City of Springfield

Agenda

City Council

REVISED

Jeff Schrag, Mayor

Zone Councilmembers	**General Councilmembers**
Monica Horton, Zone 1	Heather Hardinger, General A
Abe McGull, Zone 2	Craig Hosmer, General B
Brandon Jenson, Zone 3	Callie Carroll, General C
Bruce Adib-Yazdi, Zone 4	Derek Lee, General D

May 18, 2026 **6:30 PM** **Regional Police-Fire Training Center**
2620 West Battlefield Road
Room 101, 102, and 103

Rules and procedures.

1. ROLL CALL.

2. APPROVAL OF MINUTES.

2.1. Approval of the Minutes of the May 5, 2026, Special City Council Meeting.

3. FINALIZATION AND APPROVAL OF CONSENT AGENDAS.

CITIZENS WISHING TO SPEAK TO OR REMOVE ITEMS FROM THE CONSENT AGENDAS MUST DO SO AT THIS TIME.

4. CEREMONIAL MATTERS.

5. CITY MANAGER REPORT AND RESPONSES TO QUESTIONS RAISED AT THE PREVIOUS CITY COUNCIL MEETING.

6. SECOND READING AND FINAL PASSAGE.

Citizens Have Spoken. May Be Voted On.

6.1. Amended Council Bill 2026-092 (Horton)
A special ordinance authorizing a budget adjustment amending the Fiscal Year 2025-2026 budget of the City of Springfield in the amount of ($14,934) for the purpose of approving expenditures from the Commercial Street Tax Increment Financing Special Allocation Fund for certain public improvement projects within the Commercial Street Tax Increment Financing District.

6.2. Council Bill 2026-103 (Jenson)
A general ordinance amending Section 1-9 of the Springfield City Code, ‘City Limits,’ and Section 46-1 of the Springfield City Code, ‘Boundaries of wards, precincts and

council zones,' for the purpose of annexing approximately 1.00 acre of private property generally located at 2852 West Republic Road into the City of Springfield as Annexation A-2-2026.

6.3. Council Bill 2026-104 (Horton)
A general ordinance amending Chapter 36, Article 4, Section 4.01B of the Land Development Code, 'Official Zoning Map,' by rezoning approximately 0.19 acres of property generally located at 1125 East Thoman Street from HM, Heavy Manufacturing, to R-MX1, Mixed-density Neighborhood – Low; and adopting an updated Official Zoning Map.

6.4. Council Bill 2026-105 (Adib-Yazdi)
A special ordinance approving the mapping of the East West Arterial, generally located between US Highway 65 and Riverbluff Boulevard to Kissick Avenue, pursuant to Section 11.11 of the City Charter of the City of Springfield, Missouri, in order to preserve right-of-way for future public street improvements for an additional five years.

6.5. Council Bill 2026-106 (Horton)
A special ordinance authorizing the City Manager, or designee, to enter into an Infrastructure Reimbursement Agreement with Drew Lewis Foundation, Inc. in the not to exceed amount of $29,850.30 for the purpose of developing public stormwater infrastructure along West Poplar Street between North Weaver Avenue and North Broadway Avenue.

7. RESOLUTIONS.
Citizens May Speak. May Be Voted On.

7.1. Council Bill 2026-109 (Lee)
A resolution adopting the Springfield-Greene County All-Hazards Emergency Mitigation Plan.

8. EMERGENCY BILLS.

9. PUBLIC IMPROVEMENTS.

10. GRANTS.

11. AMENDED BILLS.

12. COUNCIL BILLS FOR PUBLIC HEARING.
Citizens May Speak. Not Anticipated To Be Voted On.

12.1. Council Bill 2026-110 (Horton)
A general ordinance amending Section 1-9 of the Springfield City Code, 'City Limits,' and Section 46-1 of the Springfield City Code, 'Boundaries of wards, precincts and council zones,' for the purpose of annexing approximately 26.80 acres of private property generally located at 2707 North Farm Road 123 (Westgate Avenue) and

approximately 1.10 acres of right-of-way for North Farm Road 123 (Westgate Avenue) into the City of Springfield as Annexation A-3-2026.

13. FIRST READING BILLS. Requiring One Reading.

14. FIRST READING BILLS. Requiring Two Readings.

Citizens May Speak. Not Anticipated To Be Voted On.

14.1. Council Bill 2026-112 (Carroll)

A special ordinance amending Special Ordinance 27857 providing benefits for certain employees under the Missouri Local Government Employees Retirement System, by reducing the retirement age for all eligible current and future telecommunicator first responders and all eligible current and future emergency medical service personnel.

14.2. Council Bill 2026-113 (Lee)

A special ordinance authorizing the City Manager, or designee, to enter into a Sewer Extension Cost Reimbursement Agreement with Sunshine Developer, LLC, for the recovery of proportional square foot costs of the construction of a force main sewer to serve Turner's Ranch Subdivision and establishing a sanitary sewer cost recovery area and a per square foot connection fee to reimburse the developer for proportional costs of construction of the force main sewer.

14.3. Council Bill 2026-114 (Horton)

A general ordinance amending the Springfield City Code, Chapter 18, "Animals," Articles I, II, and III, to provide improved enforcement measures for the Springfield-Greene County Health Department's ("SGCHD") animal control program to increase neighborhood safety by responding to dogs and owners who are not complying with City ordinances.

14.4. Council Bill 2026-115 (Carroll)

A special ordinance amending the budget of the City of Springfield for Fiscal Year 2025-2026, in the amount of $118,800, to appropriate unused funds originally budgeted for Police Department salaries to provide for the sustainment of Police Department Body Worn Cameras.

14.5. Council Bill 2026-116 (Lee)

A special ordinance amending the budget of the City of Springfield for Fiscal Year 2025-2026, in the amount of $98,708, to appropriate unused funds originally budgeted for Police Department salaries to provide for the continuation of the Police Recruitment Plan.

14.6. Council Bill 2026-117 (Hosmer)

A special ordinance setting a preliminary tax levy on real and personal property for current expenses and debt retirement of the City of Springfield, Missouri, and its boards and agencies, for the Fiscal Year beginning July 1, 2026, and ending June 30, 2027; and declaring an emergency pursuant to Section 2.12(5) of the City Charter.

14.7. Council Bill 2026-118 (Hardinger)
A special ordinance adopting a budget for the City of Springfield, Missouri, for the Fiscal Year beginning July 1, 2026, and ending June 30, 2027; providing that certain amounts shown in the budget document are appropriated for the various departments specified in said budget; and declaring an emergency pursuant to Section 2.12(3) of the City Charter.

15. PETITIONS, REMONSTRANCES AND COMMUNICATIONS.

16. NEW BUSINESS.

17. UNFINISHED BUSINESS.

18. MISCELLANEOUS.

19. CONSENT AGENDA – FIRST READING BILLS. See Item #3.

19.1. Council Bill 2026-119 (Hosmer)
A special ordinance authorizing the City Manager, or designee, to enter into an Intergovernmental Agreement with the Board of Governors of Missouri State University for the purpose of continuing to provide enhanced law enforcement services within and around the Missouri State University campus.

20. CONSENT AGENDA – ONE READING BILLS. See Item #3.

21. CONSENT AGENDA – SECOND READING BILLS.

21.1. Council Bill 2026-107 (McGull)
A special ordinance authorizing the Director of Planning and Development to accept the dedication of public streets and easements to the City of Springfield, Missouri, as shown on the Preliminary Plat Renewal of MHC Kenworth Addition, generally located at 5400 East Bucees Boulevard, upon the applicant filing and recording a final plat that substantially conforms to the preliminary plat; and authorizing the City Clerk to sign the final plat upon compliance with all the terms of this Ordinance.

21.2. Confirm the following reappointments to the Airport Board: Jerome Bledsoe and Paula Dougherty, with terms to expire June 1, 2029.

21.3. Confirm the following appointments to the Airport Board: Heather Rooney McBride and Monte McNew, with terms to expire June 1, 2029.

21.4. Confirm the following appointments to the Springfield-Greene County Park Board: Phillip Herzog, with term to expire June 1, 2029.

21.5. Confirm the following appointments to the Landmarks Board: David Hammons, Historian, and Jason Nunn, Member-At-Large, with terms to expire November 1, 2028.

21.6. Confirm the following appointments to the Planning and Zoning Commission: Brandi Morris, with term to expire January 1, 2027.

21.7. Confirm the following reappointments to the Police Officers' and Firefighters' Retirement System Board of Trustees: Laura Robinson, Attorney Representative, and Andy Stewart, Financial Representative, with terms to expire April 30, 2029.

22. END OF CONSENT AGENDA.

23. ADJOURN.

May 5, 2026
Springfield, Missouri

The City Council met in special session on May 5, 2026, in the Councilman Denny Whayne Conference Room on the 4th Floor of the Busch Municipal Building, 840 Boonville. The meeting was called to order by Mayor Schrag.

Roll Call

Present: Craig Hosmer, Abe McGull, Brandon Jenson, Heather Hardinger, Callie Carroll, Derek Lee, Bruce Adib-Yazdi, and Jeff Schrag. Absent: Monica Horton.

Closed Session

Councilmember Hosmer moved City Council hold a closed meeting to discuss legal actions, causes of action or litigation involving a public governmental body and any confidential or privileged communications between a public governmental body or its representatives and its attorneys pursuant to Section 610.021(1), RSMo.; and leasing, purchase or sale of real estate by a public governmental body where public knowledge of the transaction might adversely affect the legal consideration therefor pursuant to Section 610.021(2), RSMo.; and this meeting, record, and vote shall be closed and the City Council shall stand adjourned.

Mayor Pro Tem Hardinger seconded the motion, and it was approved by the following vote: Ayes: McGull, Jenson, Carroll, Lee, Adib-Yazdi, Hosmer, Hardinger, and Schrag. Nays: None. Abstain: None. Absent: Horton.

Prepared by
Tonia Stopka

_____
Anita J. Cotter, MMC/MPCC
City Clerk

DRAFT

SUPPLEMENTAL EXPLANATION TO AMENDED COUNCIL BILL 2026-092 (HORTON)

FILED: 05/08/2026

ORIGINATING DEPARTMENT: Economic Vitality and Workforce Development

TITLE: A special ordinance authorizing a budget adjustment amending the Fiscal Year 2025-2026 budget of the City of Springfield in the amount of ($14,934) for the purpose of approving expenditures from the Commercial Street Tax Increment Financing Special Allocation Fund for certain public improvement projects within the Commercial Street Tax Increment Financing District.

PURPOSE: To amend Council Bill 2026-092 (Commercial Street TIF Budget Adjustment)

BACKGROUND INFORMATION: On May 4, 2026, Council Bill 2026-092 was amended as follows:

- Decreasing the expenditure for the Footbridge Plaza from $500,000 to no more than $300,000;
- Changing the use of the expenditure from “design and study” to “programming, stakeholder engagement, design, and preparation of shovel-ready construction documents”; and
- Substituting an amended Exhibit A.

Submitted By: Laura Vales, Assistant City Attorney

Authorized for inclusion on the agenda pursuant to City Code section 2-33:

Attachments:
1. Explanation Sheet (9)
2. Amended Commercial Street TIF Allocation Budget Adjustment
3. CB 2026-092 - amend - BA

CITY OF Springfield

EXPLANATION TO COUNCIL BILL 2026-092 (HORTON)

FILED: 04/23/2026

ORIGINATING DEPARTMENT: Economic Vitality and Workforce Development

TITLE: A special ordinance authorizing a budget adjustment amending the Fiscal Year 2025-2026 budget of the City of Springfield in the amount of $185,066 for the purpose of approving expenditures from the Commercial Street Tax Increment Financing Special Allocation Fund for certain public improvement projects within the Commercial Street Tax Increment Financing District.

PURPOSE: To amend the budget of the City of Springfield for Fiscal Year 2025-2026 in the amount of $185,066 for the purpose of approving expenditures from the Commercial Street Tax Increment Financing ("TIF") Special Allocation Fund for certain public improvement projects within the Commercial Street TIF District.

BACKGROUND INFORMATION: The City Council accepted the Commercial Street Historic District Strategy for Success on March 6, 2006 via Resolution 9338. The Strategy recommended the use of TIF for sustained redevelopment and revitalization. City Council directed Staff to prepare a TIF Redevelopment Plan for the area.

On April 7, 2008, the City Council approved the Commercial Street TIF Redevelopment Plan though Special Ordinance 25373. The Plan establishes a process and means for funding public improvements within the area, based on the premise that public investment in key projects will incentivize sustained private redevelopment.

The Plan outlines eligible TIF-funded projects and the process for expending captured funds. Each year, staff holds a public meeting on Commercial Street where property owners, businesses, and residents learn about the Special Allocation Fund and potential public improvement projects. Staff reviews project costs and available funding to make recommendations on which projects should proceed and how they should be financed. In years where funding is limited, no projects may be recommended. Commercial Street stakeholders review these materials and provide their own feedback. These recommendations, alongside those from the Planning and Development Department, are presented to the City Council for annual decisions on fund expenditures. This process ensures yearly input from key stakeholders and maintains ongoing project prioritization.

REMARKS: Staff held an annual public meeting on February 3, 2026, to provide an update on existing TIF-funded projects and the status of the Special Allocation Fund, and to discuss new projects. Based on stakeholder feedback, the following adjustments and allocations are recommended:

- **Gateway Signage Project:** Cancel the project and return unused funds ($518,293) to the Special Allocation Fund. Funding of $530,000 was originally authorized by Special Ordinances 27265 and 27818 for the construction of two obelisk gateways at the intersections of N. Lyon Ave. & W. Commercial St. and N. Washington St. & E. Commercial St.

- **Public Parking Lots:** Close out the completed projects at the northeast corner of N. Campbell Ave. & W. Pacific St. and the southwest corner of N. Robberson Ave. & E. Pacific St. Return the unused funds ($146,642) to the Special Allocation Fund. Of the $230,000 authorized by Special Ordinance 27551, only $83,368 was expended.

- **Façade Loan Program:** Allocate $150,000 to the program and convert it into a revolving loan fund. Previous funding ($54,000 authorized by Special Ordinances 27121 and 27364) consisted of one-time-use funds that were redeposited into the Special Allocation Fund upon repayment. The loan program is currently depleted.

- **East Commercial Streetscape:** Allocate $200,000 for streetscape design along East Commercial Street between North Jefferson and North Benton Avenue.

- **Footbridge Plaza:** Allocate $500,000 for the design and study of the Footbridge Plaza, which will consider upgrades to hard surfaces, landscaping, lighting, sound systems, and other amenities to enhance the plaza as a multi-functional public space for community events and passive recreation.

These recommended adjustments and allocations are itemized in the in the attached budget adjustment (Exhibit A).

The impact of these recommended adjustments and allocations on the Commercial Street TIF Special Allocation Fund is summarized in the tables below.

Commercial Street TIF Special Allocation Fund

Current

Fund Balance	$ 2,026,527.03
Budgeted Amounts	$ (703,968.09)
Total Uncommitted	**$ 1,322,558.94**

After Returning Unused Funds

Completed Parking Lots Projects	$ 146,641.87
Cancelled Gateway Signage Project	$ 518,292.50
Total Uncommitted	$ 1,322,558.94

New Total Uncommitted	**$ 1,987,493.31**

After Proposed Allocations

Commercial Street Façade Revolving Loan Program	$ (150,000.00)
Streetscape Design – E Commercial, N Jefferson to N Benton	$ (200,000.00)
Footbridge Plaza Design and Study	$ (500,000.00)
Total Uncommitted	$ 1,987,493.31
New Total Uncommitted	**$ 1,137,493.31**

The next Commercial Street TIF stakeholder meeting is planned for Fall 2026 to provide an update on the funded projects and recommendations for future projects. Economic Vitality and Public Works staff will continue to coordinate with Commercial Street stakeholders on the progress of all funded projects.

Staff recommends approval.

Submitted By: Matthew Schaefer, Assistant Director of Economic Vitality and Workforce Development

Authorized for inclusion on the agenda pursuant to City Code section 2-33:

Attachments:
1. Commercial Street TIF Allocation Budget Adjustment
2. 0054 EV FY26 Adj for Commercial St TIF Allocation (1)

One-rdg. _____
P. Hrngs. _____
Pgs. _____
Filed: 04-14-26

Sponsored by: Horton

First Reading: _____ Second Reading: _____
AMENDED
COUNCIL BILL 2026-092 SPECIAL ORDINANCE _____

AN ORDINANCE

AUTHORIZING a budget adjustment amending the Fiscal Year 2025-2026 budget of the City of Springfield in the amount of ($14,934) for the purpose of approving expenditures from the Commercial Street Tax Increment Financing Special Allocation Fund for certain public improvement projects within the Commercial Street Tax Increment Financing District.

_____

WHEREAS, the City Council accepted the Commercial Street Historic District Strategy for Success on March 6, 2006, via Resolution 9338; and

WHEREAS, the City Council approved the Commercial Street Tax Increment Financing ("TIF") Redevelopment Plan on April 7, 2008, via Special Ordinance 25373; and

WHEREAS, said Redevelopment Plan establishes a process and means for funding public improvements within the District and outlines eligible TIF-funded projects and the process for expending captured funds; and

WHEREAS, each year, City staff holds a public meeting on Commercial Street for property owners, businesses, and residents can learn about the Special Allocation Fund and potential public improvement projects and provide feedback on desired projects; and

WHEREAS, City staff held the most recent such meeting on February 3, 2026; and

WHEREAS, as a result of public feedback, City staff recommends the following allocations, resulting in a net expenditure adjustment of ($14,934):

- **Gateway Signage Project**: Cancel the project and return unused funds totaling $518,293 to the Special Allocation Fund

- **Public Parking Lots**: Close out the completed projects and return the unused funds totaling $146,642 to the Special Allocation Fund

- **Façade Loan Program**: Allocate $150,000 to the program to establish a revolving loan program

- **East Commercial Streetscape**: Allocate $200,000 for streetscape design along East Commercial Street between North Jefferson and North Benton Avenue

- **Footbridge Plaza**: Allocate up to $300,000 for programming, stakeholder engagement, design, and the preparation of shovel-ready construction documents for the Footbridge Plaza. This project will consider physical upgrades including hard surfaces, landscaping, lighting, sound systems, and other amenities.

WHEREAS, an amendment to the budget of the City of Springfield for Fiscal Year 2025-2026 in the amount of ($14,934) has been recommended by the City Manager.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF SPRINGFIELD, MISSOURI, as follows, that:

Section 1 – The budget of the City of Springfield, Missouri, for Fiscal Year 2025-2026 is hereby amended in the accounts and amounts shown on Budget Adjustment No. 0054, which is attached hereto as “Exhibit A” and incorporated herein by reference.

Section 2 – The City Council finds that the budget adjustment made above has recommended by the City Manager.

Section 3 – The City Manager, or designee, is directed to cause the appropriate accounting entries to be made in the books and records of the City.

Section 4 – This Ordinance shall be in full force and effect from and after passage.

Passed at meeting: _____

_____
Mayor

Attest: _____, City Clerk

Filed as Ordinance: _____

Approved as to form: Laura Vales, Assistant City Attorney

Approved for Council action: _____, City Manager

CITY OF SPRINGFIELD, MO
BUDGET ADJUSTMENT

Exhibit A

Budget Adjustment
0054

Revenues:

Fund	Dept	Org	Account	P&G	Location	Amount	Description
43050	23	60210	414100	103074	00000	$ (518,293)	Gateway Signage Project
43050	23	60210	414100	103055	00000	$ (64,123)	Lot 1 NE Corner Campbell/Pacific
43050	23	60210	414100	103056	00000	(82,519)	Lot 2 SW Corner Pacific/Robberson
43050	23	60210	408040	000000	00000	150,000	Façade Loan Program
43050	23	60210	414100	000000	00000	200,000	East Commercial Streetscape
43050	23	60210	414100	103065	00000	300,000	Footbridge Plaza
Net Revenue Adjustment						$ (14,934)	

Expenditures:

Fund	Dept	Org	Account	P&G	Location	Amount	Description
43050	23	60210	508340	103074	00000	$ (518,293)	Gateway Signage Project
43050	23	60210	504580	103055	00000	$ (9,409)	Lot 1 NE Corner Campbell/Pacific
43050	23	60210	504600	103055	00000	$ (54,714)	Lot 1 NE Corner Campbell/Pacific
43050	23	60210	504600	103056	00000	(82,519)	Lot 2 SW Corner Pacific/Robberson
43050	23	60210	504600	000000	00000	150,000	Façade Loan Program
43050	23	60210	508340	000000	00000	200,000	East Commercial Streetscape
43050	23	60210	508340	103065	00000	300,000	Footbridge Plaza
Net Expenditure Adjustment						$ (14,934)	

Fund Balance Appropriation:

Fund		Title	Amount

Explanation: To amend the FY2025-26 budget by adjusting the Commercial St TIF allocations.

Requested By:

5-6-26
Department Head Date

Approved By:

5-6-26
Director of Finance Date

City Manager Date

Authorization:

Council Bill No. 2026-092
Ordinance No.
1st Reading
2nd Reading
Journal Imp No.

EXPLANATION TO COUNCIL BILL 2026-103 (JENSON)

FILED: 05/08/2026

ORIGINATING DEPARTMENT: Planning and Development

TITLE: A general ordinance amending Section 1-9 of the Springfield City Code, 'City Limits,' and Section 46-1 of the Springfield City Code, 'Boundaries of wards, precincts and council zones,' for the purpose of annexing approximately 1.00 acre of private property generally located at 2852 West Republic Road into the City of Springfield as Annexation A-2-2026.

PURPOSE: To adopt an ordinance to annex approximately 1.00 acre of private property generally located at 2852 W Republic Road and the right-of-way for South Glenn Avenue adjacent to the subject property into the city of Springfield as Annexation A-2-2026. (Staff recommends approval.)

BACKGROUND INFORMATION: The owner(s) of the private property generally located at 2852 W Republic Road are requesting annexation into the city of Springfield. The owner(s) of the private property have signed a petition to request annexation of approximately 1.00 acre and intends to rezone the property for commercial development.

City Council is required to hold a public hearing to determine whether the annexation is reasonable and necessary for the proper development of the city and whether the City can furnish normal City services within a reasonable period. If no written objection is filed within fourteen (14) days of the public hearing, the City may annex the property by ordinance without further action.

REMARKS: The area to be annexed is contiguous to the city of Springfield. See "Exhibit B" for the location of the private property and right-of-way to be annexed.

RECOMMENDATIONS:

1. The area to be annexed is within the City's Urban Service Area and is consistent with its policies.
2. The area to be annexed is contiguous and compact to the city of Springfield.
3. The property owner(s) have petitioned the City for annexation.
4. All City services can be provided to the property.

5. The City will receive property tax revenue upon annexation of the private property and sales tax with commercial development.

6. Based on the subject property's location in proximity to the existing city limits and the recommendations of Chapter 6, Growth Areas, and Annexation, of the Forward SGF Comprehensive Plan, staff supports this request.

Submitted By: Alana Owen, Senior City Planner

Authorized for inclusion on the agenda pursuant to City Code section 2-33:

Attachments:
1. A-2-2026 - 2852 W Republic Rd
2. A-2-2026_ExhA
3. A-2-2026_ExhB

One-rdg. _____
P. Hrngs. X
Pgs. _____
Filed: 04-28-26

Sponsored by: Jenson

First Reading: _____ Second Reading: _____

COUNCIL BILL 2026-103 GENERAL ORDINANCE _____

AN ORDINANCE

AMENDING Section 1-9 of the Springfield City Code, 'City Limits,' and Section 46-1 of the Springfield City Code, 'Boundaries of wards, precincts and council zones,' for the purpose of annexing approximately 1.00 acre of private property generally located at 2852 West Republic Road into the City of Springfield as Annexation A-2-2026.

_____

WHEREAS, a verified petition requesting annexation was filed by the owners of all fee interest of record in all tracts of real property located within the area proposed to be annexed, as described in "Exhibit A," attached hereto and incorporated herein by this reference, said area being generally located at 2852 West Republic Road; and

WHEREAS, the subject property is within the City of Springfield's Urban Service Area and is compact and contiguous to the City, as shown in "Exhibit B," attached hereto and incorporated herein by this reference; and

WHEREAS, proper notice was published at least seven (7) days prior to the public hearing; and

WHEREAS, City Council does find and determine that: (1) said annexation is reasonable and necessary to the proper development of the City; (2) the City either already furnishes normal municipal services to the area annexes, or is able to furnish such services within a reasonable time after annexation; and (3) the area annexed herein is contiguous and compact to the existing corporate boundaries of the City.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF SPRINGFIELD, MISSOURI, as follows, that:

Section 1 – City Council, after holding a public hearing, hereby determines that annexation of the property described in "Exhibit A" is reasonable and necessary to the proper development of the City; the City either already furnishes normal municipal services to the area annexes, or is able to furnish such services within a reasonable time after annexation; and the area is contiguous and compact to the existing boundaries of the City as shown in "Exhibit B."

Section 2 – Pursuant to the provisions of Section 71.012 RSMo., the property described in “Exhibit A” is hereby annexed into the City of Springfield, Missouri.

Section 3 – Section 1-9 of the Springfield City Code, ‘City Limits,’ is hereby amended by adding thereto the land described in "Exhibit A."

Section 4 – Section 46-1 of the Springfield City Code, ‘Boundaries of wards, precincts and council zones,’ is hereby amended by placing the property described in "Exhibit A" into the appropriate ward and precinct as determined by the County Clerk in accordance with the provisions of State law.

Section 5 – The City Clerk is directed to: (1) file certified copies of this Annexation Ordinance with the Clerk of Greene County; (2) file certified copies of this Annexation Ordinance with the Assessor of Greene County; and (3) forward to the Missouri Director of Revenue, by certified mail, certified copies of this Ordinance, and any other information that the Director of Revenue may require. The City Clerk is further authorized and empowered to perform any other administrative acts which are consistent with the intent of this Ordinance.

Section 6 – This Ordinance shall be in full force and effect from and after passage.

Passed at meeting: _____

_____
Mayor

Attest: _____, City Clerk

Filed as Ordinance: _____

Approved as to form: Laura Vales, Assistant City Attorney

Approved for Council action: _____, City Manager

EXHIBIT A
ANNEXATION A-2-2026
LEGAL DESCRIPTION

All of Lot A-1 of the Replat Lot A Helen's Addition, a recorded subdivision in Greene County, Missouri.

And also the following Glenn Avenue Right-of-Way as described below:

A PART OF THE GLENN AVENUE RIGHT-OF-WAY IN THE NORTHEAST QUARTER OF THE NORTHEAST QUARTER OF SECTION 16 TOWNSHIP 28 NORTH RANGE 22 WEST, IN GREENE COUNTY, MISSOURI, MORE PARTICULARLY DESCRIBED AS FOLLOWS:
BEGINNING AT THE SOUTHEAST CORNER OF LOT A-1 OF "REPLAT LOT A HELEN'S ADDITION", A RECORDED SUBDIVISION IN GREENE COUNTY, MISSOURI, BEING ON THE WEST RIGHT-OF-WAY LINE OF GLENN AVENUE; THENCE EAST, ALONG A PROJECTION OF THE SOUTH LINE OF SAID LOT A-1, TO THE EAST RIGHT-OF-WAY LINE OF GLENN AVENUE; THENCE SOUTH, ALONG SAID EAST RIGHT-OF-WAY LINE, TO THE EXISTING SOUTH RIGHT-OF-WAY LINE OF REPUBLIC ROAD; THENCE WESTERLY, ALONG SAID SOUTH RIGHT-OF-WAY LINE, TO THE NORTHEASTERLY CORNER OF SAID LOT A-1, BEING ON SAID WEST RIGHT-OF-WAY LINE OF GLENN AVENUE; THENCE SOUTHERLY, ALONG SAID WEST RIGHT-OF-WAY LINE, TO THE POINT OF BEGINNING.
CONTAINING 0.37 ACRES, MORE OR LESS, OF GLENN AVENUE RIGHT-OF-WAY.

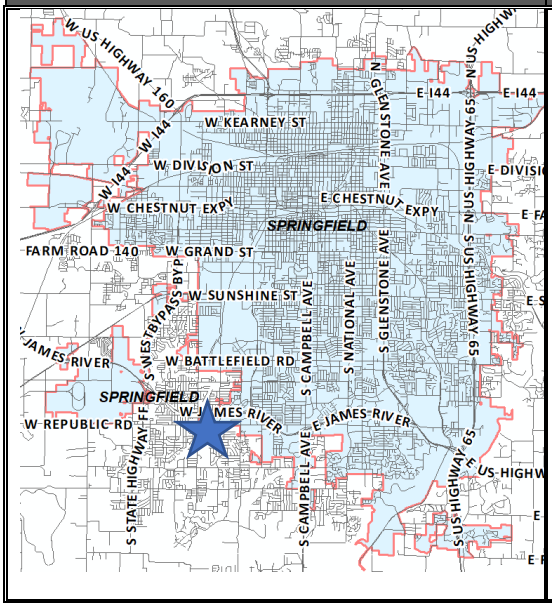
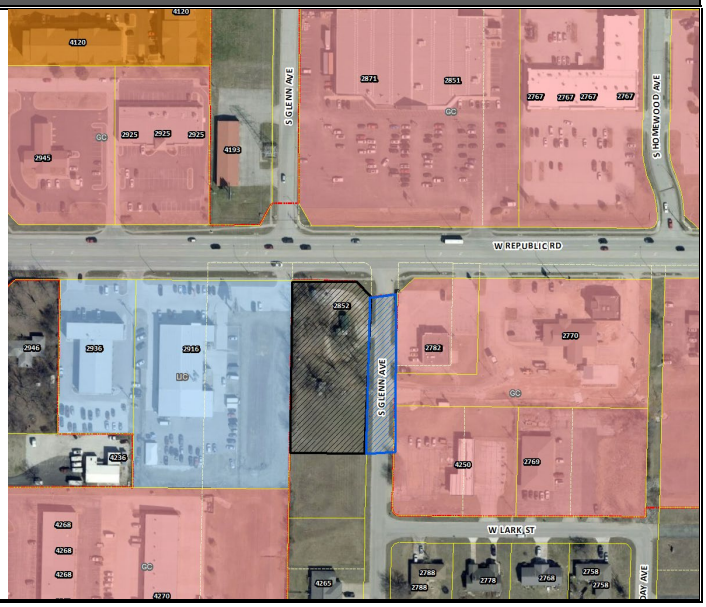
EXHIBIT B

DEVELOPMENT REVIEW STAFF REPORT

PROJECT INFORMATION	
Case Number:	A-2-2026
Location:	2852 W Republic Road
Total Acres:	1.00 acre
Applicant:	Coorts Coffee 1 LLC
Existing Land Use:	Undeveloped
City Council:	May 4, 2026
Public Notification:	Mail and legal in Springfield News Leader
Staff:	Alana Owen, AICP, Principal Planner
Staff recommendation:	Staff recommends approval

PROJECT SUMMARY:

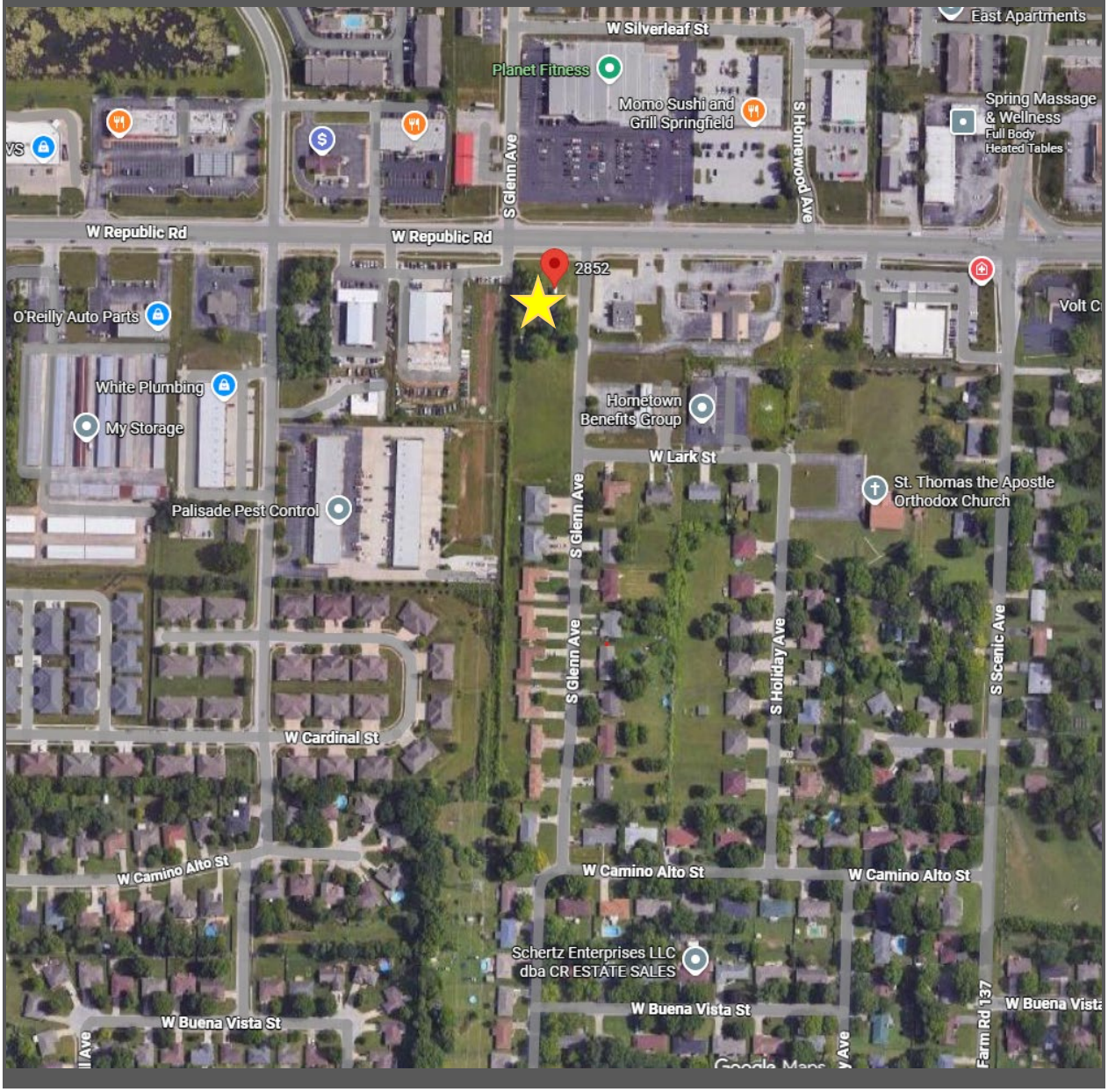
Request to annex approximately 1.00 acre of private property generally located at 2852 W. Republic Road and the right-of-way for South Glenn Avenue adjacent to the subject property into the city of Springfield.

LOCATION MAP	CITY LIMIT & ZONING MAP
	

CITY OF Springfield

DEVELOPMENT REVIEW STAFF REPORT

GOOGLE AERIAL OF LANDMARKS, BUSINESSES, AND ATTRACTIONS:



DEVELOPMENT REVIEW STAFF REPORT

GOOGLE MAPS STREET VIEW:



PROPERTY HISTORY:

The subject property is outside the city limits in unincorporated Greene County. The subject property is zoned as a Greene County C-2, General Commercial District. The annexation is being processed with the intent to rezone and develop for commercial use.

COMPATIBILITY WITH COMPREHENSIVE PLAN:

The subject property is in a Priority One strategic annexation area identified in Chapter 6, Growth Areas and Annexation, of the Forward SGF Comprehensive Plan. Priority One areas represent short-term growth areas. These growth areas are primarily located on the western and southwestern sides of the city in the vicinity of the Springfield-Branson National Airport, Interstate 44, West Sunshine Corridor, and James River Freeway. While not every property identified in the Priority One can or should be annexed immediately, each represents areas where opportunities for economic and job growth are promising due to varying combinations of available infrastructure, city services, proximity to major transportation corridors, and advantageous land patterns.

Annexation Considerations

The following strategies will help to further guide the prioritization of annexations:

1. The City should prioritize annexation of City, City Utilities, Park Board, and Ozark Greenways-owned properties.
2. The City should prioritize annexation of properties with an “Irrevocable Petition and Consent to Annexation Agreement” that are revenue-generating and located along major corridors and areas of potential economic activity.

3. The City should evaluate annexation proposals on a property-by-property or case-by-case basis but work to coordinate annexation of multiple properties simultaneously, when possible, to maximize the time and cost efficiency involved in processing.
4. The City should engage with area Fire Protection Districts in evaluation of potential impact resulting from annexation of property by the City.
5. The City should be conscious of impractical boundary configurations created when annexing properties on only one side of a street, skipping over properties, or creating islands of unincorporated properties.
6. The City should weigh the anticipated impact of annexation on the ability to provide timely and professional emergency services, including personnel requirements, capital requirements, necessary and available infrastructure, call volume, and standards of cover.
7. The City should evaluate the age and condition of existing infrastructure in areas desired for annexation, as well as future maintenance costs.
8. The City should weigh the comprehensive advantages of both long-term revenue growth and population growth, including a variety of demographic considerations associated with providing services to new residents and property owners.
9. The City should weigh the fiscal impacts of annexation against the opportunity to grow the population base, increase resident participation in city elections, tax referendums, and expand the reach of citizens to serve on city advisory boards and committees.
10. The City should weigh the strategic value of incorporating geographic areas that facilitate growth in new areas.

If the annexation is approved, the intent is to rezone the subject property and develop for commercial use. As part of this annexation, the City will be annexing a portion of South Glenn Avenue that is adjacent to the subject property to the east. It is anticipated that when developed commercially, this project will break even or be a positive financial gain to the City, when considering the anticipated sales tax and expected maintenance and service costs.

The property involved in this annexation request is identified as being within the City Corridor place type in the Forward SGF Comprehensive Plan (see the Future Placetype Map on page 7).

CITY OF Springfield

DEVELOPMENT REVIEW STAFF REPORT

FUTURE PLACETYPE MAP:



SURROUNDING ZONING, LAND USES AND PLACETYPES:

	NORTH	SOUTH	EAST	WEST
ZONING	GC/Greene County C-2	Greene County C-2	GC	GC
LAND USE	Commercial uses/mixed residential	Multi-family and single-family homes	Commercial uses	Commercial uses
PLACETYPES	City Corridor	City Corridor	City Corridor	City Corridor

DEPARTMENT COMMENTS:

1. DEPARTMENT OF BUILDING DEVELOPMENT SERVICES:
   No issues with the proposed annexation.

2. CITY UTILITIES:
   CU has no objections to the proposed annexation. The property has access to CU gas/water along both Glenn Avenue and the south side of Republic Road. CU electric can be extended from across Republic Road.

3. DEPARTMENT OF ENVIRONMENTAL SERVICES CLEAN WATER SERVICES DIVISION:

   No objection to annexation. It needs to be noted that the property does not have public sewer available to it and will require a public sewer extension. The public improvement plans will need to be submitted, approved, filed and either constructed or escrowed before a sewer permit could be issued.

4. EMERGENCY 911:
   No concerns.

5. GREENE COUNTY HIGHWAY DEPARTMENT:
   No comments.

6. POLICE DEPARTMENT:
   No comments.

7. FIRE DEPARTMENT:

   Service – The primary Fire Station responding to this area would be Station #6 located at 2620 W Battlefield, which is approximately 1.8 miles from the northwest corner of the property. Fire Station # 9, located at 450 W Walnut Lawn is the secondary station responding to this location, which is 3.3 miles from the northwest corner of the property.

   ISO area – The proposed annexation is currently outside the recommended ISO 1.5 mile (ISO diamond) response distance by 0.35 miles for the 1st due unit. ***This will negatively impact our ISO rating.***

   Response times/Standards of Cover – Estimated response time was calculated mathematically with an assumed travel speed of 45 miles per hour by the fire apparatus. The 1st due company has an estimated total response time of 4 minutes, 50 seconds. The 2nd due company has an estimated total response time of 6 minutes, 44 seconds. It is likely the standard of coverage benchmark could be met for single company responses and unlikely the benchmark could be met for a full 1st alarm response which requires 3 engines, 2 Trucks, 1 Rescue and 1 Battalion Chief to arrive on scene within 11 minutes and 24 seconds. An automatic aid agreement for this area is in place with the Battlefield Fire Protection District. ***The department expects that it will meet the initial unit but not the ERF benchmarks. This will negatively impact our accreditation.***

		Estimated Total Response Time	Benchmark*	Baseline**
1st Due Company	Station 6	4-5 minutes	6 minutes 20 seconds	8 minutes 13 seconds
Total Effective Response Force	Station 6,8,9,13,1	13-14 minutes	10 minutes 20 seconds	13 minutes 18 seconds

Water Supply – Existing development in the area is served by multiple CU water mains. ***The Fire Department does not have any concerns with the water supply for this proposed annexation after Fire Code requirements are met for development.***

Impact – The area of proposed annexation will likely contain a Scooters Coffee Drive-Thru. ***The Fire Department does not have any concerns regarding the impact to daily service requirements.***

Fire Department Recommendation: ***Based upon all relevant factors, the Fire Department is supportive of this annexation.***

8. DEPARTMENT OF PUBLIC WORKS STORMWATER ENGINEERING DIVISION:

SITE DESCRIPTION & DRAINAGE PATTERN

	Drainage Basin	Fee in Lieu for Flood Control	Fee in Lieu for Water Quality	Stream Buffer on Site	Sinkhole or Watershed	Floodplain and Floodway
2852 W Republic Road	Ward Branch	Stormwater Report Required	No	No	No	No

All chapter and section references below are to the City's Flood Control and Water Quality Protection Manual Version April 2022.

DETENTION AND DISCHARGE REQUIREMENTS

The 1-acre lot drains to S Glenn Ave. The submitted site plan does not include a flood control stormwater control measure. Support for a fee in lieu of detention application requires a stormwater report with downstream analysis of S Glenn Ave and W Lark St curb and gutter capacity for the additional flowrate from impervious area increase.

WATER QUALITY REQUIREMENTS

1. Water Quality is required for new development projects or redevelopment projects, with new or increased impervious surfacing, within the city limits of Springfield that disturb 1 acre or greater. Including projects less than 1 acre that are part of a larger common plan of development or sale that will disturb 1 or more acres over the life of the project. Chapter 10 Sec. 2.0.

2. A land disturbance permit will be required with disturbing 1 acre or greater per Chapter 4 Section 5 of the City's Flood Control and Water Quality Protection Manual.

3. Water Quality Credits are available to use in design for preserved trees and new planted trees. Landscaping and Bufferyard trees required by planning cannot be used for the water quality credits unless it is part of a SCM. Chapter10, Section 3.1.

FLOODPLAIN

N/A

NATURAL CHANNEL & STREAM BUFFERS

N/A

SINKHOLES & KARST FEATURES

N/A

9. DEPARTMENT OF PUBLIC WORKS TRAFFIC DIVISION:

TRAFFIC REPORT

	Street Name	Street Classification	Jurisdiction	ROW from Centerline (ft.)		Traffic Count (vehicles per day)	On-Street Parking	Sidewalk	
				Required	Existing			Required	Existing
Street 1	W Republic Road	Primary Arterial	City	50	50	24,300	No	Yes	Yes
Street 2	S Glenn Avenue	Local	County	25	25	NA	No	Yes	No

ACCESS - All new or modified access shall comply with current City of Springfield standards for the street classification.

TRAILS, BUS STOPS, AND ADDITIONAL INFORMATION – There are no Greenway Trails near the property. There are bus stops on W Republic Road near the property.

IMPROVEMENTS – No improvements are required for this annexation. A traffic study is not required for this annexation.

STAFF ANALYSIS AND RECOMMENDATION:

1. The applicant has petitioned for the City of Springfield to annex approximately 1.00 acre of private property generally located at 2852 W Republic Road into the city. The applicant will request to rezone the property for commercial development.

2. The *Comprehensive Plan's Land Use & Development* chapter identifies the subject property as being located within the City Corridor placetype. City Corridors provide a wide range of shopping, service, entertainment, and employment destinations for both residents and visitors.

3. There are adequate utility and sewer and water facilities existing or that can be provided to serve the uses that would be permitted if the property was annexed.

4. The area to be annexed is within the City's Urban Service Area and is consistent with its policies.

5. The area to be annexed is contiguous and compact to the City of Springfield and is bounded on three sides by the city of Springfield.

6. The City will receive property tax revenue upon annexation of the private property and sales tax revenue if developed for commercial development.

STAFF RECOMMENDATION:

1. Staff recommends approval of the annexation request based on its compatibility with the *Comprehensive Plan's* Annexation policies.

ATTACHMENT 1
Annexation Schedule

ANNEXATION:

City Council public hearing..... May 4, 2026

City Council vote ..... May 18, 2026

EXPLANATION TO COUNCIL BILL 2026-104 (HORTON)

FILED: 05/08/2026

ORIGINATING DEPARTMENT: Planning and Development

TITLE: A general ordinance amending Chapter 36, Article 4, Section 4.01B of the Land Development Code, 'Official Zoning Map,' by rezoning approximately 0.19 acres of property generally located at 1125 East Thoman Street from HM, Heavy Manufacturing, to R-MX1, Mixed-density Neighborhood – Low; and adopting an updated Official Zoning Map.

PURPOSE: Amending the Springfield Land Development Code, Section 36-306, 'Official zoning map and rules for interpretation,' by rezoning approximately 0.19 acres of property generally located at 1125 East Thoman Street from HM, Heavy Manufacturing to R-MX1, Mixed-Density Neighborhood – Low. (Staff and Planning and Zoning Commission recommend approval.)

BACKGROUND INFORMATION:

ZONING CASE NUMBER Z-10-2026

The applicant is requesting to rezone approximately 0.19 acres of property generally located at 1125 East Thoman Street from HM, Heavy Manufacturing to R-MX1, Mixed-Density Neighborhood – Low. The applicant intends to build a duplex on the lot.

REMARKS:The Planning and Zoning Commission held a public hearing on April 9, 2026, and recommended approval, by a vote of 8 to 0.

The Planning and Development staff recommends the application be approved (see the attached Development Review Staff Report).

FINDINGS FOR STAFF RECOMMENDATION:

1. The applicant is requesting to rezone approximately 0.19 acres of property generally located at 1125 East Thoman Street from HM, Heavy Manufacturing to R-MX1, Mixed-Density Neighborhood – Low. The applicant intends to build a duplex on the lot.

2. The subject property is on the edge of the Business Flex placetype and adjacent to the Mixed-Use placetype.

3. The predominate historical use and development pattern in this area is residential. This area has been zoned industrial since 1995, however the properties have not seen industrial development occur.

4. The R-MX1 district is considered a less intense district than the existing zoning of HM.

5. This application is consistent with the *Comprehensive Plan's Housing and Neighborhoods* chapter, which encourages creative housing solutions to add housing diversity and support downsizing households, young professionals, and aging-in-place. The *Plan* encourages the use of "missing middle" housing types. Missing middle housing sits in the middle of the development spectrum between single-family homes and mid-rise to high-rise apartment buildings. These housing types should be integrated into Springfield's existing neighborhoods to increase housing diversity and provide a wider, more equitable range of housing choices.

6. Missing middle housing types provide opportunities for the city to increase the diversity of its housing stock through moderate increases in density, while maintaining the neighborhood character Springfield residents cherish. They range from low-density duplexes to mid-density multiplexes and triplexes, which can be integrated into the City's housing mix by using single-family lots to accommodate two to three units in a context-sensitive manner.

7. The Plan recommends a "stepped down" approach to be used to transition from higher density/intensity residential and non-residential uses to single-family residential homes and uses, with greater densities/intensities located on higher functioning roadways, at the periphery of the neighborhood.

8. The City and other agencies can provide services, facilities, and infrastructure that may be necessary for anticipated uses in the R-MX1 district. The capacity of the surrounding street network and access on street frontages is adequate for the proposed uses in the R-MX1 district.

9. There are few changing conditions in the area, and the predominant use is residential. This application advances the public interest by allowing residential development in an area that has residential uses.

10. A reasonably viable economic use of the subject property will not be precluded if the proposed rezoning is denied.

11. The proposed rezoning was reviewed by City departments and comments are contained in the staff report (above).

12. The applicant held a neighborhood meeting on February 19, 2026, regarding the rezoning request. A summary of the meeting is attached (Exhibit C - Attachment 2).

13. The public notice was advertised in the News-Leader at least 15 days prior to the public hearing. The property was posted by the applicant at least 10 days prior to the public hearing. Public notice letters were sent out at least 10 days prior to the public hearing to all property owners within 185 feet.

STAFF RECOMMENDATION:Staff recommends approval based on the proposal's general conformance to the Comprehensive Plan's Business Flex Placetype and on the findings of facts above.

Submitted By: Michael Sparlin, Senior City Planner

Authorized for inclusion on the agenda pursuant to City Code section 2-33:

Attachments:
1. Z-10-2026 1125 E Thoman Street
2. Z-10-2026_exhA
3. Z-10-2026_exhB
4. Z-10-2026_exhC

One-rdg. _____
P. Hrngs. X
Pgs. _____
Filed: 04-28-26

Sponsored by: Horton

First Reading: _____ Second Reading: _____

COUNCIL BILL 2026-104 GENERAL ORDINANCE _____

AN ORDINANCE

AMENDING Chapter 36, Article 4, Section 4.01B of the Land Development Code, 'Official Zoning Map,' by rezoning approximately 0.19 acres of property generally located at 1125 East Thoman Street from HM, Heavy Manufacturing, to R-MX1, Mixed-density Neighborhood – Low; and adopting an updated Official Zoning Map.

WHEREAS, an application has been filed for a zoning change of the property generally located at 1125 East Thomas Street from HM, Heavy Manufacturing, to R-MX1, Mixed-density Neighborhood – Low; and

WHEREAS, following proper notice, the Planning and Zoning Commission held a public hearing on April 9, 2026, a copy of the Record of Proceedings from said public hearing being attached hereto and incorporated herein by this reference as "Exhibit B," and said Commission made a recommendation of approval by a vote of 8 to 0; and

WHEREAS, the City has reviewed the applicant's request and prepared a staff report concerning the application, which is attached hereto and incorporated herein by this reference as "Exhibit C"; and

WHEREAS, proper notice was given of a public hearing before City Council, and said hearing was held in accordance with the law.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF SPRINGFIELD, MISSOURI, as follows, that:

Section 1 – The property generally located at 1125 East Thoman Street and described in "Exhibit A," which is attached hereto and incorporated herein by this reference, is hereby rezoned from HM, Heavy Manufacturing, to R-MX1, Mixed-density Neighborhood – Low. Springfield Land Development Code Section 4.01B, 'Official Zoning Map,' is hereby amended, changed, and modified consistent with this Ordinance.

Section 2 – City Council hereby directs the City Manager, or designee, to update the City's digital zoning map to reflect this rezoning, and City Council adopts the map thereby amended as the Official Zoning Map of Springfield, Missouri, as provided for in the Springfield Land Development Code, Section 36-4.01B, 'Official Zoning Map.'

Section 3 – The Official Zoning Map herein adopted shall be maintained and archived in the same digital form in which this Council has approved its adoption.

Section 4 – This Ordinance shall be in full force and effect from and after passage.

Passed at meeting: _____

_____
Mayor

Attest: _____, City Clerk

Filed as Ordinance: _____

Approved as to form: Laura Vales, Assistant City Attorney

Approved for Council action: _____, City Manager

EXHIBIT A
LEGAL DESCRIPTION

All of Lot 20 in Thoman’s Addition

EXHIBIT B
RECORD OF PROCEEDINGS

Planning and Zoning Commission – April 9, 2026

Z-10-2026
1125 East Thoman Street
Applicant: Barrera Family Properties

Mr. Sparlin stated that this is a request to rezone approximately 0.19 acres of property from HM, Heavy Manufacturing to R-MX1, Mixed-Density Neighborhood – Low.

Commissioner Doennig opened the public hearing

Mr. John Barrera, 1125 E. Thoman and confirmed that he intends to build a duplex with rear access via the alleyway and here to answer any questions.

Commissioner Pauly asked about the elevation difference between Thoman Street and the property itself and what is the plan for potential drive access.

Mr. Barrera noted that there will be rear access (driveway).

Commissioner Doennig closed the public hearing.

COMMISSION ACTION:
Planning and Zoning Commissioner Knuckles moved to approve Z-10-2026. Commissioner Jacquez seconded the motion. The item **Passed** with the following votes: Ayes: Commissioner Doennig, Commissioner Hunton, Commissioner Pauly, Commissioner McClure, Commissioner Knuckles, Commissioner Jacquez, Commissioner Souliere, and Commissioner Scott. Nays: None. Absent: Commissioner Gunther. Abstain: None.



Bob Hosmer, AICP
Planning Manager

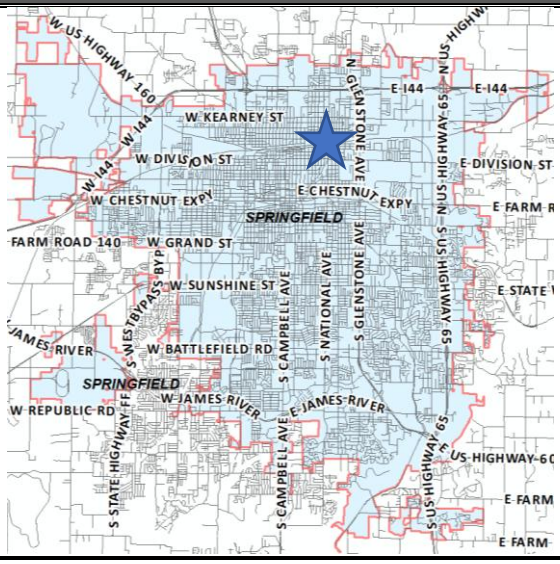
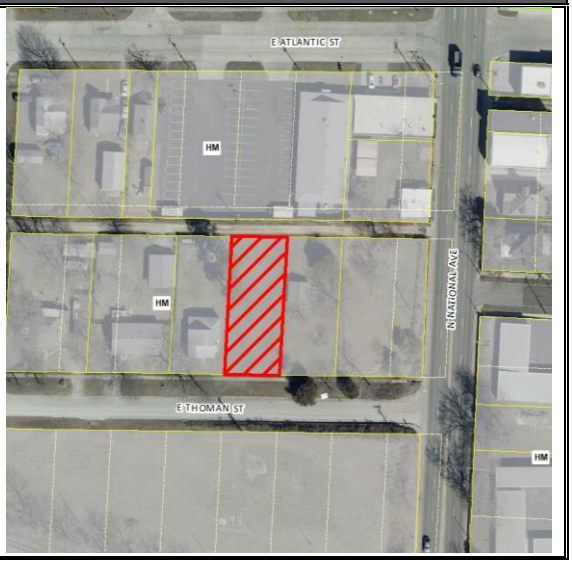
DEVELOPMENT REVIEW STAFF REPORT

PROJECT INFORMATION:

Case Number:	Z-10-2026
Location:	1125 East Thoman Street
Total Acres:	0.19 acres
Applicant:	Barrera Family Properties LLC
Existing Land Use:	Undeveloped land
Neighborhood Meeting:	February 19, 2026
Planning and Zoning Commission:	April 9, 2026
City Council:	May 4, 2026
Public Notification:	Mail, posted property, and legal in the Springfield News-Leader
Staff:	Michael Sparlin, Senior Planner
Staff recommendation:	Staff recommends approval
Proposed motion:	I move to recommend approval of rezoning case Z-10-2026 (All commission motions are made in the affirmative).
Required Vote:	A majority of those present (5 members are a quorum).

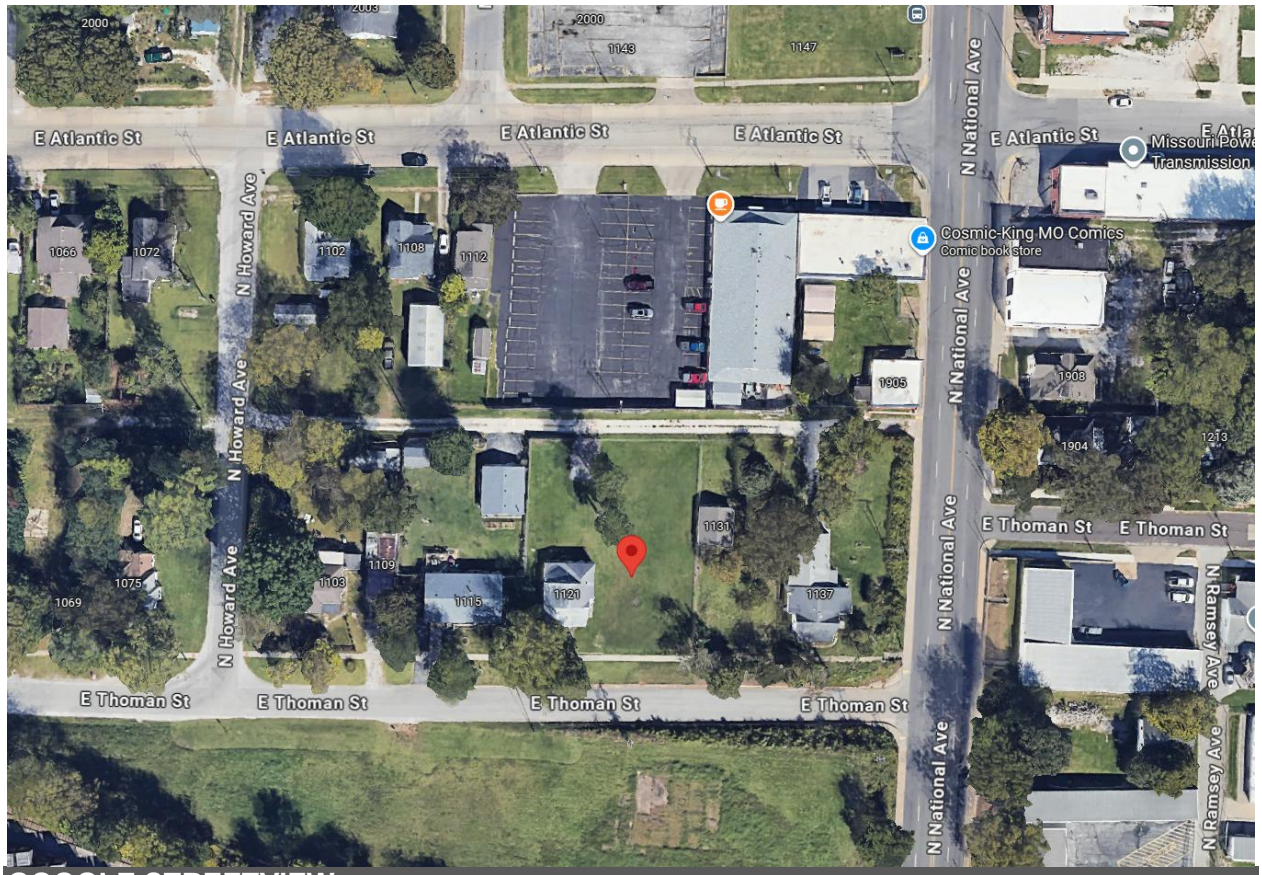
PROJECT SUMMARY:

Request to rezone approximately 0.19 acres of property generally located at 1125 East Thoman Street from HM, Heavy Manufacturing to R-MX1, Mixed-Density Neighborhood – Low.

LOCATION MAP	ZONING MAP
	

DEVELOPMENT REVIEW STAFF REPORT

GOOGLE AERIAL OF LANDMARKS, BUSINESSES, AND ATTRACTIONS:



GOOGLE STREETVIEW:



CITY OF Springfield

DEVELOPMENT REVIEW STAFF REPORT

PROPERTY HISTORY:

The subject property was zoned HM in the 1995 city-wide remapping. The property was a direct translation from the old HM – Heavy Manufacuting District to new Land Development Code HM – Heavy Manufacuting District on April 7, 2026.

PLANNING AND ZONING COMMISSION AUTHORITY:

Sec. 36-2.05. – Rezoning

B. Review Criteria. Review, recommendations, and decisions for a proposed rezoning shall be based on evaluating and balancing the following criteria:

1. The proposed district is consistent with the goals and objectives of the comprehensive plan and any other plan, policy or guidance adopted pursuant to that plan.
2. Whether the area has changed since the existing zoning has been in place, or it is changing to a degree that it advances is in the public interest to rezone the property.
3. The proposed district will enable development in character with existing or anticipated development in the area considering:
   a. The design of streets, civic spaces, and other open space;
   b. The mix, density, or intensity of potential uses;
   c. The pattern, scale, and format of buildings and sites enabled by district standards;
   d. The compatibility with and transition to other districts, development, or uses in the vicinity; and
   e. Any reasonably anticipated negative impacts can be mitigated by applicable development standards or planning, design, and engineering practices applicable to the site.
   f. Any rezoning application conditioned on a zoning site plan may be evaluated based on that plan; otherwise, the entirety of what may be enabled by the zoning district shall be considered with the above criteria.
4. The City or other agencies can provide services, facilities, and infrastructure that may be necessary for anticipated uses in the proposed district, including capacity of the surrounding street network and access on specific street frontages.
5. Reasonable viable economic use of the subject property will be precluded if the proposed rezoning is denied.
6. The recommendations of any professional staff or advisory review bodies, and any additional testimony or evidence on the record.
7. Any relevant information submitted or presented at the public hearing.

ZONING ORDINANCE REQUIREMENTS:

CODE ITEM	REQUIREMENTS FOR R-MX1 DISTRICT
Minimum Lot area	3,000 sq. ft. / unit
Maximum Lot area	12,000 sq. ft.
Minimum Lot Width	50 feet
Maximum Lot width	n/a
Minimum Open Space	20%

Maximum Height	35 feet, 2.5 stories
Minimum Setbacks	Front – 25 feet Side – 5 feet Rear – 10 feet
Frontage Type	The default frontage type is the "Neighborhood frontage" according to Table 5-3.
Front Entry Features	A porch, stoop or entry court is required according to Table 5-4
Building Design Standards	Maximum wall plane without massing variation – 250 s.f. or 25 linear feet Maximum wall plane without modulation – 250 s.f. or 25 linear feet Transparency - 20% on all street-facing facades; 10% on all non-street-facing facades Materials – Primary – at least 55%, Secondary – 20-30% (limit 2), Accent – 5-15%, Limit of 5 materials total.

COMPATIBILITY WITH COMPREHENSIVE PLAN:

PLACETYPE:

The *Comprehensive Plan's Land Use & Development* chapter identifies the subject property as the Business Flex placetype.

This placetype includes areas with an eclectic mix of light industrial, office, storage, warehouse, and distribution centers, complemented by the occasional commercial sales and services. Business Flex areas are located on secondary roadways, where good street connectivity and access to major roadways and distribution routes can be easily accessed. Located in expanded areas adjacent to higher, more intense industrial uses and city corridors, Business Flex provide support services, sales, service, and supply of goods to consumers and contractors, where high visibility road frontage is not a priority. Planning for this placetype focuses on ensuring Business Flex operations have sufficient land available to expand and grow, while not dominating corridors where high visibility, retail frontage is prioritized.

Placetypes are not as rigid as zoning districts and allow for supporting or ancillary uses which complement and enhance its sense of place; as an extension of this, a single placetype is not likely to be defined by a single zoning district or even a collection of closely related zoning districts (e.g. industrial districts), but rather a mix of tangentially related zoning districts which together form a cohesive sense of place when developed with similar character, scale, and form.

Primary Land Uses:

- Maker spaces, artisan, and innovation spaces
- Personal and outdoor storage
- Light industry
- Warehousing and distribution facilities

Supporting Land Uses:

- Parks, greenways and open space
- Sports complexes and recreational facilities
- Urban agriculture
- Office, hospitality, retail sales and service
- Universities, colleges, and vocational schools
- Government, healthcare and institutional facilities
- Airport, railroad, and freight facilities

Characteristics

Transportation and Infrastructure

- Access management is improved for vehicles through curb cut consolidation and cross-access between commercial properties, reducing traffic conflicts and backups.
- Electric vehicle charging facilities are integrated and incentivized into development plans.
- As technology, trends, and funds permit, utilities are buried or consolidated along rear property lines, reducing conflicts with street trees, pedestrian infrastructure, and viewsheds.
- Best management practices for stormwater management are required in development projects and within public rights-of-way, such as permeable paving, rain gardens, green roofs, native landscaping, and other low impact design strategies.
- Pedestrian and bicycle infrastructure, and micro-mobility are integrated.

Urban Design- Building and Site Typology

- Perimeter landscaping screens surface parking lots that accommodate the high number of employees, vehicles, delivery, and large truck traffic.
- Outside storage, auto oriented, or light industrial uses are screened from view from the right-of-way.
- Use of quality materials, construction methods, workmanship, and design should be incorporated into new development and redevelopment.
- A mix of building heights is supported through structured site and building design strategies to soften the impact on adjacent lower intensity residential development.
- Lighting, landscaping, signage, mail, and delivery accommodations should also be proactively incorporated into the site design.
- Design should discourage the placement of mechanical equipment along major roadways or should be completely screened, along with trash receptacles, and recycling bins.

Transitions

- Appropriate site design, parking access, massing, building orientation, screening, buffering, and separation standards are adopted and used to mitigate adjacent incompatible uses.
- Commercial and smaller office uses within the placetype are directed to its perimeter to provide a gradual transition into surrounding placetypes.

PLACETYPE ASSIGNMENTS AND TRANSITIONS

Assignments

Placetype designations are based on a variety of factors but largely represent desired future land use patterns. Placetype assignments also reflect existing development patterns, take into consideration historical value, as well as the impact and relationship to the built and natural environment. The following conditions and land characteristics should be considered when changes or amendments are proposed to and within a placetype.

Primary use - The predominate historical use and development pattern of a geographic area that exists within the built and natural environment.

Proximity – The location with respect to significant landmarks and geographic places

Edges and boundaries – Natural boundaries and geographic edges, including major roadways, railways, waterways, parks, and geographical land features.

Roadway classifications – Functional use and type of roadways on the edges or at crossroads

Regulatory – Existing zoning, permitted and conditional uses, historic designations, and redevelopment plans.

Forecasts – Anticipated major land use shifts, changes in use, or trends.

Other Considerations –

- Decreasing or increasing market demand for commercial or housing in non-traditional districts or corridors
- Greater focus on integrating diverse uses at the edges and areas of transition.
- Community expectations
- More walkable, livable integrated neighborhoods and districts
- Documented increases in nuisances, code violations, disinvestment, and other related trends
- More diversity in housing types, affordability, and availability
- Increased beautification, aesthetics, and identity
- Greater focus on preservation, adaptation, and reuse of existing homes and structures

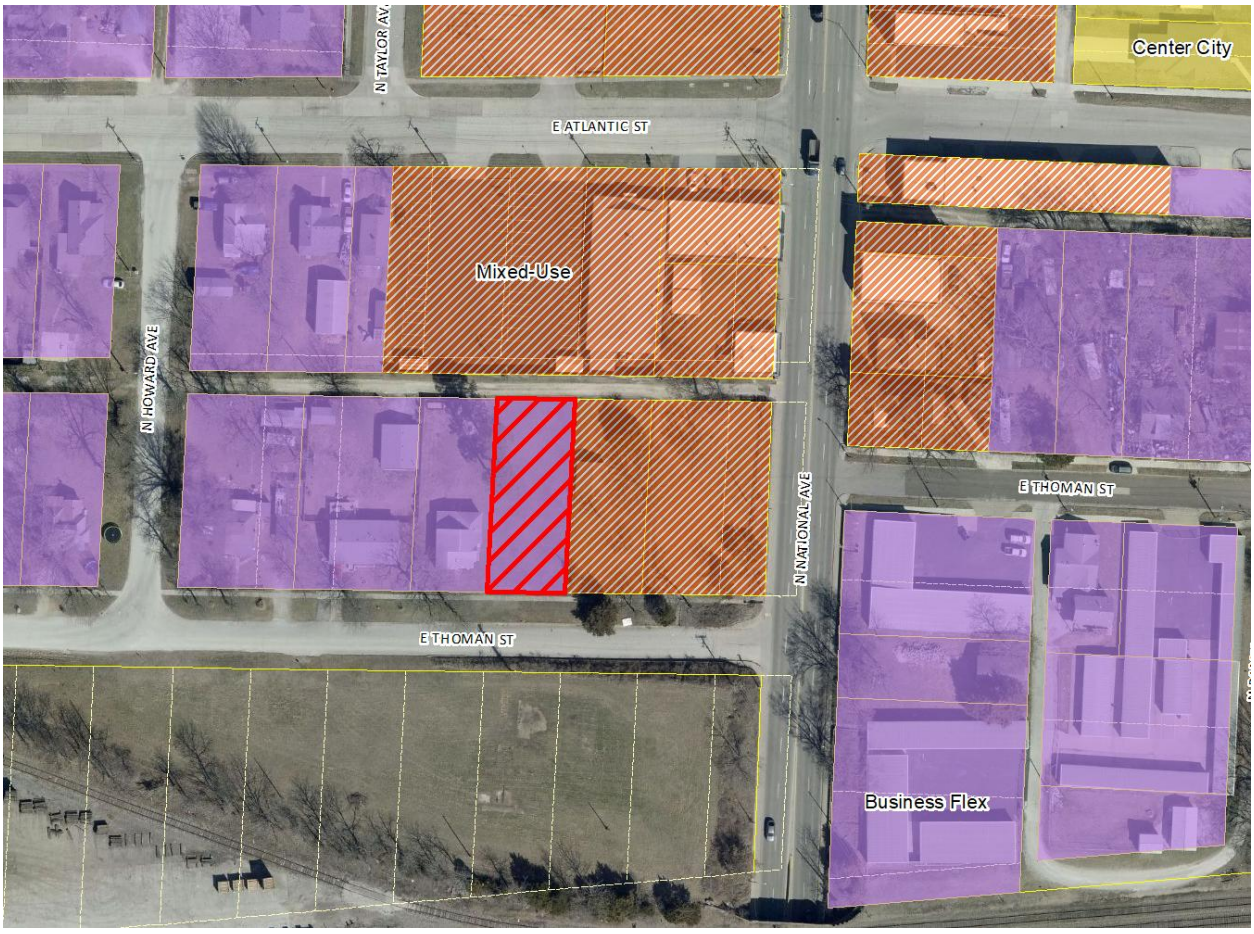
Transitions

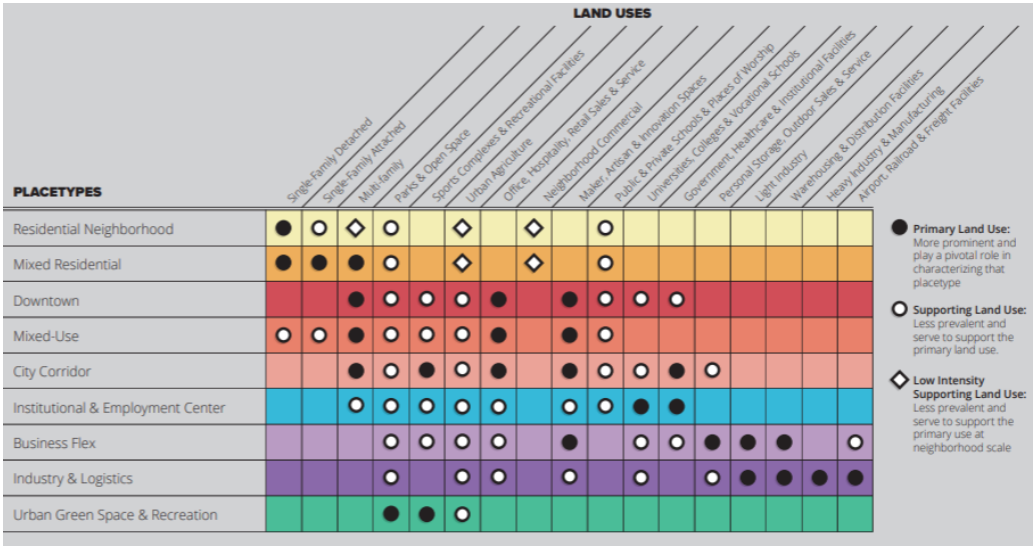
In every city, dissimilar land uses converge at some point. Transitioning within, between, and along the edges is one of the most critical elements to align as Placetypes are implemented, changed, or amended. Typically, a one-to-two-block transition zone on either side of both placetype boundaries would be a practical zone to complete the transition from one placetype to another.

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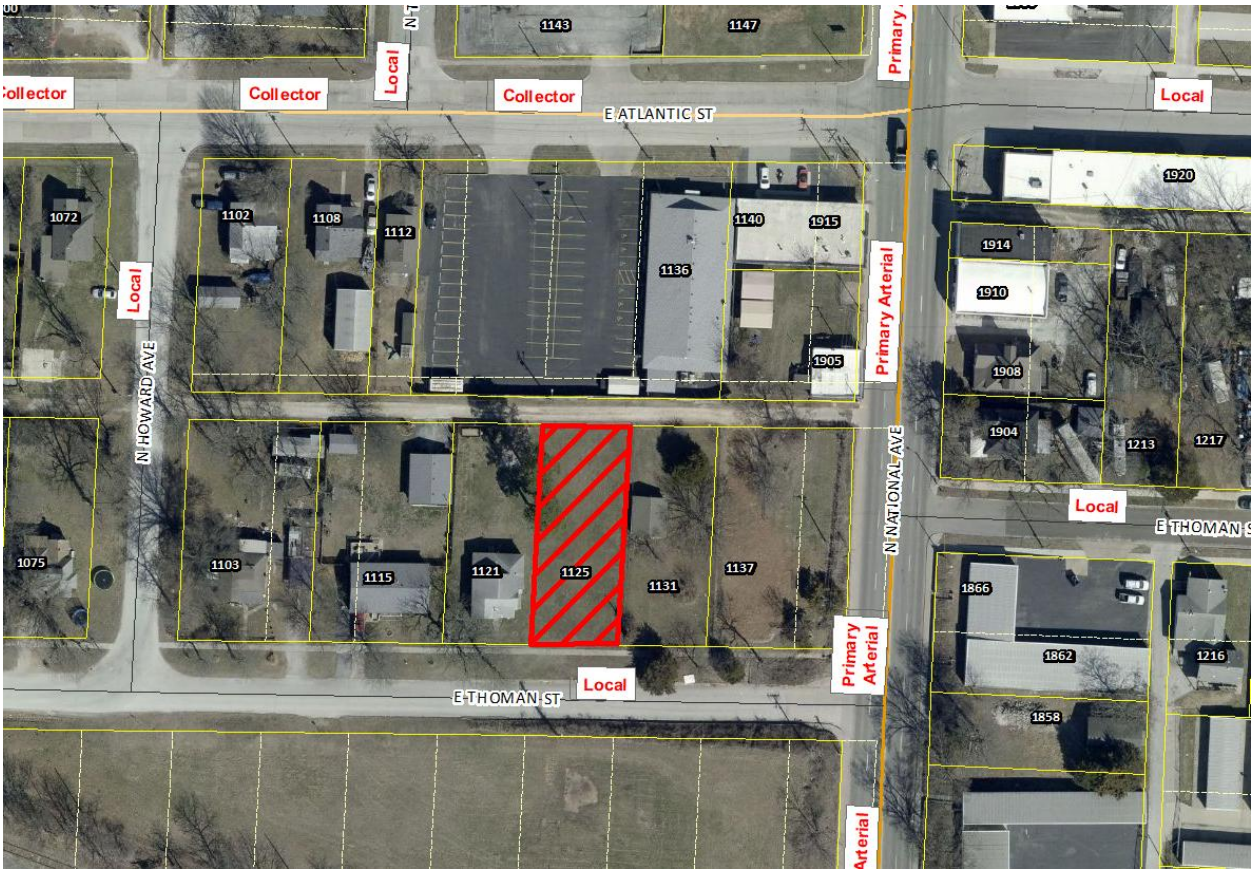
FUTURE PLACETYPE MAP:





DEVELOPMENT REVIEW STAFF REPORT

MAJOR THOROUGHFARE MAP:



SURROUNDING ZONING, LAND USES AND PLACETYPES:

	NORTH	SOUTH	EAST	WEST
ZONING	HM	HM	HM	HM
LAND USE	Parking lot	Undeveloped land	Single-family residential	Single-family residential
PLACETYPES	Mixed-use	Business flex	Mixed-use	Business flex

DEPARTMENT OF BUILDING DEVELOPMENT SERVICES:

No comments.

CITY UTILITIES:

No issues

DEPARTMENT OF ENVIRONMENTAL SERVICES WASTEWATER MANAGEMENT DIVISION:

No objections to the rezoning.

FIRE DEPARTMENT:

No objections to rezoning.

DEPARTMENT OF PUBLIC WORKS TRAFFIC ENGINEERING DIVISION:

	Street Name	Street Classification	Jurisdiction	ROW from Centerline (ft.)		Traffic Count (vehicles per day)	On-Street Parking	Sidewalk	
				Required	Existing			Required	Existing
Street 1	E Thoman Street	Local	City	25	35	NA	Yes	Yes	Yes

ACCESS - All new or modified driveway approaches shall comply with current City of Springfield standards for the street classification.

TRAILS, BUS STOPS, AND ADDITIONAL INFORMATION - There are no Greenway Trails near these properties. There are bus stops on National near the property.

IMPROVEMENTS - No improvements are required for this rezoning. A traffic study is not required for this rezoning.

DEPARTMENT OF PUBLIC WORKS STORMWATER ENGINEERING DIVISION:

SITE DESCRIPTION & DRAINAGE PATTERN

	Drainage Basin	Fee in Lieu Flood Control	Fee in Lieu Water Quality	Stream Buffer	Sinkhole or Watershed	Floodplain/ Floodway
1125 E Thoman St	Jordan Creek North Branch	No	No	No	No	No

All chapter and section references below are to the City's Flood Control and Water Quality Protection Manual Version April 2022.

DETENTION AND DISCHARGE REQUIREMENTS
1. Property is a legal lot within a platted subdivision (Thoman's Add). Duplex is a residential site plan submission for BLDR permit. No Flood Control required.

WATER QUALITY REQUIREMENTS
N/A

FLOODPLAIN
N/A

NATURAL CHANNEL & STREAM BUFFERS
N/A

SINKHOLES & KARST FEATURES
N/A

STAFF ANALYSIS AND RECOMMENDATION:

1. The applicant is requesting to rezone approximately 0.19 acres of property generally located at 1125 East Thoman Street from HM, Heavy Manufacturing to R-MX1, Mixed-Density Neighborhood – Low. The applicant intends to build a duplex on the lot.

2. The subject property is on the edge of the Business Flex placetype and adjacent to the Mixed-Use placetype.

3. The predominate historical use and development pattern in this area is residential. This area has been zoned industrial since 1995, however the properties have not seen industrial development occur.

4. The R-MX1 district is considered a less intense district than the existing zoning of HM.

5. This application is consistent with the *Comprehensive Plan's Housing and Neighborhoods* chapter which encourages creative housing solutions to add housing diversity and support downsizing households, young professionals, and aging-in-place. The *Plan* encourages the use of "missing middle" housing types. Missing middle housing sits in the middle of the development spectrum between single-family homes and mid-rise to high-rise apartment buildings. These housing types should be integrated into Springfield's existing neighborhoods to increase housing diversity and provide a wider, more equitable range of housing choices.

6. Missing middle housing types provide opportunities for the city to increase the diversity of its housing stock through moderate increases in density, while maintaining the neighborhood character Springfield residents cherish. They range from low density duplexes to mid density multiplexes and triplexes, which can be integrated into the City's housing mix by using single-family lots to accommodate two to three units in a context-sensitive manner.

7. The Plan recommends a "stepped down" approach to be used to transition from higher density/intensity residential and non-residential uses to single-family residential homes and uses, with greater densities/intensities located on higher functioning roadways, at the periphery of the neighborhood.

8. The City and other agencies can provide services, facilities, and infrastructure that may be necessary for anticipated uses in the R-MX1 district. The capacity of the surrounding street network and access on street frontages is adequate for the proposed uses in the R-MX1 district.

9. There are few changing conditions in the area, and the predominant use is residential. This application advances the public interest by allowing residential development in an area that has residential uses.

10. A reasonably viable economic use of the subject property will not be precluded if the proposed rezoning is denied.

11. The proposed rezoning was reviewed by City departments and comments are contained in the staff report (above).

12. The applicant held a neighborhood meeting on February 19, 2025, regarding the rezoning request. A summary of the meeting is attached (Attachment 2).

13. The public notice was advertised in the News-Leader at least 15 days prior to the public hearing. The property was posted by the applicant at least 10 days prior to the public hearing. Public notice letters were sent out at least 10 days prior to the public hearing to all property owners within 185 feet.

STAFF RECOMMENDATION:

1. Staff recommends approval based on the proposal's general conformance to the Comprehensive Plan's Business Flex placetype and on the finding of facts above.

PLANNING AND ZONING OPTIONS:

The planning and zoning commission shall make one of the following recommendations in connection with each proposed change in zoning district classification of this article:

1. Recommend against the proposed change in the zoning district classification.
2. Recommend a change in the zoning district classification.
3. Recommend a change in the zoning district classification together with recommendations which, in the judgment of the planning and zoning commission, will protect adjacent property and ensure that the proposed amendment is consistent with the purpose and intent of this article.

AFFIDAVIT OF NEIGHBORHOOD NOTIFICATION AND MEETING SUMMARY

1. Request change to zoning from: HM (existing zoning) to R-MX1 (proposed zoning)
2. Meeting Date & Time: 19 FEB 26 4-630 PM
3. Meeting Location: 1559 N National Ave
4. Number of invitations that were sent: 130
5. How the mailing list was generated: City of Springfield
6. Number of neighbors in attendance (attach a sign-in sheet): 0
7. List the verbal comments and how you plan to address any issues:
(City Council does not expect all the issues to be resolved to the neighborhood's satisfaction; however, the developer must explain why the issues cannot be resolved).

n/a

8. List or attach the written comments and how you plan to address any issues:

n/a

I, John Barrera (*print name*), attest that the neighborhood meeting was held on 02/19/2026 (*month/date/year*), and is at least twenty-one (21) days prior to the Planning and Zoning Commission public hearing and in accordance with the attached "Neighborhood Notification and Meeting Process."

Signature of person completing affidavit

John Barrera

Printed name of person completing affidavit

1125 E Thomas HM to R-MX1

Sign In Sheet

Name	Address	Phone	Email

No Attendees →

CITY OF Springfield

EXPLANATION TO COUNCIL BILL 2026-105 (ADIB-YAZDI)

FILED: 05/08/2026

ORIGINATING DEPARTMENT: Planning and Development

TITLE: A special ordinance approving the mapping of the East West Arterial, generally located between US Highway 65 and Riverbluff Boulevard to Kissick Avenue, pursuant to Section 11.11 of the City Charter of the City of Springfield, Missouri, in order to preserve right-of-way for future public street improvements for an additional five years.

PURPOSE: To adopt an ordinance to approve the mapping of the East West Arterial for five (5) years between US Highway 65/ Riverbluff Boulevard to Kissick Avenue pursuant to Section 11.11 of the City Charter of the City of Springfield, Missouri. (Planning and Zoning Commission and Staff recommend approval.)

BACKGROUND INFORMATION:

EAST WEST ARTERIAL MAPPING

1. The general location of the East West Arterial was first identified as a future primary arterial in the City of Springfield-Greene County Comprehensive Plan Transportation Plan Element, which was adopted on June 11, 2001. On November 14, 2022, the City adopted a new Comprehensive Plan, Forward SGF. The new Comprehensive Plan identified the general location of the East West Arterial on the Major Thoroughfare Plan in the Transportation and Mobility Chapter 9.

2. The East West Arterial is generally located between US Highway 65/Riverbluff Boulevard on the east and Kissick Avenue/Farm Road 169 on the west.

3. The City Charter (section 11.11) gives the Planning and Zoning Commission the ability to make survey for the exact location of new streets that have previously been included in the Major Throughfare Plan. When the Commission certifies to the City Council that they have made such a survey; the City may be ordinance map the subject street on the official street map.

4. On June 4, 2015, the City Planning and Zoning Commission approved the preparation of preliminary designs for the more detailed alignment of the East West Arterial.

5. The Planning and Zoning Commission adopted the East West Arterial on June 9, 2016, with a five-year limitation and with the clarification that the mapping is only for those properties within the City limits.

6. On July 11, 2016, City Council approved the mapping of the East West Arterial with a five-year limitation and with the clarification that the mapping is only for those properties within the City limits.

7. Planning and Zoning Commission held a public hearing on March 11, 2021, and approved the extension for 5 years. On June 14, 2021, City Council held a public hearing and approved the extension for 5 years. This five-year extension will expire on June 14, 2026. The current five-year limitation will expire on June 14, 2026.

8. A more detailed survey and legal has been completed showing the exact alignment of the East West Arterial corridor (Attachment 1 and 2). The timing of the street will depend on the development in the area.

9. The adoption of a mapped street shall not, in and of itself, constitute or be deemed to constitute the opening or establishment of any street or the taking or acceptance of any land for street purposes.

   The City Council may provide by general ordinance that no permit shall be issued for any buildings or structures or any part thereof on any land located between the mapped lines of a street as shown on the official map.

   The public can view the exact alignment plans in the City of Springfield Public Works Department, file #2016PW0009T.

10. The public notice was advertised in the Springfield New Leader at least 15 days prior to the public hearing. Public notice letters were sent out at least 10 days prior to the public hearing to all record owners of land on or abutting the future street lines designated on the East West Arterial. Nine (9) record owners of land on or abutting the future street lines designated on the East West Arterial were notified by mail of this request representing multiple tracts of land (see attached survey).

RECOMMENDATIONS: The Planning and Zoning Commission held a public hearing on April 9, 2026, and recommended approval, by a vote of 8 to 0, to approve the East West Arterial Mapping as described in Exhibit B with a five (5) year term limit.

STAFF RECOMMENDATION: Staff recommends approval of the East West Arterial mapping.

Submitted By: Bob Hosmer, Planning Manager

Authorized for inclusion on the agenda pursuant to City Code section 2-33:

Attachments:
1. East West Arterial Mapping Extension
2. East West Arterial Mapping_exhA
3. East West Arterial Mapping_exhB
4. East West Arterial Mapping_exhC

One-rdg. _____
P. Hrngs. _____
Pgs. _____
Filed: 04-28-26

Sponsored by: Adib-Yazdi

COUNCIL BILL 2026-105 SPECIAL ORDINANCE _____

AN ORDINANCE

APPROVING the mapping of the East West Arterial, generally located between US Highway 65 and Riverbluff Boulevard to Kissick Avenue, pursuant to Section 11.11 of the City Charter of the City of Springfield, Missouri, in order to preserve right-of-way for future public street improvements for an additional five years.

_____

WHEREAS, the East West Arterial was identified as a future primary arterial in the Springfield-Greene County Comprehensive Plan, Transportation Plan Element, which was adopted June 11, 2001, and amended April 4, 2016; and

WHEREAS, the City of Springfield adopted a new comprehensive plan, “Forward SGF,” on November 14, 2022, which identifies the East West Arterial on the Major Thoroughfare Plan in the Transportation and Mobility chapter; and

WHEREAS, the Planning and Zoning Commission (“Commission”) of the City of Springfield, Missouri, had surveyed and established the exact locations for right-of-way lines of an area within the City of Springfield to be known as the East West Arterial in 2016; and

WHEREAS, the Commission had caused the location and lines of such area to be located upon a plat, attached hereto and incorporated herein by reference as “Exhibit C,” and certified said plat and location of right-of-way lines to City Council; and

WHEREAS, on July 11, 2016, City Council accepted and adopted the plat of the East West Arterial by Special Ordinance 26761, with a requirement for further review and recertification of the plat of the East West Arterial in the event construction was not implemented within five (5) years of the passage of Special Ordinance 26761; and

WHEREAS, the Commission voted to recertify the aforementioned plat and the location of right-of-way lines on March 11, 2021, and City Council again accepted and adopted the plat of the East West Arterial, this time by Special Ordinance 27509; and

WHEREAS, the Commission most recently held a public hearing on April 9, 2026, and voted to recertify the plat of the East West Arterial and the location of right-of-

way lines, with a record of proceedings attached hereto and incorporated herein by reference as “Exhibit A”; and

WHEREAS, proper notice has been given that this Ordinance, adopting the plat showing the location of and mapping the future street generally located between US Highway 65 and Riverbluff Boulevard to Kissick Avenue, would be considered on May 4, 2026, and May 18, 2026, before final passage, as required by Section 11.11 of the City Charter; and

WHEREAS, City Council has considered the plat and street locations as submitted to it and has heard discussion on said plat.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF SPRINGFIELD, MISSOURI, as follows, that:

Section 1 – The plat of the East West Arterial between US Highway 65 and Riverbluff Boulevard to Kissick Avenue, as submitted by the Commission, is hereby accepted and adopted by City Council, as more specifically shown on the legal descriptions of such right-of-way lines, and contained within the plat, which are attached hereto and incorporated herein by reference as “Exhibit B” and “Exhibit C,” respectively, and are also on file in the office of the City Clerk. The East West Arterial, as shown on said plat, is hereby mapped, as provided by Section 11.11 of the Charter of the City of Springfield, Missouri.

Section 2 – The City Clerk of the City of Springfield, Missouri, shall cause the certified copy of the plat, submitted to the City Council by the Commission, to be filed in the City Clerk’s Office, and the same shall constitute the official copy of the plat of the planned East West Arterial.

Section 3 – In the even the planned construction of the East West Arterial is not implemented within five (5) years from the date of the passage of this Ordinance, the Commission shall conduct further review of the continuing need for the mapping of said street and, if a continuing need for the East West Arterial is found, shall recertify the plats of the East West Arterial and resubmit the issue to City Council.

Section 6 – This Ordinance shall be effective immediately upon adoption.

Passed at meeting: _____

_____
Mayor

Attest: _____, City Clerk

Filed as Ordinance _____

Approved as to form: Laura Vales, Assistant City Attorney

84 Approved for Council action:  , City Manager

EXHIBIT A
RECORD OF PROCEEDINGS
Planning and Zoning Commission – April 9, 2026

East West Arterial Mapping Extension
Future East West Arterial extending from East Evans Road
Applicant: City of Springfield

Mr. Hosmer stated that this a request to approve the East West Arterial Mapping from U.S. Highway 65 and Riverbluff Boulevard to Kissick Avenue (Farm Road 169).

Commissioner Doennig opened the public hearing

Mr. Ben Peterson, 6446 South Ridge Crossing and a property owner that is adjacent to the proposed route and not necessarily against it. He expressed concern over discrepancies in the maps sent over five years, noting the proposed route appears to shift north into his residential property, despite having open farmland to the south.

Mr. Hosmer stated that it is the same survey that was conducted previously and that he would be glad to talk with Mr. Peterson for clarification.

Mr. Cory Eden, 2320 E. Southview, strongly opposed the mapping, emphasizing his property is in Greene County with an Ozark address, not Springfield city limits. He argued the road would cut through his 12-acre property, impact its value and natural features, and is a waste of taxpayer money, especially given the proximity of Evans Road. He questioned the justification for building in a floodplain and the perceived shift north of the route.

Mr. Chris Greene, 3654 E. Cherry Street, (attorney for Mr. Eden) stated that Mr. Eden's property is not within city limits and therefore the mapping, as presented, is inconsistent with the requirement that it applies only to property within Springfield's city limits. He suggested alternative routes might be cheaper and more logical.

Commissioner Knuckles asked staff to go over the mapping process with Ozarks Transportation Organization (OTO) and other groups.

Staff clarified that the mapping only affects property within the City of Springfield's jurisdiction. While the overall major thoroughfare plan (developed by Ozarks Transportation Organization and Greene County) guides regional transportation, the specific, detailed surveyed alignment being voted on is for areas within Springfield city limits. Any application to properties outside the city would require annexation.

Commissioner Doennig closed the public hearing.

Commissioners discussed the history of the arterial plan (general line since approximately 2000, detailed survey since approximately 2016) and the purpose of mapped streets (to prevent development in future right-of-way, referencing Kansas Expressway) for example.

COMMISSION ACTION:
Planning and Zoning Commissioner Knuckles moved to approve Preliminary Plat Renewal of MHC Kenworth Addition. Commissioner Jacquez seconded the motion. The item **Passed** with the following votes: Ayes: Commissioner Doennig, Commissioner Hunton, Commissioner Pauly, Commissioner McClure, Commissioner Knuckles, Commissioner Jacquez, Commissioner Souliere, and Commissioner Scott. Nays: None. Absent: Commissioner Gunther. Abstain: None.



Bob Hosmer, AICP
Planning Manager

EXHIBIT B
LEGAL DESCRIPTION
EAST WEST ARTERIAL MAPPING

The description of the surveyed centerline of East West Arterial (also known as Riverbluff Boulevard), from Station 131+07.28 (a point west of Kissick Avenue) to Station 189+41.59 (the intersection of Southwood Avenue) as shown on the:

Mapping Plan
for
East West Arterial
City of Springfield, Greene County, Missouri

on file with the City of Springfield Public Works Department, file #2016PW0009T and described as follows:

COMMENCING at a found iron pin at the Northeast corner of the Southwest Quarter of Section 29, Township 28 North, Range 21 West, Greene County, Missouri; thence North 86 Degrees 54 Minutes 37 Seconds West along the North line of said Quarter, a distance of 496.80 feet to a point in the same; thence departing said North line South 03 Degrees 05 Minutes 23 Seconds West, a distance of 883.49 feet to centerline station 131+07.28 for a POINT OF BEGINNING of centerline; thence South 88 Degrees 24 Minutes 23 Seconds East, a distance of 617.52 feet to centerline P.C. station 137+24.80; thence Southeastwardly along a curve to the right having a Radius of 1,050.00 feet, an Included Angle of 20 Degrees 26 Minutes 47 Seconds, a distance of 374.71 feet to centerline P.T. station 140+99.51; thence South 67 Degrees 57 Minutes 35 Seconds East, a distance of 883.75 feet to centerline P.C. station 149+83.26; thence Southeastwardly on a curve to the left having a Radius of 1,050.00 feet, an Included Angle of 50 Degrees 59 Minutes 02 Seconds, a distance of 934.32 feet to centerline P.T. station 159+17.58; thence North 61 Degrees 03 Minutes 23 Seconds East, a distance of 1,570.79 feet to centerline P.C. station 174+88.37; thence Northeastwardly on a curve to the right having a Radius of 1,900.00 feet, an Included Angle of 26 Degrees 47 Minutes 08 Seconds, a distance of 888.24 feet to centerline P.T. station 183+76.61; thence North 87 Degrees 50 Minutes 30 Seconds East, a distance of 564.98 feet to the intersection of the centerline of Southwood Avenue at station 189+41.59 and the POINT OF TERMINATION.

Right of way widths, slope easements, and other appurtenances are as shown on plan #2016PW0009T which is made a part of this description by reference

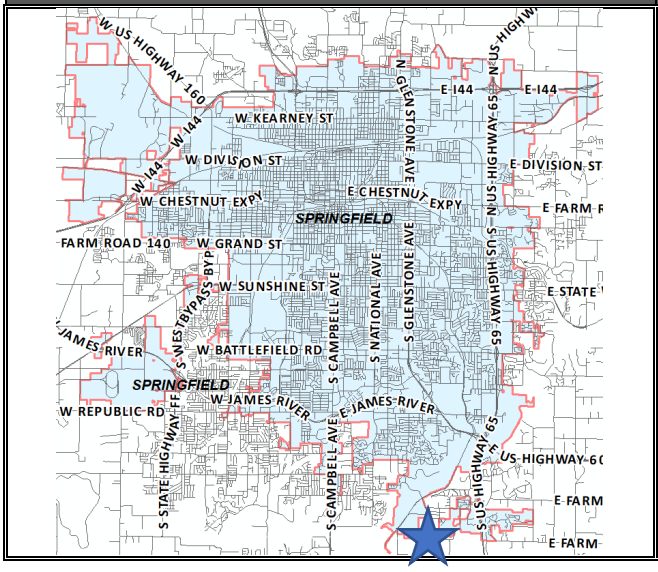
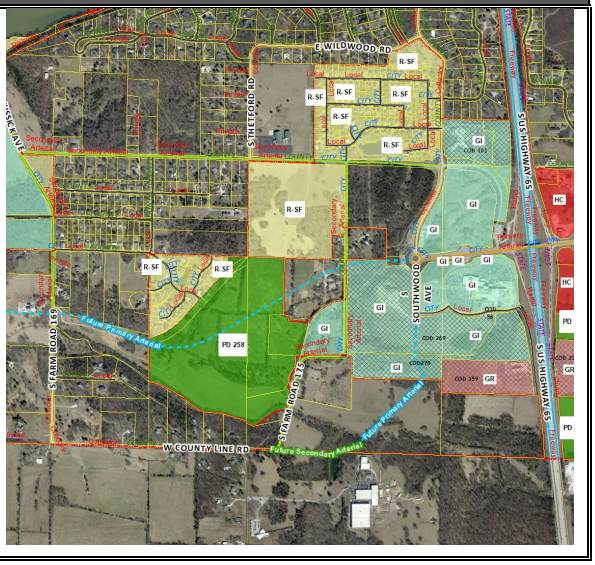
DEVELOPMENT REVIEW STAFF REPORT

PROJECT INFORMATION

Case Number:	East West Arterial Mapping
Location:	US Highway 65 and Riverbluff Boulevard to Kissck Avenue (Farm Road 169)
Applicant:	City of Springfield
Existing Land Use:	Hospital, Clinic, Single-Family Residential, Agricultural and Undeveloped Vacant Land.
Planning and Zoning Commission:	April 9, 2026
City Council:	May 4, 2026
Public Notification:	Mail, and legal in Springfield News-Leader
Staff:	Bob Hosmer, Planning Manager
Staff recommendation:	Staff recommends approval
Proposed motion:	I move to recommend approval of the East West Arterial Mapping as submitted in the Staff Report (All commission motions are made in the affirmative).
Required Vote:	A majority of those present (5 members are a quorum).

PROJECT SUMMARY:

The City of Springfield proposes to map the alignment of the East West Arterial located between US Highway 65 and Riverbluff Boulevard to Kissick Avenue or Farm Road 169. The City Council may provide by general ordinance that no permit shall be issued in the City for any buildings or structures or any part thereof on any land located between the mapped lines of a street as shown on the official map.

LOCATION MAP	MAP
	

CITY OF Springfield

DEVELOPMENT REVIEW STAFF REPORT

GOOGLE AERIAL:



DEVELOPMENT REVIEW STAFF REPORT

PROPERTY HISTORY:

The initial alignment of the East West Arterial was established in 2001 when the City of Springfield-Greene County Comprehensive Plan Transportation Plan Element was adopted by City Council.

On June 4, 2015, the City Planning and Zoning Commission approved the preparation of preliminary designs for the detailed alignment of the East West Arterial.

Planning and Zoning Commission held a public hearing on April 14, 2016, and approved the East West Arterial Mapping.

On May 2, 2016, the City Council remanded the East West Arterial back to the Commission and recommended that the Commission place a five-year time limit on the mapping of the East West Arterial and to clarify that the mapping is only for properties located within the City limits of the City of Springfield, Missouri.

On June 9, 2016, the Commission approved the mapping of the East West Arterial with a five-year limitation and with the clarification that the mapping is only for those properties within the City limits.

On July 11, 2016, City Council approved the mapping of the East West Arterial with a five-year limitation and with the clarification that the mapping is only for those properties within the City limits.

Planning and Zoning Commission held a public hearing on March 11, 2021, and approved the extension for 5 years. On June 14, 2021, City Council held a public hearing and approved the extension for 5 years. This five-year extension will expire on June 14, 2026.

PLANNING AND ZONING COMMISSION AUTHORITY:

Section 11.7. Legal status of master plan.

(1) *Master plan to provide general guidelines.* The master plan shall be prepared and maintained as a general guide for the orderly and efficient development and redevelopment of the City of Springfield. The master plan shall be kept current through review not less than every five years. When required by this Charter or otherwise deemed necessary, such review shall include proposed revisions or alterations in the master plan and public hearings thereon.

(2) *Regulations to generally conform to master plan.* All rezoning of land, subdivision plats, development proposals, and the zoning ordinance, subdivision ordinance and the zoning map should generally conform with the guidelines set forth in the master plan and should be reviewed for consistency with the master plan; provided, however, inconsistencies with the master plan shall not constitute cause to invalidate any such matter. The master plan shall not have the effect of a regulatory ordinance.

(3) *Master plan to guide public improvements.* The master plan shall provide guidelines for the location of public streets, parks and other public ways, grounds and spaces, public buildings and structures, facilities of public or private utilities, and the acquisition of real property by the city for public use. To that end the planning and zoning commission shall review the following:

- (a) All proposals to construct or extend public streets.
- (b) All proposals to improve land as a park.
- (c) All proposals to lay out or improve other public ways, grounds or spaces.

(d) All proposals to construct public buildings and structures.

(e) All proposals to lay out and construct facilities of public utilities, whether publicly or privately owned.

(f) All proposals to acquire real property for public purposes.

In reviewing and approving all such proposals, the function of the planning and zoning commission shall be to determine whether they are generally consistent with the master plan of the city. No such proposals shall be constructed or authorized until the location, extent and character thereof has been submitted and approved by the planning and zoning commission.

In case of disapproval, the commission shall communicate its reasons to the city council, and the city council, by vote of not less than two-thirds of its entire membership, may overrule the disapproval and, upon the overruling, the city council or the appropriate board or officer may proceed, except that if the proposal is by an agency other than an agency of the city and the authorization or financing does not fall within the province of the city council, then the submission to the planning commission shall be by the agency having jurisdiction, and the planning commission's disapproval may be overruled by that agency by a vote of not less than two-thirds of its entire membership. The acceptance, widening, removal, extension, relocation, narrowing, vacation, abandonment, change of use, acquisition of land, sale or lease of any street or other public facility is subject to similar submission and approval, and the failure to approve may be similarly overruled.

In the event the commission shall fail to act within thirty days after the date of official submission of a proposal (which date shall be the date that the matter is placed upon the agenda of the commission) to the commission, then the proposal shall be deemed to have been approved by the commission, unless a longer period for review by the commission shall have been authorized by the council or by the public officials submitting the proposal. In any case in which the commission finds that it is not reasonably able to complete its review of a proposal within thirty days, it may extend the time for such review for not more than thirty days.

Section 11.11. – Lines of mapped streets

After the city council shall have adopted a major thoroughfare plan of the territory of the City or of any section thereof, the planning and zoning commission shall have the power to make or cause to be made, from time to time, surveys for the exact location of the lines of new, extended, or widened streets in any portion of such planned territory, and to make and certify to the council plats of the areas thus surveyed, on which are indicated the location of the lines recommended by the commission as the planned or mapped lines of future streets, street extensions, or street widenings, together with the commission's estimate of the time period within which the land shown on the plat or street locations should be acquired for street purposes. The council may by ordinance adopt any such plat, in accordance with the procedure prescribed in Section 2.12 of this Charter; provided, that notice of the time and place when and where it will be considered for final passage shall be sent by mail to the record owners of land on or abutting which the future street lines designated on the plat are located. Any modification of such plat shall before passage be submitted to the planning and zoning commission and either approved by it or, if disapproved, be approved by a favorable vote of the council. The adoption of a plat shall not, in and of itself, constitute or be deemed to constitute the opening or establishment of any street or the taking or acceptance of any land for street purposes.

Approved by vote of the people April 1, 1980.

COMPATIBILITY WITH COMPREHENSIVE PLAN:

The City of Springfield adopted the Forward SGF Comprehensive Plan on November 14, 2022.

The *Forward SGF Comprehensive Plan* establishes the long-term vision for the City and its growth area. This vision is supported by a series of goals and related strategies which will work collectively to achieve measurable change in the Springfield community. In the end, all components of the Plan are driven by one unifying guiding principle: improve quality of place.

DEVELOPMENT REVIEW STAFF REPORT

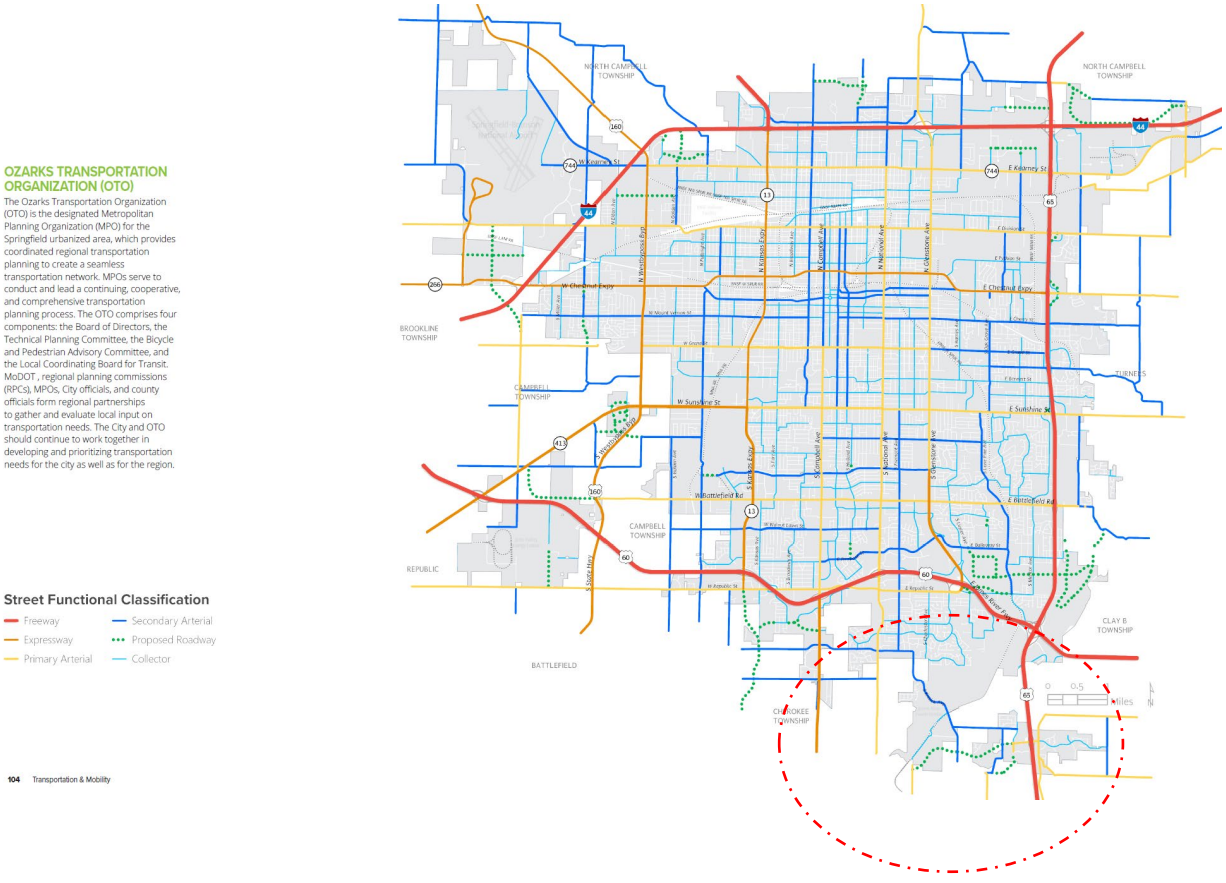
The following chapter presents the Plan's organization, the *Forward SGF Vision*, and the Plan's themes that are interwoven across chapters.

MAJOR THOROUGHFARE PLAN

The Major Thoroughfare Plan provides an overall framework for making decisions on thoroughfare improvements and extensions, identifies approximate locations for future major transportation corridors, and serves as a general guide for securing street rights-of-way. The City coordinates amendments to the Major Thoroughfare Plan with the Ozarks Transportation Organization (OTO), which is the designated Metropolitan Planning Organization (MPO) for the Springfield urbanized area.

The Major Thoroughfare Plan should be reviewed at least every five years with amendments adopted by OTO and the City. Existing and Future Streets identified in the Major Thoroughfare Plan are assigned to the City's Functional Classification System based on the degree to which they are projected to provide mobility to through traffic and access to adjacent land. Specifications for the design and construction are defined by the Design Guide for Public Improvements adopted by the City of Springfield. Collectively, the Major Thoroughfare Plan, Functional Classification System, and the Design Guide for Public Improvements should be reviewed, updated, and codified as a key implementation component of the Comprehensive Plan; however, the Design Guide should be updated to reflect the Street Type overlay recommended by Forward SGF.

MAJOR THOROUGHFARE MAP:


OZARKS TRANSPORTATION ORGANIZATION (OTO)
The Ozarks Transportation Organization (OTO) is the designated Metropolitan Planning Organization (MPO) for the Springfield urbanized area, which provides coordinated regional transportation planning to create a seamless transportation network. MPOs serve to conduct and lead a continuing, cooperative, and comprehensive transportation planning process. The OTO comprises four components: the Board of Directors, the Technical Planning Committee, the Bicycle and Pedestrian Advisory Committee, and the Local Coordinating Board for Transit. MoDOT, regional planning commissions (RPCs), MPOs, City officials, and county officials form regional partnerships to gather and evaluate local input on transportation needs. The City and OTO should continue to work together in developing and prioritizing transportation needs for the city as well as for the region.
Street Functional Classification
Freeway
Expressway
Primary Arterial
Secondary Arterial
Proposed Roadway
Collector
104 Transportation & Mobility
NORTH CAMPBELL TOWNSHIP
BROOKLINE TOWNSHIP
CAMPBELL TOWNSHIP
REPUBLIC
BATTLEFIELD
CLAY B TOWNSHIP
CHEROKEE TOWNSHIP
TURNER
E Kearney St
W Chestnut Expy
E Chestnut Expy
W Sunshine St
E Sunshine St
E Battlefield Rd
W Republic St
E Republic St
N Kansas Expy
N Glenstone Ave
S Glenstone Ave
S Kansas Expy
S Campbell Ave
N Campbell Ave
N National Ave
S National Ave
S Fremont Ave
S Jefferson Ave
S Eastgate Ave
S Fort Harrison Ave
S Scenic Ave
S Lone Pine Ave
S Delaware Ave
S Boonville Ave
S Main Ave
S Robberson Ave
S Broadway Ave
S Grant Ave
S Pickwick Ave
S Kimbrough Ave
S Ingram Mill Rd
S Farm Rd 125
S Farm Rd 123
S Farm Rd 127
S Farm Rd 129
S Farm Rd 131
S Farm Rd 133
S Farm Rd 135
S Farm Rd 137
S Farm Rd 139
S Farm Rd 141
S Farm Rd 143
S Farm Rd 145
S Farm Rd

DEVELOPMENT REVIEW STAFF REPORT

STAFF ANALYSIS AND RECOMMENDATION:

1. The general location of the East West Arterial was first identified as a future primary arterial in the City of Springfield-Greene County Comprehensive Plan Transportation Plan Element which was adopted on June 11, 2001. On November 14, 2022, the City adopted a new Comprehensive Plan, Forward SGF. The new Comprehensive Plan identified the general location of the East West Arterial on the Major Thoroughfare Plan in the Transportation and Mobility Chapter 9.

2. The East West Arterial is generally located between US Highway 65/Riverbluff Boulevard on the east and Kissick Avenue/Farm Road 169 on the west.

3. The City Charter (section 11.11) gives the Planning and Zoning Commission the ability to make survey for the exact location of new streets that have been previously included in the Major Throughfare Plan. When the Commission certifies to the City Council that they have made such a survey; the City may be ordinance map the subject street on the official street map.

4. On June 4, 2015, the City Planning and Zoning Commission approved the preparation of preliminary designs for the alignment of the East West Arterial.

5. The Planning and Zoning Commission adopted the East West Arterial on June 9, 2016, with a five-year limitation and with the clarification that the mapping is only for those properties within the City limits.

6. On July 11, 2016, City Council approved the mapping of the East West Arterial with a five-year limitation and with the clarification that the mapping is only for those properties within the City limits.

7. Planning and Zoning Commission held a public hearing on March 11, 2021, and approved the extension for 5 years. On June 14, 2021, City Council held a public hearing and approved the extension for 5 years. This five-year extension will expire on June 14, 2026. The current five-year limitation will expire on June 14, 2026.

8. A more detailed survey and legal has been completed showing the exact alignment of the East West Arterial corridor (Attachment 1 and 2). The timing of the street will depend on the development in the area.

9. The adoption of a mapped street shall not, in and of itself, constitute or be deemed to constitute the opening or establishment of any street or the taking or acceptance of any land for street purposes.

   The City Council may provide by general ordinance that no permit shall be issued for any buildings or structures or any part thereof on any land located between the mapped lines of a street as shown on the official map.

   The public can view the exact alignment plans in the City of Springfield Public Works Department, file #2016PW0009T.

10. The public notice was advertised in the Springfield New Leader at least 15 days prior to the public hearing. Public notice letters were sent out at least 10 days prior to the public hearing to all

record owners of land on or abutting the future street lines designated on the East West Arterial. Nine (9) record owners of land on or abutting the future street lines designated on the East West Arterial were notified by mail of this request representing multiple tracts of land (see attached survey).

STAFF RECOMMENDATION:

1. Staff recommends approval based on the proposal's general conformance to the Comprehensive Plan.

PLANNING AND ZONING OPTIONS:

The planning and zoning commission shall make one of the following recommendations in connection with the proposal:

1. Recommend that the proposal is generally inconsistent with the Comprehensive Plan of the city and communicate the reasons to the city council; or
2. Recommend that the proposal is generally consistent with the Comprehensive Plan of the city.

LEGAL DESCRIPTION
EAST WEST ARTERIAL MAPPING

The description of the surveyed centerline of East West Arterial (also known as Riverbluff Boulevard), from Station 131+07.28 (a point west of Kissick Avenue) to Station 189+41.59 (the intersection of Southwood Avenue) as shown on the:

Mapping Plan
for
East West Arterial
City of Springfield, Greene County, Missouri

on file with the City of Springfield Public Works Department, file #2016PW0009T and described as follows:

COMMENCING at a found iron pin at the Northeast corner of the Southwest Quarter of Section 29, Township 28 North, Range 21 West, Greene County, Missouri; thence North 86 Degrees 54 Minutes 37 Seconds West along the North line of said Quarter, a distance of 496.80 feet to a point in the same; thence departing said North line South 03 Degrees 05 Minutes 23 Seconds West, a distance of 883.49 feet to centerline station 131+07.28 for a POINT OF BEGINNING of centerline; thence South 88 Degrees 24 Minutes 23 Seconds East, a distance of 617.52 feet to centerline P.C. station 137+24.80; thence Southeastwardly along a curve to the right having a Radius of 1,050.00 feet, an Included Angle of 20 Degrees 26 Minutes 47 Seconds, a distance of 374.71 feet to centerline P.T. station 140+99.51; thence South 67 Degrees 57 Minutes 35 Seconds East, a distance of 883.75 feet to centerline P.C. station 149+83.26; thence Southeastwardly on a curve to the left having a Radius of 1,050.00 feet, an Included Angle of 50 Degrees 59 Minutes 02 Seconds, a distance of 934.32 feet to centerline P.T. station 159+17.58; thence North 61 Degrees 03 Minutes 23 Seconds East, a distance of 1,570.79 feet to centerline P.C. station 174+88.37; thence Northeastwardly on a curve to the right having a Radius of 1,900.00 feet, an Included Angle of 26 Degrees 47 Minutes 08 Seconds, a distance of 888.24 feet to centerline P.T. station 183+76.61; thence North 87 Degrees 50 Minutes 30 Seconds East, a distance of 564.98 feet to the intersection of the centerline of Southwood Avenue at station 189+41.59 and the POINT OF TERMINATION.

Right of way widths, slope easements, and other appurtenances are as shown on plan #2016PW0009T which is made a part of this description by reference

Point of commencement-
East-West Arterial Centerline
NE Cor. SW¼ Sec. 29-28-21

N86°54'37"W
496.80'

883.49'

S03°05'23"W

NE 1/4 SW 1/4
SEC29-T28N-R21W

The City of Springfield, a Municipal Corporation
Book 2008, Page 022071-08

Mapped
right of way

131+54.90
117.58L

131+57.30
104.92R

POINT OF BEGINNING
East-West Arterial
STA: 131+07.28
Grid Northing=140626.664m
Grid Easting=432748.784m

S88°24'23"E 617.52'

Mapped
right of way

136+04.36
126.21R

136+49.47
111.21R

PC = 137+24.80

R=1050.00
L=374.71'
Delta=20°26'47"
CH=S78°10'59"E
CL=372.72

139+17.12
101.51R

PT = 140+99.51

136+60.64
132.20L

137+49.72
154.90L

138+57.83
145.59L

138+98.30
111.39L

Kissick Avenue

David Young and Victoria Young, HW
Book 2163, Page 1797

David Young and Victoria Young, HW
Book 2163, Page 1797

Aaron Patrick Lyons and Amy Louise Lyons, Co-Trustees of The Aaron Patrick Lyons and Amy Louise Lyons Revocable Trust Agreement Dated June 25, 2003
Book 2017, Page 037630-17

Terry L. Hartin and Marcia D. Hartin, HW
Book 2882, Page 0105

NW 1/4 SE 1/4
SEC29-T28N-R21W

Norbert Lee Schatzer and Janice E. Schatzer, HW
Book 4,162, Page 0254

Ecf TRUST
Book 2022
Page 015167-22

141+51.42
138.94L

141+51.42
109.96L

142+40.00
138.94L

142+40.00
109.37L

Cory James Eden & Katie Collenn Eden, as Trustees of the Cory Eden and Katie Eden Qualified Spousal Trust dated February 28, 2025
Book 2025 Page 006302-25

142+41.18
105.27R

143+58.39
104.36R

East-West Arterial Centerline

S67°57'35"E

Cory James Eden & Katie Collenn Eden, as Trustees of the Cory Eden and Katie Eden Qualified Spousal Trust dated February 28, 2025
Book 2025 Page 006302-25

Mark E. Eck, Trustee of the Mark E. Eck Living Trust Dated May 10, 2012 and Mary L. Eck, Trustee of the Mary L. Eck Living Trust dated May 10, 2012
Book 2022 Page 015167-22

147+59.91
98.45L
883.75'

148+33.52
124.58L

148+35.65
108.45L

149+12.45
135.01L

149+14.91
116.41L

PC = 149+83.26

Benjamin C. Petersen and Ashlie Petersen
Book 2020, Page 002297-20

149+70.63
116.20L

149+31.95
102.79L

SE 1/4
SEC29-T28N-R21W

SW 1/4 SE 1/4
SEC29-T28N-R21W

SE 1/4 SW 1/4
SEC29-T28N-R21W

0 100 200

Granite Springs Phase One

Granite Springs Street (on plat)

NE 1/4 SE 1/4
SEC29-T28N-R21W

Mark E. Eck, Trustee of the Mark E. Eck Living Trust
Dated May 10, 2012 and Mary L. Eck, Trustee of the
Mary L. Eck Living Trust dated May 10, 2012
Book 2022 Page 015167-22

Mapped
right of way

PT = 156+17.58

N61°

155+68.34
184.22L

158+37.00
89.27L

156+71.00
131.76L

155+06.30
108.26L

152+92.76
90.16L

R=1050.00
L=934.32'
Delta=50°59'02"
CH=N86°32'54"E
CL=903.81

Mapped
right of way

157+50.86
88.20R

152+40.23
85.05R

154+15.91
80.50R

155+59.25
84.05R

Mark E. Eck, Trustee of the Mark E. Eck Living Trust
Dated May 10, 2012 and Mary L. Eck, Trustee of the
Mary L. Eck Living Trust dated May 10, 2012
Book 2022 Page 015167-22

REV: 11/19/2025
CORRECT SCRIVENER'S ERROR IN LAST DISTANCE
SHOWN AS 655.49' TO CORRECT DISTANCE OF 564.98'.
UPDATE PROPERTY OWNERS

STATE OF MISSOURI
JAMES D. GRAY
NUMBER LS-2000147862
PROFESSIONAL LAND SURVEYOR
11/20/2025

DEPARTMENT OF PUBLIC WORKS
SPRINGFIELD, MISSOURI

Mapping of the East-West Arterial from Kissick to Southwood

APPROVED BY _____ DATE _____
DIRECTOR OF PUBLIC WORKS

SURVEYED BY: Dill	DESIGN:	SCALES	SHEET 1
FIELD BK.:	DRAWN: Dill	HOR: 1"=100'	OF 2 SHEETS
LEVEL BK.:	CHECKED:	VERT:	FILE NO. 2016PW0009T

SW 1/4 NW 1/4
SEC28-T28N-R21W

SE 1/4 NW 1/4
SEC28-T28N-R21W

S. Farm Rd. 175

Southwood Ave.

The Church of Jesus Christ of Latter-day Saints
Book 2024 Page 017042-24

John Walker and Gwendolynn Walker
Book 2017 Page 000211-17

Lisa Kostov and Victor Kotlov
Book 2020 Page 047602-20

T4S Property Development, LLC
Book 2024 Page 033455-24

Tea Properties of Missouri, II, LLC
Book 2010, Page 053160-10

Mapped
right of way

184+33.37
160.05L

185+19.08
163.28L

181+15.89
87.00L

179+86.80
90.88L

185+08.70
7.91L

City of Springfield
Bk. 2012
Pg. 023270-12
Right of way, slope
easement and temp.
const. easement.

N87°50'30"E 564.98'

176+83.02
152.09L

177+73.59
95.74L

179+61.59
0.00L

PT = 183+76.61

City of Springfield
Bk. 2012
Pg. 023271-12
Right of way, slope
easement and temp.
const. easement.

R=1900.00
L=888.24'
Delta=26°47'08"
CH=N74°26'56"E
CL=880.17

INTERSECTION
East-West Arterial STA: 189+41.59=
Southwood Avenue STA: 23+61.76
Grid Northing=140823.769m
Grid Easting=434422.195m

174+33.72
89.04L

173+05.33
109.00L

Mark E. Eck, Trustee of the Mark E. Eck Living Trust
Dated May 10, 2012 and Mary L. Eck, Trustee of the
Mary L. Eck Living Trust dated May 10, 2012
Book 2022 Page 015167-22

Steven Hartley, A single person and
Wilma Jean Hartley, A single person
Book 2013 Page 028011-13

178+56.42
94.12R

179+30.52
100.79R

PC = 174+88.37

176+33.12
158.93R

173+16.32
88.21R

Tea Properties of Missouri II LLC
Book 2010, Page 053488-10

Mark E. Eck, Trustee of the Mark E. Eck Living Trust
Dated May 10, 2012 and Mary L. Eck, Trustee of the
Mary L. Eck Living Trust dated May 10, 2012
Book 2022 Page 015167-22

1570.79'

Mapped
right of way

168+52.04
92.89R

N61°03'23"E

165+40.38
110.27R

158+37.00
89.27L

156+71.00
131.76L

PT = 159+17.59

157+50.86
88.20R

Mapped
right of way

Mark E. Eck, Trustee of the Mark E. Eck Living Trust
Dated May 10, 2012 and Mary L. Eck, Trustee of the
Mary L. Eck Living Trust dated May 10, 2012
Book 2022 Page 015167-22

Mark E. Eck, Trustee of the Mark E. Eck Living Trust
Dated May 10, 2012 and Mary L. Eck, Trustee of the
Mary L. Eck Living Trust dated May 10, 2012
Book 2022 Page 015166-22

NW 1/4 SW 1/4
SEC28-T28N-R21W

NE 1/4 SW 1/4
SEC28-T28N-R21W

SW 1/4
SEC28-T28N-R21W

REV: 11/19/2025
CORRECT SCRIVENER'S ERROR IN LAST DISTANCE
SHOWN AS 655.49' TO CORRECT DISTANCE OF 564.98'.
UPDATE PROPERTY OWNERS

REV: 11/19/2025 TO CORRECT SCRIVENER'S ERROR FOR LAST DISTANCE TO 564.98'.
UPDATE PROPERTY OWNERS

STATE OF MISSOURI
JAMES D. GRAY
NUMBER LS-2000147862
PROFESSIONAL LAND SURVEYOR
11/20/2025

DEPARTMENT OF PUBLIC WORKS
SPRINGFIELD, MISSOURI

Mapping of the East-West Arterial from Kissick to Southwood

APPROVED BY _____ DATE _____
DIRECTOR OF PUBLIC WORKS

SURVEYED BY: Dill	DESIGN:	SCALES	SHEET 2
FIELD BK.:	DRAWN: Dill	HOR: 1"=100'	OF 2 SHEETS
LEVEL BK.:	CHECKED:	VERT:	FILE NO. 2016PW0009T

Bob Dixon
Presiding Commissioner

Rusty MacLachlan
1st District Commissioner

John C. Russell
2nd District Commissioner

Shane Schoeller
Clerk of the Commission

Christopher J. Coulter, AICP
County Administrator

Megan Applegate
Executive Assistant

COUNTY COMMISSION

Greene County, Missouri
(417) 868-4112

May 20, 2021

Mr. Dan Smith, Public Works Director
City of Springfield Public Works Department
1111 W. Chestnut Expressway
Springfield, MO 65802

RE: East-West Arterial Roadway Corridor

Dear Mr. Smith,

The purpose of this letter is to reaffirm Greene County's shared support and continued partnership in working towards the future completion of an East-West Arterial roadway corridor in southern Greene County, which will ultimately provide regional transportation system connectivity between US Highway 65 and State Route FF near Greene County's southern boundary.

The Greene County Commission recognizes the extensive long-range planning efforts that have been made, beginning in the mid-1990's, by both the City of Springfield and Greene County officials to pursue the conceptual plan for this future transportation corridor. Since May of 2002, Greene County has worked in coordination with our local planning partners and citizens to identify, evaluate, and pursue a preferred roadway alignment that minimizes impacts to the surrounding environment and to local residents. In April of 2016, the Greene County Planning Board formally adopted an update to Greene County's Major Thoroughfare Plan. Included in that updated mapping was the future alignment for the East-West Arterial between US 65 and Route FF, which reflects the county's latest preliminary design plans between Campbell Avenue and Kissick, and aligns with the City of Springfield's mapping of the East-West Arterial from Kissick to Southwood.

Our Greene County Planning and Zoning staff in coordination with the Greene County Highway Department is committed to continue working in partnership with future land developers and property owners to preserve and acquire the necessary right-of-way that will be required for the future completion of this regional transportation corridor within Greene County's jurisdiction. On behalf

of the Greene County Commission, we would urge the City to continue taking the necessary steps towards the preservation and acquisition of right-of-way within the City of Springfield's jurisdiction in order to further our region's progress towards this East-West Arterial roadway connection.

We wish to extend our gratitude to you and your staff for your continued efforts to pursue these regional transportation projects and priorities that provide improved safety and mobility for the citizens of Springfield and Greene County.

Sincerely,

Bob Dixon
Presiding Commissioner

Rusty MacLachlan
Commissioner Dist. 1

John C. Russell
Commissioner Dist.2

OZARKS TRANSPORTATION ORGANIZATION
A METROPOLITAN PLANNING ORGANIZATION

2208 W. CHESTERFIELD BOULEVARD, SUITE 101, SPRINGFIELD, MO 65807
417-865-3047

24 March 2026

Dan Smith
Director of Public Works
840 Boonville Avenue
Springfield, Missouri 65802

Attention: Scott Bachman, Transportation Planner

Dear Mr. Smith:

The Ozarks Transportation Organization appreciates the opportunity to provide support regarding the City of Springfield's recertification of the East West Arterial corridor.

The East West Arterial has long been identified within the OTO's Major Thoroughfare Plan as an important future corridor supporting the continued growth and mobility needs of the region through enhanced regional connectivity.

As the federally designated Metropolitan Planning Organization for the Springfield urban area, the OTO is responsible for maintaining a long range transportation plan that reflects regional priorities and supports a coordinated, multimodal system. Within this framework, the plan emphasizes the importance of a connected transportation network and the preservation of key future corridors, such as the East West Arterial, to maintain long term system connectivity, manage future travel demand, and support the efficient movement of people and goods. Preserving the alignment of the East West Arterial ensures that future transportation options remain viable as development occurs, as well as positioning the region to respond effectively to continued growth.

Based on its role in the regional transportation network and its longstanding inclusion in adopted plans, the OTO supports the continued preservation and recertification of the East West Arterial corridor. We appreciate the City's continued coordination of transportation planning efforts and look forward to ongoing collaboration to implement regional priorities.

Sincerely,

Sara Fields

Sara J. Fields, AICP
Executive Director

CITY OF Springfield

EXPLANATION TO COUNCIL BILL 2026-106 (HORTON)

FILED: 05/08/2026

ORIGINATING DEPARTMENT: Public Works

TITLE: A special ordinance authorizing the City Manager, or designee, to enter into an Infrastructure Reimbursement Agreement with Drew Lewis Foundation, Inc. in the not to exceed amount of $29,850.30 for the purpose of developing public stormwater infrastructure along West Poplar Street between North Weaver Avenue and North Broadway Avenue.

PURPOSE: Authorizing the City Manager, or designee, to enter into a Development Agreement with the Developer of the Broadway Cottage Courtyard Planned Development No. 389 for cost participation by the City for certain offsite stormwater infrastructure and coordinated resurfacing improvements to correlate with public improvements along the street. The Developer agreement is being recommended as a targeted partnership opportunity to support housing investment and reinvestment in an older part of the City where existing infrastructure conditions do not support more intense uses.

BACKGROUND INFORMATION: As part of the Planned Development No. 389, the Developer has agreed to construct public improvements associated with the project as required to meet typical impacts to public infrastructure as necessary to support the development as per approved Public Improvement Plan 2025PW0010, including sidewalks along Broadway Avenue, Poplar Street, and Weaver Avenue, curb and gutter and angled on-street parking along Broadway Avenue as necessary to meet parking needs, a median and traffic-calming improvements along Broadway Avenue that slows traffic for safe on-street parking, and stormwater conveyance improvements along Weaver Avenue.

The Development Agreement is intended to clearly establish the roles, responsibilities, and cost participation of the Developer and the City for certain public improvements associated with the project. As required by Planned Development No. 389, the Developer will construct the required public improvements as shown in approved Public Improvement Plans 2025PW0010.

City participation will include reimbursement for limited off site public stormwater infrastructure needed to support the project and replacement of an existing stormwater inlet in which the Developer's project ties into. The City's fiscal participation will include reimbursement of approximately $29,850 for the materials and 50% of labor cost for off-site pipe, inlet, and related stormwater connection materials required to convey runoff from the development's detention improvements to the public system. The City's reimbursement and funding for these stormwater infrastructure improvements will be

provided by the 1/4-cent Capital Improvement Sales Tax funds that are already budgeted.

In addition, the City will accelerate timelines for typical street resurfacing of Broadway and Weaver Avenues adjacent to the development that is necessary to accommodate grade changes and stormwater improvements. This work will be performed after acceptance of the related public improvements. The estimated resurfacing cost is $32,000 and will be funded by 1/4-cent Capital Improvement Sales Tax funds that are already budgeted.

Supports the following City Council Priorities:

- Economic Vitality
- Housing Strategy

REMARKS: Public Works recommends approval of this Council bill.

Submitted By: Brett Foster, Assistant Director of Public Works

Authorized for inclusion on the agenda pursuant to City Code section 2-33:

Attachments:
1. Drew Lewis Infrastructure Agreement_ord
2. Infrastructure Reimbursement Agreement - Drew Lewis
3. Exhibit A_2024PW0010
4. Exhibit B_Downstream Improvements 1

One-rdg. _____
P. Hrngs. _____
Pgs. _____
Filed: 05-28-26

Sponsored by: Lee

First Reading: _____ Second Reading: _____

COUNCIL BILL 2026-106 SPECIAL ORDINANCE _____

AN ORDINANCE

AUTHORIZING the City Manager, or designee, to enter into an Infrastructure Reimbursement Agreement with Drew Lewis Foundation, Inc. in the not to exceed amount of $29,850.30 for the purpose of developing public stormwater infrastructure along West Poplar Street between North Weaver Avenue and North Broadway Avenue.

_____

WHEREAS, City Council adopted General Ordinance 6685 on October 21, 2024, rezoning approximately 1.4 acres of property generally located at 737, 745, 751, 761, and 801 North Broadway Avenue and 732 and 742 North Weaver Avenue to Planned Development No. 389 ("PD 389") for the construction of a single-family residential pocket neighborhood by Drew Lewis Foundation, Inc.; and

WHEREAS, PD 389 requires construction of public improvements necessary to adequately accommodate the intensity of development proposed in PD 389, and, as approved by Public Improvement Plan 2025PW0010, includes sidewalks along North Broadway Avenue, West Poplar Street, and North Weaver Avenue, curb and gutter and angled on-street parking along North Broadway Avenue, a median and traffic calming improvements along North Broadway Avenue, and stormwater conveyance improvements along North Weaver Avenue; and

WHEREAS, Drew Lewis Foundation, Inc. has requested the City reimburse Drew Lewis Foundation, Inc. in the not to exceed amount of $29,850.30 for materials and 50% of labor to develop public stormwater infrastructure, including the installation of a new inlet and stormwater pipe, and the replacement of an existing downstream inlet; and

WHEREAS, the City's fiscal participation will be paid using 1/4-cent Capital Improvement Sales Tax funds that are already budgeted.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF SPRINGFIELD, MISSOURI, as follows, that:

Section 1 – The City Manager, or designee, is hereby authorized to enter into an Infrastructure Reimbursement Agreement with Drew Lewis Foundation, Inc. in the not to exceed amount of $29,850.30 for the purpose of developing public stormwater infrastructure along West Poplar Street between North Weaver Avenue and North Broadway Avenue, a copy of the same being attached hereto and incorporated by reference as “Exhibit 1.”

Section 2 – This Ordinance shall be in full force and effect from and after passage.

Passed at meeting: _____

_____
Mayor

Attest: _____, City Clerk

Filed as Ordinance: _____

Approved as to form: _____, Assistant City Attorney

Approved for Council action: _____, City Manager

Exhibit 1

ROUTING ORDER	(1) ORIGINATING DEPARTMENT PUBLIC WORKS	(2) OWNER	(3) FINANCE DEPARTMENT
	(4) LAW DEPARTMENT	(5) CITY MANAGER'S OFFICE	(6) CITY CLERK'S OFFICE
EFFECTIVE DATE	TERMINATION DATE	**CONTRACT NUMBER:**	
(X) NEW CONTRACT		( ) RENEWAL OF CONTRACT	

CITY	**DREW LEWIS FOUNDATION**
City of Springfield	**Drew Lewis Foundation, Inc.**
840 Boonville, PO Box 8368	**1126 N Broadway Avenue**
Springfield, MO 65802	**Springfield, MO 65802**
Attn:	**Attn: Amy Blansit, CEO**
Dept:	**Phone:**
Phone:	**Email:**
Email: @springfieldmo.gov	

INFRASTRUCTURE REIMBURSEMENT AGREEMENT

THIS AGREEMENT, made and entered into this _____day of _____, 20___, between the City of Springfield, Missouri (referred to herein as "the City"), and Drew Lewis Foundation (referred to herein as "Owner"):

WHEREAS, Owner is engaged in the Broadway Cottages project (hereinafter referred to as "Project"), a single-family residential pocket neighborhood on 1.4 acres of property generally located at 737, 745, 751, 761, and 801 North Broadway Avenue and 732 and 742 North Weaver Avenue (collectively referred to herein as the "Property"); and

WHEREAS, the Project requires both on-site and off-site stormwater improvements, detailed in the Broadway Cottages Public Improvement Plan (2025PW0010) (referred to herein as the "Broadway PIP"); and

WHEREAS, the City finds the Project and the Broadway PIP serves a public purpose by increasing affordable housing stock within the City and improving public infrastructure; and

WHEREAS, Owner will manage the design and construction of the Broadway PIP, except as otherwise noted herein, and the City agrees to reimburse certain costs associated with the Broadway PIP as described in this Agreement; and

WHEREAS, the parties acknowledge that City's performance of this work arises from considerations particular to the circumstances of this location, and not from any legal obligation, contractual duty, or established course of dealing.

NOW, THEREFORE, the City and Owner hereby mutually covenant and agree as follows:

1. Plans, Specifications, and Construction. Owner has prepared design plans and specifications, at Owner's cost, for the infrastructure improvements as depicted in Public Works plan number 2025PW0010, attached hereto and incorporated herein by this reference as ***Exhibit A***. Owner avers the plans and specifications have been prepared in accordance with and conform to City requirements and specifications. City reserves the right to review and approve the plans and specifications.

2. Responsibilities. The parties agree to perform the following:

a. Owner. Owner shall be solely responsible for all engineering costs and for construction of the infrastructure improvements in accordance with plans reviewed and approved by the City in ***Exhibit A***, except as otherwise noted in this Agreement.
b. City.
    i. *Reimbursement*. The City shall reimburse Owner **twenty-nine thousand eight hundred fifty dollars and thirty cents ($29,850.30)** for the downstream stormwater improvements included in the approved bid by Eoff Associates and as depicted in the document attached hereto and incorporated herein as ***Exhibit B*.** This shall include reimbursement for material and 50% of labor cost of 15 inch storm pipe between drainage structures A1 to A3 and from inlet A1to the existing inlet at the downstream tie in to the City's existing infrastructure.
    ii. *Construction*. The City shall be responsible for replacing the existing stormwater curb inlet located at Franklin Avenue and Poplar Street at the downstream end of storm line A, which the City shall perform with its own personnel or contractors and at its own cost.

3. Payment. Within thirty (30) days of final acceptance of all improvements shown in PIP Plan 2025PW0025, the City agrees to pay Owner its share of costs in accordance with Paragraph 2 of this Agreement. It is expressly understood that in no event will the total compensation and reimbursement to be paid to Owner under the terms of this Agreement exceed the sum of **twenty-nine thousand eight hundred fifty dollars and thirty cents. ($29,850.30)**.

4. Ownership. The City will own and maintain any stormwater improvements located outside the Property upon completion and acceptance of construction.

5. Termination.

a. *Default by Owner.* City reserves the right to immediately terminate and cancel this Agreement at any time for material breach of a contractual obligation by Owner. If the City exercises this right, the City shall give written notice of termination to Owner. The date of termination for breach shall be the date upon which notice of termination is delivered to Owner in

accordance with this Agreement. Termination of this Agreement for breach will not relieve Owner of any claims against it that arise under this Agreement before the Agreement is terminated. If the City elects to terminate under this provision, Owner shall be responsible to the City for all of the City's actual costs in the public improvements up to and including the date of termination.

b. *Default by City.* If through any cause, the City shall fail to fulfill in timely and proper manner the City's obligations under this Agreement, the Owner shall deliver written notice of the same to the City and if such failure or violation is not cured within ten days thereafter (or such longer period of time as is reasonably necessary so long as the City begins to cure such failure or violation within such ten-day period and thereafter diligently pursues the same to completion), Owner shall thereupon have the right to terminate this Agreement by giving at least 5 days' prior written notice of such termination, specifying the effective date thereof. If Owner elects the terminate under this provision, Developer shall be responsible to the City for all of the City's actual costs in the public improvements, up to and including the date of termination. Termination of this Agreement shall be the sole remedy for any default by City under this Agreement.

6. Conflict of Interest. In accepting this contract, Owner certifies that no member or officer of its firm or corporation is an officer or employee of the City of Springfield, Missouri, or any of its boards or agencies, and further that no officer or employee of the City has any financial interest, direct or indirect, in this Agreement. All applicable federal regulations and provisions of RSMo Section 105.450 et seq. shall not be violated.

7. Assignment. Owner shall not assign any interest in this Agreement, and shall not transfer any interest in the same (whether by assignment or novation), without prior written consent of the City.

8. Notices. All notices required or permitted hereinunder and required to be in writing may be given by FAX, electronic mail, or by first class mail addressed to City and Owner at the addresses shown above. The date of delivery of any notice given by mail shall be the date falling on the second full day after the day of its mailing. The date of delivery of notice by FAX transmission shall be deemed to be the date transmission occurs, except where the transmission is not completed by 5:00 p.m. on a regular business day at the terminal of the receiving party, in which case the date of delivery shall be deemed to fall on the next regular business day for the receiving party. Electronic mail shall be deemed to be delivered on the day it is sent before 5:00 p.m. on a regular business day and the following business day if sent after 5:00 p.m. or on a non-business day.

9. Entire Agreement. This Agreement contains the entire Agreement of the parties. No modification, amendment, or waiver of any of the provisions of this Agreement shall be effective unless in writing specifically referring hereto, and signed by both parties.

10. Jurisdiction and Venue. This Agreement and every question arising hereunder shall be construed or determined according to the laws of the State of Missouri. Should any part of this agreement be adjudicated, venue shall be proper only in the Circuit Court of Greene County, Missouri.

11. Independent Parties. The relationship of the parties hereunder is that of independent contractors, and neither party shall be considered to be a partner, joint venture, employer or employee of the other under this Agreement. This Agreement creates no agency in either party, neither party has any authority to bind the other party in any transaction or make any representations on behalf of the other party, and nothing contained herein shall constitute or designate Owner, or any of Owner's contractors, agents, or employees, as agents or employees of the City.

12. Liability. Nothing in this Agreement shall be construed to create any liability on behalf of the City for any direct, special, indirect, or consequential damages. Owner agrees that the City shall not be liable for any damages caused to the Property in the course of performing its obligations under this Agreement. In no event shall any language or requirement in this Agreement be construed as or constitute a waiver or limitation of City's defenses with regard to sovereign immunity, governmental immunity, or official immunity under federal or state constitutions or laws.

13. Dispute. In the event the City is the prevailing party in any litigation arising out of or relating tot his Agreement, the City shall be entitled to all reasonable attorneys' fees and expenses incurred.

14. Contingent Upon Funds. This Agreement is contingent upon the City having sufficient funds available for the Public Improvements. Developer shall have no right of action against City in the event City is unable to perform its obligations under this Agreement as a result of insufficient funds.

15. Discrimination. Owner agrees in the performance of this Agreement not to discriminate on the ground or because of race, creed, color, national origin or ancestry, sex, religion, handicap, age, status as a protected veteran or status as a qualified individual with a disability, or political opinion or affiliation.

16. Recitals. The "Whereas" clauses stated above are incorporated herein by reference.

[Signature Page Follows]

IN WITNESS WHEREOF, the parties hereto have set their hands and seals on the day and year herein stated.

CITY OF SPRINGFIELD, MISSOURI

_____
City Manager or his designee

Date:

_____

CERTIFICATE OF DIRECTOR OF FINANCE

I certify that the expenditure contemplated by this document is within the purpose of the appropriation to which it is to be charged and that there is an unencumbered balance of appropriated and available funds to pay therefore.

_____
Director of Finance or his designee

APPROVED AS TO FORM:

_____
City Attorney or Assistant City Attorney

DREW LEWIS FOUNDATION

_____
Amy Blansit, CEO

DREW LEWIS BROADWAY COTTAGES
PAVING, DRAINAGE & SANITARY IMPROVEMENT PLANS
SPRINGFIELD, GREENE COUNTY, MISSOURI

SHEET INDEX

NO.	DESCRIPTION	SUFFIX
1	COVER SHEET	C1
2	BROADWAY AVE IMPROVEMENT PLAN	T1
3	WEAVER AVE IMPROVEMENT PLAN	T2
4	STREET DETAILS 1	T3
5	STREET DETAILS 2	T4
6	STORM SEWER EXTENSION PLAN COVER SHEET	W1
7	STORM SEWER EXTENSION PLAN	W2
8	STORM SEWER DETAILS	W3
9	SANITARY SEWER EXTENSION PLAN COVER SHEET	S1
10	SANITARY SEWER EXTENSION PLAN	S2
11	SANITARY SEWER DETAILS	S3
12	EROSION CONTROL PLAN	E1
13	EROSION CONTROL DETAILS	E2

FLOOD ZONE:

BY GRAPHIC PLOTTING ONLY, THIS PROPERTY IS IN ZONE X [UNSHADED], AN AREA OF MINIMAL FLOOD HAZARD, ACCORDING TO FLOOD INSURANCE RATE MAP (FIRM) MAP NUMBER 29077C0333E, WHICH BEARS AN EFFECTIVE DATE OF DECEMBER 17, 2010. THE SUBJECT TRACT ARE NOT IN A FLOOD HAZARD AREA. NO FIELD SURVEYING WAS PERFORMED TO DETERMINE THIS ZONE.

DISTURBED AREA : 1.75 AC

SANITARY SEWER MIN. FINISHED FLOOR

LOT	MFF
1	1291.10
2	1290.90
3	1290.50
4	1290.40
5	1289.90
6	1289.80
7	1289.40
8	1289.30
9	1288.90
10	1288.70
11	1286.10

PROJECT SPECIFICATIONS:

THE SPECIFICATIONS FOR THIS PROJECT SHALL BE THE FOLLOWING:

MOST CURRENT EDITION OF THE STANDARD GENERAL CONDITIONS AND TECHNICAL SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION FOR THE CITY OF SPRINGFIELD, MISSOURI.

THE STANDARD SPECIFICATIONS THROUGH AND INCLUDING THE LATEST AMENDMENTS SHALL BE PART OF THESE PROJECT DRAWINGS AND SPECIFICATIONS AND ARE INCORPORATED HEREIN BY REFERENCE. THE MORE STRINGENT OF THESE STANDARD SPECIFICATIONS AND THOSE PREPARED BY THE ENGINEER PREPARING THESE PLANS SHALL GOVERN.

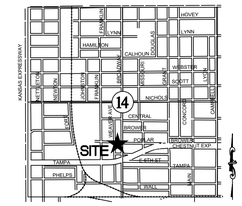


LOTS:1-11 (11 TOTAL) WATERSHED:JORDAN CREEK LOWER BRANCH

GENERAL NOTES

1. CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO THE LATEST REVISIONS OF THE STANDARD GENERAL CONDITIONS AND TECHNICAL SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION FOR THE CITY OF SPRINGFIELD, MISSOURI.
2. THE CONTRACTOR SHALL FIELD VERIFY ALL HORIZONTAL AND VERTICAL LINES AND GRADES OF EXISTING UTILITIES PRIOR TO THE CONSTRUCTION OF IMPROVEMENTS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY UPON DISCOVERY OF A DISCREPANCY BETWEEN CONTRACT DRAWINGS AND ACTUAL FIELD CONDITIONS.
3. CONTRACTOR SHALL CONTACT THE CITY OF SPRINGFIELD CONSTRUCTION INSPECTION DEPARTMENT A MINIMUM OF 5 WORKING DAYS PRIOR TO ANY CONSTRUCTION ON RIGHT OF WAY TO SETUP A PRECONSTRUCTION CONFERENCE. PLEASE USE GROUP EMAIL OF dethomas@springfieldmo.gov AND aflippin@springfieldmo.gov FOR CONTACTING CONSTRUCTION INSPECTION DEPARTMENT. IN ADDITION TO EMAIL, YOU MAY CONTACT DOUG THOMAS AT 417-864-1968. CONTRACTOR SHALL DISCUSS AND SCHEDULE PRECONSTRUCTION CONFERENCE WHEN CONTACTING THE INSPECTION DEPARTMENT. ANY WORK PRIOR TO PRECONSTRUCTION CONFERENCE WILL BE REJECTED.
4. APPLICABLE PERMITS MUST BE OBTAINED FROM THE CITY, STATE AND COUNTY PRIOR TO EXCAVATION WITHIN ANY RIGHT-OF-WAY, AND PRIOR TO ANY CONSTRUCTION.
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE LOCATION OF ANY UNDERGROUND UTILITIES OR OTHER OBSTRUCTIONS AND TO BE LIABLE FOR DAMAGE AND CONSEQUENT REPAIR TO SUCH IN THE COURSE OF HIS OPERATIONS.
6. THE CONTRACTOR AND/OR BUILDER WILL KEEP THE SUBDIVISION NEAT AND ORDERLY AT ALL TIMES WHILE CONSTRUCTION IS TAKING PLACE. ALL CITY STREETS ADJACENT TO THE DEVELOPMENT SHALL BE KEPT CLEAR OF MUD, ROCK, DIRT, DEBRIS, PAPER AND WASTE MATERIAL AT ALL TIMES. THE PROPER AMOUNT OF INSPECTION SHALL BE CALLED FOR AT THEIR PROPER TIMES, OR ANY AND ALL WORK MAY BE REJECTED.
7. IF ANY WORK OR ACCESS TO ANY ADJOINING PROPERTY IS DONE, IT IS THE FULL RESPONSIBILITY OF THE APPLICANT/OWNER TO OBTAIN PROPER RELEASES FROM ADJOINING PROPERTY OWNERS AND ASSUME ALL LIABILITY FOR ACTION TAKEN DURING ALL CONSTRUCTION.
8. ALL DISTURBED AREAS ARE TO BE RESEEDED IN ACCORDANCE WITH THE CURRENT REQUIREMENTS OF THE CITY OF SPRINGFIELD DESIGN STANDARDS FOR PUBLIC IMPROVEMENTS.
9. CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE ANY EXISTING STREET, CURB AND GUTTER, SIDEWALK AND DRIVEWAYS.
10. THE CONTRACTOR SHALL HAVE ON SITE A SET OF PLANS FILED WITH THE CITY OF SPRINGFIELD. THE CONTRACTOR SHALL HAVE ON THE PROJECT AT ALL TIMES, AS HIS AGENT, A COMPETENT SUPERINTENDENT CAPABLE OF READING AND THOROUGHLY UNDERSTANDING THE PLANS AND SPECIFICATIONS, THOROUGHLY EXPERIENCED IN THE TYPE OF WORK BEING PERFORMED, AND WHO SHALL RECEIVE INSTRUCTIONS FROM THE ENGINEER OR HIS AUTHORIZED REPRESENTATIVE.
11. ALL TRENCHES, WHICH LIE UNDER PROPOSED PAVEMENT OR LIE WITHIN TWO FEET OF THE BACK OF CURB SHALL BE BACKFILLED TO PAVEMENT SUBGRADE WITH COMPACTED GRANULAR MATERIAL.
12. FOR TESTING PROCEDURES REFER TO GENERAL CONDITIONS AND TECHNICAL SPECIFICATIONS FOR THE CITY OF SPRINGFIELD, PUBLIC WORKS.
13. MANHOLE COVERS, VALVE BOXES AND OTHER UTILITY APPURTENANCES SHALL NOT ENCROACH ON SIDEWALKS, CURBS OR PAVEMENT. WHERE CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR INSTRUCTION PRIOR TO PROCEEDING.
14. THE CONTRACTOR SHALL NOTIFY THE INSPECTOR OF ANY NEW SINKHOLES DISCOVERED DURING CONSTRUCTION.
15. PIPE BEDDING WITHIN UNIMPROVED AREAS TO CONFORM TO CITY DETAIL SAN-12.
16. BACKFILL WITHIN RIGHT-OF-WAY TO CONFORM TO CITY OF SPRINGFIELD GENERAL CONDITIONS AND TECHNICAL SPECS, SECTION 4.1.3.9., AS FOLLOWS; "THE BACKFILL MATERIAL FOR SEWERS AND LATERALS CONSTRUCTED IN OPEN CUTS CROSSING OR PARALLEL TO ROADWAYS, DRIVEWAYS, SIDEWALKS, OTHER EXISTING PAVEMENTS, OR HAVING THE NEAR SIDE OF THE TRENCH WALLS WITHIN TWO (2) FEET OF BACK/BOTTOM OF STREET CURB, AND AT OTHER LOCATIONS SHOWN ON THE PLANS OR SPECIFIED, ALL OF THE BACKFILL SHALL CONSIST OF GRANULAR MATERIAL MEETING THE REQUIREMENTS FOR BEDDING MATERIAL, SPECIFIED HEREINBEFORE. THIS MATERIAL SHALL BE PLACED AND THOROUGHLY COMPACTED."
17. THE CONTRACTOR IS RESPONSIBLE FOR ALL METHODS, SEQUENCING, AND SAFETY CONCERNS ASSOCIATED WITH THIS PROJECT DURING CONSTRUCTION, UNLESS SPECIFICALLY ADDRESSED OTHERWISE IN THIS PLAN OR ELSEWHERE IN THE CONTRACT.
18. THE QUANTITIES AND SITE CONDITIONS DEPICTED IN THESE PLANS ARE FOR INFORMATIONAL PURPOSES ONLY AND ARE SUBJECT TO ERROR AND OMISSION. CONTRACTORS SHALL SATISFY THEMSELVES AS TO ACTUAL QUANTITIES AND SITE CONDITIONS PRIOR TO BIDDING THE WORK FOR THE CONSTRUCTION COVERED BY THIS PLAN.
19. A REASONABLE EFFORT HAS BEEN MADE TO SHOW THE LOCATIONS OF EXISTING UNDERGROUND FACILITIES AND UTILITIES IN THE CONSTRUCTION AREA. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO UTILITIES AND/OR FACILITIES CAUSED DURING THEIR CONSTRUCTION OPERATIONS.
20. THE CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION OF CONSTRUCTION AFFECTING UTILITIES AND THE COORDINATION OF ANY NECESSARY UTILITY RELOCATION WORK.
21. COORDINATION BETWEEN ALL PARTIES IS ESSENTIAL PART OF CONTRACT.
22. CONTRACTOR SHALL REMOVE ALL TREES WITHIN THE COUNTY RIGHT-OF-WAY.
23. WHENEVER THE CONTRACTOR IS WORKING WITHIN THE GREENE COUNTY RIGHT-OF-WAY, THE CONTRACTOR SHALL CONTACT THE GREENE COUNTY HIGHWAY DEPARTMENT, P: 417-829-6510, AT LEAST 24 HOURS PRIOR TO WORKING AT THE SITE. FAILURE TO DO SO MAY RESULT IN REJECTION OF ANY WORK COMPLETED PRIOR TO CONTACT.
24. NO MEASUREMENTS SHOULD BE SCALED OFF PLANS. USE ONLY LABELED DISTANCES.

MISSOURI ONE CALL SYSTEM, INC. 1-800-344-7483 STOP - CALL BEFORE YOU DIG!



LOCATION SKETCH
SEC. 14, T-29-N, R-22-W
SCALE: 1"=2000'

ZONING:

SUBJECT PROPERTY IS PD-389 (PLANNED DEVELOPMENT 389) SETBACKS TO BE DETERMINED AT TIME OF DEVELOPMENT.

OWNER:

DREW LEWIS FOUNDATION
1126 N BROADWAY AVE
SPRINGFIELD, MO 65802

CIVIL ENGINEER:

CAMERON M. HOLE,
OWN, INC.
3213 S. WEST BYPASS
SPRINGFIELD, MO 65807
CHOLE@WEAREOWN.COM
(417) 866-2741

UTILITY CONTACTS

SANITARY SEWER:
CITY OF SPRINGFIELD
PUBLIC WORKS
1111 W CHESTNUT EXPWY
SPRINGFIELD, MO 65802
PHONE (417) 864-1010

STREETS:
CITY OF SPRINGFIELD
PUBLIC WORKS
1111 W CHESTNUT EXPWY
SPRINGFIELD, MO 65802
PHONE (417) 864-1010

WATER, GAS & ELECTRIC SUPPLY:
CITY UTILITIES
301 E CENTRAL ST.
SPRINGFIELD, MO 65802
PHONE (417) 863-9000

TELECOMMUNICATIONS:
AT&T
JOHN PENNER
PHONE (417) 353-8877

STORM SEWER PIPE NOTES:

1. THE APPROVED PIPE MATERIALS ARE HIGH DENSITY POLYETHYLENE PIPE (HDPE), CORRUGATED METAL PIPE (CMP), AND REINFORCED CONCRETE PIPE (RCP). ANY PIPE ALTERNATES WILL REQUIRE CITY APPROVAL.
2. ALL PIPE IS TO BE INSTALLED PER CITY OF SPRINGFIELD STANDARDS AND THE MANUFACTURER'S REQUIREMENTS.
3. ALL INSTALLED PIPE SHALL BE MIN. HS-20 LOADING AND MEET ALL APPLICABLE ASTM STANDARDS.
4. ALL INSTALLED PIPE SHALL HAVE A MANNING'S ROUGHNESS COEFFICIENT OF n=0.013.

COMPACTION TESTING NOTE:
OWN, INC. SHALL BE RETAINED TO TEST ANY FILL PLACED ON SITE (INCLUDING LOT GRADING) IN ACCORDANCE WITH CITY OF SPRINGFIELD SPECIFICATIONS.

DIMENSION NOTE:
DIMENSIONS SHOWN ARE TO FACE OF CURB UNLESS NOTED OTHERWISE.

SPECIAL NOTE:
CONTRACTOR TO PERFORM DETAILED SITE INSPECTION TO LOCATE ALL EXISTING UTILITES AND VERIFY ANY POSSIBLE CONFLICTS WITH PROPOSED IMPROVEMENTS PRIOR TO BEGINNING ANY CONSTRUCTION. CONTACT ENGINEER WITH ANY CONFLICTS.

CAUTION:
INFORMATION ON THIS DRAWING CONCERNING THE TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

OWN
Engineering beyond.™
3213 S. West Bypass
Springfield, MO 65807
417.866.2741
weareown.com

COA#000062
CAMERON M. HOLE PE# 2025018184

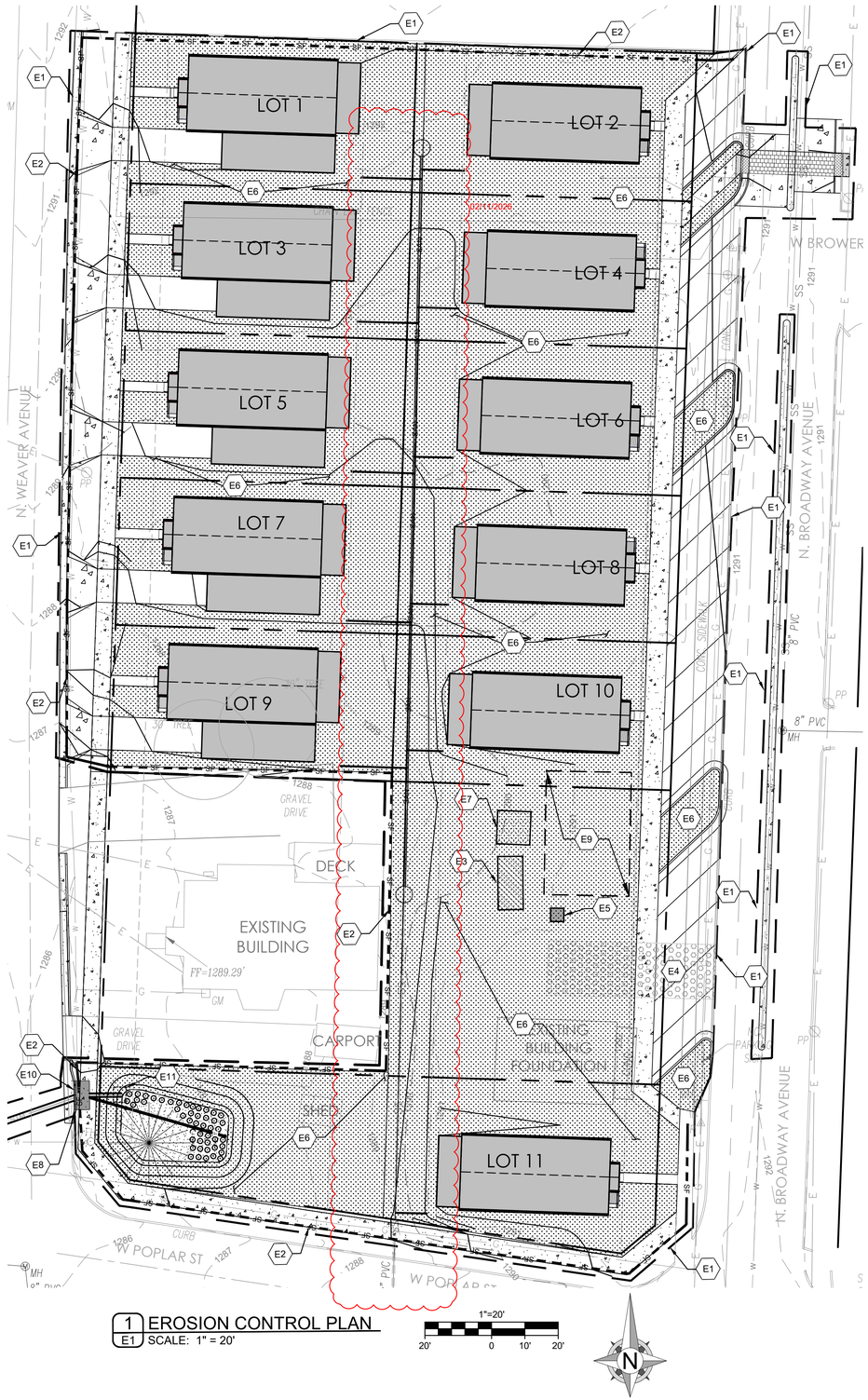
FORMERLY ANDERSON ENGINEERING

STATE OF MISSOURI
CAMERON M. HOLE
NUMBER PE - 2025018184
PROFESSIONAL ENGINEER
06-25-2025

DEPARTMENT OF PUBLIC WORKS
SPRINGFIELD, MISSOURI
N BROADWAY AVE, SPRINGFIELD, MO
PAVING, DRAINAGE AND SANITARY IMPROVEMENT PLANS
COVER SHEET – C1

SURVEYED BY: OWN, INC.	DESIGN: CMH/LLJ	SCALES	SHEET 1
FIELD BK.: N/A	DRAWN: CMH/LLJ	HOR: N/A	OF 13 SHEETS
LEVEL BK.: N/A	CHECKED: JMD	VERT: N/A	FILE NO. 2025PW0010C1

APPROVED BY
DIRECTOR OF PUBLIC WORKS
FILED
IN THE OFFICE OF THE
DIRECTOR OF PUBLIC WORKS
FILE NO. 2025PW0010
DATE 11/21/2025



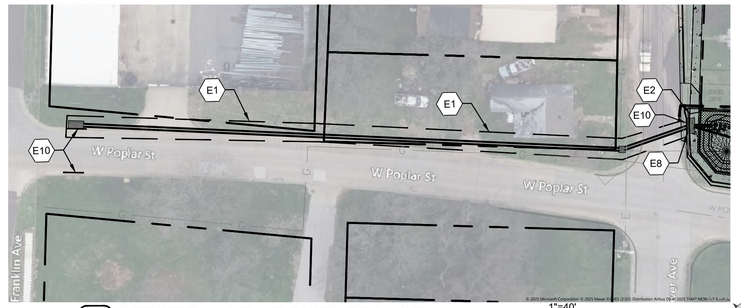
1 EROSION CONTROL PLAN
E1 SCALE: 1" = 20'

1"=20'
20' 0 10' 20'

N

EROSION CONTROL PHASING CHART

PROJECT STAGE	BMP PLAN REF. #	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES:	INSTALLATION DATE / REMOVAL DATE
A - PRE-CONSTRUCTION	E4	i. TEMPORARY CONSTRUCTION ENTRANCE/EXIT	D	SEE DETAIL SHEET E2	
	E2	ii. TEMPORARY COMPOST FILTER SOCK	D	SEE DETAIL SHEET E2	
	E5	iv. INSTALL PORTA-POTTY(S)	D	CONTRACTOR TO MARK FINAL PLACEMENT.	
	E3	v. INSTALL DUMPSTER, SITE SIGN & SPILL KIT	D	CONTRACTOR TO MARK FINAL PLACEMENT.	
B - CLEARING AND MASS GRADING	E9	i. STOCKPILE AREA	D	SEE DETAIL SHEET E2	
	E6	ii. TEMPORARY SEEDING	N/A	PROVIDE TEMPORARY SEEDING. SEE SEEDING NOTES ON SHEET E1.	
C - CONSTRUCTION	E7	i. INSTALL CONCRETE WASHOUT	N/A	SEE DETAIL SHEET E2	
	E10	ii. INSTALL INLET FILTER BAGS.	D	SEE DETAIL SHEET E2	
D - POST CONSTRUCTION/ FINAL STABILIZATION	E6	i. PROVIDE TOPSOIL, SEED, MULCH, HYDROSEED, AND LANDSCAPE	N/A	WHERE CLEAN LIMESTONE IS NOT PLACED, ESTABLISH PERENNIAL VEGETATION WITH A 70% DENSITY OVER 100% OF DISTURBED AREA. REFER TO LANDSCAPE PLAN FOR ADDITIONAL INFORMATION.	



2 OFFSITE LIMIT OF DISTURBANCE
E1 SCALE: 1" = 40'

1"=40'
40' 0 20' 40'

N

KEY NOTES:

E1 LIMITS OF LAND DISTURBANCE.

E2 LIMITS OF TEMPORARY EROSION CONTROL COMPOST FILTER SOCK. REFER TO DETAIL 1/E2.

E3 INSTALL DUMPSTER AND CONTACT TRASH COMPANY FOR PICK UP. FINAL LOCATION TO BE DETERMINED BY CONTRACTOR.

E4 INSTALL TEMPORARY CONSTRUCTION ENTRANCE. REFER TO CONSTRUCTION EGRESS NOTES AND DETAIL 2/E2.

E5 INSTALL PORTABLE TOILET AND STAKE FIRMLY TO GROUND. FINAL LOCATION TO BE DETERMINED BY CONTRACTOR.

E6 AREAS TO BE VEGETATED: ALL AREAS DISTURBED BY CONSTRUCTION ARE TO BE SEEDED AND STRAW MULCHED, UNLESS OTHERWISE NOTED, OVER MIN. 4" TOPSOIL. STOCKPILE HAULED IN AS APPROVED BY THE PROJECT MANAGER. SEE EROSION CONTROL AND MAINTENANCE PLAN NOTES. REFER TO SITE DEVELOPMENT PLAN AND LANDSCAPE PLANS FOR PERMANENT STABILIZATION DETAILS.

E7 LOCATION OF 10' X 10' CONCRETE WASHOUT AREA. REFER TO DETAIL 4/E2.

E8 OUTFALL 001

E9 INSTALL TEMPORARY SOIL STOCKPILE CONTROL. REFER TO DETAIL 3/E2.

E10 INSTALL CURB INLET FILTER BAG. REFER TO DETAIL 5/E2.

E11 INSTALL BIORETENTION OUTFALL PROTECTION. REFER TO DETAIL 6/E2.

STORMWATER SUMMARY:

TOTAL PROPERTY AREA = 1.41 ACRES
TOTAL DISTURBED AREA = 1.59 ACRES

EXISTING IMPERVIOUS COVER = 0.09 ACRES
PROPOSED IMPERVIOUS COVER = 0.47 ACRES

WATER QUALITY TREATMENT IS PROVIDED USING BIORETENTION BASIN. A FEE IN LIEU OF DETENTION WILL BE SUBMITTED. REFER TO STORMWATER REPORT BY OWN, INC.

EROSION CONTROL & MAINTENANCE PLAN NOTES:

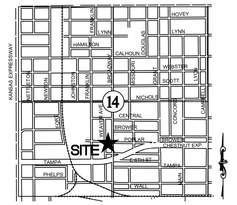
1. RETAIN FLOATABLE WIND BLOWN MATERIALS ON SITE BY STORING ALL TRASH AND BUILDING MATERIAL WASTE IN ENCLOSURES UNTIL PROPER DISPOSAL AT OFF-SITE FACILITIES. CHECK ADJACENT AREAS DAILY AND PICK UP CONSTRUCTION WASTE MATERIALS AND DEBRIS THAT HAVE BLOWN OR WASHED OFF SITE.
2. PERMANENTLY STABILIZE ALL SURFACE AREA WITHIN AND ADJACENT TO THIS SITE THAT IS DISTURBED BY VEHICLES, GRADING AND OTHER CONSTRUCTION FOR THE PROPOSED FACILITY. STABILIZATION IS OBTAINED WHEN THE DISTURBED SURFACE IS COVERED WITH STRUCTURES, PAVING AND OR PERENNIAL VEGETATION HAVING A UNIFORM COVERAGE DENSITY OF AT LEAST 70%. STABILIZATION OF ALL DISTURBED AREA IS REQUIRED BEFORE TERMINATING MAINTENANCE AND REMOVAL OF EROSION CONTROL MEASURES.
3. CONTRACTORS SHALL INSPECT POLLUTION CONTROL MEASURES AT LEAST ONCE EVERY 7 DAYS AND WITHIN 24 HOURS AFTER A STORM EVENT OF 1/2 INCH OR GREATER. DAMAGED MEASURES THAT PROVE TO BE INEFFECTIVE SHALL BE REPLACED WITH MORE EFFECTIVE MEASURES OR ADDITIONAL MEASURES WITHIN SEVEN DAYS. REPEATED FAILURE OF A CONTROL MEASURE REQUIRES INSTALLATION OF A MORE SUITABLE DEVICE TO PREVENT DISCHARGE OF POLLUTANTS FROM THE CONSTRUCTION SITE.
4. INSTALLATION OF ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY THE CITY OR STATE. CONTRACTOR TO VERIFY REQUIREMENTS PRIOR TO BEGINNING ANY WORK ON PROJECT SITE.
5. CARE SHALL BE TAKEN TO MINIMIZE THE ENCROACHMENT OF SEDIMENT INTO ALL STORM DRAIN APPURTENANCES, PUBLIC STREETS, AND ONTO PRIVATE PROPERTY UNTIL IMPERVIOUS MATERIAL (ROAD/PARKING AREA SURFACE) IS APPLIED OR UNTIL PROPOSED LANDSCAPE HAS BEEN ESTABLISHED.
6. REFER TO SHEET ESC2 FOR SILT FENCE CONSTRUCTION.
7. ALL GRASS SLOPES WHICH EXCEED 3:1 (H:V) SHALL UTILIZE ROLLED EROSION CONTROL PRODUCT (RECP). RECP SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS AND STANDARDS. CONTRACTOR SHALL COORDINATE INSTALLATION INSPECTION WITH MANUFACTURER.

LEGEND

(SYMBOLS APPLY ONLY WHEN USED ON DRAWINGS)

— —1335— —	EXISTING GRADE LINES
——1335——	PROPOSED GRADE LINES
	LIMITS OF DISTURBED AREA
— — — SF —	COMPOST FILTER SOCK
	PORTABLE TOILET
	DUMPSTER
	CONCRETE WASHOUT
	AREA TO BE VEGETATED

MISSOURI ONE CALL SYSTEM, INC. 1-800-344-7483 STOP - CALL BEFORE YOU DIG!



LOCATION SKETCH

SEC. 14, T-29-N, R-22-W
SCALE: 1"=2000'

SEEDING AND MULCHING NOTES

SEEDING
INSTALL UPSTREAM BMPS TO PROTECT AREA TO BE SEEDED. COMPLETE GRADING AND REMOVE ALL DEBRIS LARGER THAN 1 INCH. LOOSEN COMPACTED SOILS TO A DEPTH OF 4 INCHES. GROOVE OR FURROW ON THE CONTOUR IF NECESSARY. SPREAD LOOSE TOPSOIL AT A DEPTH OF 4 INCHES. MIX SOIL AMENDMENTS (LIME, FERTILIZER, ETC.) INTO THE TOP 4 INCHES OF SOIL. PLANT SEED ¼ TO ½ INCHES DEEP USING A CYCLONE SEEDER, DRILL, CULTIPACKER SEEDER, OR HYDRO-SEEDER. ROLL LIGHTLY TO FIRM SURFACE. COVER SEEDED AREA WITH MULCH. INSTALL ADDITIONAL STABILIZATION (EROSION CONTROL BLANKETS, NETTING, BONDED FIBER MATRIX, ETC.) ON SLOPES STEEPER THAN 3:1 AND IN AREAS OF CONCENTRATED FLOW. WATER IMMEDIATELY-ENOUGH TO SOAK 4 INCHES INTO THE SOIL WITHOUT CAUSING RUNOFF.

TOPSOIL REQUIREMENTS
PERMANENT AND TEMPORARY SEEDING: LOOSEN COMPACTED SOILS TO A DEPTH OF 4 INCHES. IF RAINFALL CAUSES SURFACE TO BECOME SEALED OR CRUSTED, LOOSEN IT JUST PRIOR TO SEEDING. SLOPES STEEPER THAN 33 PERCENT (3:1) GRADE SHOULD BE GROOVED OR FURROWED ON THE CONTOUR BEFORE SEEDING. A GOOD SEEDBED IS WELL PULVERIZED, LOOSE AND UNIFORM. PERMANENT SEEDING: A MINIMUM OF 4 INCHES OF LOOSE TOPSOIL SHOULD BE SPREAD ON AREAS TO BE SEEDED.

LIME REQUIREMENTS
PERMANENT AND TEMPORARY SEEDING: LIME SHOULD BE APPLIED ACCORDING TO SOIL TEST RECOMMENDATIONS. IF THE pH OF THE SOIL IS UNKNOWN, LIME SHALL BE INCORPORATED INTO THE TOP 4 INCHES OF SOIL AT A RATE OF 1500 POUNDS EFFECTIVE NEUTRALIZING MATERIAL (ENM) PER ACRES. SOILS WITH A pH OF SIX OR HIGHER NEED NOT BE LIMED.

FERTILIZER REQUIREMENTS
PERMANENT SEEDING: FERTILIZER SHOULD BE APPLIED BASED ON SOIL TESTS. WHEN THESE ARE NOT POSSIBLE A 13-13-13 GRADE FERTILIZER SHALL BE INCORPORATED INTO THE TOP 4 INCHES OF SOIL AT THE RATE OF 500 POUNDS PER ACRE.
TEMPORARY SEEDING: FERTILIZER SHOULD BE APPLIED BASED ON SOIL TESTS. WHEN THESE ARE NOT POSSIBLE, A 10-10-10 GRADE FERTILIZER SHALL BE INCORPORATED INTO THE TOP 4 INCHES OF SOIL AT THE RATE OF 200 POUNDS PER ACRE.

SEED REQUIREMENTS
PERMANENT SEEDING: SEED MIX SHALL CONSIST OF NINETY PERCENT (90%) TALL FESCUE AND TEN PERCENT (10%) ANNUAL RYEGRASS. SEED MIXTURE SHALL BE APPLIED AT A RATE OF 400 POUNDS PER ACRE.
TEMPORARY SEEDING: SEED MIX SHALL CONSIST OF ANY COMBINATION OF TALL FESCUE, ANNUAL RYEGRASS, SUDAN, MILLET, WHEAT OR OATS. SEED MIXTURE SHALL BE APPLIED AT A RATE OF 200 POUNDS PER ACRE.
DORMANT SEASON SEEDING: SEED MIX SHALL CONSIST OF 80 PERCENT (80%) TALL FESCUE, TEN PERCENT (10%) ANNUAL RYEGRASS AND TEN PERCENT (10%) SPRING OATS. SEED MIXTURE SHALL BE APPLIED AT A RATE OF 600 POUNDS PER ACRE.

MULCH REQUIREMENTS
PERMANENT AND TEMPORARY SEEDING: WHERE SLOPES ARE LESS THAN 25 PERCENT (4:1) GRADE, CEREAL GRAIN MULCH IS REQUIRED AT THE RATE OF 100 POUNDS PER 1,000 SQUARE FEET (4,500 LBS/ACRE). CEREAL GRAIN MULCH SHALL MEET THE REQUIREMENTS OF SECTION 802 OF THE MISSOURI STATE SPECIFICATIONS FOR HIGHWAY CONSTRUCTION FOR TYPE I MULCH. WHERE SLOPES ARE 25 PERCENT (4:1) OR GREATER GRADE, TYPE 3 MULCH (HYDROMULCH) MEETING THE REQUIREMENTS OF SECTION 802 OF THE STATE SPECIFICATIONS SHALL BE USED. TYPE 3 MULCH SHALL BE APPLIED AT A MINIMUM RATE OF 2,000 LBS/ACRE.

DATES FOR SEEDING
PERMANENT SEEDING: MARCH 1 TO JUNE 1 AND AUGUST 15 TO NOVEMBER 1
TEMPORARY SEEDING: CAN OCCUR DURING ANY SEASON, HOWEVER WINTER IS THE LEAST TOLERANT.
DORMANT SEASON SEEDING: DECEMBER 15 TO FEBRUARY 29

HYDROSEEDING
TO SELECT APPROPRIATE HYDROSEEDING MIXTURES, AN EVALUATION OF SITE CONDITIONS SHALL BE PERFORMED WITH RESPECT TO: SOIL CONDITIONS, SITE TOPOGRAPHY, SEASON AND CLIMATE, VEGETATION TYPES, MAINTENANCE REQUIREMENTS, SENSITIVE ADJACENT AREAS, WATER AVAILABILITY, AND PLANS FOR PERMANENT VEGETATION. HYDROSEEDING CAN BE ACCOMPLISHED USING A MULTIPLE-STEP OR ONE-STEP PROCESS. THE MULTIPLE-STEP PROCESS ENSURES MAXIMUM DIRECT CONTACT OF THE SEEDS TO SOIL. WHEN THE ONE-STEP PROCESS IS USED TO APPLY THE MIXTURE OF SEED, FIBER, ETC., THE SEED RATE SHALL BE INCREASED TO COMPENSATE FOR ALL SEEDS NOT HAVING DIRECT CONTACT WITH THE SOIL. FOLLOW-UP APPLICATIONS SHALL BE MADE AS NEEDED TO COVER WEAK SPOTS.

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STATE OF MISSOURI
CAMERON M. HOLE
NUMBER PE - 2025018184
PROFESSIONAL ENGINEER
02/11/2026

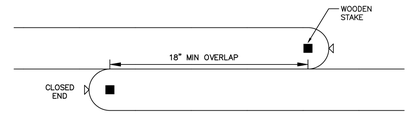
DEPARTMENT OF PUBLIC WORKS
SPRINGFIELD, MISSOURI

N BROADWAY AVE, SPRINGFIELD, MO
PAVING, DRAINAGE AND SANITARY IMPROVEMENT PLANS
EROSION CONTROL PLAN – E1

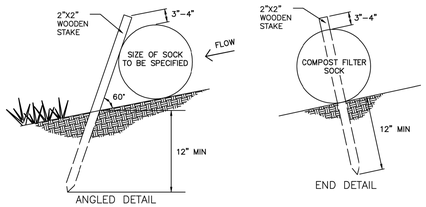
SURVEYED BY: OWN, INC.	DESIGN: CMH/LLJ	SCALES 1" = 20' HOR: 1" = 40' VERT: N/A	SHEET 12 OF 13 SHEETS
FIELD BK.: N/A	DRAWN: CMH/LLJ		FILE NO. 2025PW0010E1
LEVEL BK.: N/A	CHECKED: JMD		

APPROVED BY Dan Smith
DIRECTOR OF PUBLIC WORKS
FILED
IN THE OFFICE OF THE
DIRECTOR OF PUBLIC WORKS
FILE NO. 2025PW0010
DATE 2/18/2026

NOTES:
1. COMPOST SOCK SHALL BE INSTALLED PRIOR TO ANY SOIL DISTURBANCE ACTIVITIES.
2. COMPOST SOCKS ARE GENERALLY PLACED ALONG THE PERIMETER OF A SITE, AT INTERVALS ALONG A SLOPE, AT AREA INLETS, OR AS DITCH CHECKS TO SLOW DOWN RUNOFF AND RETAIN SEDIMENT.
3. MANUFACTURER'S SPECIFICATIONS SHALL BE FOLLOWED FOR SELECTING SOCK DIAMETER.
4. VEHICLES AND MACHINERY SHALL BE PREVENTED FROM DAMAGING THE SOCK.
5. ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE HEIGHT OF THE SOCK.
6. BROKEN STAKES AND TORN SECTIONS SHALL BE REPLACED AND REPAIRED.
7. SOCK SHALL BE REMOVED AFTER PERMANENT VEGETATION IS ESTABLISHED.



PLAN VIEW

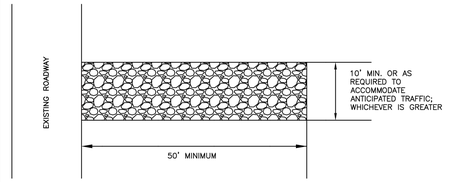


SECTION VIEW

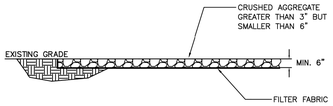
ENVIRONMENTAL SERVICES DEPT. SPRINGFIELD, MO.	COMPOST SOCK	UPDATED: NOV. 2020 BMP MANUAL

1 COMPOST SOCK
E2 SCALE: NTS

NOTES:
1. RUMBLE STRIPS ARE RECOMMENDED FOR LARGER SITES.
2. AVOID PLACING EXITS IN AN OUTFALL AREA OR OTHER LOW AREAS WHERE WATER PONDS OR FLOWS.
3. A CULVERT SHALL BE INSTALLED IF EXIT CROSSES A DITCH.
4. ROCK APRON INSTALLATION SHALL BE WIDE ENOUGH TO ACCOMODATE TURNING VEHICLES.
5. ADD NEW ROCK OR RAKE EXISTING ROCK WHEN VOIDS FILL WITH SEDIMENT.
6. ANY MUD, ROCK OR DEBRIS TRACKED ONTO PAVED SURFACES AND ACCUMULATED IN CURBS SHALL BE REMOVED USING A SWEEPER, SHOVEL, ETC.
7. REMOVE EXIT WHEN VEHICLES AND EQUIPMENT WILL NO LONGER ACCESS UNPAVED AREAS.
8. TRACK OUT MUST BE REMOVED WITHIN THE SAME BUSINESS DAY.



PLAN VIEW

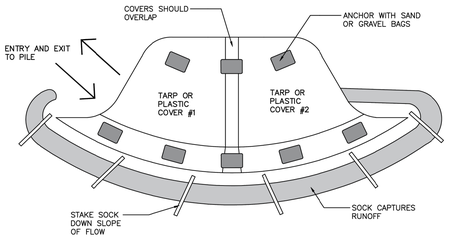


SECTION VIEW

ENVIRONMENTAL SERVICES DEPT. SPRINGFIELD, MO.	CONSTRUCTION EXIT	UPDATED: AUG. 2018 BMP MANUAL

2 CONSTRUCTION EXIT
E2 SCALE: NTS

NOTES:
1. PLASTIC COVERS SHALL BE INSTALLED OVER STOCKPILES AS THEY ARE GENERATED THROUGHOUT THE PROJECT. COVERS SHALL PREVENT EROSION AND SEDIMENT TRANSFER PRIOR TO RAIN EVENTS.
2. SEAMS SHALL BE TAPED OR WEIGHTED DOWN THEIR ENTIRE LENGTH.
3. COMPOST FILTER SOCK SHALL BE INSTALLED TO RETAIN SEDIMENT RUNOFF.
4. STOCKPILE SLOPES SHALL NOT EXCEED 2:1.
5. OFF-SITE BORROW/FILL AREAS SHALL ALSO BE PROTECTED BY ADEQUATE SEDIMENT AND EROSION CONTROL BMPS. IF PART OF A JOB DISTURBING 1 ACRE OR GREATER THEIR LOCATION SHALL BE NOTED WITHIN THE SWPPP.
6. ADHERE TO COMPOST FILTER SOCK STANDARDS FOR MAINTENANCE.
7. STOCKPILE BMPS MAY BE REMOVED AFTER AREA IS STABILIZED



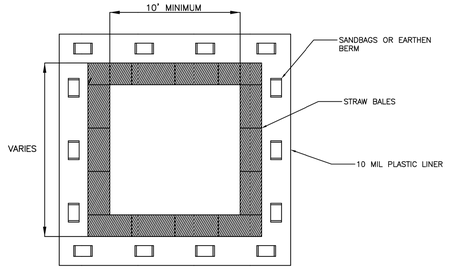
ENVIRONMENTAL SERVICES DEPT. SPRINGFIELD, MO.	STOCKPILE CONTROL	UPDATED: DEC. 2020 BMP MANUAL

3 STOCKPILE CONTROL
E2 SCALE: NTS

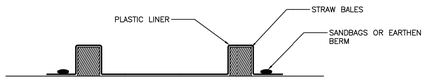
NOTES:
1. WASHOUT CONTAINMENT SHALL BE INSTALLED FOR DURATION OF CONCRETE WORK AND RETAIN CONCRETE AND OTHER WASHOUT LIQUIDS UNTIL EVAPORATION OR REMOVAL BY PUMP.
2. CONTAINMENT SHALL BE SIZED FOR EXPECTED WASHOUT VOLUMES.
3. AVOID PLACING NEAR STORM DRAINS, STREAMS, SINKHOLES, OUTFALLS OR OTHER LOW AREAS WHERE WATER PONDS OR FLOWS.
4. OTHER APPROVED LEAK-PROOF CONTAINMENT IS ACCEPTABLE.
5. TRAPS SHALL BE ROUTINELY, MAINTAINED AT 75% CAPACITY AND REPLACED AS NECESSARY TO PERFORM.
6. THE WASHOUT PIT SHALL BE COVERED BEFORE PREDICTED RAIN EVENTS TO PREVENT OVERFLOW.
7. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 30FT OF THE TEMPORARY CONCRETE WASHOUT FACILITY.



SIGNAGE



PLAN VIEW

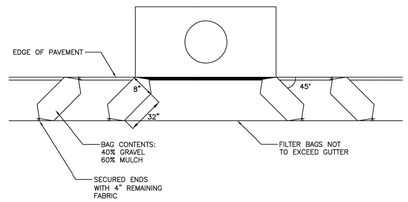


SECTION VIEW

ENVIRONMENTAL SERVICES DEPT. SPRINGFIELD, MO.	CONCRETE WASHOUT	UPDATED: AUG. 2018 BMP MANUAL

4 CONCRETE WASHOUT
E2 SCALE: NTS

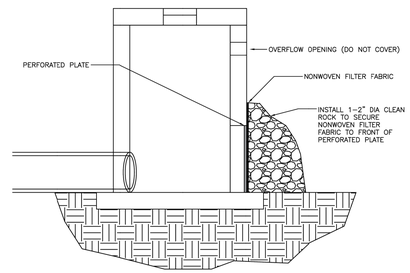
NOTES:
1. FILTER BAGS SHALL BE INSTALLED PRIOR TO DISTURBANCE AND AS INLETS ARE INSTALLED.
2. FILTER BAG INLET PROTECTION SHALL BE INSTALLED IN CONJUNCTION WITH GRATE INLET FILTER BMP WHEN A GRATE IS CONNECTED TO A CURB INLET.
3. SEDIMENT ACCUMULATION SHALL BE REMOVED AFTER RAIN EVENTS AND SHALL NOT EXCEED 50%.
4. FILTER BAGS SHALL BE REPLACED WHEN PERFORMANCE IS NO LONGER SATISFACTORY.
5. FILTER BAGS SHALL ONLY BE REMOVED WHEN UPSTREAM AREAS ARE PERMANENTLY STABILIZED.



ENVIRONMENTAL SERVICES DEPT. SPRINGFIELD, MO.	CURB INLET FILTER BAG	UPDATED: DEC. 2018 BMP MANUAL

5 CURB INLET FILTER BAG
E2 SCALE: NTS

NOTES:
1. REFER TO DEWATERING DETAIL IF DEWATERING OF BASIN IS NECESSARY. TRENCHING THROUGH THE BASIN BERM TO RELEASE WATER OR OTHER DEWATERING METHODS THAT DO NOT USE APPROPRIATE BMPS ARE A VIOLATION.
2. SEDIMENT SHALL BE REMOVED PRIOR TO SEEDING THE BASIN.
3. FABRIC AND ROCK SHALL BE REMOVED WHEN UPSTREAM AREAS HAVE BEEN STABILIZED.
4. FILTER FABRIC AND ROCK SHALL BE PLACED ONLY IN FRONT OF PERFORATED PLATE AND SHALL NOT COVER THE OVERFLOW OPENING.



ENVIRONMENTAL SERVICES DEPT. SPRINGFIELD, MO.	BASIN OUTFALL	UPDATED: AUG. 2018 BMP MANUAL

6 BASIN OUTFALL
E2 SCALE: NTS

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STATE OF MISSOURI
CAMERON M. HOLE
NUMBER PE - 2025018184
PROFESSIONAL ENGINEER
06-25-2025

DEPARTMENT OF PUBLIC WORKS
SPRINGFIELD, MISSOURI

N BROADWAY AVE, SPRINGFIELD, MO
PAVING, DRAINAGE AND SANITARY IMPROVEMENT PLANS
EROSION CONTROL DETAILS – E2

SURVEYED BY: OWN, INC.	DESIGN: CMH/LLJ	SCALES	SHEET 13
FIELD BK.: N/A	DRAWN: CMH/LLJ	HOR: N/A	OF 13 SHEETS
LEVEL BK.: N/A	CHECKED: JMD	VERT: N/A	FILE NO. 2025PW0010E2

APPROVED BY
DIRECTOR OF PUBLIC WORKS
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FILE NO. 2025PW0010
DATE 11/21/2025

DREW LEWIS BROADWAY COTTAGES
SANITARY IMPROVEMENT PLANS
SPRINGFIELD, GREENE COUNTY, MISSOURI

MISSOURI ONE CALL SYSTEM, INC. 1-800-344-7483 STOP - CALL BEFORE YOU DIG!

SANITARY SEWER
MIN. FINISHED FLOOR

LOT	MFF
1	1291.10
2	1290.90
3	1290.50
4	1290.40
5	1289.90
6	1289.80
7	1289.40
8	1289.30
9	1288.90
10	1288.70
11	1286.10



1 S1 SANITARY SEWER OVERALL PLAN
SCALE: 1" = 20'

1"=20'
20' 0 10' 20'

SEWER DISTRICT DESCRIPTION
SECTION 3 OF DISTRICT 6.

SHEET INDEX

NO.	DESCRIPTION	SUFFIX
9	SANITARY SEWER EXTENSION PLAN COVER SHEET	S1
10	SANITARY SEWER EXTENSION PLAN	S2
11	SANITARY SEWER DETAILS	S3

SYMBOLS LEGEND

CP	CONTROL POINT
IP	FOUND IRON PIN
IP	SET IRON PIN
RWM	RIGHT-OF-WAY MARKER
PP GY	POWER POLE W/ GUY
MH	MANHOLE
SCO	SEWER CLEANOUT
GM	GAS METER
LP	LIGHT POLE
	SIGN
WM	WATER METER
WV	WATER VALVE
GV	GAS VALVE
FH	FIRE HYDRANT
TR	TELEPHONE RISER
	BUMPER POST
	GRATE INLET
	TREELINE
	BUSH
ER	ELECTRICAL RISER
TS	TRAFFIC SIGNAL BOX
MB	MAIL BOX
PROPERTY LINE	
SANITARY SEWER	SS
STORM SEWER	SW
TELEPHONE LINE	T
UNDERGROUND TELEPHONE	UT
GAS LINE	G
WATER LINE	W
ELECTRIC LINE	E
UNDERGROUND ELECTRIC	UE
FENCE LINE	x x
RETAINING WALL	
LINE LABELS	MEASURED 100' M / DEED 100' D
EXISTING CONTOUR	1190
PROPOSED CONTOUR	

GENERAL NOTES

1. CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO THE LATEST REVISIONS OF THE STANDARD GENERAL CONDITIONS AND TECHNICAL SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION FOR THE CITY OF SPRINGFIELD, MISSOURI.
2. THE CONTRACTOR SHALL FIELD VERIFY ALL HORIZONTAL AND VERTICAL LINES AND GRADES OF EXISTING UTILITIES PRIOR TO THE CONSTRUCTION OF IMPROVEMENTS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY UPON DISCOVERY OF A DISCREPANCY BETWEEN CONTRACT DRAWINGS AND ACTUAL FIELD CONDITIONS.
3. CONTRACTOR SHALL CONTACT THE CITY OF SPRINGFIELD CONSTRUCTION INSPECTION DEPARTMENT A MINIMUM OF 5 WORKING DAYS PRIOR TO ANY CONSTRUCTION ON RIGHT OF WAY TO SETUP A PRECONSTRUCTION CONFERENCE. PLEASE USE GROUP EMAIL OF dethomas@springfieldmo.gov AND aflippin@springfieldmo.gov FOR CONTACTING CONSTRUCTION INSPECTION DEPARTMENT. IN ADDITION TO EMAIL, YOU MAY CONTACT DOUG THOMAS AT 417-864-1968. CONTRACTOR SHALL DISCUSS AND SCHEDULE PRECONSTRUCTION CONFERENCE WHEN CONTACTING THE INSPECTION DEPARTMENT. ANY WORK PRIOR TO PRECONSTRUCTION CONFERENCE WILL BE REJECTED.
4. APPLICABLE PERMITS MUST BE OBTAINED FROM THE CITY, STATE AND COUNTY PRIOR TO EXCAVATION WITHIN ANY RIGHT-OF-WAY, AND PRIOR TO ANY CONSTRUCTION.
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE LOCATION OF ANY UNDERGROUND UTILITIES OR OTHER OBSTRUCTIONS AND TO BE LIABLE FOR DAMAGE AND CONSEQUENT REPAIR TO SUCH IN THE COURSE OF HIS OPERATIONS.
6. THE CONTRACTOR AND/OR BUILDER WILL KEEP THE SUBDIVISION NEAT AND ORDERLY AT ALL TIMES WHILE CONSTRUCTION IS TAKING PLACE. ALL CITY STREETS ADJACENT TO THE DEVELOPMENT SHALL BE KEPT CLEAR OF MUD, ROCK, DIRT, DEBRIS, PAPER AND WASTE MATERIAL AT ALL TIMES. THE PROPER AMOUNT OF INSPECTION SHALL BE CALLED FOR AT THEIR PROPER TIMES, OR ANY AND ALL WORK MAY BE REJECTED.
7. IF ANY WORK OR ACCESS TO ANY ADJOINING PROPERTY IS DONE, IT IS THE FULL RESPONSIBILITY OF THE APPLICANT/OWNER TO OBTAIN PROPER RELEASES FROM ADJOINING PROPERTY OWNERS AND ASSUME ALL LIABILITY FOR ACTION TAKEN DURING ALL CONSTRUCTION.
8. ALL DISTURBED AREAS ARE TO BE RESEEDED IN ACCORDANCE WITH THE CURRENT REQUIREMENTS OF THE CITY OF SPRINGFIELD DESIGN STANDARDS FOR PUBLIC IMPROVEMENTS.
9. CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE ANY EXISTING STREET, CURB AND GUTTER, SIDEWALK AND DRIVEWAYS.
10. THE CONTRACTOR SHALL HAVE ON SITE A SET OF PLANS FILED WITH THE CITY OF SPRINGFIELD. THE CONTRACTOR SHALL HAVE ON THE PROJECT AT ALL TIMES, AS HIS AGENT, A COMPETENT SUPERINTENDENT CAPABLE OF READING AND THOROUGHLY UNDERSTANDING THE PLANS AND SPECIFICATIONS, THOROUGHLY EXPERIENCED IN THE TYPE OF WORK BEING PERFORMED, AND WHO SHALL RECEIVE INSTRUCTIONS FROM THE ENGINEER OR HIS AUTHORIZED REPRESENTATIVE.
11. ALL TRENCHES, WHICH LIE UNDER PROPOSED PAVEMENT OR LIE WITHIN TWO FEET OF THE BACK OF CURB SHALL BE BACKFILLED TO PAVEMENT SUBGRADE WITH COMPACTED GRANULAR MATERIAL.
12. FOR TESTING PROCEDURES REFER TO GENERAL CONDITIONS AND TECHNICAL SPECIFICATIONS FOR THE CITY OF SPRINGFIELD, PUBLIC WORKS.
13. MANHOLE COVERS, VALVE BOXES AND OTHER UTILITY APPURTENANCES SHALL NOT ENCROACH ON SIDEWALKS, CURBS OR PAVEMENT. WHERE CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR INSTRUCTION PRIOR TO PROCEEDING.
14. THE CONTRACTOR SHALL NOTIFY THE INSPECTOR OF ANY NEW SINKHOLES DISCOVERED DURING CONSTRUCTION.
15. PIPE BEDDING WITHIN UNIMPROVED AREAS TO CONFORM TO CITY DETAIL SAN-12.
16. BACKFILL WITHIN RIGHT-OF-WAY TO CONFORM TO CITY OF SPRINGFIELD GENERAL CONDITIONS AND TECHNICAL SPECS, PAGE IV-13, SECTION 1., AS FOLLOWS; "THE BACKFILL MATERIAL FOR SEWERS AND LATERALS CONSTRUCTED IN OPEN CUTS CROSSING OR PARALLEL TO ROADWAYS, DRIVEWAYS, SIDEWALKS, OTHER EXISTING PAVEMENTS, OR HAVING THE NEAR SIDE OF THE TRENCH WALLS WITHIN TWO (2) FEET OF BACK/BOTTOM OF STREET CURB, AND AT OTHER LOCATIONS SHOWN ON THE PLANS OR SPECIFIED, ALL OF THE BACKFILL SHALL CONSIST OF GRANULAR MATERIAL MEETING THE REQUIREMENTS FOR BEDDING MATERIAL, SPECIFIED HEREINBEFORE. THIS MATERIAL SHALL BE PLACED AND THOROUGHLY COMPACTED."
17. THE CONTRACTOR IS RESPONSIBLE FOR ALL METHODS, SEQUENCING, AND SAFETY CONCERNS ASSOCIATED WITH THIS PROJECT DURING CONSTRUCTION, UNLESS SPECIFICALLY ADDRESSED OTHERWISE IN THIS PLAN OR ELSEWHERE IN THE CONTRACT.
18. THE QUANTITIES AND SITE CONDITIONS DEPICTED IN THESE PLANS ARE FOR INFORMATIONAL PURPOSES ONLY AND ARE SUBJECT TO ERROR AND OMISSION. CONTRACTORS SHALL SATISFY THEMSELVES AS TO ACTUAL QUANTITIES AND SITE CONDITIONS PRIOR TO BIDDING THE WORK FOR THE CONSTRUCTION COVERED BY THIS PLAN.
19. A REASONABLE EFFORT HAS BEEN MADE TO SHOW THE LOCATIONS OF EXISTING UNDERGROUND FACILITIES AND UTILITIES IN THE CONSTRUCTION AREA. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO UTILITIES AND/OR FACILITIES CAUSED DURING THEIR CONSTRUCTION OPERATIONS.
20. THE CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION OF CONSTRUCTION AFFECTING UTILITIES AND THE COORDINATION OF ANY NECESSARY UTILITY RELOCATION WORK.
21. COORDINATION BETWEEN ALL PARTIES IS ESSENTIAL PART OF CONTRACT.
22. CONTRACTOR SHALL REMOVE ALL TREES WITHIN THE COUNTY RIGHT-OF-WAY.
23. WHENEVER THE CONTRACTOR IS WORKING WITHIN THE GREENE COUNTY RIGHT-OF-WAY, THE CONTRACTOR SHALL CONTACT THE GREENE COUNTY HIGHWAY DEPARTMENT, P: 417-829-6510, AT LEAST 24 HOURS PRIOR TO WORKING AT THE SITE. FAILURE TO DO SO MAY RESULT IN REJECTION OF ANY WORK COMPLETED PRIOR TO CONTACT.
24. NO MEASUREMENTS SHOULD BE SCALED OFF PLANS. USE ONLY LABELED DISTANCES.

NO NIGHT WORK WILL BE ALLOWED. CONTRACTOR TO COORDINATE WITH CITY INSPECTOR

SANITARY SEWER LATERAL NOTE:
ALL SEWER LATERALS SHALL INCLUDE A CLEANOUT AND TRACER WIRE PER CITY STANDARD DETAILS SAN-24 AND SAN-25.

THE SURVEY INFORMATION SHOWN REFLECTS ABOVE GROUND INDICATIONS OF UTILITIES AND INFORMATION AVAILABLE FROM UTILITY COMPANIES. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANTY THAT THE UNDER-GROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED, ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORAMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

SPECIAL NOTE:
CONTRACTOR TO FAMILIARIZE THEM SELF WITH THE MISSOURI OVERHEAD POWERLINE SAFETY ACT. IF NECESSARY, CONTRACTOR SHALL CONTACT CITY UTILITIES TECHOUSE (417-831-8888) A MINIMUM OF TEN DAYS IN ADVANCE TO MAKE ARRANGEMENTS FOR LINE COVER.

DIMENSION NOTE:
DIMENSIONS SHOWN ARE TO FACE OF CURB UNLESS NOTED OTHERWISE.

SPECIAL NOTE:
CONTRACTOR TO PERFORM DETAILED SITE INSPECTION TO LOCATE ALL EXISTING UTILITES AND VERIFY ANY POSSIBLE CONFLICTS WITH PROPOSED IMPROVEMENTS PRIOR TO BEGINNING ANY CONSTRUCTION. CONTACT ENGINEER WITH ANY CONFLICTS.

CONTRACTOR TO COORDINATE WORK WITH ADJACENT PROPERTY OWNERS

ALL PUBLIC MAINS ARE REQUIRED TO BE SDR26.

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weareown.com

COA#000062
CAMERON M. HOLE PE# 2025018184

FORMERLY ANDERSON ENGINEERING

STATE OF MISSOURI
CAMERON M. HOLE
NUMBER PE - 2025018184
PROFESSIONAL ENGINEER
02/11/2026

DEPARTMENT OF PUBLIC WORKS
SPRINGFIELD, MISSOURI

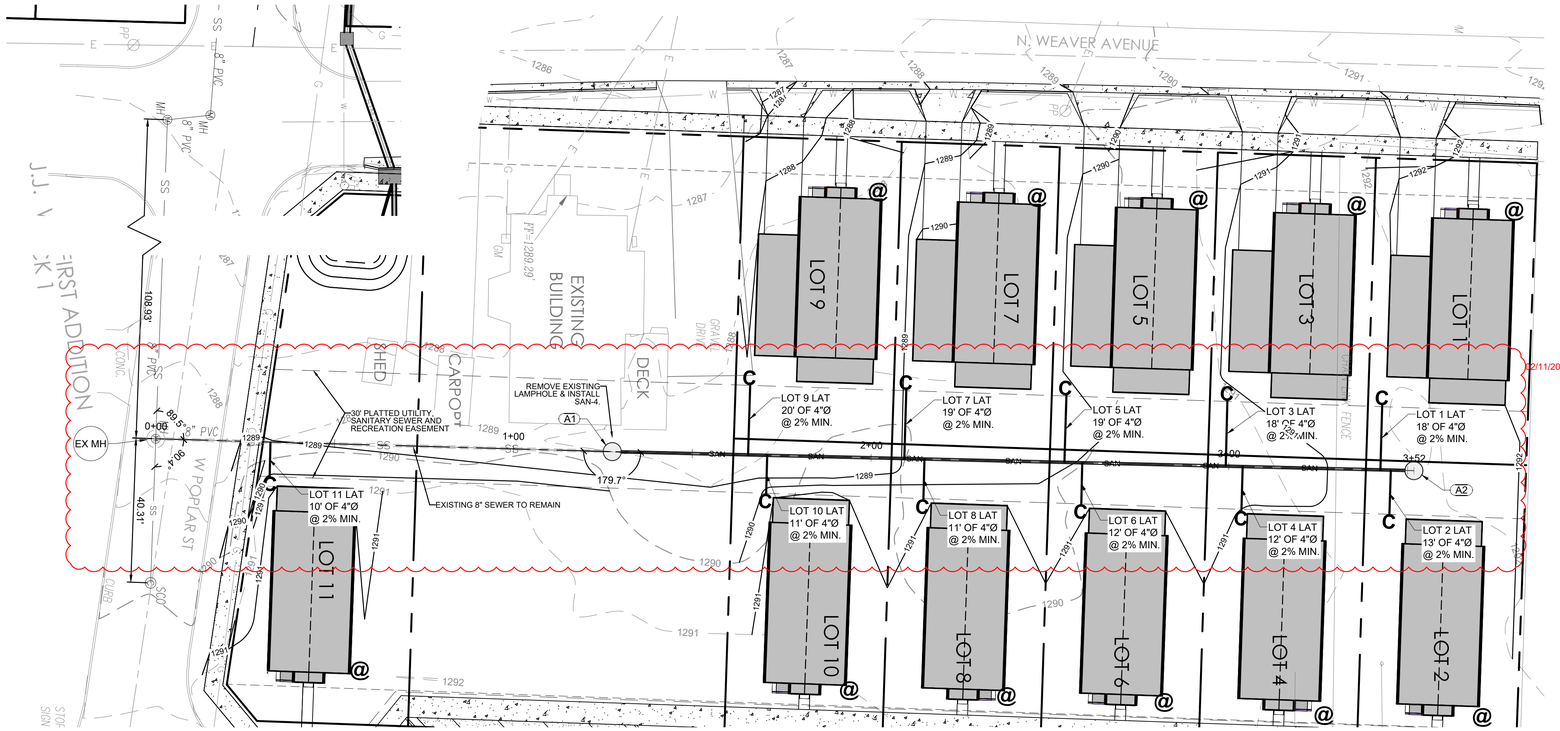
N BROADWAY AVE, SPRINGFIELD, MO
PAVING, DRAINAGE AND SANITARY IMPROVEMENT PLANS
SANITARY SEWER EXTENSION PLAN COVER SHEET - S1

SURVEYED BY: CBN, INC.	DESIGN: CMH,LLJ	SCALES	SHEET 9
FIELD BK.: N/A	DRAWN: CMH,LLJ	HOR: 1" = 40'	OF 13 SHEETS
LEVEL BK.: N/A	CHECKED: MD	VERT: N/A	FILE NO. 2025PW0010S1

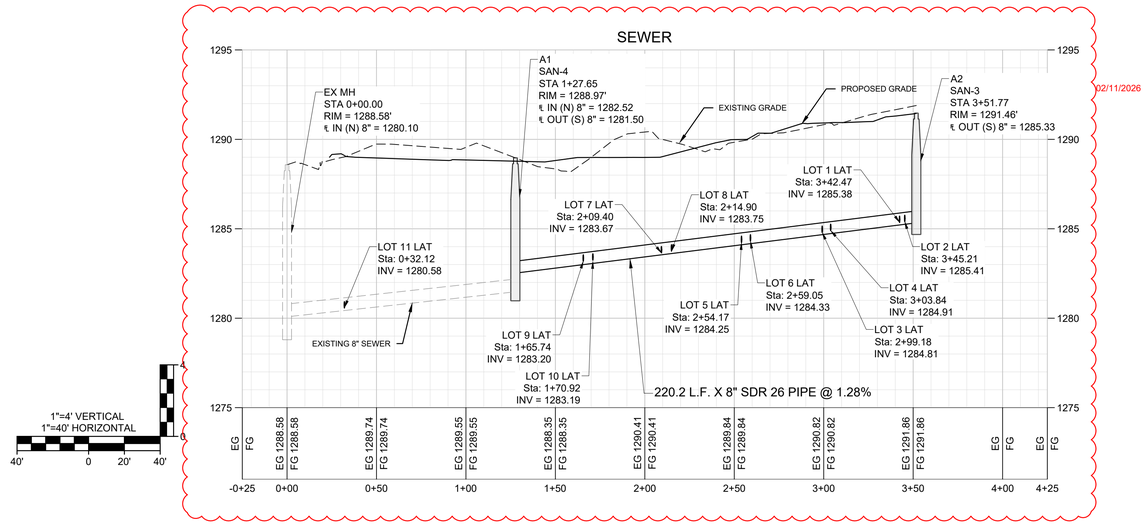
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FILE NO. 2025PW0010
DATE 2/18/2026



1 SANITARY SEWER EXTENSION PLAN
S2 SCALE: 1" = 20'



2 SANITARY SEWER EXTENSION PROFILE
S2 HORIZONTAL SCALE: 1" = 40'; VERTICAL SCALE: 1" = 4'

02/11/2026

SYMBOLS LEGEND

SS	EXISTING SEWER
SAN	PROPOSED SEWER
C	SANITARY SEWER CLEANOUT
@	FURTHEST ELEVATION TO SERVE ENTIRE LOT.

CONTRACTOR TO COORDINATE WORK WITH ADJACENT PROPERTY OWNERS.

SANITARY SEWER NOTE:
ALL SEWERS IN FILL AREAS TO BE PLACED AND THOROUGHLY COMPACTED PRIOR TO PLACING PIPE ACCORDING TO CITY DESIGN STANDARDS.

ALL PUBLIC MAINS ARE REQUIRED TO BE SDR26.

SANITARY SEWER LATERAL NOTE:
ALL SEWER LATERALS TO BE 4" Ø SCH 40 PVC AND SHALL INCLUDE A CLEANOUT AND TRACER WIRE PER CITY DETAIL SAN-24 AND SAN-25

MISSOURI ONE CALL SYSTEM, INC.
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STOP - CALL BEFORE YOU DIG!

NO NIGHT WORK WILL BE ALLOWED. CONTRACTOR TO COORDINATE WITH CITY INSPECTOR

CONTRACTOR SHALL FIELD VERIFY THAT PROPOSED GRADES MATCH EXISTING PAVEMENT AT ALL CONNECTION POINTS. CONTRACTOR SHALL NOTIFY ENGINEER IF DISCREPANCY OCCURS.

THE SURVEY INFORMATION SHOWN REFLECTS ABOVE GROUND INDICATIONS OF UTILITIES AND INFORMATION AVAILABLE FROM UTILITY COMPANIES. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANTY THAT THE UNDER-GROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED, ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

SPECIAL NOTE:
CONTRACTOR TO FAMILIARIZE THEM SELF WITH THE MISSOURI OVERHEAD POWERLINE SAFETY ACT. IF NECESSARY, CONTRACTOR SHALL CONTACT CITY UTILITIES TECHOUSE (417-831-8888) A MINIMUM OF TEN DAYS IN ADVANCE TO MAKE ARRANGEMENTS FOR LINE COVER.

DIMENSION NOTE:
DIMENSIONS SHOWN ARE TO FACE OF CURB UNLESS NOTED OTHERWISE.

SPECIAL NOTE:
CONTRACTOR TO PERFORM DETAILED SITE INSPECTION TO LOCATE ALL EXISTING UTILITES AND VERIFY ANY POSSIBLE CONFLICTS WITH PROPOSED IMPROVEMENTS PRIOR TO BEGINNING ANY CONSTRUCTION. CONTACT ENGINEER WITH ANY CONFLICTS.

SPECIAL NOTE:
ANY CHANGE OF ALIGNMENT WILL REQUIRE REVISED PLANS. ANY CHANGE OF ELEVATION GREATER THAN 12 INCHES WILL REQUIRE REVISED PLANS. REVISED PLANS MUST BE APPROVED BEFORE WORK CAN COMMENCE.

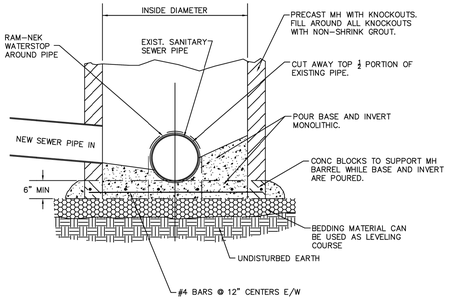
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Springfield, MO 65807
417.866.2741
weareown.com
COA#000062
CAMERON M. HOLE PE# 2025018184
FORMERLY ANDERSON ENGINEERING

STATE OF MISSOURI
CAMERON M. HOLE
NUMBER PE - 2025018184
PROFESSIONAL ENGINEER
02/11/2026

DEPARTMENT OF PUBLIC WORKS
SPRINGFIELD, MISSOURI
N BROADWAY AVE, SPRINGFIELD, MO
PAVING, DRAINAGE AND SANITARY IMPROVEMENT PLANS
SANITARY SEWER EXTENSION PLAN – S2

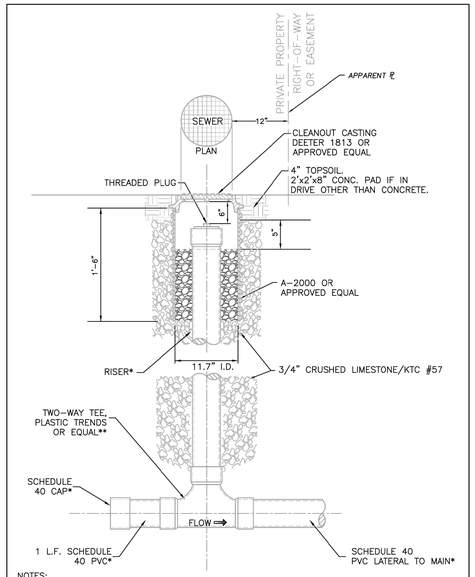
SURVEYED BY: OWN, INC.
FIELD BK.: N/A
LEVEL BK.: N/A
DESIGN: CMH/LJJ
DRAWN: CMH/LJJ
CHECKED: JMD
SCALES HOR: 1" = 20' / 1" = 40' VERT: 1" = 4'
SHEET 10 OF 13 SHEETS
FILE NO. 2025PW0010S2

APPROVED BY
DIRECTOR OF PUBLIC WORKS
FILED
IN THE OFFICE OF THE
DIRECTOR OF PUBLIC WORKS
FILE NO. 2025PW0010
DATE 2/18/2026



DEPARTMENT OF PUBLIC WORKS SPRINGFIELD, MO.	NEW MANHOLE ON EXISTING LINE	ADOPTED: 11-6-2012
		SAN-4

1 NEW MANHOLE ON EXISTING LINE
S3 SCALE: NTS



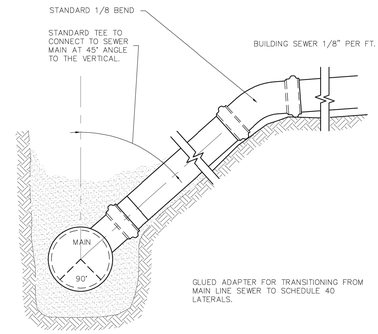
NOTES:
-NOT MAINTAINED BY ENVIRONMENTAL SERVICES.
-ADJUST LATERAL DEPTH AS NECESSARY TO AVOID UTILITY CONFLICT.
* 4" OR 6" SCHEDULE 40 PVC.
** 4"X4" NO. #D1004; 6"X6" NO. #D1006 BY PLASTIC TRENDS.

DEPARTMENT OF PUBLIC WORKS SPRINGFIELD, MO.	TYPICAL CLEANOUT RISER	ADOPTED: 1/1/2017
		SAN-24

4 TYPICAL CLEANOUT RISER
S3 SCALE: NTS

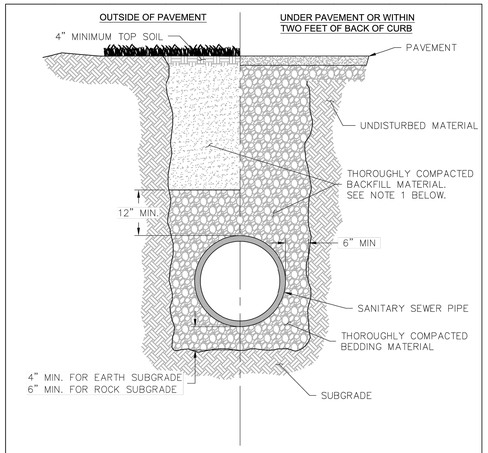
NOTE:

MOULDED TEES ARE REQUIRED FOR ALL LATERALS ON NEW SEWER LINES. ALL LATERALS SHALL BE SCHEDULE 40 PIPE AND JOINTS SHALL BE GLUED WITH AN APPROVED ADHESIVE.



DEPARTMENT OF PUBLIC WORKS SPRINGFIELD, MO.	HOUSE CONNECTIONS - LESS THAN 12'	ADOPTED: 7/1/2023
		SAN-10

2 HOUSE CONNECTION DETAIL - LESS THAN 12'
S3 SCALE: NTS



NOTES:

1. BACKFILL AND BEDDING MATERIAL SHALL CONFORM TO CHAPTER 4 – SANITARY SEWERS OF THE CITY OF SPRINGFIELD GENERAL CONDITIONS AND TECHNICAL SPECIFICATIONS.
2. MINIMUM DEPTH OF BEDDING MATERIAL:
   ¡ PIPE DIAMETER BUT NEVER LESS THAN 4" BELOW THE PIPE IN EARTH, 6" BELOW IN ROCK AND A MINIMUM OF 12" ABOVE THE PIPE.

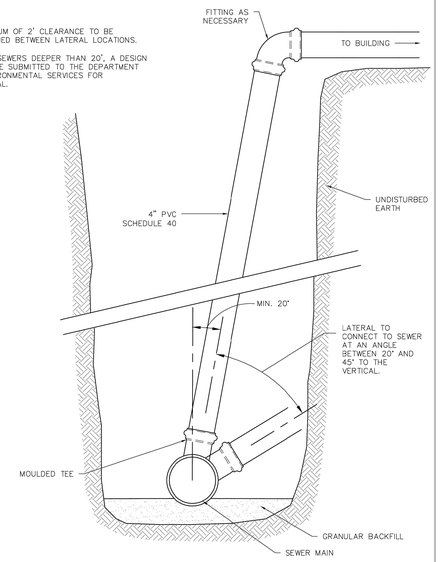
DEPARTMENT OF PUBLIC WORKS SPRINGFIELD, MO.	SEWER PIPE TRENCH DETAIL	ADOPTED: 10/1/2019
		SAN-28

5 SEWER PIPE TRENCH
S3 SCALE: NTS

NOTE:

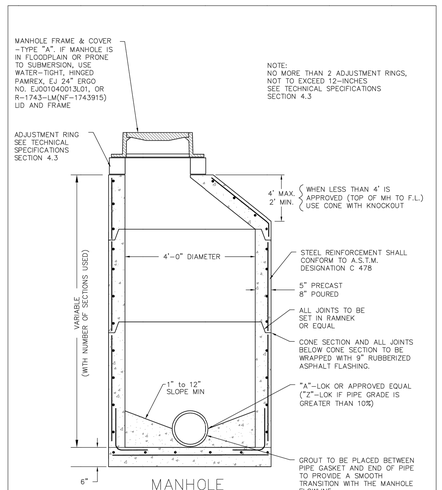
1. MINIMUM OF 2' CLEARANCE TO BE MAINTAINED BETWEEN LATERAL LOCATIONS.

2. FOR SEWERS DEEPER THAN 20', A DESIGN SHALL BE SUBMITTED TO THE DEPARTMENT OF ENVIRONMENTAL SERVICES FOR APPROVAL.



DEPARTMENT OF PUBLIC WORKS SPRINGFIELD, MO.	HOUSE CONNECTIONS - 12 FEET TO 20 FEET	ADOPTED: 7/1/2023
		SAN-11

3 HOUSE CONNECTION DETAIL - 12' TO 20'
S3 SCALE: NTS



DEPARTMENT OF PUBLIC WORKS SPRINGFIELD, MO.	STANDARD FOUR-FOOT DIAMETER MANHOLE	ADOPTED: 7/1/2023
		SAN-3

6 STANDARD FOUR-FOOT DIAMETER MANHOLE
S3 SCALE: NTS

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COA#000062
CAMERON M. HOLE PE# 2025018184

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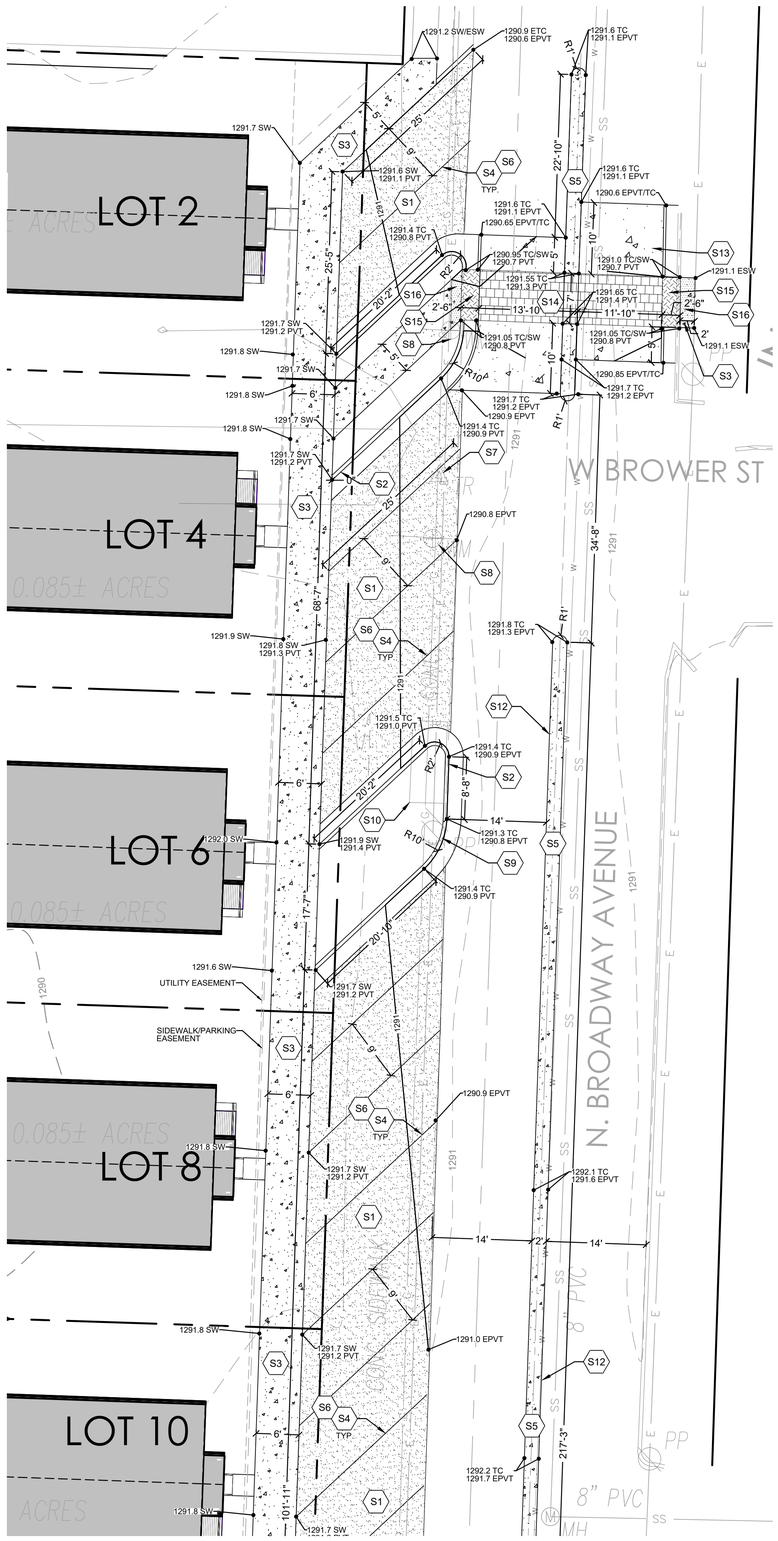
STATE OF MISSOURI
CAMERON M. HOLE
NUMBER PE - 2025018184
PROFESSIONAL ENGINEER
06-25-2025

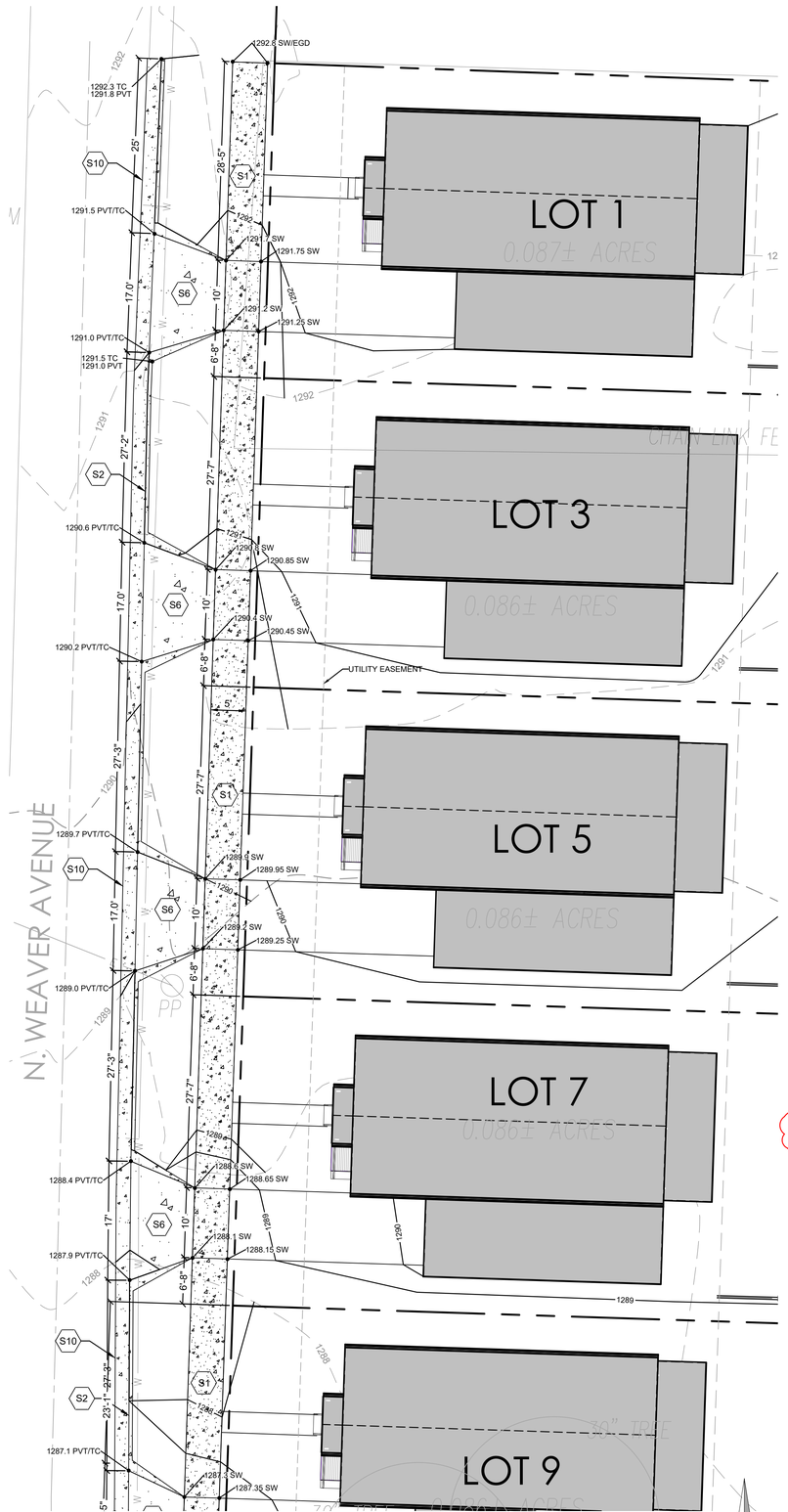
DEPARTMENT OF PUBLIC WORKS
SPRINGFIELD, MISSOURI

N BROADWAY AVE, SPRINGFIELD, MO
PAVING, DRAINAGE AND SANITARY IMPROVEMENT PLANS
SANITARY SEWER DETAILS – S3

SURVEYED BY: OWN, INC.	DESIGN: CMH/LLJ	SCALES	SHEET 11
FIELD BK.: N/A	DRAWN: CMH/LLJ	HOR: N/A	OF 13 SHEETS
LEVEL BK.: N/A	CHECKED: JMD	VERT: N/A	FILE NO. 2025PW0010S3

APPROVED BY _____
DIRECTOR OF PUBLIC WORKS
FILED
IN THE OFFICE OF THE
DIRECTOR OF PUBLIC WORKS
FILE NO. 2025PW0010
DATE 11/21/2025


LOT 2
0.085± ACRES
LOT 4
0.085± ACRES
LOT 6
0.085± ACRES
LOT 8
0.085± ACRES
LOT 10
ACRES
W BROWER ST
N. BROADWAY AVENUE
1291.2 SW/ESW
1290.9 ETC
1290.6 EPVT
1291.6 TC
1291.1 EPVT
1291.7 SW
1291.6 SW
1291.1 PVT
1291.6 TC
1291.1 EPVT
1290.6 EPVT/TC
1291.4 TC
1290.8 PVT
1290.65 EPVT/TC
1290.95 TC/SW
1290.7 PVT
1291.55 TC
1291.3 PVT
1291.0 TC/SW
1290.7 PVT
1291.1 ESW
1291.65 TC
1291.4 PVT
1291.7 SW
1291.2 PVT
1291.8 SW
1291.05 TC/SW
1290.8 PVT
1291.05 TC/SW
1290.8 PVT
1290.85 EPVT/TC
1291.7 TC
1291.2 EPVT
1290.9 EPVT
1291.4 TC
1290.9 PVT
1290.8 EPVT
1291.8 TC
1291.3 EPVT
1291.5 TC
1291.0 PVT
1291.4 TC
1290.9 EPVT
1291.9 SW
1291.8 SW
1291.3 PVT
1291.3 TC
1290.8 EPVT
1291.4 TC
1290.9 PVT
1290.9 EPVT
1292.1 TC
1291.6 EPVT
1291.0 EPVT
1292.2 TC
1291.7 EPVT
1292.3 SW
1291.9 SW
1291.4 PVT
1291.6 SW
UTILITY EASEMENT
SIDEWALK/PARKING EASEMENT
1291.7 SW
1291.2 PVT
1291.8 SW
1291.7 SW
1291.2 PVT
1291.8 SW
1291.7 SW
1291.2 PVT
1291.8 SW



1 WEAVER AVE SIDEWALK PLAN NORTH
T2 SCALE: 1" = 10'

SPECIAL NOTE:
CONTRACTOR SHALL REPAIR AND/OR REPLACE ANY DAMAGED AREAS OF PAVEMENT DUE TO CONSTRUCTION ACTIVITIES.

CAUTION:
EXISTING SURFACE FEATURES, STRUCTURES, ETC. AND UNDERGROUND INSTALLATIONS SUCH AS WATER MAINS, GAS MAINS, SEWERS, TELEPHONE LINES, FIBER OPTIC LINES AND BURIED STRUCTURES ARE INDICATED ON THE DRAWING ONLY TO THE EXTENT SUCH INFORMATION HAS BEEN MADE AVAILABLE TO OR DISCOVERED BY THE SURVEYOR IN PREPARING THIS DRAWING. THERE IS NO GUARANTEE AS TO THE ACCURACY OR COMPLETENESS OF SUCH INFORMATION. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF UNDERGROUND AND OTHER UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

SPECIAL NOTE:
PRIOR TO BEGINNING ANY SITE WORK & ORDERING OF MATERIALS, CONTRACTOR SHALL FIELD VERIFY ALL UTILITY & DRAINAGE CONNECTIONS TO EXISTING SYSTEMS BY POT HOLING AND SHALL NOTIFY ENGINEER OF NEEDED CHANGES: FAILURE TO DO SO WILL RESULT IN THE CONTRACTOR BEING RESPONSIBLE FOR ALL REVISION COSTS AND DELAYS.

KEY NOTES:

S1 INSTALL SIDEWALK
REFER TO DETAIL 5/T3 AND DETAIL 7/T3 FOR THICKENED SIDEWALK THROUGH DRIVEWAYS.

S2 INSTALL CURB & GUTTER
REFER TO DETAIL 1/T3.

S3 POPLAR ST SIDEWALK
REFER TO 2/T1 FOR CONTINUATION

S4 SHED
COORDINATE RELOCATION OF SHED W/ PROPERTY OWNER IF NEEDED

S5 STORMWATER INLET
INLET TO BE ADA COMPLIANT AND FLUSH WITH ALL SURROUNDING SIDEWALK

S6 RESIDENTIAL DRIVEWAY & SIDEWALK
REFER TO DETAIL 7/T3.

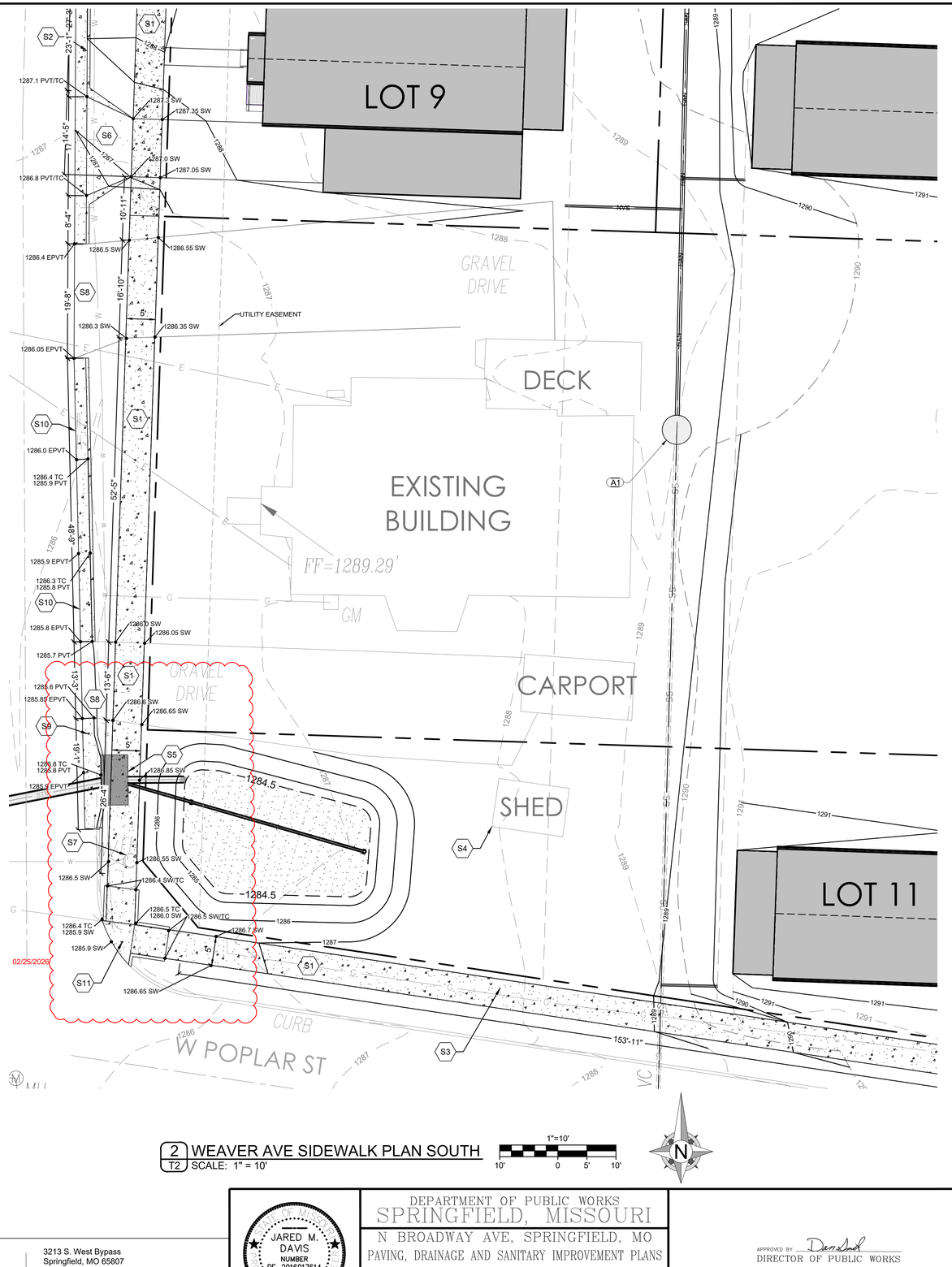
S7 FIRE HYDRANT
COORDINATE RELOCATION OF FIRE HYDRANT WITH CITY UTILITIES.

S8 EXISTING GRAVEL DRIVEWAY TO REMAIN

S9 WARPED CURB & GUTTER
TRANSITION FROM 0" DEEP GUTTER TO 5" DEEP GUTTER AT INLET THROAT. PROVIDE POSITIVE DRAINAGE TO INLET.

S10 SAWCUT 3" OF EXISTING PAVEMENT
PROVIDE CLEAN VERTICAL EDGE FOR CONNECTION. MATCH ELEVATION ALONG EDGE AND INSTALL SEALANT AT JOINT.

S11 INSTALL TYPE II CURB RAMP
REFER TO DETAIL 2/T4. 02/25/2026



2 WEAVER AVE SIDEWALK PLAN SOUTH
T2 SCALE: 1" = 10'

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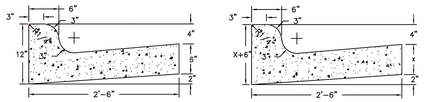
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COA#000062
JARED M. DAVIS PE# 2016017614
FORMERLY ANDERSON ENGINEERING

JARED M. DAVIS
NUMBER PE-2016017614
02-25-2026

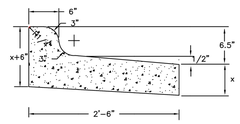
DEPARTMENT OF PUBLIC WORKS
SPRINGFIELD, MISSOURI
N BROADWAY AVE, SPRINGFIELD, MO
PAVING, DRAINAGE AND SANITARY IMPROVEMENT PLANS
WEAVER AVE IMPROVEMENT PLAN – T2

SURVEYED BY: OWN, INC.	DESIGN: CMH/LLJ	SCALES	SHEET 3
FIELD BK.: N/A	DRAWN: CMH/LLJ	HOR: 1" = 10'	OF 13 SHEETS
LEVEL BK.: N/A	CHECKED: JMD	VERT: N/A	FILE NO. 2025PW001072

APPROVED BY
DIRECTOR OF PUBLIC WORKS
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DIRECTOR OF PUBLIC WORKS
FILE NO. 2025PW0010
DATE 3/12/2026

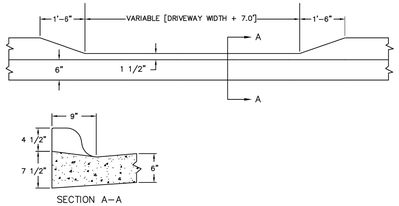


NOTE: #5 REBAR @ 2'6" O.C. TO BE USED ON ALL CONCRETE PAVEMENT. WHEN CONCRETE PAVEMENT IS 8" OR MORE A KEYWAY MAY BE USED IN PLACE OF REBAR. ASPHALT PAVEMENT – DOWELL AND KEYWAY SHALL BE OMITTED.



NOTE: TRANSITION LENGTH FOR SPILL CURB SHOULD BE A MINIMUM OF 5'

STANDARD RESIDENTIAL DRIVEWAY OPENING

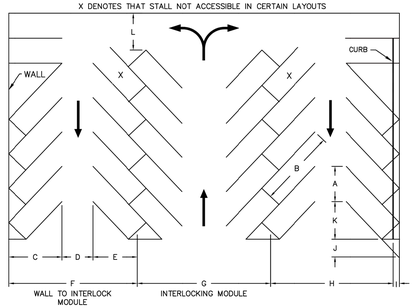


DEPARTMENT OF PUBLIC WORKS SPRINGFIELD, MO.	CURB & GUTTER / DRIVEWAY OPENING	REVISED 7/1/2023 ST-2

1 CURB & GUTTER
T3 SCALE: NTS

MINIMUM REQUIREMENTS FOR LAYOUT ELEMENTS

X DENOTES THAT STALL NOT ACCESSIBLE IN CERTAIN LAYOUTS



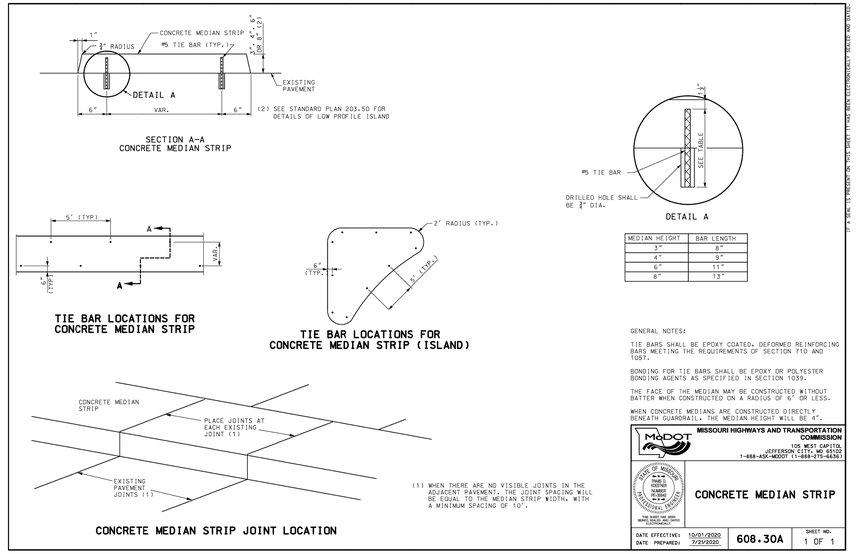
PARKING LAYOUT DIMENSIONS (IN FEET) FOR 9 FT. STALLS AT VARIOUS ANGLES

DIMENSION	SYMBOL	90°	75°	60°	45°	30°
STALL WIDTH, PARALLEL TO AISLE	A	9.0	9.3	10.4	12.7	18.0
STALL LENGTH OF LINE	B	18.5	20.0	22.0	25.0	34.1
STALL DEPTH TO WALL	C	18.5	19.5	19.0	17.5	17.1
AISLE WIDTH BETWEEN STALL LINES	D	26.0	23.0	16.0	12.0	10.0
STALL DEPTH, INTERLOCK	E	18.5	18.8	17.5	15.3	13.2
MODULE, WALL TO INTERLOCK	F	63.0	61.3	52.5	44.8	40.3
MODULE, INTERLOCKING	G	63.0	61.0	51.0	42.6	36.4
MODULE, INTERLOCK TO CURB FACE	H	60.5	58.8	50.2	42.8	38.8
BUMPER OVERHANG (TYPICAL)	I	2.5	2.5	1.0.4	2.0	1.5
OFFSET	J	0.0	0.5	2.7	6.3	13.5
SETBACK	K	0.0	5.0	8.3	11.0	16.0
CROSS AISLE, ONE-WAY	L	14.0	14.0	14.0	14.0	14.0
CROSS AISLE, TWO-WAY	–	24.0	24.0	24.0	24.0	24.0

NOTE: ANY PARKING LAYOUT OTHER THAN SHOWN MUST BE APPROVED BY THE CITY TRAFFIC ENGINEER.

DEPARTMENT OF PUBLIC WORKS SPRINGFIELD, MO.	PARKING STALL LAYOUT ELEMENTS	REVISED: 10/1/2019 ST-6

2 PARKING STALL LAYOUT DETAIL
T3 SCALE: NTS



MEDIAN HEIGHT	BAR LENGTH
3"	8"
4"	9"
6"	11"
8"	13"

GENERAL NOTES:

TIE BARS SHALL BE EPOXY COATED. DEFORMED REINFORCING BARS MEETING THE REQUIREMENTS OF SECTION 710 AND 1057.

BONDING FOR TIE BARS SHALL BE EPOXY OR POLYESTER BONDING AGENTS AS SPECIFIED IN SECTION 1039.

THE FACE OF THE MEDIAN MAY BE CONSTRUCTED WITHOUT BATTER WHEN CONSTRUCTED ON A RADIUS OF 6' OR LESS.

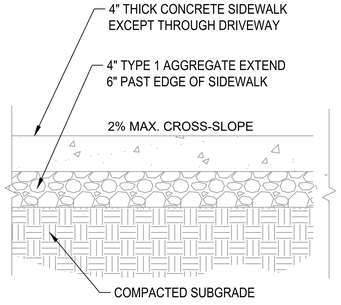
WHEN CONCRETE MEDIANS ARE CONSTRUCTED DIRECTLY BENEATH GUARDRAIL, THE MEDIAN HEIGHT WILL BE 4".

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

CONCRETE MEDIAN STRIP

DATE EFFECTIVE: 10/01/2020
DATE PREPARED: 7/23/2020
608.30A
SHEET NO. 1 OF 1

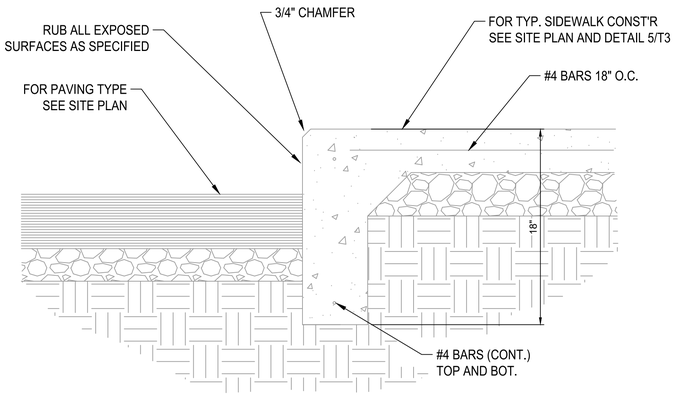
3 CONCRETE MEDIAN STRIP
T3 SCALE: NTS



NOTES:

1. *ALL SIDEWALKS ARE TO BE BUILT PER THE MOST CURRENT VERSION OF THE MISSOURI STANDARD PLANS FOR HIGHWAY CONSTRUCTION.*
2. *CONTROL JOINTS AT 4-6' O.C.*
3. *EXPANSION JOINTS EVERY 100' AND 18" ON EACH SIDE OF DRIVEWAYS, INTERSECTING WALKS, AND LOCATIONS AS SHOWN ON PLANS.*
4. *ASPHALT DRIVEWAYS - IF CROSS-SLOPE < 2%, SAWCUT EXISTING PAVEMENT AND INSTALL SIDEWALK. IF CROSS-SLOPE > 2%, DRIVEWAY MUST BE REMOVED AS REQUIRED TO PROVIDE 2% CROSS-SLOPE.*
5. *CONCRETE DRIVEWAYS - IF CROSS-SLOPE < 2%, EXISTING PAVEMENT IS ACCEPTABLE AS SIDEWALK. IF CROSS-SLOPE > 2%, DRIVEWAY MUST BE SAWCUT AND REMOVED AS REQUIRED TO INSTALL SIDEWALK WITH A MAXIMUM 2% CROSS-SLOPE.*
6. *GRAVEL DRIVEWAYS - INSTALL SIDEWALK ACROSS DRIVEWAY AS SHOWN IN PLAN.*
7. *NO SIDEWALK CROSS-SLOPE CAN EXCEED 2%, INCLUDING SIDEWALKS ACROSS DRIVEWAYS.*
8. *THE MAXIMUM RUNNING SLOPE OF SIDEWALKS ARE 5%. IF A RUNNING SLOPE ON A SIDEWALK NOT CLASSIFIED AS A RAMP EXCEEDS 5%, HANDRAILS WILL BE REQUIRED.*
9. *THE MAXIMUM RUNNING SLOPE ON A SIDEWALK CLASSIFIED AS A RAMP IS 8.33%. NO RUNNING SLOPE ON ANY SECTION OF SIDEWALK CAN EXCEED 8.33%*
10. *ALL SIDEWALK AND CURB RAMPS MUST COMPLY WITH FEDERAL LAWS AND ADA GUIDELINES. NON-COMPLIANT WORK WILL BE REMOVED AND REPLACED AT CONTRACTOR'S EXPENSE.*

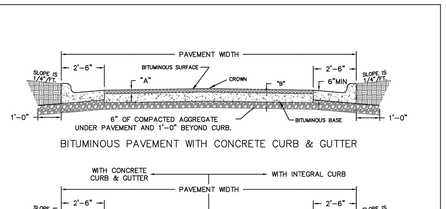
5 TYPICAL SIDEWALK CROSS-SECTION
T3 SCALE: N.T.S.



GENERAL NOTES

1. ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER
2. ALL #4 TO HAVE 1-1/2" COVER.
3. ALL REINFORCING BARS TO BE GRADE 60.
4. ALL CONCRETE TO BE 5,000 PSI.

6 TURNDOWN SIDEWALK DETAIL
T3 SCALE: N.T.S.



NOTE: SEE ST-03 & ST-04 FOR JOINT DETAILS

STANDARD PAVEMENT WIDTH AND THICKNESS			
STREET TYPE	"T"	"A"	"B"
ALLEY/LOCAL	6"	2"	5"
COLLECTOR	6"	2"	6"
ARTERIAL	8"	2"	9"

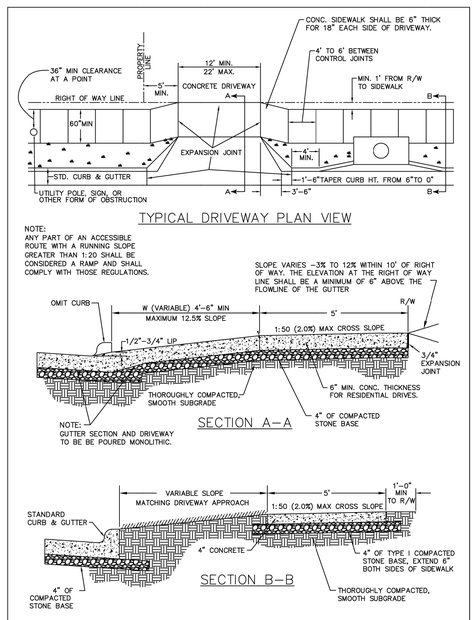
NOTES: CROSS SLOPE SHALL BE 1/4"/FT. ON ALL PAVEMENTS EXCEPT ALLEYS.

WIDTH OF PAVEMENT IS SUBJECT TO REQUIREMENTS OF THE PLANNING DEPARTMENT AND MAY VARY FROM THE STANDARDS.

TO CREATE A GUTTER SECTION THE CONTRACTOR SHALL FORM A 2" RISE 2' FROM THE INSIDE OF THE CURB. PAVEMENT WIDTH WILL BE MEASURED FROM BACK OF CURBS ON IMPROVED STREETS. PAVEMENT CROWN SHOULD BE CENTERED IN RIGHT OF WAY.

DEPARTMENT OF PUBLIC WORKS SPRINGFIELD, MO.	TYPICAL STREET SECTIONS	REVISED: 10/1/2019 ST-1

4 ASPHALT PAVEMENT SECTION
T3 SCALE: NTS



DEPARTMENT OF PUBLIC WORKS SPRINGFIELD, MO.	TYPICAL RESIDENTIAL DRIVEWAY & SIDEWALK	REVISED: 7/1/2013 ST-8

7 RESIDENTIAL DRIVEWAY DETAIL
T3 SCALE: NTS

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COA#000062
CAMERON M. HOLE PE# 2025018184

FORMERLY ANDERSON ENGINEERING

STATE OF MISSOURI
CAMERON M. HOLE
NUMBER PE - 2025018184
PROFESSIONAL ENGINEER
Cameron Hole
06-25-2025

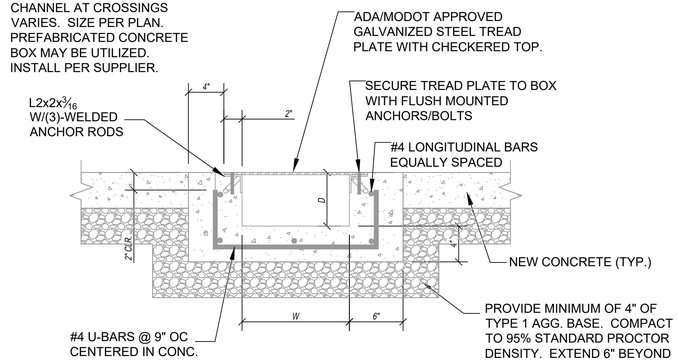
DEPARTMENT OF PUBLIC WORKS
SPRINGFIELD, MISSOURI

N BROADWAY AVE, SPRINGFIELD, MO
PAVING, DRAINAGE AND SANITARY IMPROVEMENT PLANS
STREET DETAILS 1 – T3

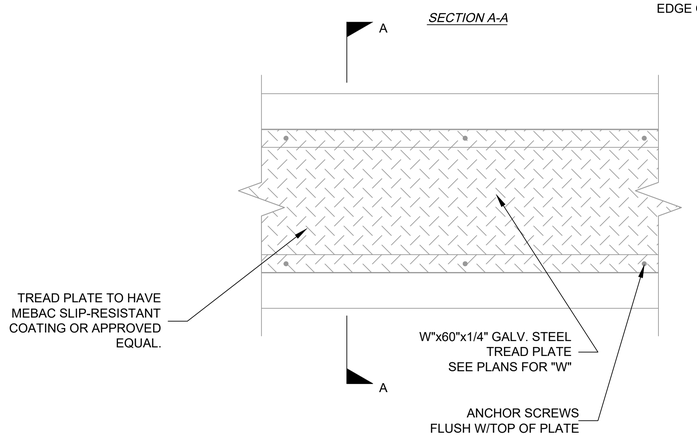
SURVEYED BY: OWN, INC.	DESIGN: CMH/LLJ	SCALES	SHEET 4
FIELD BK.: N/A	DRAWN: CMH/LLJ	HOR: N/A	OF 13 SHEETS
LEVEL BK.: N/A	CHECKED: JMD	VERT: N/A	FILE NO. 2025PW001073

APPROVED BY: Dan Smith
DIRECTOR OF PUBLIC WORKS
FILED
IN THE OFFICE OF THE
DIRECTOR OF PUBLIC WORKS
FILE NO. 2025PW0010
DATE 11/21/2025

NOTE:
DEPTH (D) AND WIDTH (W) OF CHANNEL AT CROSSINGS VARIES. SIZE PER PLAN. PREFABRICATED CONCRETE BOX MAY BE UTILIZED. INSTALL PER SUPPLIER.

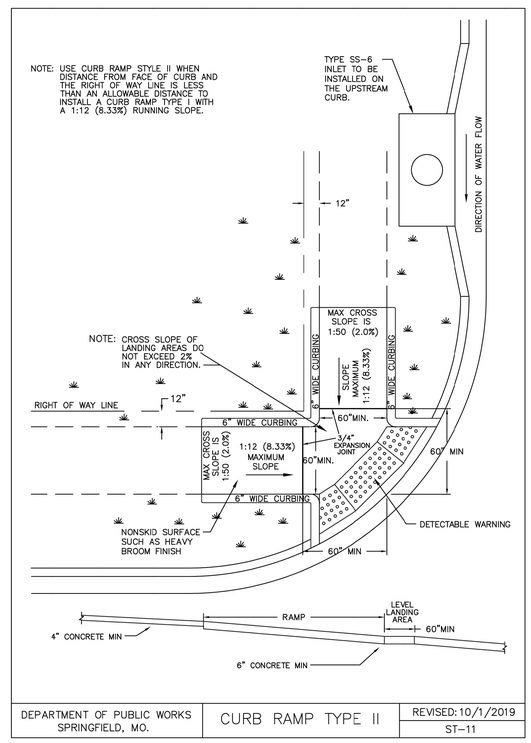


SECTION A-A



PLAN

1 TREAD PLATE AND BOX CULVERT
T4 SCALE: N.T.S.



DEPARTMENT OF PUBLIC WORKS SPRINGFIELD, MO.	CURB RAMP TYPE II	REVISED: 10/1/2019 ST-11

02/25/2026

2 CURB RAMP TYPE II DETAIL
T4 SCALE: N.T.S.

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COA#000062
JARED M. DAVIS PE# 2016017614

FORMERLY ANDERSON ENGINEERING

JARED M. DAVIS NUMBER PE-2016017614
02-25-2026

DEPARTMENT OF PUBLIC WORKS
SPRINGFIELD, MISSOURI
N BROADWAY AVE, SPRINGFIELD, MO
PAVING, DRAINAGE AND SANITARY IMPROVEMENT PLANS
STREET DETAILS 2 – T4

SURVEYED BY: OWN, INC.	DESIGN: CMH/LJ	SCALES	SHEET 5
FIELD BK.: N/A	DRAWN: CMH/LJ	HOR: N/A	OF 13 SHEETS
LEVEL BK.: N/A	CHECKED: JMD	VERT: N/A	FILE NO. 2025PW001071

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FILE NO. 2025PW0010
DATE 3/12/2026

DREW LEWIS BROADWAY COTTAGES
DRAINAGE IMPROVEMENT PLANS
SPRINGFIELD, GREENE COUNTY, MISSOURI



1 W1 STORM SEWER EXTENSION OVERVIEW
SCALE: 1" = 20'

1"=20'
20' 0 10' 20'

N

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SYMBOLS LEGEND

- CP CONTROL POINT
- IP FOUND IRON PIN
- IP SET IRON PIN
- RWM RIGHT-OF-WAY MARKER
- PP GY POWER POLE W/ GUY
- MH MANHOLE
- SCO SEWER CLEANOUT
- GM GAS METER
- LP LIGHT POLE
- SIGN
- WM WATER METER
- WV WATER VALVE
- GV GAS VALVE
- FH FIRE HYDRANT
- TR TELEPHONE RISER
- BUMPER POST
- GRATE INLET
- TREELINE
- BUSH
- ER ELECTRICAL RISER
- TS TRAFFIC SIGNAL BOX
- MB MAIL BOX

- PROPERTY LINE
- SANITARY SEWER ——SS——
- STORM SEWER ——SW——
- TELEPHONE LINE ——T——
- UNDERGROUND TELEPHONE ——UT——
- GAS LINE ——G——
- WATER LINE ——W——
- ELECTRIC LINE ——E——
- UNDERGROUND ELECTRIC ——UE——
- FENCE LINE ——x——x——
- RETAINING WALL
- LINE LABELS MEASURED 100' M / DEED 100' D
- EXISTING CONTOUR —— 1190
- PROPOSED CONTOUR

GENERAL NOTES

1. CONSTRUCTION METHODS AND MATERIALS SHALL CONFORM TO THE LATEST REVISIONS OF THE STANDARD GENERAL CONDITIONS AND TECHNICAL SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION FOR THE CITY OF SPRINGFIELD, MISSOURI.
2. THE CONTRACTOR SHALL FIELD VERIFY ALL HORIZONTAL AND VERTICAL LINES AND GRADES OF EXISTING UTILITIES PRIOR TO THE CONSTRUCTION OF IMPROVEMENTS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY UPON DISCOVERY OF A DISCREPANCY BETWEEN CONTRACT DRAWINGS AND ACTUAL FIELD CONDITIONS.
3. CONTRACTOR SHALL CONTACT THE CITY OF SPRINGFIELD CONSTRUCTION INSPECTION DEPARTMENT A MINIMUM OF 5 WORKING DAYS PRIOR TO ANY CONSTRUCTION ON RIGHT OF WAY TO SETUP A PRECONSTRUCTION CONFERENCE. PLEASE USE GROUP EMAIL OF dethomas@springfieldmo.gov AND aflippin@springfieldmo.gov FOR CONTACTING CONSTRUCTION INSPECTION DEPARTMENT. IN ADDITION TO EMAIL, YOU MAY CONTACT DOUG THOMAS AT 417-864-1968. CONTRACTOR SHALL DISCUSS AND SCHEDULE PRECONSTRUCTION CONFERENCE WHEN CONTACTING THE INSPECTION DEPARTMENT. ANY WORK PRIOR TO PRECONSTRUCTION CONFERENCE WILL BE REJECTED.
4. APPLICABLE PERMITS MUST BE OBTAINED FROM THE CITY, STATE AND COUNTY PRIOR TO EXCAVATION WITHIN ANY RIGHT-OF-WAY, AND PRIOR TO ANY CONSTRUCTION.
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE LOCATION OF ANY UNDERGROUND UTILITIES OR OTHER OBSTRUCTIONS AND TO BE LIABLE FOR DAMAGE AND CONSEQUENT REPAIR TO SUCH IN THE COURSE OF HIS OPERATIONS.
6. THE CONTRACTOR AND/OR BUILDER WILL KEEP THE SUBDIVISION NEAT AND ORDERLY AT ALL TIMES WHILE CONSTRUCTION IS TAKING PLACE. ALL CITY STREETS ADJACENT TO THE DEVELOPMENT SHALL BE KEPT CLEAR OF MUD, ROCK, DIRT, DEBRIS, PAPER AND WASTE MATERIAL AT ALL TIMES. THE PROPER AMOUNT OF INSPECTION SHALL BE CALLED FOR AT THEIR PROPER TIMES, OR ANY AND ALL WORK MAY BE REJECTED.
7. IF ANY WORK OR ACCESS TO ANY ADJOINING PROPERTY IS DONE, IT IS THE FULL RESPONSIBILITY OF THE APPLICANT/OWNER TO OBTAIN PROPER RELEASES FROM ADJOINING PROPERTY OWNERS AND ASSUME ALL LIABILITY FOR ACTION TAKEN DURING ALL CONSTRUCTION.
8. ALL DISTURBED AREAS ARE TO BE RESEEDED IN ACCORDANCE WITH THE CURRENT REQUIREMENTS OF THE CITY OF SPRINGFIELD DESIGN STANDARDS FOR PUBLIC IMPROVEMENTS.
9. CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE ANY EXISTING STREET, CURB AND GUTTER, SIDEWALK AND DRIVEWAYS.
10. THE CONTRACTOR SHALL HAVE ON SITE A SET OF PLANS FILED WITH THE CITY OF SPRINGFIELD. THE CONTRACTOR SHALL HAVE ON THE PROJECT AT ALL TIMES, AS HIS AGENT, A COMPETENT SUPERINTENDENT CAPABLE OF READING AND THOROUGHLY UNDERSTANDING THE PLANS AND SPECIFICATIONS, THOROUGHLY EXPERIENCED IN THE TYPE OF WORK BEING PERFORMED, AND WHO SHALL RECEIVE INSTRUCTIONS FROM THE ENGINEER OR HIS AUTHORIZED REPRESENTATIVE.
11. ALL TRENCHES, WHICH LIE UNDER PROPOSED PAVEMENT OR LIE WITHIN TWO FEET OF THE BACK OF CURB SHALL BE BACKFILLED TO PAVEMENT SUBGRADE WITH COMPACTED GRANULAR MATERIAL.
12. FOR TESTING PROCEDURES REFER TO GENERAL CONDITIONS AND TECHNICAL SPECIFICATIONS FOR THE CITY OF SPRINGFIELD, PUBLIC WORKS.
13. MANHOLE COVERS, VALVE BOXES AND OTHER UTILITY APPURTENANCES SHALL NOT ENCROACH ON SIDEWALKS, CURBS OR PAVEMENT. WHERE CONFLICTS ARE DISCOVERED, THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR INSTRUCTION PRIOR TO PROCEEDING.
14. THE CONTRACTOR SHALL NOTIFY THE INSPECTOR OF ANY NEW SINKHOLES DISCOVERED DURING CONSTRUCTION.
15. PIPE BEDDING WITHIN UNIMPROVED AREAS TO CONFORM TO CITY DETAIL SAN-12.
16. BACKFILL WITHIN RIGHT-OF-WAY TO CONFORM TO CITY OF SPRINGFIELD GENERAL CONDITIONS AND TECHNICAL SPECS, PAGE IV-13, SECTION 1., AS FOLLOWS; "THE BACKFILL MATERIAL FOR SEWERS AND LATERALS CONSTRUCTED IN OPEN CUTS CROSSING OR PARALLEL TO ROADWAYS, DRIVEWAYS, SIDEWALKS, OTHER EXISTING PAVEMENTS, OR HAVING THE NEAR SIDE OF THE TRENCH WALLS WITHIN TWO (2) FEET OF BACK/BOTTOM OF STREET CURB, AND AT OTHER LOCATIONS SHOWN ON THE PLANS OR SPECIFIED, ALL OF THE BACKFILL SHALL CONSIST OF GRANULAR MATERIAL MEETING THE REQUIREMENTS FOR BEDDING MATERIAL, SPECIFIED HEREINBEFORE. THIS MATERIAL SHALL BE PLACED AND THOROUGHLY COMPACTED."
17. THE CONTRACTOR IS RESPONSIBLE FOR ALL METHODS, SEQUENCING, AND SAFETY CONCERNS ASSOCIATED WITH THIS PROJECT DURING CONSTRUCTION, UNLESS SPECIFICALLY ADDRESSED OTHERWISE IN THIS PLAN OR ELSEWHERE IN THE CONTRACT.
18. THE QUANTITIES AND SITE CONDITIONS DEPICTED IN THESE PLANS ARE FOR INFORMATIONAL PURPOSES ONLY AND ARE SUBJECT TO ERROR AND OMISSION. CONTRACTORS SHALL SATISFY THEMSELVES AS TO ACTUAL QUANTITIES AND SITE CONDITIONS PRIOR TO BIDDING THE WORK FOR THE CONSTRUCTION COVERED BY THIS PLAN.
19. A REASONABLE EFFORT HAS BEEN MADE TO SHOW THE LOCATIONS OF EXISTING UNDERGROUND FACILITIES AND UTILITIES IN THE CONSTRUCTION AREA. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO UTILITIES AND/OR FACILITIES CAUSED DURING THEIR CONSTRUCTION OPERATIONS.
20. THE CONTRACTOR IS RESPONSIBLE FOR ALL COORDINATION OF CONSTRUCTION AFFECTING UTILITIES AND THE COORDINATION OF ANY NECESSARY UTILITY RELOCATION WORK.
21. COORDINATION BETWEEN ALL PARTIES IS ESSENTIAL PART OF CONTRACT.
22. CONTRACTOR SHALL REMOVE ALL TREES WITHIN THE COUNTY RIGHT-OF-WAY.
23. WHENEVER THE CONTRACTOR IS WORKING WITHIN THE GREENE COUNTY RIGHT-OF-WAY, THE CONTRACTOR SHALL CONTACT THE GREENE COUNTY HIGHWAY DEPARTMENT, P: 417-829-6510, AT LEAST 24 HOURS PRIOR TO WORKING AT THE SITE. FAILURE TO DO SO MAY RESULT IN REJECTION OF ANY WORK COMPLETED PRIOR TO CONTACT.
24. NO MEASUREMENTS SHOULD BE SCALED OFF PLANS. USE ONLY LABELED DISTANCES.

SHEET INDEX

NO.	DESCRIPTION
5	STORM SEWER EXTENSION PLAN COVER SHEET
6	STORM SEWER EXTENSION PLAN
7	STORM SEWER DETAILS

02/25/2026

STORM SEWER PIPE NOTES:

1. THE APPROVED PIPE MATERIALS ARE POLYPROPYLENE (PP) AND REINFORCED CONCRETE PIPE (RCP). ANY PIPE ALTERNATES WILL REQUIRE CITY APPROVAL.
2. ALL PIPE IS TO BE INSTALLED PER CITY OF SPRINGFIELD STANDARDS AND THE MANUFACTURER'S REQUIREMENTS.
3. ALL INSTALLED PIPE SHALL BE MIN. HS-20 LOADING AND MEET ALL APPLICABLE ASTM STANDARDS.
4. ALL INSTALLED PIPE SHALL HAVE A MANNING'S ROUGHNESS COEFFICIENT OF n=0.013.

DIMENSION NOTE:
DIMENSIONS SHOWN ARE TO FACE OF CURB UNLESS NOTED OTHERWISE.

SPECIAL NOTE:
CONTRACTOR TO PERFORM DETAILED SITE INSPECTION TO LOCATE ALL EXISTING UTILITES AND VERIFY ANY POSSIBLE CONFLICTS WITH PROPOSED IMPROVEMENTS PRIOR TO BEGINNING ANY CONSTRUCTION. CONTACT ENGINEER WITH ANY CONFLICTS.

SPECIAL NOTE:
CONTRACTOR TO PROVIDE SHOP DRAWINGS TO ENGINEER FOR REVIEW PRIOR TO ORDERING MATERIALS.

CURB INLET NOTE:
ALL CURB INLETS TO BE CITY STANDARD CURB INLETS UNLESS OTHERWISE NOTED.

STORM SEWER NOTE:
ALL STORM SEWER BOX TOPS SHALL BE INSTALLED AT SAME GRADE AS THE ADJACENT ROADWAY.

CAUTION:
INFORMATION ON THIS DRAWING CONCERNING THE TYPE AND LOCATION OF EXISTING UNDERGROUND AND OTHER UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE AND LOCATION OF BOTH EXISTING UNDERGROUND AND OTHER UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

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COA#000062
JARED M. DAVIS PE# 2016017614
FORMERLY ANDERSON ENGINEERING

JARED M. DAVIS
NUMBER PE-2016017614
02-25-2026

DEPARTMENT OF PUBLIC WORKS
SPRINGFIELD, MISSOURI
N BROADWAY AVE, SPRINGFIELD, MO
PAVING, DRAINAGE AND SANITARY IMPROVEMENT PLANS
STORM SEWER EXTENSION PLAN COVER SHEET - W1

SURVEYED BY:	DESIGN: CMH/LJ	SCALES	SHEET 5
OWN, INC.	DRAWN: CMH/LJ	HOR: 1" = 20'	OF 13 SHEETS
FIELD BK.: N/A	CHECKED: MD	VERT: N/A	FILE NO.
LEVEL BK.: N/A			2025PW0010W1

APPROVED BY
DIRECTOR OF PUBLIC WORKS
FILED
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DIRECTOR OF PUBLIC WORKS
FILE NO. 2025PW0010
DATE 3/12/2026

SPECIAL NOTE:
EXISTING CURB INLET RIM AND INVERT TAKEN FROM AS BUILT PLANS FOR PROJECT #0PW2148, ON FILE WITH THE CITY OF SPRINGFIELD. FIELD VERIFY LOCATION & ELEVATION PRIOR TO BEGINNING CONSTRUCTION. NOTIFY ENGINEER IF DISCREPANCY OCCURS.

SPECIAL NOTE:
CONTOURS SHOWN ON THIS SHEET ARE FROM LIDAR AND ARE APPROXIMATE. FIELD CONDITIONS MAY VARY. CONTRACTOR SHALL FIELD VERIFY PRIOR TO BEGINNING CONSTRUCTION AND NOTIFY ENGINEER OF ANY DISCREPANCIES.

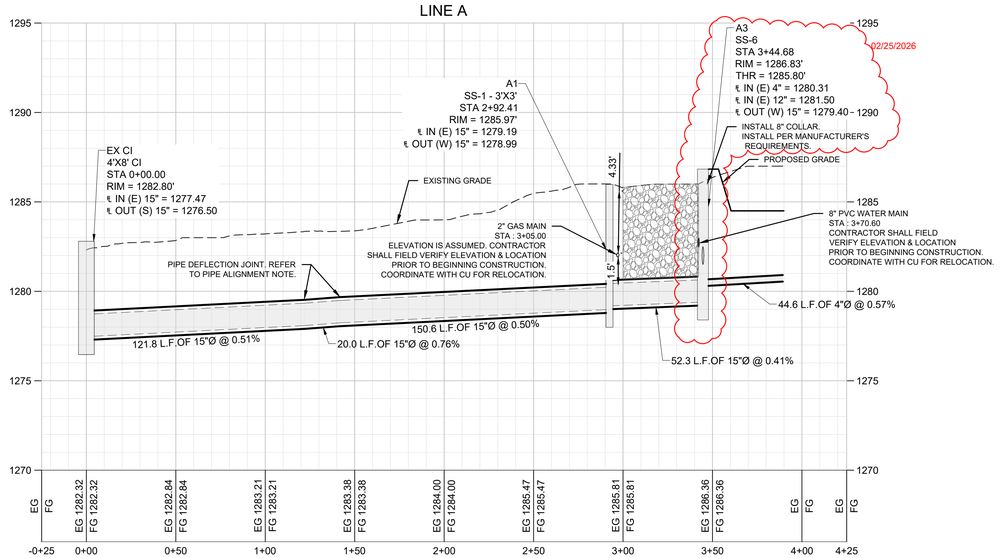
PIPE ALIGNMENT NOTE:
HORIZONTAL ALIGNMENT OF THE 15" HP STORM PIPE VIA JOINT DEFLECTION SHALL NOT EXCEED 5% (2.87 DEGREES PER 20' SECTION, 400' RADIUS). CONTRACTOR SHALL UTILIZE A DIGITAL PROTRACTOR OR STRING LINE OFFSET TO VERIFY DEFLECTION AT EACH JOIN PRIOR TO BACKFILLING. ANY JOINT SHOWING A GAP EXCEEDING MANUFACTURER'S TOLERANCES SHALL BE RESET OR REPLACED WITH A FITTING.



1 STORM LINE A PLAN
W2 SCALE: 1" = 20'

1"=20'
20' 0 10' 20'

N



02/25/2026

GRAVEL BACKFILL NOTE:
INSTALL 3/4" CLEAN AGGREGATE FULL DEPTH OF TRENCH WITHIN 1:1 ZONE OF PAVEMENT.

1"=4' VERTICAL
1"=40' HORIZONTAL
4 0
40' 0 20' 40'

2 STORM LINE A PROFILE
W2 HORIZONTAL SCALE: 1" = 40'; VERTICAL SCALE: 1" = 4'

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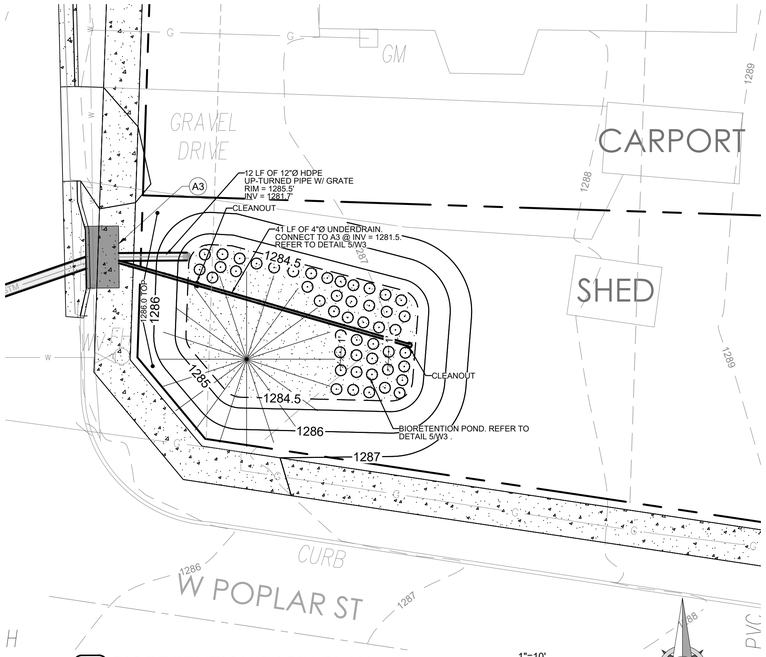
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JARED M. DAVIS PE# 2016017614
FORMERLY ANDERSON ENGINEERING

JARED M. DAVIS
NUMBER PE-2016017614
02-25-2026

DEPARTMENT OF PUBLIC WORKS
SPRINGFIELD, MISSOURI
N BROADWAY AVE, SPRINGFIELD, MO
PAVING, DRAINAGE AND SANITARY IMPROVEMENT PLANS
STORM SEWER EXTENSION PLAN – W2

SURVEYED BY: OWN, INC.
FIELD BK.: N/A
LEVEL BK.: N/A
DESIGN: CMH/LLJ
DRAWN: CMH/LLJ
CHECKED: JMD
SCALES HOR: 1" = 20' 1" = 40' VERT: 1" = 4'
SHEET 7 OF 13 SHEETS
FILE NO. 2025PW0010W2

APPROVED BY
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FILE NO. 2025PW0010
DATE 3/12/2026



1 BIORETENTION BASIN PLAN
W3 SCALE: 1" = 10'

1"=10'
10' 0 5' 10'

BIORETENTION PLANTINGS

PROVIDE A MINIMUM OF 70% COVERAGE
BIORETENTION AREA = 569 SQFT
PROPOSED COVERAGE = 400 SQFT
COVERAGE = 70%

PROVIDED TREES: 1
PROVIDED SHRUBS: 47

BIORETENTION SPECIES	
	RIVER BIRCH, BETULA NIGRA, 1.5" CAL. MIN. AT PLANTING, OR APPROVED EQUAL
⊙	*INDIGO BUSH, AMORPHA FRUTICOSA, 24" TALL, OR APPROVED EQUAL*
	BIORETENTION FILTER AREA. REFER TO DETAIL 5/W3.

TREE/SHRUB SELECTION

EVERGREEN TREE

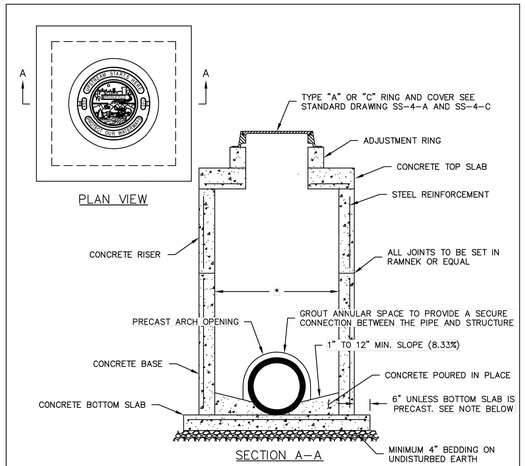
SHRUB

BIORETENTION FILTER AREA

CONTRACTOR TO COORDINATE WITH OWNER, UTILITY PROVIDERS AND THE CITY OF SPRINGFIELD ON WHICH TREES/SHRUBS TO BE SELECTED AND WHERE THEY MAY BE PLACED.

SPECIAL NOTE:
THE ENGINEER OF RECORD IS REQUIRED TO SUBMIT AS-BUILT CERTIFICATION OF THE STORMWATER CONTROL MEASURES UPON COMPLETION OF THE PROJECT. THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER TO IDENTIFY THE LIST OF STORMWATER MEASURES REQUIRING CERTIFICATION AND COORDINATE DURING CONSTRUCTION TO ALLOW THE ENGINEER TO MAKE ANY OBSERVATIONS NECESSARY DURING CONSTRUCTION TO CERTIFY THE STORMWATER CONTROL MEASURES.

SPECIAL NOTE TO CONTRACTOR:
DO NOT ALLOW MACHINERY ON BOTTOM SURFACE OF BIORETENTION. IF MACHINERY MUST ENTER THE BIORETENTION AREA, USE SMALL TRACKED EQUIPMENT TO MINIMIZE COMPACTION AND WORK OUT SO MACHINERY DOES NOT TTRACK ON BOTTOM OF FINISHED EXCAVATION. DO NOT ALLOW MACHINERY IN THE BIORETENTION AREA WHEN THE BOTTOM SURFACE IS WET. EXCAVATION MUST BE FLAT BUT NOT SMOOTH. SCARIFY THE BOTTOM AND DO NOT SCRAPE SMOOTH SINCE THIS WILL REDUCE INFILTRATION.

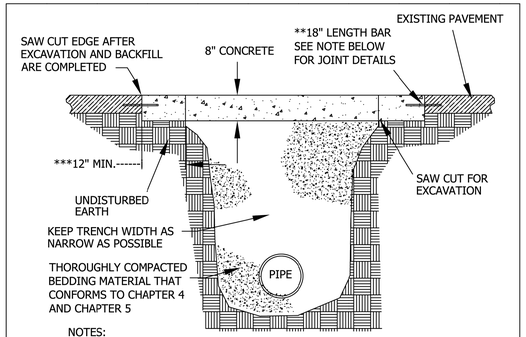


NOTES:
1. JUNCTION BOX SHALL BE DESIGNED AND MANUFACTURED IN ACCORDANCE WITH ASTM C 913 FOR A COMBINATION OF DEAD LOADS AND A-16 (HS20-44) TRAFFIC LOADS IN ACCORDANCE WITH ASTM C890.
2. FOR CAST-IN-PLACE STRUCTURES, THE ENGINEER SHALL SUBMIT A DRAWING FOR THE DESIGN OF THE STRUCTURE INCLUDING SIZE AND SPACING OF REINFORCEMENT AND THICKNESS OF CONCRETE IN WALLS, TOP SLAB, AND BOTTOM SLAB FOR SAME LOADING AS SPECIFIED IN NOTE 1.
3. JUNCTION BOX SHALL BE CONSTRUCTED WITH AS FEW JOINTS AS REASONABLY PRACTICAL. WHEN JOINTS ARE NECESSARY, JOINTS SHALL BE WATERTIGHT, DETAILED ON SHOP DRAWINGS AND DESIGNED TO PREVENT LATERAL MOVEMENT DURING AND AFTER CONSTRUCTION.
4. BOTTOM SLAB SHALL BE POURED IN PLACE. IF MANUFACTURER IS CONCERNED ABOUT STRUCTURAL INTEGRITY OF BASE DURING TRANSPORTATION THEN THE BOTTOM SLAB MAY BE PRECAST WITH RISER.
5. PIPE TO BE ON GRADE BEFORE BOTTOM SLAB IS CONSTRUCTED UNLESS BOTTOM IS PRECAST WITH BASE.
6. ALL PIPES SHALL FIT FLUSH WITH INSIDE FACE OF JUNCTION BOX.
7. BOTTOM OF JUNCTION BOX TO BE FILLED WITH CONCRETE FORMING CHANNELS TOWARD OUTLET PIPE FROM ALL INLET PIPES. CONCRETE SHALL BE FLUSH WITH INVERT OF OUTLET PIPE.
8. NO MORE THAN 2 ADJUSTMENT RINGS MAY BE USED BUT SHALL NOT EXCEED 18 INCHES.
9. CONCRETE TOP SLAB SHALL BE PINNED TO STRUCTURE AT THE CORNERS USING ONE #4 DEFORMED BAR IN EACH CORNER. BAR SHALL EXTEND A MINIMUM OF 6 INCHES INTO RISER BELOW.

PIPE DIAMETER	*MINIMUM INSIDE DIMENSION OF STRUCTURE
15" - 24"	THREE FEET (3')
27" - 30"	FOUR FEET (4')
36" - 42"	FIVE FEET (5')
48" - 54"	SIX FEET (6')

DEPARTMENT OF PUBLIC WORKS SPRINGFIELD, MO.	JUNCTION BOX	ADOPTED: 10/1/2021 SS-1

2 JUNCTION BOX DETAIL
W3 SCALE: NTS



NOTES:

* OMIT DOWEL BARS WHEN REPAIRING ASPHALT PAVEMENT

** JOINTS IN CONCRETE PAVEMENT:

TRANSVERSE JOINTS: ALL TRANSVERSE JOINTS SHALL COMPLY TO ST-3 AND ST-4 WITH THE EXCEPTION THAT AN L 1 JOINT SHALL BE USED ON TRANSVERSE JOINTS FOR PAVEMENTS LESS THAN 6" IN THICKNESS.

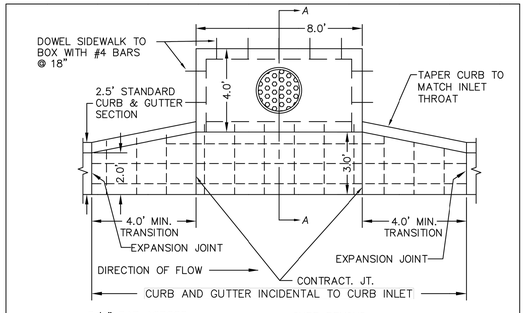
LONGITUDINAL JOINTS: ALL LONGITUDINAL JOINTS SHALL COMPLY TO ST-3 AND ST-4. ALL PAVEMENT REPAIRS SHALL BE REMOVED TO EXISTING LANE LINES OR CENTERLINE OF THE ROADWAY AND NO PARTIAL LANE WIDTH REPAIRS WILL BE ALLOWED TO REMAIN IN PLACE.

*** IF TRANSVERSE JOINT FALLS WITHIN 5' OF EXISTING TRANSVERSE JOINT IN CONCRETE PAVEMENT, PAVEMENT SHALL BE REMOVED AND REPLACED TO EXISTING TRANSVERSE JOINT.

REPAIRS AND/OR REPLACEMENT OF DRIVEWAYS SHALL BE TO CURRENT STANDARDS AND SPECIFICATION UNLESS APPROVED BY THE DIRECTOR OF PUBLIC WORKS. NO PARTIAL REPAIRS OF DRIVEWAYS LESS THAN LIMITS OF EXPANSION JOINTS AS SHOWN IN THE STANDARD DRAWINGS FOR NEW DRIVEWAYS WILL BE ALLOWED. IF NO EXPANSION JOINTS EXIST OR THE DRIVE IS ASPHALT AND /OR AGGREGATE MATERIAL, THE REPAIR SHALL REPLACE THE DRIVE FROM THE ADJACENT STREET TO THE RIGHT OF WAY LINE OF EQUAL OR BETTER MATERIAL AS THE EXISTING DRIVE.

DEPARTMENT OF PUBLIC WORKS SPRINGFIELD, MO.	EXISTING PAVEMENT REPAIR DETAIL	REVISED: 7-1-23 ST-13

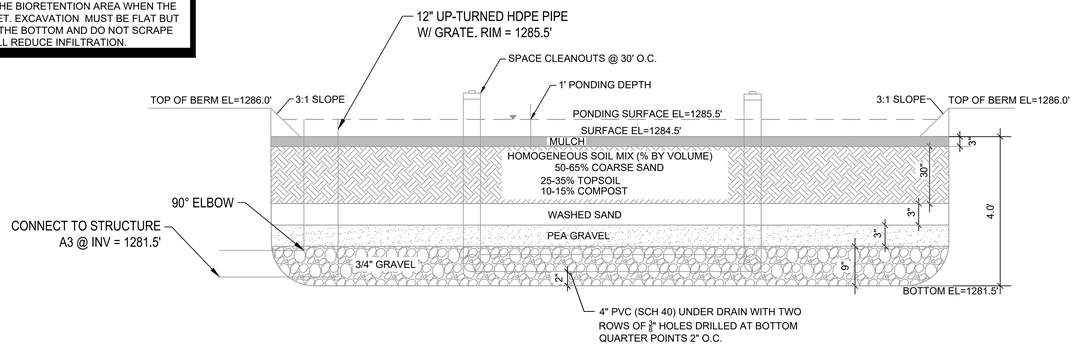
3 PAVEMENT REPAIR
W3 SCALE: NTS



NOTE:
1. #4 BARS @ 10" O.C.(ALL WALLS, VERT. & HORIZ.)
2. IF CLEARANCE CAN'T BE PROVIDED FROM TOP AND SIDES OF PIPE, A MODIFIED INLET MUST BE USED.
3. 6", 12" OR 18" PRECAST LIDS MAY BE USED.
4. IF INLET IS NOT RECESSED, THROAT OPENING IS 7 INCHES.
5. CURB AND GUTTER CONSTRUCTED IN FRONT OF INLET AND ON EACH SIDE OF INLET AS SHOWN ABOVE SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE CURB INLET.

DEPARTMENT OF PUBLIC WORKS SPRINGFIELD, MO.	CURB INLET	ADOPTED: 10/1/04 SS-6

4 CURB INLET DETAIL
W3 SCALE: NTS



NOTES:
1. SOIL MEDIA IS NOT TO BE ADDED TO BIORETENTION AREA UNTIL SITE IS STABILIZED.
2. MEDIAN SOIL LAYER WILL ALLOW A MINUMUM OF 1 ft/DAY. FOR INFILTRATION.

5 BIORETENTION FILTER TYPICAL SECTION
W3 SCALE: NTS

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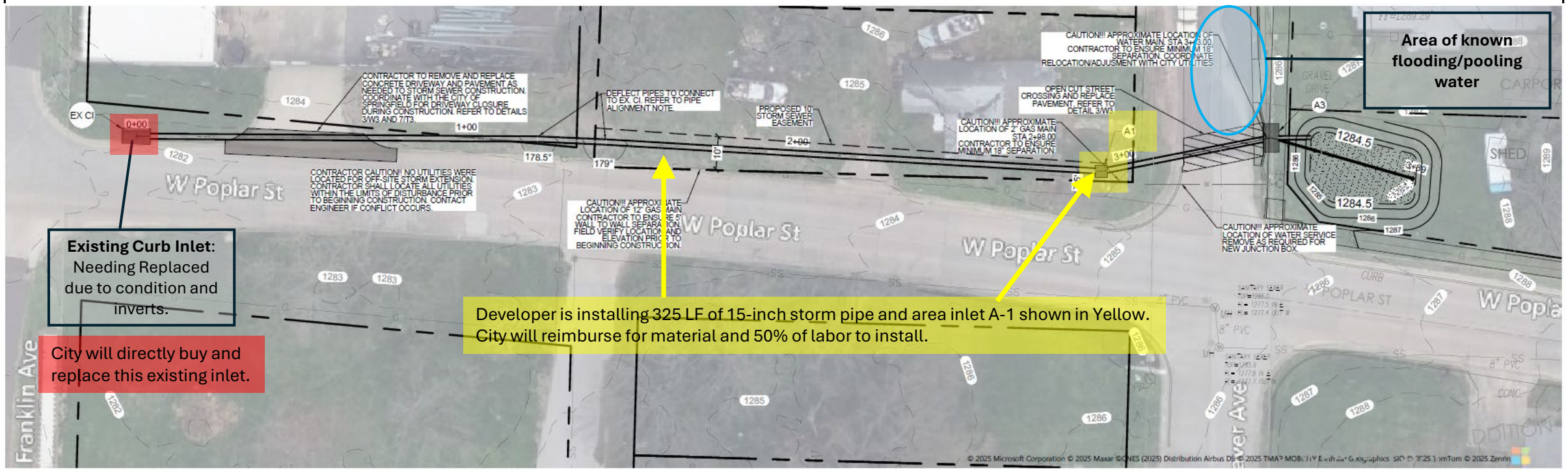
FORMERLY ANDERSON ENGINEERING

STATE OF MISSOURI · CAMERON M. HOLE · NUMBER PE - 2025018184 · PROFESSIONAL ENGINEER
Cameron Hole
06-25-2025

DEPARTMENT OF PUBLIC WORKS
SPRINGFIELD, MISSOURI
N BROADWAY AVE, SPRINGFIELD, MO
PAVING, DRAINAGE AND SANITARY IMPROVEMENT PLANS
STORM SEWER DETAILS – W3

SURVEYED BY:	DESIGN: CMH/JLJ	SCALES	SHEET 8
CMH, INC.	DRAWN: CMH/JLJ	HOR: N/A	OF 13 SHEETS
FIELD BK.: N/A	CHECKED: JMD	VERT: N/A	FILE NO. 2025PW0010W3
LEVEL BK.: N/A			

APPROVED BY
DIRECTOR OF PUBLIC WORKS
FILED
IN THE OFFICE OF THE
DIRECTOR OF PUBLIC WORKS
FILE NO. 2025PW0010
DATE 11/21/2025



1 W2 STORM LINE A PLAN
SCALE: 1" = 20'

CITY OF Springfield

1"=20'
20' 0 10' 20'
SCALE:

DISCLAIMER: All information included on this map or digital file is provided "as-is" for general information purposes only. The City of Springfield, and all other contributing data suppliers, make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, or suitability of the data for any particular use. Furthermore, the City of Springfield, and all other contributing data suppliers, assume no liability whatsoever associated with the use or misuse of the data.

EXPLANATION TO COUNCIL BILL 2026-109 (LEE)

FILED: 05/05/2026

ORIGINATING DEPARTMENT: Emergency Management

TITLE: A resolution adopting the Springfield-Greene County All-Hazards Emergency Mitigation Plan.

PURPOSE: To approve and adopt the Springfield-Greene County All-Hazards Mitigation Plan. The plan identifies community risks and vulnerabilities associated with natural and human-caused hazards and outlines long-term strategies through the introduction of projects to reduce their impact on lives, property, and critical infrastructure. Adoption of this plan demonstrates the City's commitment to proactive risk reduction and ensures continued eligibility for federal mitigation grant funding through the Federal Emergency Management Agency.

BACKGROUND INFORMATION: The Springfield-Greene County All-Hazards Mitigation Plan was prepared in accordance with the Disaster Mitigation Act of 2000 and applicable guidance from the State and Federal Emergency Management Agency, through a coordinated effort involving local jurisdictions and stakeholders. The plan incorporates a detailed assessment of hazards and vulnerabilities affecting the community and establishes mitigation strategies intended to reduce long-term risk to persons and property. Adoption of said plan is a prerequisite for continued eligibility to receive federal mitigation funding. Accordingly, the City Council hereby considers approval and adoption of the All-Hazards Mitigation Plan. This ordinance is associated with a federally required planning document that maintains eligibility for hazard mitigation grant funding administered by the Federal Emergency Management Agency. Therefore, it may be considered for adoption as a one-reading bill pursuant to City Charter Section 2.16(25).

REMARKS: The All-Hazards Mitigation Plan update reflects a collaborative, multi-jurisdictional effort involving local agencies, partner organizations, and stakeholder input across Springfield and Greene County. The plan builds upon previous versions by incorporating updated risk assessments, recent disaster data, and current best practices in mitigation planning.

Approval of this plan does not obligate the City to specific expenditures but provides a strategic framework for prioritizing future mitigation projects as funding becomes available. Adoption positions the City to compete for federal mitigation funding and supports long-term cost avoidance by reducing disaster-related damages.

This plan aligns with existing local and regional emergency management strategies and reinforces the City's commitment to public safety, infrastructure protection, and

community resilience.

A similar Resolution appeared on a previous CIty Council Agenda. To ensure the adoption of the most current version of the plan, this Resolution supersedes and replaces the previous version.

Submitted By: Larry Woods

Authorized for inclusion on the agenda pursuant to City Code section 2-33:
Collin Quigley, Deputy City Manager 05/13/2026

Attachments:
1. EMS All-HazardsResolution
2. Exhibit A

One-rdg. ___X_____
P. Hrngs. _____
Pgs. _____
Filed: __05-12-26__

Sponsored by: ____Lee_____

COUNCIL BILL _____2026-109_____ RESOLUTION _____

RESOLUTION

ADOPTING the Springfield-Greene County All-Hazards Emergency Mitigation Plan.

WHEREAS, the Springfield-Greene County Office of Emergency Management maintains an emergency operations plan for responding to disasters, known as the All-Hazards Mitigation Plan; and

WHEREAS, the All-Hazards Mitigation Plan is periodically updated to ensure ongoing preparation for the threat natural hazards pose to people and property within the City of Springfield and Greene County; and

WHEREAS, the Office of Emergency Management has prepared an updated All-Hazards Mitigation Plan, known as the 2025-2030 Springfield-Greene County Hazard Mitigation Plan in accordance with federal laws, including the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended; the National Flood Insurance Act of 1968, as amended; and the National Dam Safety Program Act, as amended; and

WHEREAS, the 2025-2030 Springfield-Greene County Hazard Mitigation Plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in the City of Springfield and Greene County from the impacts of future hazards and disasters; and

WHEREAS, adoption by the City of Springfield demonstrates its commitment to hazard mitigation and achieving the goals outlined in the 2025-2030 Springfield-Greene County Hazard Mitigation Plan.

NOW, THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF SPRINGFIELD, MISSOURI, as follows, that:

Section 1 – City Council hereby adopts the 2025-2030 Springfield-Greene County Hazard Mitigation Plan, attached hereto as “Exhibit A.” The plan should be monitored, evaluated, updated, and resubmitted periodically, at least every five years from the date of last adoption.

Section 2 – This Resolution shall be in effect immediately upon adoption.

Passed at meeting: _____

_____
Mayor

Attest: _____, City Clerk

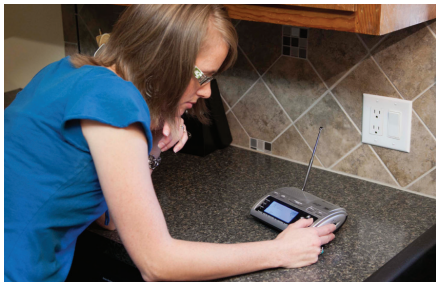
Filed as Resolution: _____

Approved as to form:_____, Assistant City Attorney

Approved for Council action:_____, City Manager

MITIGATION • PREPAREDNESS • RESPONSE • RECOVERY











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EXECUTIVE SUMMARY

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PREREQUISITES

44 CFR requirement 201.6(c)(5): The local hazard mitigation plan shall include documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval of the plan. For multi-jurisdictional plans, each jurisdiction requesting approval of the plan must document that it has been formally adopted.

This plan has been reviewed by and adopted with resolutions or other documentation of adoption by all participating jurisdictions and schools/special districts. The documentation for each adoption is included in Appendix C. *(Pending State Approval)*

A model resolution was provided to the jurisdictions but was not required to be used. This example is provided on the next page.

The jurisdictions listed in the Executive Summary participated in the development of this plan and have adopted the multi-jurisdictional plan.

MODEL RESOLUTION

(LOCAL GOVERNMENT, INCLUDING SPECIAL DISTRICTS), (STATE)

RESOLUTION NO.

A RESOLUTION OF (LOCAL GOVERNMENT) ADOPTING THE (TITLE AND DATE OF MITIGATION PLAN).

WHEREAS the (local governing body) recognizes the threat that natural hazards pose to people and property within (local government); and

WHEREAS the (local government) has prepared a multi-hazard mitigation plan, hereby known as (title and date of mitigation plan) in accordance with federal laws, including the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended; the National Flood Insurance Act of 1968, as amended; and the National Dam Safety Program Act, as amended; and

WHEREAS (title and date of mitigation plan) identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in (local government) from the impacts of future hazards and disasters; and

WHEREAS adoption by the (local governing body) demonstrates its commitment to hazard mitigation and achieving the goals outlined in the (title and date of mitigation plan).

NOW THEREFORE, BE IT RESOLVED BY THE (LOCAL GOVERNMENT), (STATE), THAT:

Section 1. In accordance with (local rule for adopting resolutions), the (local governing body) adopts the (title and date of mitigation plan). While content related to (local government) may require revisions to meet the plan approval requirements, changes occurring after adoption will not require (local government) to re-adopt any further iterations of the plan. Subsequent plan updates following the approval period for this plan will require separate adoption resolutions.

ADOPTED by a vote of _____ in favor and _____ against, and _____ Abstaining, this _____

day of _____ , _____

By: _____

Print Name: _____

ATTESTED By: _____

Print Name: _____

APPROVED AS TO FORM By: _____

Print Name: _____

GREENE COUNTY HAZARD MITIGATION PLANNING COMMITTEE

Table 1.1 Jurisdictional Representatives

Name	Title	Department	Jurisdiction/Agency/ Organization
Larry Woods	Emergency Management Director	Springfield-Greene County OEM	Greene County
John Davis	Chief of Police/Emergency Management Director	Ash Grove Police Department	City of Ash Grove
Tommy VanHorn	Former City Administrator/Emergency Management Director	City of Battlefield	City of Battlefield
Beth West	City Clerk	City of Battlefield	City of Battlefield
Greg Porter	EMD	City of Fair Grove	City of Fair Grove
Lynn Hollandworth	Deputy Fire Chief/Emergency Management Director	Republic Fire Protection District	City of Republic
Maggie Rogers	Health Planner	Springfield-Greene County Health Department	City of Springfield
April Ford	911 Director	Springfield-Greene County Emergency Communications Center	City of Springfield
Sandy Strecker	City Clerk	City of Strafford	City of Strafford
Martha Smartt	City Manager/Floodplain Administrator	City of Strafford	City of Strafford
Donna Ellis	City Clerk	City of Willard	City of Willard
Shane Medlin	Superintendent	Ash Grove School District	Ash Grove School District
Jennifer Katzin	Assistant Superintendent	Logan-Rogersville School District	Logan-Rogersville School District
Jason Perkins	Assistant Superintendent of Operations	Republic School District	Republic School District
Jim Farrell	Springfield Public Schools Police Chief/Emergency Management Director	Springfield Public Schools	Springfield School District

Kathleen Kingry	Environmental Safety and Compliance Coordinator	Ozarks Technical Community College	Ozarks Technical Community College
Josh Dukewits	B-Shift Battalion Chief	Battlefield Fire Department	Battlefield Fire Protection District
Scott Moore	Former Fire Chief	Battlefield Fire Department	Battlefield Fire Protection District
Jamie Kilburn	Fire Chief	Brookline Fire Department	Brookline Fire Protection District
Will Glenn	Logistics Chief	Brookline Fire Department	Brookline Fire Protection District
Ashlee Parker	Assistant Fire Chief	Ebenezer Fire Department	Ebenezer Fire Protection District
Tim Clarkson	Assistant Chief B-Shift	Logan-Rogersville Fire Department	Logan-Rogersville Fire Protection District
Kevin Samsel	Assistant Chief B-Shift	Willard Fire Department	Willard Fire Protection District

Table 1.2 Stakeholder Representatives

Name	Title	Department	Agency/Organization
Hannah James	Emergency Management Coordinator	Emergency Management and Business Continuity	CoxHealth
Mark Foos	Captain	Springfield Police Department	Springfield Police Department
Adrienne Jenkins	Operational Resiliency Manager	Operational Resiliency	City Utilities
Kip Mathena	Director – Risk Management	Risk Management	City Utilities
Joanna Whetstine	Environmental Safety and Emergency Management Specialist	Emergency Management	Mercy Hospital
Sydney Allen	Planning Director	Planning and Zoning	Greene County
Chris Brumett	Social Services Director/Emergency Operations Notification	Emergency Management	Salvation Army

Brian Weiler	Director of Aviation	Leadership	Springfield-Branson National Airport
Jon Carney	Superintendent of General Services	Parks Department	City of Springfield
Nathan Huggins	GIS & Asset Systems Manager	Geographical Information Systems	City of Springfield
Steve Runnels	Warning Coordination Meteorologist	National Weather Service	National Weather Service
Eddie Castleberry	Former School Resource Officer	Fair Grove Schools	Fair Grove School District
Brian Bagley	Director of Operations	Ash Grove Schools	Ash Grove School District
Jeffery Ikerd	Geographic Information Systems Specialist	Geographical Information Systems	Greene County

Stakeholders are individuals or groups that are affected by a mitigation action or policy and include businesses, not-for-profit organizations, private organizations, and citizens. Unlike planning team members, stakeholders may not be involved in all stages of the planning process, but they may inform the planning team on a specific topic or profile input from different points of view in the community.

PURPOSE AND PARTICIPATION

The purpose of hazard mitigation is to reduce or eliminate long-term risk to people and property from hazards. Greene County and participating jurisdictions developed this multi-jurisdictional local hazard mitigation plan update to reduce future losses from hazard events to Greene County and its communities and school/special districts. This plan is an update of the plan that was approved on August 27th, 2020. The plan and the update were prepared pursuant to the requirements of the Disaster Mitigation Act of 2000 to result in eligibility for the Federal Emergency Management Agency (FEMA) Hazard Mitigation Assistance Grant Programs. The plan was revised to reflect changes in development in the county. It was also revised to reflect changes in the priorities and mitigation efforts in Greene County.

The Greene County Multi-Hazard Mitigation Plan is a multi-jurisdiction plan that covers the following jurisdictions that participated in the planning process:

- Greene County
- City of Ash Grove
- City of Battlefield
- City of Fair Grove
- City of Republic
- City of Springfield
- City of Strafford
- Ash Grove Public School District
- Logan-Rogersville School District
- Ozarks Technical Community College
- Springfield Public School District
- Battlefield Fire Protection District
- Brookline Fire Protection District
- Willard Fire Protection District

The City of Walnut Grove, the City of Willard, Springfield Fire Protection District, Ebenezer Fire Protection District, Logan-Rogersville Protection District, and Missouri State University were invited to participate but only attended the kickoff meeting and did not meet all the requirements to continue participation. In addition, Strafford Fire Protection District, Strafford School District, Walnut Grove Schools, West Republic Fire Protection District , and Bois D'Arc Fire Protection District failed to attend any meetings they were invited to and did not meet requirements for plan participation. When the five-year plan update is developed for this plan, the jurisdictions above will be invited again and offered to resume participation in the plan.

Greene County and the entities listed above developed a Multi-Jurisdictional Hazard Mitigation Plan. This current planning effort serves to update the previously approved plan that was approved by FEMA August 2020. The plan update process followed methodology in accordance with FEMA guidance, which began with the formation of a Mitigation Planning Committee (MPC) comprised of representatives from Greene County and participating jurisdictions. The MPC updated the risk assessment that identified and profiled hazards that pose risk to Greene County and analyzed jurisdictional vulnerability to these hazards. The MPC also examined the capabilities in place to mitigate the hazard damage, with emphasis on changes that have occurred since the previously approved plan was adopted. The MPC determined that the planning area is vulnerable to several hazards that are identified, profiled, and analyzed in this plan. Some examples of hazards include tornadoes, flooding, extreme temperatures, dam failure, etc.

Based upon the Risk Assessment, the MPC updated goals for reducing risk from hazards. The goals are listed below:

1. Minimize the development of Greene County in hazard-prone areas, including flood zones.
2. Minimize losses to existing and future structures within hazard areas.
3. Strengthening protection of critical facilities and infrastructure from natural hazards to create a safer, more sustainable community.
4. Build and enhance local mitigation capabilities to ensure individual safety, reduce damage to public buildings, and ensure continuity of emergency services.
5. Increase public awareness of risk from natural hazards.
6. Improve the coordination and communication with federal, state, regional and local emergency management personnel, and other potential partners.

To advance the identified goals, the MPC developed recommended mitigation actions, as summarized in the tables on the following pages. The MPC developed an implementation plan for each action, which identifies priority level, background information, ideas for implementation, responsible agency, timeline, cost estimate, potential funding sources, and more. These additional details are provided in Chapter 4.

Table 1.3 Mitigation Project Matrix

#	Action	Jurisdiction	Priority	Goals Addressed	Hazards Addressed	Address Current Development	Address Future Development	Continued Compliance with NIFP
Greene County								
1.1	Continue to purchase properties located within Unincorporated Greene County. See page below for already purchased properties.	Greene County	High	1	Flooding	Yes	Yes	Yes
2.1	Purchase and place sirens in the areas for the county that are not in the current coverage and update all sirens with support systems.	Greene County	High	1	Tornadoes	Yes	Yes	Yes
3.1	Build shelters across the county to provide appropriate shelter for the citizens and staff of Greene County during tornadoes.	Greene County	Medium	1	Tornadoes, Severe Storms	Yes	Yes	Yes
4.1	Create flood warning systems for flood prone roads using various methods including railroad crossing signs.	Greene County	High	1	Flooding	Yes	Yes	Yes
5.1	Update the Springfield-Greene County Office of Emergency Management's Website to include the newest version of the Hazard Mitigation Plan.	Greene County	Medium	1	All Hazards	Yes	Yes	Yes

Ash Grove Schools								
1.1	Build a FEMA safe room shelter on the Ash Grove School Campus and the Bois D'Arc Elementary School Campus to mitigate the loss of life in the school system in the event of a tornado or severe wind.	Ash Grove School District	High	3	Tornadoes, Severe Wind	Yes	Yes	Yes
1.2	Hire two School Resource Officers to support student safety and to serve the Ash Grove School Campus, as well as the Bois D'Arc Elementary School Campus. They would help to prevent the loss of life and/or property.	Ash Grove School District	High	3	Targeted Violence, Hazardous Materials, Train Derailment	Yes	Yes	Yes
Battlefield Fire Protection District								
1	Purchase and acquisition of higher-visibility collapsible signs for emergency scene setup during vehicle accidents and natural disasters that may disrupt traffic.	Battlefield Fire Protection District	High	3	Hazardous Materials, Targeted Violence, Flooding, Ice and Snow, Earthquake, Land Subsidence, Airplane Crash, Train Derailment	Yes	Yes	Yes
2	Installation of a flood gate on Farm Road 141 between Battlefield and Nixa. This gate will be used to control traffic during extreme flood situations.	Battlefield Fire Protection District	High	2	Flooding	Yes	Yes	Yes
Brookline Fire Protection District								
1	Construct a third fire station in the northeastern region of the district boundary that includes a community storm shelter/tornado safe room.	Brookline Fire Protection District	High	2	Tornadoes, Damaging Winds, Lightning	Yes	Yes	Yes

2	Relocate and reconstruct Fire Station 2 in the southern central region of the district boundary that includes a community storm shelter/tornado safe room.	Brookline Fire Protection District	High	3	Tornadoes, Damaging Winds, Lightning	Yes	Yes	Yes
3	Construct Fire Station 3, an additional fire station to the district, in the northeast region of the district boundaries with appropriate emergency apparatus improvements.	Brookline Fire Protection District	High	1	Flood, Snow and Ice	Yes	Yes	Yes
4	Purchase new apparatus with equipment, such as pump heaters, which are better suited to handle the climate conditions of the region.	Brookline Fire Protection District	High	1	Extreme Temperatures	Yes	Yes	Yes
5	Construct Fire Station 3, a third fire station to the district, in the northeast region of the district boundaries and acquire apparatus better suited for hazardous material responses.	Brookline Fire Protection District	High	2	Hazardous Materials	Yes	Yes	Yes
6	Relocation of Station 2 to better accommodate the service area with the acquisition of apparatus better equipped to handle such incidents.	Brookline Fire Protection District	High	1	Drought, Wildfire	Yes	Yes	Yes
7	Construction of Fire Station 3.	Brookline Fire Protection District	High	1	Urban Fire	Yes	Yes	Yes
8	Acquire training, training props, and PPE for aircraft firefighting.	Brookline Fire Protection District	High	2	Airplane Crash	Yes	Yes	Yes

9	Install backup power supply generators at Brookline Fire Stations 1 and 2.	Brookline Fire Protection District	High	2	Power Failure	Yes	Yes	Yes
10	Acquire training, training props, and PPE for train derailments.	Brookline Fire Protection District	High	2	Train Derailment	Yes	Yes	Yes
11	Acquire safety equipment and PPE to be distributed to personnel during such incidents, while securing funding for potential staffing issues and shortages of personnel that may have been exposed during such events.	Brookline Fire Protection District	High	1	Communicable Diseases	Yes	Yes	Yes
12	Develop an Education and Outreach plan to include the listed hazard topics that most impact the district's demographic, such as cyber bullying, recreational explosives (fireworks, etc.), political protests overspill from Springfield or Republic, unknown cave collapse threats at Wilson Creek National Battlefield, animal diseases that impact food products, and warfare threats that may impact the region.	Brookline Fire Protection District	High	2	Cyber Explosives Land Subsidence Civil Unrest Cave/Mine Collapse Dam Failure Animal Disease Targeted Violence Biological Chemical. Radiological Earthquake Sabotage Nuclear Waste	Yes	Yes	Yes
City of Ash Grove								
1.1	Develop a plan to replace existing 30+ year old outdoor warning sirens with all hazard devices.	City of Ash Grove	High	1	Severe Storms, Tornadoes	Yes	Yes	Yes

1.2	Add units for larger coverage area and maintain standard of warning in areas of new development. Reach and implement alternative notification systems.	City of Ash Grove	High	1	Severe Storms, Tornadoes	Yes	Yes	Yes
1.3	Install generators at siren sites to provide reliable warning systems in power outage situations.	City of Ash Grove	High	1	Severe Storms, Tornadoes	Yes	Yes	Yes
1.4	Monitor annexation process to stay informed as to upcoming and potential annexations to ensure warning siren coverage remains consistent with current standard	City of Ash Grove	High	1	Severe Storms, Tornadoes	Yes	Yes	Yes
1.5	Equip new sirens with radio technology to enable Greene County with the ability to activate and monitor sirens	City of Ash Grove	High	1	Severe Storms, Tornadoes	Yes	Yes	Yes
1.6	Develop the ability to broadcast emergency and public education materials to the public	City of Ash Grove	High	1	Severe Storms, Tornadoes	Yes	Yes	Yes
1.7	Promote NOAA weather radios with an annual city sponsored purchase campaign	City of Ash Grove	High	1	Severe Storms, Tornadoes	Yes	Yes	Yes
1.8	Develop a plan to install cameras at sites that routinely host large special events and that also have good vantage points to monitor incoming weather. Install cameras at chosen sites and link them to the EOC.	City of Ash Grove	High	1	Severe Storms, Tornadoes	Yes	Yes	Yes

1.9	Work with the Springfield-Greene County Office of Emergency Management on proper placement of warning sirens and cameras.	City of Ash Grove	High	1	Severe Storms, Tornadoes	Yes	Yes	Yes
2.1	Secure funding and build a community safe room and hardened structure for Emergency Management and Public Safety Operations.	City of Ash Grove	High	1	All Hazards	Yes	Yes	Yes
2.2	Research grants and other funding sources to build emergency community safe rooms, large enough to temporarily house citizens.	City of Ash Grove	High	1	All Hazards	Yes	Yes	Yes
2.3	Build FEMA approved emergency safe rooms for citizens to take protective cover in and provide temporary sheltering during any emergency.	City of Ash Grove	High	1	All Hazards	Yes	Yes	Yes
2.4	Incorporate the local public safety department and emergency operations center into hardened facilities connected to the community safe room.	City of Ash Grove	High	1	All Hazards	Yes	Yes	Yes
2.5	Ensure adequate water, equipment and supplies are stored in facilities that will sustain first responders and citizens during and immediately after a disaster.	City of Ash Grove	High	1	All Hazards	Yes	Yes	Yes

2.6	Develop backup systems for utilities and communications, ensuring facilities capability during a disaster and public safety responders can continue to offer life assisting/saving services to the citizens of the city.	City of Ash Grove	High	1	All Hazards	Yes	Yes	Yes
3.1	Develop and implement public education and awareness programs and activities that focus on the prevention and mitigation of natural and manmade hazards and their consequences, and the steps that can be taken to reduce risk.	City of Ash Grove	High	1	All Hazards	Yes	Yes	Yes
3.2	Distribute brochures and related materials to inform property owners about projects they can accomplish to make their residential and commercial properties disaster resistant.	City of Ash Grove	High	1	All Hazards	Yes	Yes	Yes
3.3	Promote hazard mitigation awareness and education.	City of Ash Grove	High	1	All Hazards	Yes	Yes	Yes
3.4	Promote an awareness campaign regarding safety measures and preparation actions for specific hazards to target populations; severe winter storms, heat, tornadoes.	City of Ash Grove	High	1	All Hazards	Yes	Yes	Yes

3.5	Develop comprehensive workshops to be conducted for elected officials, business owners, and other community leaders on hazard mitigation programs and activities.	City of Ash Grove	High	1	All Hazards	Yes	Yes	Yes
3.6	Increase local business ability to expedite business resumption following a disaster	City of Ash Grove	High	1	All Hazards	Yes	Yes	Yes
3.7	Develop incentive programs for citizens, businesses, and industry to pursue hazards mitigation projects.	City of Ash Grove	High	1	All Hazards	Yes	Yes	Yes
4.1	Reduce the City of Ash Grove's Vulnerability of Human-Caused Hazards and disasters by 50 percent over the next 5 years.	City of Ash Grove	High	1	Human Caused Hazards	Yes	Yes	Yes
4.2	Develop and implement policies and training programs regarding infrastructure security and safety.	City of Ash Grove	High	1	Human Caused Hazards	Yes	Yes	Yes
4.3	Install locking, alarm, and security devices to improve physical security of municipal facilities and structures.	City of Ash Grove	High	1	Human Caused Hazards	Yes	Yes	Yes
4.4	Retrofit municipal buildings with structural components to prevent unapproved entry.	City of Ash Grove	High	1	Human Caused Hazards	Yes	Yes	Yes
4.5	Continue to develop procedural systems to reduce risk of targeted violence, cyber, and other human-caused hazards to municipal facilities.	City of Ash Grove	High	1	Human Caused Hazards	Yes	Yes	Yes

5.1	Reduce the vulnerability of flood damage to existing private and public structures.	City of Ash Grove	Medium	1	Flooding	Yes	Yes	Yes
5.2	Conduct a citywide analysis of the sewer system, assessing the causes of sanitary sewer overflows and caused during flooding events.	City of Ash Grove	Medium	1	Flooding	Yes	Yes	Yes
5.3	Create a financial and intervention plan for reducing risk for sanitary sewers overflowing during flooding vents as recognized by sewer system analysis.	City of Ash Grove	Medium	1	Flooding	Yes	Yes	Yes
5.4	Promote environmentally sound watershed and stormwater practices to decrease flash flooding.	City of Ash Grove	Medium	1	Flooding	Yes	Yes	Yes
6.1	Reduce vulnerability of population with increased risk to medical complications secondary to extreme heat.	City of Ash Grove	High	1	Extreme Temperatures (Heat)	Yes	Yes	Yes
6.2	Search and identify all local citizens that have an increased risk factor for medical complications.	City of Ash Grove	High	1	Extreme Temperatures (Heat)	Yes	Yes	Yes
6.3	Identify adequate locations to develop Community Shelters to be used during extreme heat, and similar emergencies.	City of Ash Grove	High	1	Extreme Temperatures (Heat)	Yes	Yes	Yes

6.4	Create a volunteer program that can assist in monitoring the vulnerable population identified, provide assistance by opening and monitoring shelters.	City of Ash Grove	High	1	Extreme Temperatures (Heat)	Yes	Yes	Yes
6.5	Consult with local office of the American Red Cross and other organizations to help research and organize shelter needs, and operational guidelines.	City of Ash Grove	High	1	Extreme Temperatures (Heat)	Yes	Yes	Yes
6.6	Support annual campaign advertisement for Extreme Heat Awareness	City of Ash Grove	High	1	Extreme Temperatures (Heat)	Yes	Yes	Yes
7.1	Identify primary and secondary emergency snow routes to be maintained during severe weather conditions. Establish policy and procedures for maintaining these routes.	City of Ash Grove	Medium	1	All Hazards	Yes	Yes	Yes
7.2	Establish an interdepartmental communications system for Ash Grove Emergency Management, Ash Grove Police Department, Ash Grove Fire Protection District, Ash Grove Public Works, and Ash Grove City Hall.	City of Ash Grove	Medium	1	All Hazards	Yes	Yes	Yes
7.3	Enhance strategies for post-disaster debris management.	City of Ash Grove	Medium	1	All Hazards	Yes	Yes	Yes
7.4	Increase the ability of city staff to maintain operative during emergencies.	City of Ash Grove	Medium	1	All Hazards	Yes	Yes	Yes

City of Battlefield								
1	Install backup generators for critical infrastructure in Battlefield, including the Battlefield Police Department and City Hall.	City of Battlefield	High	1	Power Outages, Civil Unrest, Targeted Violence, Cyber	Yes	Yes	Yes
2	The City of Battlefield wants to ensure that all staff understand their role in a disaster situation. To achieve this, Battlefield would like to offer training opportunities for NIMS, credentialing staff in IS 100, IS 200c, IS 700b, and IS 800d.	City of Battlefield	High	2	Drought, Extreme Temperatures, Flood, Hail, Ice and Snow, Tornado, Severe Winds, Earthquake, Wildfire, Urban Fire, Targeted Violence, Civil Unrest	Yes	Yes	Yes
3	Offer community education on the importance of residential safe rooms, including public outreach to educate citizens on funding opportunities, and the potential construction of residential shelters in areas at greater risk to tornadoes and severe winds.	City of Battlefield	Medium	3	Tornadoes, Severe Wind	Yes	Yes	Yes
4	Improve stormwater infrastructure in the Cloverdale Estates and Gold Subdivisions by enhancing stormwater management through flood control programs and updated infrastructure.	City of Battlefield	Medium	3	Flooding	Yes	Yes	Yes
City of Fair Grove								
1	Replace the siren at Delania, as the siren is showing signs of aging and may fail to operate in an emergency setting. The pole is also in need of replacement as it is showing signs of weakness due to outdoor elements.	City of Fair Grove	High	4	Tornadoes, Severe Wind	Yes	Yes	Yes

2	Raise the level of Main Street at Saddle Club Road by a height designated by engineers based on hydrological data and flood frequency. Ensure the new road elevation connects smoothly with surrounding streets to maintain traffic flow.	City of Fair Grove	High	2	Flooding	Yes	Yes	Yes
3	Utilize social media platforms to share safety tips, preparedness checklists, and earthquake facts. Create or share engaging content such as videos and infographics to inform the community of earthquakes and the impact one would have on the Fair Grove community.	City of Fair Grove	Medium	3	Earthquakes	Yes	Yes	Yes
4	Launch a comprehensive public awareness campaign focused on educating the community about the risks of extreme temperatures.	City of Fair Grove	High	3	Extreme Temperatures	Yes	Yes	Yes
4.1	Develop a social media campaign for real-time updates during extreme temperature events, including tips on staying safe and connected to local services.	City of Fair Grove	High	2	Extreme Temperatures	Yes	Yes	Yes
4.2	Implement targeted programs to protect vulnerable populations, including elderly, those with medical conditions, and low-income families from the dangers of extreme temperatures.	City of Fair Grove	High	3	Extreme Temperatures	Yes	Yes	Yes

4.3	Partner with local health and social service organizations to create a registry of individuals who may require assistance during extreme temperature events.	City of Fair Grove	High	2	Extreme Temperatures	Yes	Yes	Yes
4.4	Establish cooling and warming centers equipped with essential supplies (water, blankets, medical kits, etc.) that can be rapidly deployed during extreme temperature events.	City of Fair Grove	High	2	Extreme Temperatures	Yes	Yes	Yes
4.5	Train and educate community to check in on at-risk residents via phone calls or home visits during extreme temperature events.	City of Fair Grove	High	3	Extreme Temperatures	Yes	Yes	Yes
5	Develop a comprehensive educational outreach program targeting various segments of the community to raise awareness of communicable diseases. This may be done by way of a digital platform to disseminate information about communicable diseases and effective preventative measures using various digital channels.	City of Fair Grove	Medium	2	Communicable Diseases	Yes	Yes	Yes
6	Develop a digital campaign service that sends regular fire safety tips, seasonal reminders (e.g., using heaters safely in winter), and updates on local fire incidents or hazards.	City of Fair Grove	High	1	Urban Fire	Yes	Yes	Yes

City of Republic								
1	Iron Grain Lane will serve as the only access point to several multi-family residential apartments undergoing construction. The street and stormwater improvements will help provide sufficient road width for emergency access and will also provide infrastructure (storm culverts) designed to convey the stormwater runoff from various on-site and off-site properties to prevent roadway flooding.	City of Republic	High	1	Flooding	Yes	Yes	Yes
2	The project consists of adding stormwater infrastructure in the area of W. Logan Street to relieve the flooding of roadways and residential properties. The project is located in a floodplain.	City of Republic	High	1	Flooding	Yes	Yes	Yes
3	Prevent accidents and loss of life by improving traffic flow, firstly by improving Hines St. and Highway ZZ.	City of Republic	High	2	Drought, Extreme Temperatures, Flood, Hail, Ice and Snow, Tornado, Severe Winds, Earthquake, Wildfire, Urban Fire, Targeted Violence, Civil Unrest	Yes	Yes	Yes

City of Springfield								
1	Design and build a new animal shelter for use by the Springfield-Greene County Animal Control program to provide temporary housing for loose dogs, aggressive dogs, dogs under investigation or quarantine, and injured animals. The shelter will have more spaces to house animals, as well as specific medical isolation and quarantine pens.	Springfield-Greene County Health Department	High	2	Communicable Diseases, Flooding, Animal Diseases	Yes	Yes	Yes
2	Alternate Care Site (ACS) for the Greene County community in the event of disaster or public health emergency.	Springfield-Greene County Health Department	High	2	Tornadoes, Communicable Diseases, Ice and Snow	Yes	Yes	Yes
3	Reduce the flooding of streets, businesses, and private property to improve safety and quality of life for citizens through a flood buyout of repetitive loss areas and retrofit the areas to reduce the loss. The locations have been identified but redacted for security. The city will also be conducting a voluntary floodplain acquisition of residential and business properties.	City of Springfield	High	2	Flooding	Yes	Yes	Yes

4	Implement a scalable emergency PSAP backup plan, including a group of neighboring jurisdictions that can assist the agency with emergency re-routes and can handle surges in calls and radio traffic without compromising emergency response operations with shared CAD data through a CAD-to-CAD interface.	Springfield Greene County 9-1-1 Communi-cations Center	High	1	Cyber, Targeted Violence (sabotage)	Yes	Yes	Yes
5	Implement a scalable emergency staffing plan, including a pool of trained temporary staff and streamlined onboarding processes to ensure the 9-1-1 center can handle surges in calls and radio traffic without compromising emergency response operations.	Springfield Greene County 9-1-1 Communi-cations Center	High	2	Biological, Chemical, Civil Unrest, Cyber, Explosives, Nuclear, Radiological, Sabotage, Targeted Violence, Waste	Yes	Yes	Yes
6	Implement a scalable emergency staffing plan, including a pool of trained temporary staff and streamlined onboarding processes to ensure the 9-1-1 center can handle surges in calls and radio traffic without compromising emergency response operations.	Springfield Greene County 9-1-1 Communi-cations Center	High	2	Damaging Winds, Drought, Extreme Temperatures, Flood, Hail, Ice and Snow, Lightning, Tornado, Animal Disease, Communicable Diseases, Earthquake, Land Subsidence, Wildfire	Yes	Yes	Yes
7	Implement a scalable emergency staffing plan, including a pool of trained temporary staff and streamlined onboarding processes to ensure the 9-1-1 center can handle surges in calls and radio traffic without compromising emergency response operations.	Springfield Greene County 9-1-1 Communi-cations Center	High	2	Airplane Crash, Cave/Mine Collapse, Dam Failure, Hazardous Materials, Power Failure, Train Derailment, Urban Fire	Yes	Yes	Yes

City of Strafford								
1	Increase public awareness of the natural risks of tornadoes and winds, through the construction of storm Sirens. Two Locations are being considered.	City of Strafford	High	2	Tornadoes, Strong Winds	Yes	Yes	Yes
2	Enhance local capabilities to ensure individual safety as well as create a safer and more sustainable community. This will be achieved through the construction of community safe room shelters. Two locations are being considered.	City of Strafford	High	3	Tornadoes, Strong Winds	Yes	Yes	Yes
3	Improve coordination and communication between local government and the community.	City of Strafford	High	3	Tornadoes, Strong Winds, Flooding, Train Derailment, Ice and Snow, Hazardous Materials	Yes	Yes	Yes
4	Increase public awareness of risks. This will be achieved through the purchase of portable changeable message signs to be used in high-risk areas such as along Old Route 66 in flood-prone areas.	City of Strafford	High	3	Flooding, Train Derailment, Sanitary Waste Spillage	Yes	Yes	Yes
5	Enhance local capabilities to ensure individual safety and reduce damage to the public through the purchase of salt spreaders (3), plows (3), tanker trucks for brine treatment of icy roads along arterial and collector roads such as Bumgarner, Madison, N. Old Orchard, and Stan Harriman Blvd.	City of Strafford	High	2	Ice and Snow	Yes	Yes	Yes

6	Create a safer and more sustainable community through the purchase of a Sewer Vac Truck with Jetter and Hydro-Excavator for vacuuming up sanitary waste spills due to sewer main breaks and perform emergency vacuum removal of waste from lift station wet wells when an emergency or malfunction occurs.	City of Strafford	High	2	Waste and Hazardous Materials	Yes	Yes	Yes
Logan-Rogersville School District								
1	Restore power and/or water in cases of loss due to earthquake or severe weather. This will be accomplished through generators or a second location that can be used when needed by the district.	Logan-Rogersville School District	High	1	Earthquakes, Tornadoes, Severe Temperatures, Power Outages, Targeted Violence	Yes	Yes	Yes
2	Purchase generators that can support the different critical facilities in the district.	Logan-Rogersville School District	Medium	2	Power Outages	Yes	Yes	Yes
3	Provide multiple “Stop the Bleed” kits to have readily available to staff, if needed.	Logan-Rogersville School District	High	3	Targeted Violence, Hazardous Materials, Train Derailment	Yes	Yes	Yes
4	Provide Wi-fi on all district buses to allow real-time camera access and location of the busses.	Logan-Rogersville School District	Medium	2	Targeted Violence, Ice and Snow, Tornadoes, Sabotage, Train Derailment, Hazardous Materials, Earthquake, Urban Fire	Yes	Yes	Yes

Ozarks Technical Community College								
1	Install generators in critical facilities on campus to provide power during outages or other emergency situations.	Ozarks Technical College	High	2	Power Outages, Tornadoes, Ice and Snow, Damaging Winds	Yes	Yes	Yes
2	Install high-decibel speakers outdoors to be able to communicate with students and employees during campus emergencies.	Ozarks Technical College	High	3	Tornadoes, Earthquake, Land Subsidence, Urban Fire, Dam Failure, Airplane Crash, Hazardous Materials, Train Derailment, Civil Unrest, Sabotage, Targeted Violence, Terrorism (Biological, Chemical, Radiological, Explosives, Nuclear)	Yes	Yes	Yes
3	Create a community campaign to spread information about communicable diseases and how the students and staff can take precautions on and off campus.	Ozarks Technical College	High	2	Communicable Diseases	Yes	Yes	Yes
Springfield Public Schools								
1	Construction of the new Pershing Middle School with a storm safe room at 2120 S. Ventura Ave. Springfield MO 65804.	Springfield Public Schools	High	1	Tornadoes, Severe Wind, Targeted Violence	Yes	Yes	Yes

2	Construction of the new Pipkin Middle School with a storm safe room on the property north of Lyon, west of Campbell, and south of Division in Springfield MO 65802 (official numeric addresses have not been provided yet).	Springfield Public Schools	High	1	Tornadoes, Severe Wind, Targeted Violence	Yes	Yes	Yes
3	Construction of the new Reed Middle School with a storm safe room at 2000 N. Lyon Ave. Springfield MO 65803.	Springfield Public Schools	High	1	Tornadoes, Severe Wind, Targeted Violence	Yes	Yes	Yes
Willard Fire Protection District								
1	Ensure the safety of individuals and the community through coordinated action. This will be done through having firefighters custom-fitted for new turnout gear to ensure personal safety on emergency scenes.	Willard Fire Protection District	High	2	Targeted Violence, Airplane Crash, Hazardous Materials, Train Derailment, Urban Fire, Damaging Winds, Tornadoes	Yes	Yes	Yes
2	Replace 1986 Aerial Truck. Parts can no longer be obtained for simple maintenance, and it is no longer usable.	Willard Fire Protection District	High	1	Targeted Violence, Airplane Crash, Hazardous Materials, Train Derailment, Urban Fire, Damaging Winds, Tornadoes, Earthquake	Yes	Yes	Yes
3	Mitigate flooding at fire stations through excavating to install French drains, pouring concrete drives, installing culverts, and redoing the dirt work around the building.	Willard Fire Protection District	Medium	2	Flooding	Yes	Yes	Yes

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INTRODUCTION AND PLANNING PROCESS 1

1.1 PURPOSE

Hazard Mitigation is defined as any sustained action taken to reduce or eliminate long-term risks to life and property from hazard events. This five-year plan aims to make Greene County, and all jurisdictions within it, disaster-resilient by reducing or eliminating the long-term risks of loss of life and property from a wide range of natural, technical, and human-caused hazards.

Cities, schools, and special districts, such as fire protection districts, that participate in and adopt the Multi-Jurisdictional Hazard Mitigation Plan are eligible for mitigation grants to support their goals and projects. Communities that do not adopt the plan are not eligible for these grants.

This plan meets the requirements outlined in the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Public Law 93-288), as amended by the Disaster Mitigation Act of 2000 (Public Law 106-390), as well as the regulations established by the Interim Final Rule published in the Federal Register on February 26, 2002 (44 CFR 201.6) and finalized on October 31, 2007.

The plan has been developed using the following guides and handbooks to ensure compliance with all state and federal requirements: FEMA's Local Mitigation Planning Handbook (May 2020), FEMA's Local Mitigation Plan Review Guide (October 1, 2011), and the Local Mitigation Planning Policy Guide (April 19, 2023).

The primary mitigation programs focus on floodplain management (regulations updated in 2002) and participation in the National Flood Insurance Program (NFIP). Floodplain management programs are designed to protect the health, safety, and welfare of county residents by safeguarding property during floods, preventing avoidable increases in flood sizes, mitigating losses when constructing public facilities, and protecting the public from purchasing land that is unsuitable for its intended use due to flood hazards.

1.2 BACKGROUND AND SCOPE

The 2025-2030 Greene County Multi-Jurisdictional All Hazards Mitigation Plan is an update of the current plan that was approved August 27, 2020. The hazard mitigation plans are valid for a period of five years. In the previous 2020-2025 Hazard Mitigation Plan, the following jurisdictions and municipalities participated:

Communities

City of Ash Grove	City of Battlefield	City of Fair Grove	City of Republic
City of Strafford	City of Walnut Grove	City of Willard	City of Springfield

Fire Protection Districts

Ash Grove Fire Protection District	Battlefield Fire Protection District	Ebenezer Fire Protection District	Fair Grove Fire Protection District
Logan-Rogersville Fire Protection District	Walnut Grove Fire Protection District	Willard Fire Protection District	

Public School Districts

Ash Grove School District	Fair Grove School District	Republic School District	Springfield School District
Strafford School District	Walnut Grove School District	Willard School District	

Higher Education Institutions

Missouri State University	Ozarks Technical Community College

Many jurisdictions in Greene County extend into neighboring counties. For instance, several fire protection districts serve multiple counties. The City of Rogersville participated in the Webster County Mitigation Plan in 2020. All other jurisdictions included in this plan have assets located within Greene County.

The 2025-2030 update to the Springfield-Greene County Hazard Mitigation Plan incorporates the following jurisdictions mentioned above, along with an additional participant: Brookline Fire Department.

- Greene County
- City of Ash Grove
- City of Battlefield
- City of Fair Grove
- City of Republic
- City of Springfield
- City of Strafford
- Ash Grove Public School District
- Logan-Rogersville School District
- Ozarks Technical Community College
- Springfield Public School District
- Battlefield Fire Protection District
- Willard Fire Protection District

The information provided in this plan will serve as a strategic guide to coordinate mitigation efforts and support future decisions, including local land use policies. Furthermore, this plan addresses 30 distinct hazards, encompassing natural, technological, and human-caused risks. Not all jurisdictions are vulnerable to every hazard; for example, not all face the same level of risk from incidents like dam failures.

The following neighboring counties were contacted and given the opportunity to review Greene County's Hazard Mitigation Plan: Polk County, Webster County, Dade County, Christian County, Lawrence County, and Dallas County.

1.3 PLAN ORGANIZATION

The formatting style for the 2025-2030 plan has changed from the 2020-2025 Hazard Mitigation Plan. Springfield-Greene County used the Missouri State Emergency Management Agency's (SEMA's) Mitigation Plan template to help construct this new plan. The 2025-2030 plan is organized as follows:

- Chapter 1: Introduction and Planning Process
- Chapter 2: Planning Area Profiles and Capabilities
- Chapter 3: Risk Assessment
- Chapter 4: Mitigation Strategy
- Chapter 5: Plan Implementation and Maintenance
- Appendices

The table below shows each chapter and summarizes the changes made in the update.

Table 1.1 Changes Made in Plan Update

Plan Section	Summary Of Updates
Chapter 1 – Introduction and Planning Process	Updated the members of the Mitigation Planning Committee (MPC) and participating jurisdictions adopted the MPC.
Chapter 2 – Planning Area Profiles and Capabilities	Updated all jurisdictions community profiles and capabilities. Department summaries within Jurisdiction Capabilities were also updated.
Chapter 3 – Risk Assessment	The Mitigation Planning Committee (MPC) decided to combine the Severe Heat and Severe Cold Hazards into Extreme Temperatures. The following hazards were recognized as terrorism during the risk assessment: Nuclear, Radiological, Biological, Explosive, Targeted Violence, Chemical.
Chapter 4 – Mitigation Strategy	A standardized Cost Benefit Analysis was added to ensure that all the projects had the same foundation for determining priority and benefit. This plan used the STAPPLE method provided by SEMA.
Chapter 5 – Plan Implementation and Maintenance	No notable changes were made to this section of the plan.

1.4 PLANNING PROCESS

44 CCFR Requirement 201.6 (1): The plan shall document the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how the public was involved.

A contractor was hired under a state grant to create the 2025-2030 Greene County Multi-Jurisdictional Hazard Mitigation Plan. The contractor had the following responsibilities:

- Assist in establishing a Mitigation Planning Committee (MPC).
- Ensure the updated plan meets the Disaster Mitigation Act (DMA) requirements, as established by federal regulations and follows the most current planning guidance of the Federal Emergency Management Agency (FEMA).
- Facilitate the entire planning development process.
- Meet and coordinate with all participating MPC members.
- Identify the data that the MPC participants could provide and conduct the research and documentation necessary to augment that data.
- Produce the draft and final plan update in a FEMA-approved document and coordinate the Missouri State Emergency Management Agency (SEMA) and FEMA plan reviews.

Tables 1.2 Jurisdictional Representatives of Greene County Mitigation Planning Committee

Name	Title	Department	Jurisdiction/Agency/ Organization
Larry Woods	Emergency Management Director	Springfield-Greene County OEM	Greene County
John Davis	Chief of Police/Emergency Management Director	Ash Grove Police Department	City of Ash Grove
Tommy VanHorn	City Administrator/Emergency Management Director	City of Battlefield	City of Battlefield
Beth West	City Clerk	City of Battlefield	City of Battlefield
Greg Porter	Emergency Management Director	City of Fair Grove	City of Fair Grove
Lynn Hollandworth	Deputy Fire Chief/Emergency Management Director	Republic Fire Protection District	City of Republic
Maggie Rogers	Health Planner	Springfield-Greene County Health Department	City of Springfield
April Ford	911 Director	Springfield-Greene County Emergency Communications Center	City of Springfield

Sandy Strecker	City Clerk	City of Strafford	City of Strafford
Martha Smartt	City Manager/Floodplain Administrator	City of Strafford	City of Strafford
Donna Ellis	City Clerk	City of Willard	City of Willard
Shane Medlin	Superintendent	Ash Grove School District	Ash Grove School District
Jennifer Katzin	Assistant Superintendent	Logan-Rogersville School District	Logan-Rogersville School District
Jason Perkins	Assistant Superintendent of Operations	Republic School District	Republic School District
Jim Farrell	Springfield Public Schools Police Chief/Emergency Management Director	Springfield Public Schools	Springfield School District
Kathleen Kingry	Environmental Safety and Compliance Coordinator	Ozarks Technical Community College	Ozarks Technical Community College
Josh Dukewits	B-Shift Battalion Chief	Battlefield Fire Department	Battlefield Fire Protection District
Scott Moore	Former Fire Chief	Battlefield Fire Department	Battlefield Fire Protection District
James Kilburn	Fire Chief	Brookline Fire Department	Brookline Fire Protection District
Will Glenn	Logistics Chief	Brookline Fire Department	Brookline Fire Protection District
Ashlee Parker	Assistant Fire Chief	Ebenezer Fire Department	Ebenezer Fire Protection District
Tim Clarkson	Assistant Chief B-Shift	Logan-Rogersville Fire Department	Logan-Rogersville Fire Protection District
Kevin Samsel	Assistant Chief B-Shift	Willard Fire Department	Willard Fire Protection District

Table 1.3 Greene County Mitigation Stakeholders

Name	Title	Department	Agency/Organization
Hannah James	Emergency Management Coordinator	Emergency Management and Business Continuity	CoxHealth
Mark Foos	Captain	Springfield Police Department	Springfield Police Department
Adrienne Jenkins	Operational Resiliency Manager	Operational Resiliency	City Utilities
Kip Mathena	Director – Risk Management	Risk Management	City Utilities
Joanna Whetstine	Environmental Safety and Emergency Management Specialist	Emergency Management	Mercy Hospital
Sydney Allen	Planning Director	Planning and Zoning	Greene County
Chris Brumett	Social Services Director/Emergency Operations Notification	Emergency Management	Salvation Army
Brian Weiler	Director of Aviation	Leadership	Springfield-Branson National Airport
Jon Carney	Superintendent of General Services	Parks Department	City of Springfield
Nathan Huggins	GIS & Asset Systems Manager	Geographical Information Systems	City of Springfield
Steve Runnels	Warning Coordination Meteorologist	National Weather Service	National Weather Service
Eddie Castleberry	Former School Resource Officer	Fair Grove Schools	Fair Grove School District
Brian Bagley	Director of Operations	Ash Grove Schools	Ash Grove School District
Jeffery Ikerd	Geographic Information Systems Specialist	Geographical Information Systems	Greene County

There are many different hazard mitigation actions, often grouped into six categories. The table below depicts the types of projects in which the participating jurisdictions and members of the MPC have expertise.

Table 1.4 MPC Capability in Six Mitigation Categories

Community Department/Office	Preventive Measures	Structure and Infrastructure Projects		Natural Resource Protection	Public Information	Emergency Services
		Property Protection	Structural Flood Control Projects			
Ash Grove Police Department	x	x	x		x	x
Ash Grove Schools	x	x		x	x	
Battlefield Fire Department	x	x	x	x	x	x
Brookline Fire Department	x	x	x	x	x	x
City of Battlefield	x	x	x	x	x	
City of Fair Grove	x	x	x	x	x	
City of Strafford	x	x	x	x	x	
City of Willard	x	x	x	x	x	
Cox Health	x	x	x	x	x	
Ebenezer Fire Department	x	x	x	x	x	x
Fair Grove Schools	x	x		x	x	
Greene County GIS	x	x			x	
Logan-Rogersville Fire Department	x	x	x	x	x	x
Logan-Rogersville School District	x	x		x	x	
Mercy Hospitals	x	x	x	x	x	x
National Weather Service	x	x	x	x	x	
Ozarks Technical Community College	x	x	x	x	x	

Planning and Zoning	x	x	x	x	x	
Republic Fire Protection District	x	x	x	x	x	x
Republic School District	x	x		x	x	
Salvation Army Emergency Management	x	x			x	
Springfield-Branson National Airport	x	x	x	x	x	x
Springfield City Utilities	x	x	x	x	x	x
Springfield-Greene County Health Department	x		x	x	x	x
Springfield-Greene County Office of Emergency Management	x		x	x	x	x
Springfield Police Department	x	x	x		x	x
Springfield Public Schools	x	x		x	x	
Springfield-Greene County Emergency Communications Center	x	x	x		x	x
Willard Fire Department	x	x	x	x	x	x

1.5 Multi-Jurisdictional Participation

44 CFR Requirement 201.6(a)(3): Multi-jurisdictional plans may be accepted, as appropriate, as long as each jurisdiction has participated in the process and has officially adopted the plan.

The 2025-2030 Greene County Multi-Jurisdictional Hazard Mitigation Plan was developed by the Local Mitigation Planning Taskforce, which included representatives from fire protection districts, public school districts, higher education institutions, municipalities, and various departments within both the City of Springfield and Greene County government. The taskforce convened in accordance with the terms of a grant awarded by the Missouri State Emergency Management Agency (SEMA).

This Hazard Mitigation Plan is the outcome of a collaborative effort involving citizens, businesses, industry, institutions, and voluntary agencies across Greene County.

Incorporated communities, public school districts, fire protection districts, and other stakeholders were invited to participate in the plan update. As stipulated by the Disaster Mitigation Act (DMA), each jurisdiction was required to engage in the planning process and formally adopt the plan. The following steps were required for each participating jurisdiction:

- Designation of at least one representative to serve on the Mitigation Planning Committee (MPC).
- Participation in the initial Kickoff Meeting or a rescheduled introductory meeting.
- Submission of jurisdictional data through a Data Collection Questionnaire.
- Updates to existing mitigation projects and goals.
- Quarterly progress updates for ongoing projects and goals.
- Review and provide feedback on plan drafts.
- Maintain records of time worked on plan-related activities.
- Formal adoption of the final plan.

All participating jurisdictions successfully met the requirements outlined for the planning process. Due to staffing limitations within the jurisdictions, organizing large group meetings involving all stakeholders proved to be logistically challenging. Consequently, most meetings, following the Kickoff Meeting, were conducted on a one-on-one basis. Several members of the Mitigation Planning Committee also hold emergency management duties either as volunteers or in addition to their full-time positions. There were several difficulties with participation, including staff turnover across the county and jurisdictions and season-specific demands. A comprehensive list of all meetings held can be found in the following tables, with timesheets for each meeting available in Appendix E.

Table 1.5 Jurisdictional Participation in the Planning Process

Jurisdiction	Kickoff Meeting	Meeting Two	Meeting Three	Data Collection Questionnaire Response	Update/ Develop Mitigation Actions
City of Ash Grove	x	x	x	x	x
City of Battlefield	x	x	x	x	x
City of Fair Grove	x	x	x	x	x
City of Republic	x	x	x	x	x
City of Springfield	x	x	x	x	x
City of Strafford	x	x	x	x	x
Ash Grove School District	x	x	x	x	x
Logan-Rogersville School District	x	x	x	x	x
Springfield School District	x	x	x	x	x
Ozarks Technical Community College	x	x	x	x	x
Battlefield Fire Protection District	x	x	x	x	x
Brookline Fire Protection District	x	x	x	x	x
Willard Fire Protection District	x	x	x	x	x

1.6 PLANNING STEPS

The 2025-2030 Greene County Multi-Jurisdictional Hazard Mitigation plan used many resources to conduct research updates to the plan. Some of the resources include:

- FEMA's Local Mitigation Planning Handbook
- Local Mitigation Plan Review Guide
- 2015-2020 Greene County Multi-Jurisdictional Hazard Mitigation Plan
- Emergency Management Standards from the Emergency Management Accreditation Program (EMAP)
- Stafford Act

The development of the plan followed the 10-step planning process adapted from FEMA's Community Rating System (CRS) and Flood Mitigation Assistance Programs. The 10-Step process allows the plan to meet funding eligibility requirements of the Hazard Mitigation Grants Program (HMGP), Pre-Disaster Mitigation Program (PDM), and Flood Mitigation Assistance Program (FMA). It also allows communities to qualify for points under Activity 510 for mitigation plans within the Community Rating System. The following table shows how the CRS process aligns with the Nine Task Process outline in the Local Mitigation Planning Handbook.

Table 1.6 County Mitigation Plan Update Process

Community Rating System (CRS) Planning Steps (Activity 510)	Local Mitigation Planning Handbook Tasks (44 CFR Part 201)
Step 1. Organize	Task 1: Determine the Planning Area and Resources
	Task 2: Build the Planning Team 44 CFR 201.6(c)(1)
Step 2. Involve the Public	Task 3: Create an Outreach Strategy 44 CFR 201.6(b)(1)
Step 3. Coordinate	Task 4: Review Community Capabilities 44 CFR 201.6(b)(2) & (3)
Step 4. Assess the Hazard	Task 5: Conduct a Risk Assessment 44 CFR 201.6(c)(2)(i) 44 CFR 201.6(c)(2)(ii) & (iii)
Step 5. Assess the Problem	
Step 6. Set Goals	Task 6: Develop a Mitigation Strategy 44 CFR 201.6(c)(3)(i); 44 CFR 201.6(c)(3)(ii); and 44 CFR 201.6(c)(3)(iii)
Step 7. Review Possible Activities	
Step 8. Draft an Action Plan	
Step 9. Adopt the plan	Task 8: Review and Adopt the Plan
Step 10. Implement, Evaluate, Revise	Task 7: Keep the Plan Current
	Task 9: Create a Safe and Resilient Community 44 CFR 201.6(c)(4)

STEP 1: ORGANIZE THE PLANNING TEAM

The Mitigation Planning Committee (MPC) was kept updated via phone and email. The Mitigation Planning Contractor contacted each jurisdiction to inform them of the plan update and provided contact information for all committee members. Several internal meetings were held prior to the Kickoff Meeting to discuss schedules, timing, and meeting objectives.

The Kickoff Meeting was scheduled for April 26, 2024, with two separate sessions: one at 10:00 AM and the other at 1:00 PM. The 10:00 AM session was designed for eligible jurisdictions and community members seeking a more detailed understanding of the process. The 1:00 PM session was intended for community members who wanted to contribute to the project with a less involved commitment.

A planning workbook was created to streamline the project development process for jurisdictions and stakeholders, and it was distributed via email. Invitations to both meetings were sent by email. The 10:00 AM session had 21 participants, while the 1:00 PM session had 15 participants, collectively representing 25 jurisdictions and organizations.

Following the Kickoff Meeting, individual invitations were sent to each eligible jurisdiction. Make-up meetings were organized, as needed, for jurisdictions unable to attend either of the Kickoff Meetings, as well as for interested stakeholders. The Mitigation Planning Contractor arranged one-on-one meetings, phone calls, and email exchanges to provide additional information to jurisdictional representatives. Resources provided to jurisdictions included data questionnaires, blank Action Worksheets, blank STAPLEE Worksheets, the Kickoff Meeting slideshow, and a planning guide, all sent via email.

Copies of the timesheets and invite lists can be found in Appendix E.

The table below outlines the larger meetings held, along with the dates of individual follow-up meetings:

Table 1.7 Meeting Summaries

Meeting	Topic	Date
Informational Meeting	An introduction to the project and a discussion with the previous Mitigation Planner about the last update.	3/27/2024
Kickoff Meeting	All jurisdictions and several organizations across the county were invited to learn more about the requirements to participate, as well as what the Mitigation Plan was and how it is used.	4/26/2024
Individual Meetings	These meetings were either held at the Greene County Public Safety Center or at a location of choice by the jurisdictional representative. During these meetings, previous projects were discussed and changes were made to the individual jurisdiction information pages.	5/6/2024 - 10/24/2024
Final Meetings	These meetings were held either at the Greene County Public Safety Center or a location of choice by the jurisdictions. During this meeting, new projects were collected and goals for the 5-year plan were discussed.	7/24/2024 - 12/18/2024

STEP 2: PLAN FOR PUBLIC INVOLVEMENT

44 CFR Requirement 201.6(b): An open public involvement process is essential to the development of an effective plan. In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process shall include: (1) An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval.

The planning process must provide at least two opportunities for public comment on the plan: 1) during the drafting stage, and 2) before plan approval. The MPC decided that using an online survey, similar to the approach taken in the last two mitigation plans, would provide the public with an easy and accessible way to participate. The mitigation contractor also worked with Springfield-Greene County libraries to make printed copies of the survey available. This ensured that older individuals, as well as those without phone services who may have had trouble accessing the survey via the QR code, had an alternative means of participating.

The Hazard Experience Survey Feedback Form was published on the social media platforms of the Springfield-Greene County Office of Emergency Management, including Facebook, Instagram, and X (formerly Twitter). KY3 also featured the survey on April 4, 2024. However, only 100 responses were received, a significant decrease from the 235 responses to the previous survey in 2020. The MPC noted that the community, as a whole, seemed unfamiliar with the mitigation plan. It is hoped that, in the coming years, the plan will gain more attention. The form was available from April 3, 2024, until January 1, 2025. The MPC encouraged members to reach out to their communities and jurisdictions to promote the survey and maximize participation.

Many public responses highlighted concerns about flooding, damaging winds, tornadoes, and extreme temperatures. This information was incorporated into the risk assessment section of the plan, which evaluates the vulnerability and resilience of Greene County. Additionally, respondents raised concerns

about tornado shelter locations, the quality of road clearing after winter weather storms, and whom to contact for debris cleanup.

After the draft of the plan was written, virtual access was provided to the Greene County community, along with a second survey to gather public feedback. A virtual approach was chosen because it allows us to reach a broader audience across the county, rather than just focusing on the immediate Springfield area. Details including time sheets can be found in Appendix D Sign In Sheets and details about public outreach can be found in Appendix E Community Engagement.

STEP 3: COORDINATE WITH OTHER DEPARTMENTS AND AGENCIES AND INCORPORATE EXISTING INFORMATION

44 CFR Requirement 201.6(b): An open public involvement process is essential to the development of an effective plan. In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process shall include: (2) An opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as wells as businesses, academia, and other private and non-profit interests to be involved in the planning process. (3) Review and incorporation, if appropriate, of existing plans, studies, reports, and technical information.

During the planning process, stakeholders must be given the opportunity to be involved. Stakeholders include the following:

- Neighboring communities
- Local and regional agencies involved in hazard mitigation activities
- Agencies with the authority to regulate development
- Businesses & Academia
- Other private and non-profit interests, including underserved/vulnerable populations

Stakeholders, from respective departments and/or agencies, were invited via email and phone calls.
A large meeting for stakeholders and jurisdictions to learn more about the planning process and its impact on the community was held on April 30, 2024, at 1:00 p.m. This meeting covered the project creation process that jurisdictions would undertake, as well as the importance of mitigation planning. Attendees were encouraged to share the information with their colleagues and engage in discussions about potential projects that could benefit Greene County jurisdictions. Participants were also invited to ask questions about the process and share their opinions on mitigation planning.

The Mitigation Planning Contractor met with Ozarks Technical Community College to discuss the project. Drury University and Evangel University were invited but did not respond to the invitation. Missouri State University sent a representative to the Kickoff Meeting but did not continue with the project. Ozarks Technical Community College is the only local college eligible for mitigation funds and is featured in detail throughout the plan.

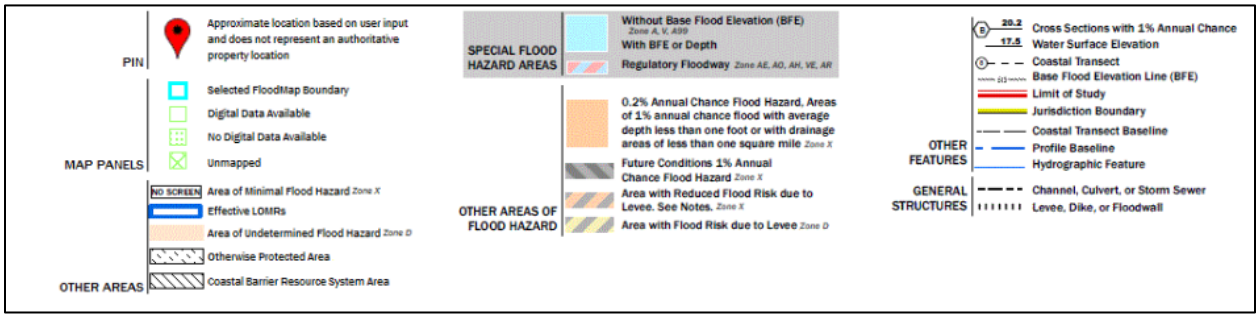
The complete list of invited stakeholders can be found in Appendix E.

Coordination with FEMA Risk Map Project

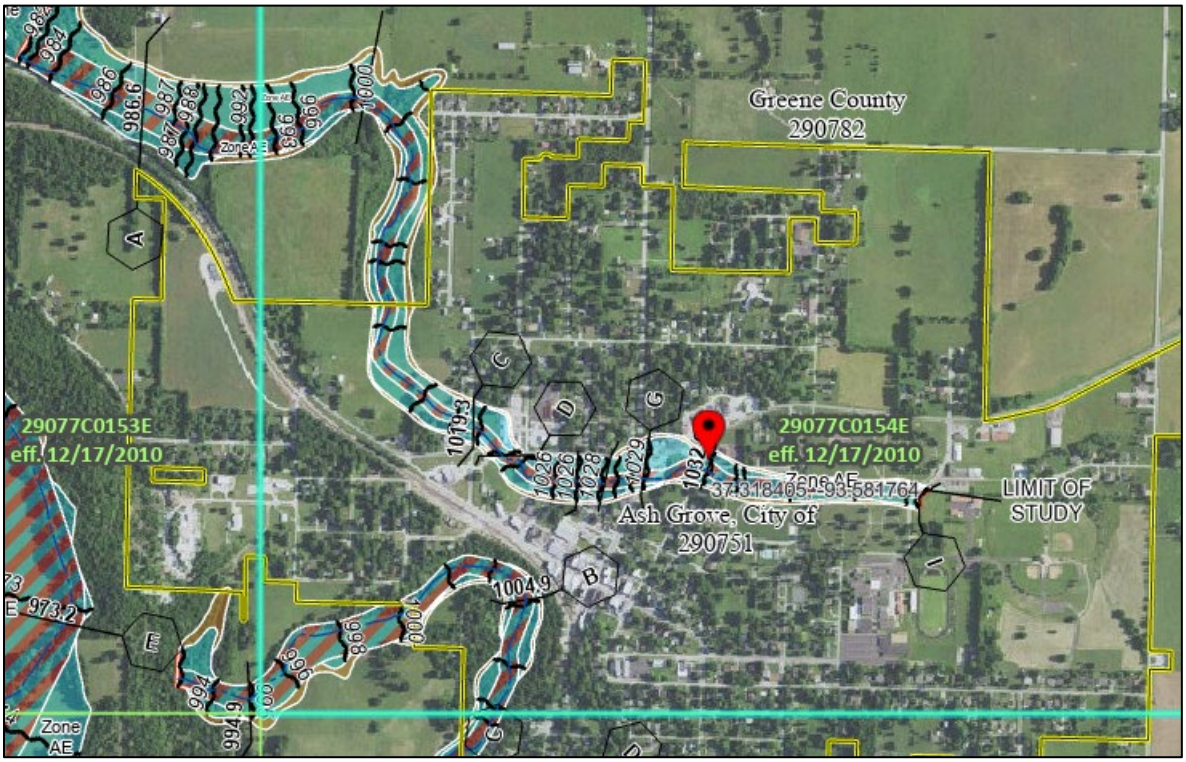
The FEMA Risk MAP Project provides high quality flood maps and information to better assess and understand the risk from flooding. Each Risk MAP flood risk project is tailored to the needs of each community and may involve different products and services.

The following pages show the FEMA Flood Insurance Rate Map (FIRM) Project for each municipality in Greene County.

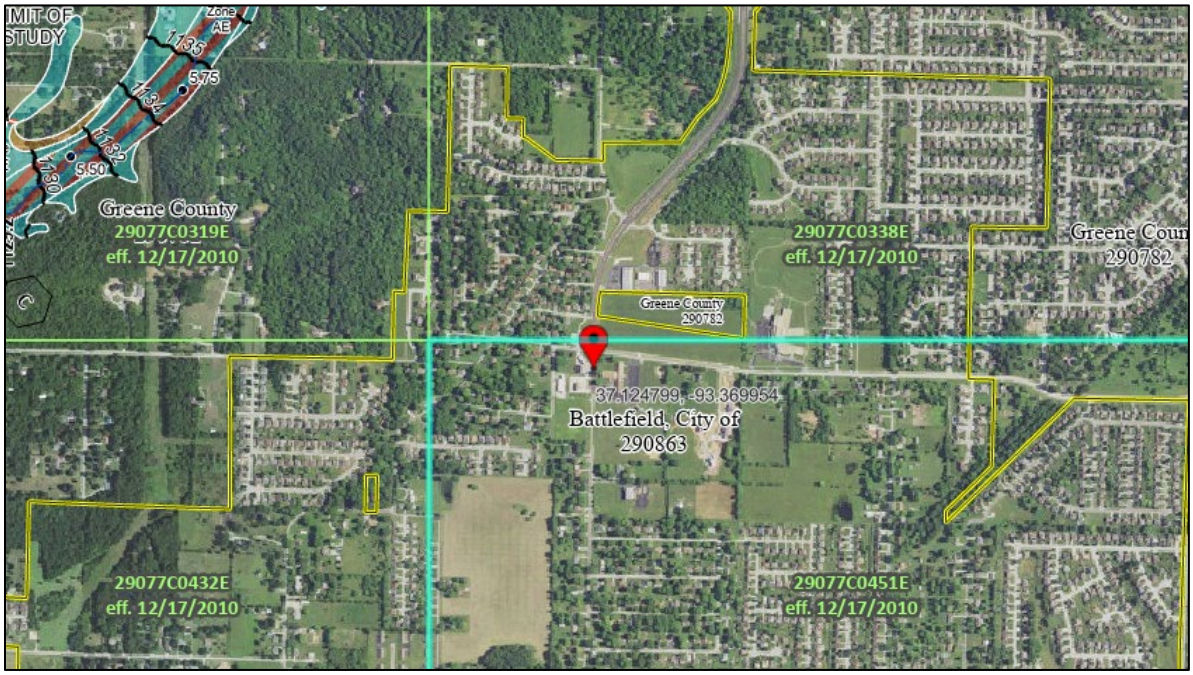
KEY FOR MAPS BELOW



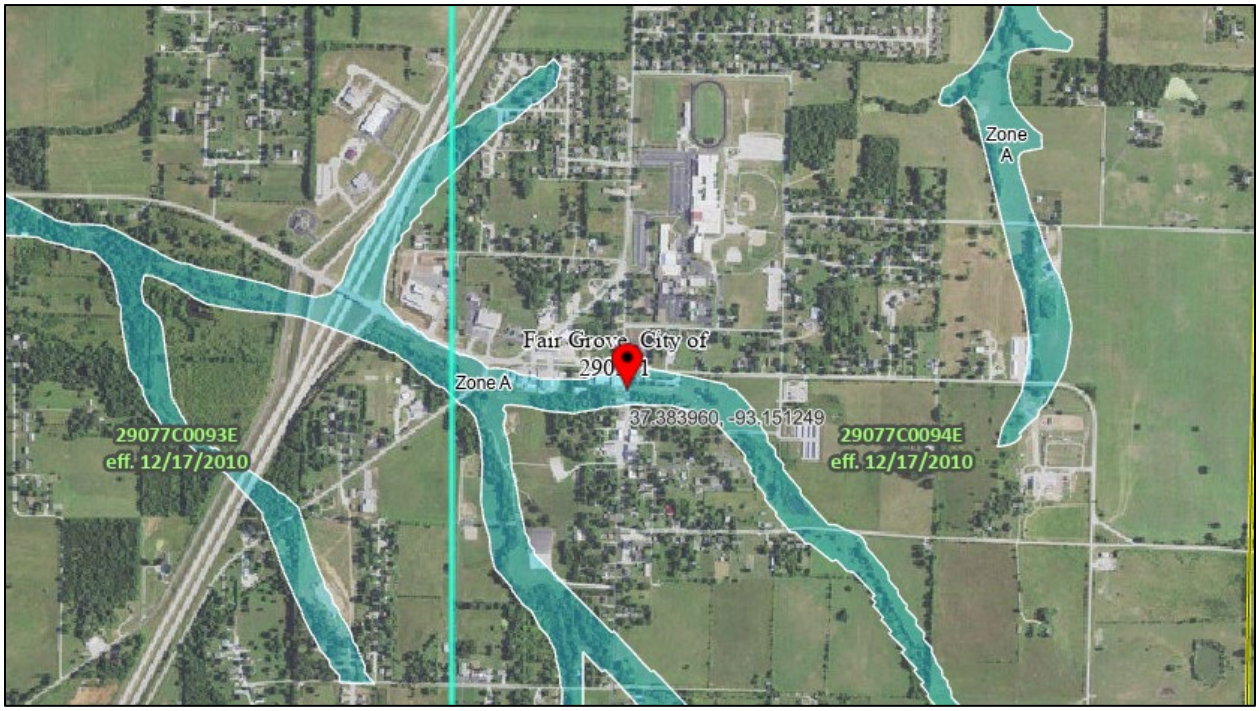
CITY OF ASH GROVE



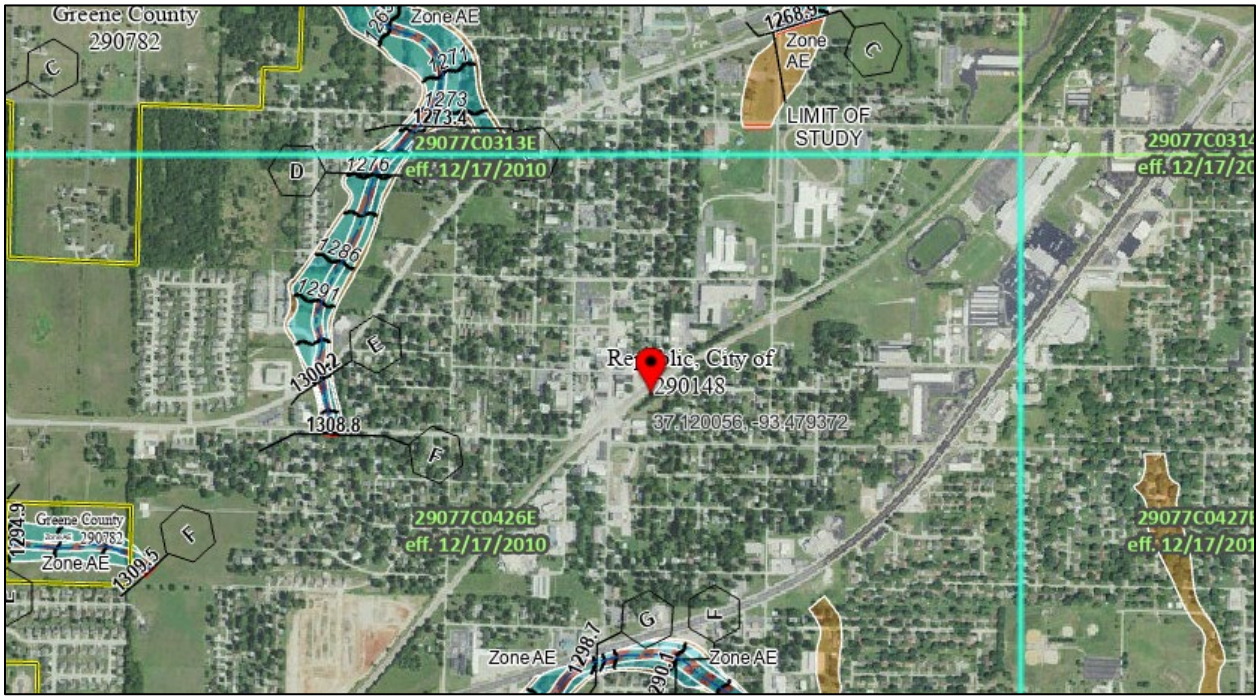
CITY OF BATTLEFIELD



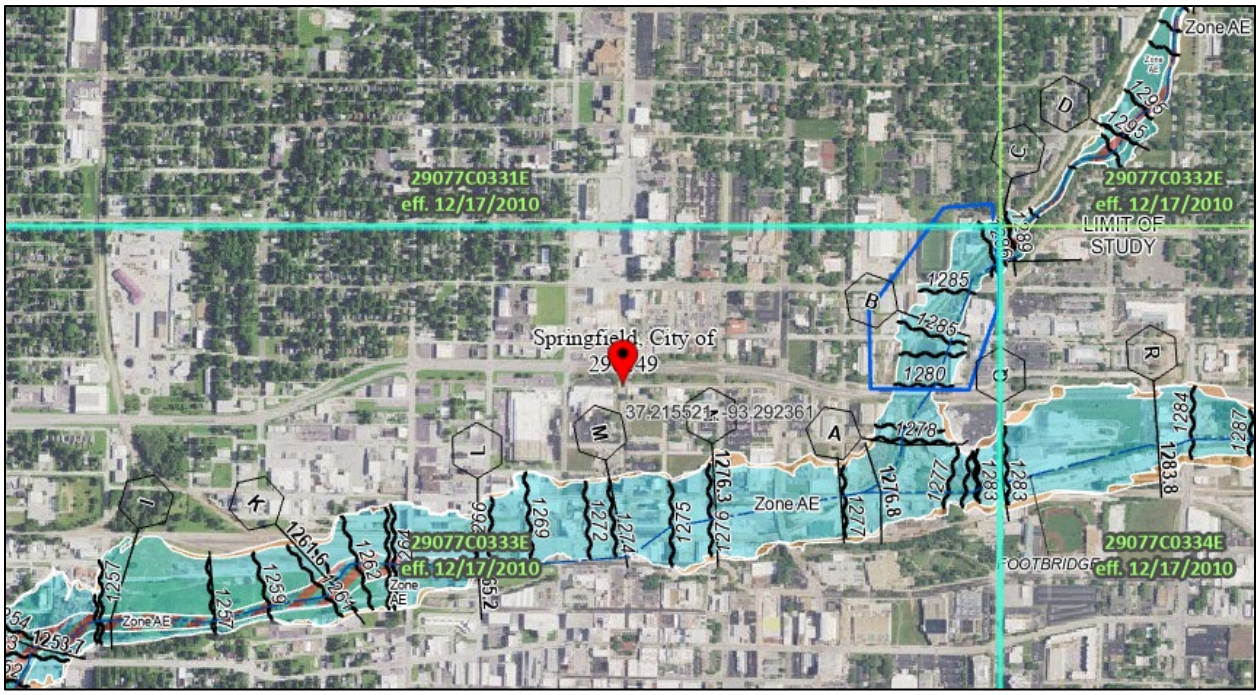
CITY OF FAIR GROVE



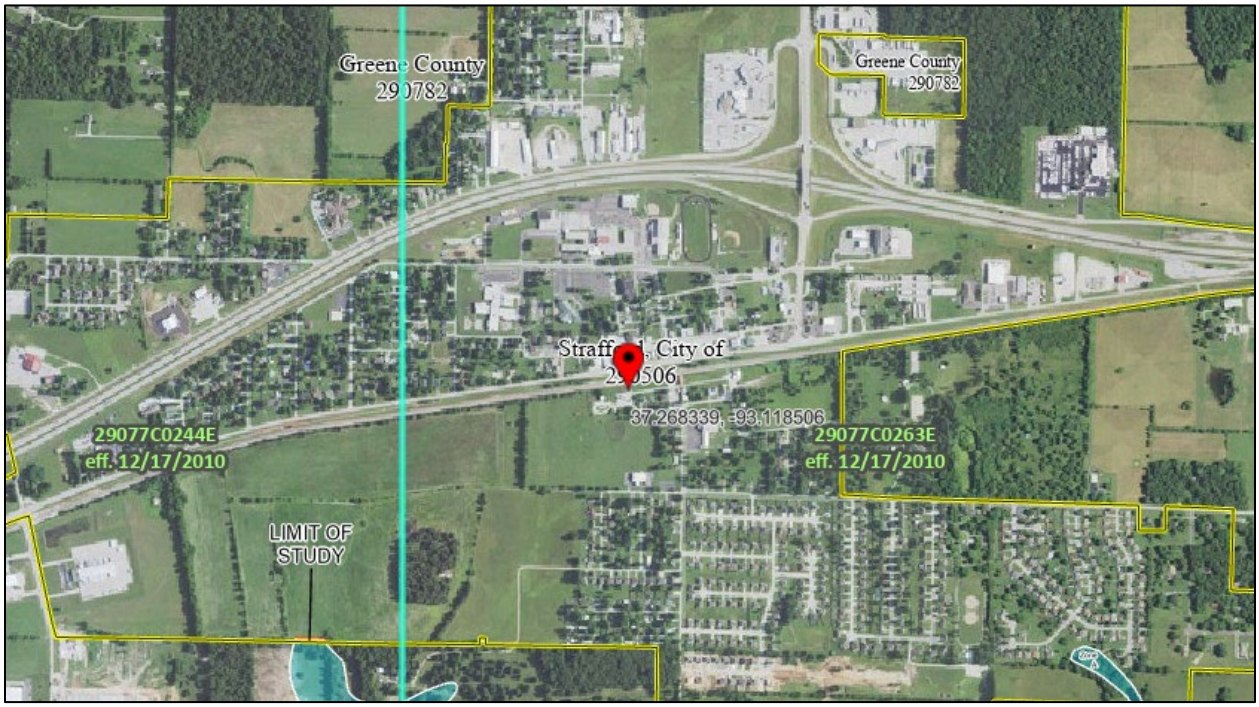
CITY OF REPUBLIC



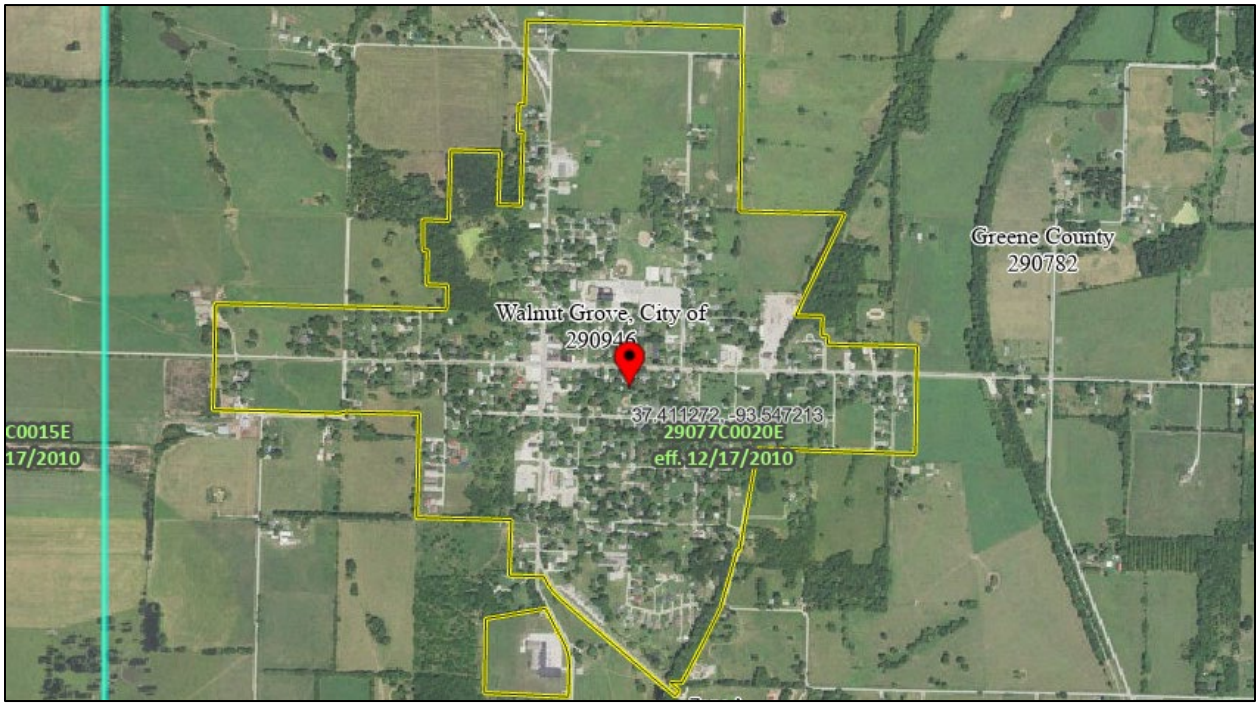
CITY OF SPRINGFIELD



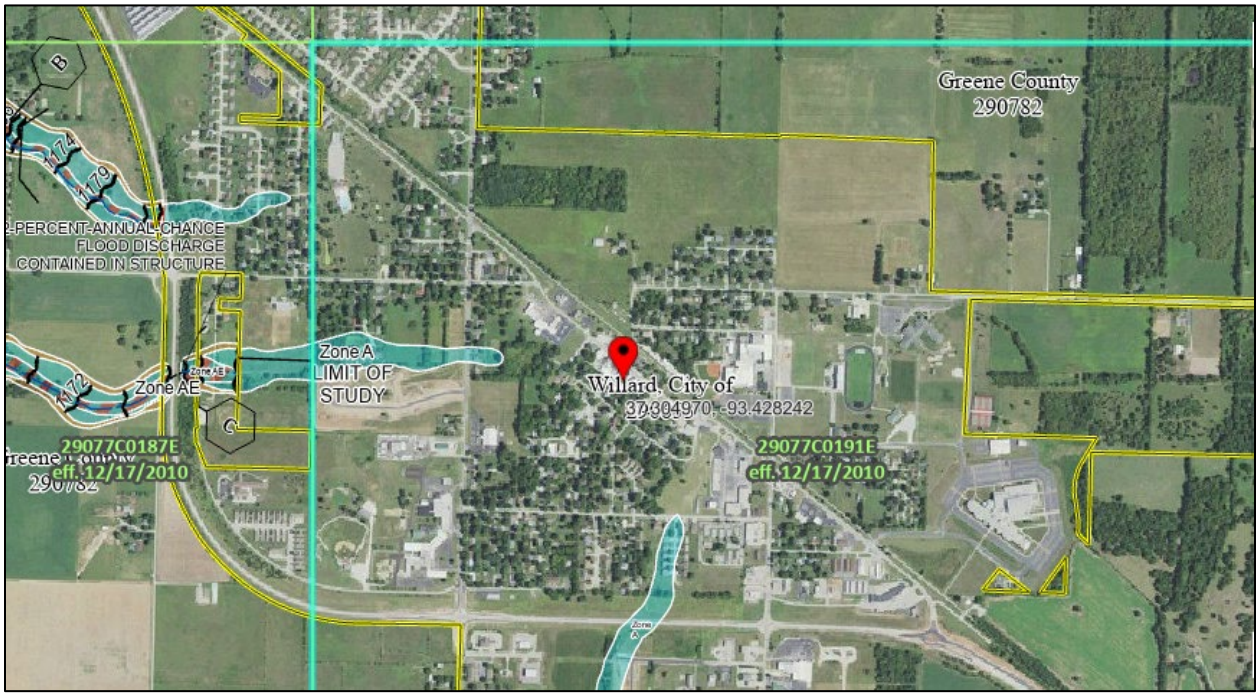
CITY OF STRAFFORD



CITY OF WALNUT GROVE



CITY OF WILLARD



Integration of Other Data, Reports, Studies, and Plans

Additional input was obtained from resources like the Missouri Department of Natural Resources and Missouri Health and Senior Services. Information provided by them helped the MPC rank our current hazards. Information requested from Missouri Department of Natural Resources included dam information and induction maps. The Department of Agriculture website was used for insurance statistics, local budgets, farms, inventory, etc. Other resources that were used included the MO State Hazard Mitigation Plan and the Mitigation Map Viewer located on the SEMA website. These resources were used in the Risk Assessment Section.

STEP 4: ASSESS THE HAZARD: IDENTIFY AND PROFILE HAZARDS

During the Kickoff Meeting, the hazards identified in the 2020-2025 Mitigation Plan were reviewed. At that time, the MPC decided to combine Extreme Heat and Extreme Cold into a single category, Extreme Temperatures. Flooding has been, and continues to be, the primary concern for Greene County. The MPC did not identify any new hazards. Compared to the State of Missouri Plan, all identified hazards were included except for Levee Failure, as there are no levees in the planning area. The following table outlines the identified hazards for Greene County:

Table 1.8 Hazards in Greene County

Natural	Technological	Human-Caused
Weather: ● Damaging Wind ● Drought ● Extreme Temperatures ● Flood ● Hail ● Ice and Snow ● Lightning ● Tornado Other: ● Animal Disease ● Communicable Disease ● Earthquake ● Land Subsidence (Sinkholes) ● Wildfire	● Airplane Crash ● Cave/Mine Collapse ● Dam Failure ● Hazardous Materials ● Power Failure ● Train Derailment ● Urban Fire	● Biological ● Chemical ● Civil Unrest ● Cyber ● Explosives ● Nuclear ● Radiological ● Sabotage ● Targeted Violence ● Waste

Detailed hazard profiles for each hazard identified in the chart above can be found in the Risk Assessment Section of this plan.

STEP 5: ASSESS THE PROBLEM: IDENTIFY ASSETS AND ESTIMATE LOSSES

Estimated losses for each jurisdiction were determined by reviewing census data, historical occurrences, and data collected through questionnaires. State-provided loss estimates from the previous 2020 Mitigation Plan were also considered. The Mitigation Planning Contractor, in collaboration with participating jurisdictions, gathered data from mitigation initiatives and capabilities, which are further discussed in the Planning Area Profiles and Capabilities section of this plan.

STEP 6: SET GOALS

During the Kickoff Meeting, the goals outlined in the 2020 Mitigation Plan were reviewed. Participants were instructed to assess these goals and determine which ones should be retained, modified, or removed and replaced. Individual meetings were held from April 26, 2024, to July 24, 2024. During these meetings, jurisdictions developed projects and goals for the next mitigation cycle, guided by the Mitigation Planning Contractor. The deadline for project submission was November 25, 2024. The projects and goals for all jurisdictions are detailed in the Mitigation Strategy section of this plan.

STEP 7: REVIEW POSSIBLE MITIGATION ACTIONS AND ACTIVITIES

Mitigation actions and activities were discussed during the Kickoff Meeting, with further discussions taking place in individual meetings scheduled throughout the planning process. Assistance with planning was provided via phone and email to the Mitigation Planning Committee (MPC). The FEMA Mitigation Ideas document was shared with the MPC to help generate ideas for actions and activities. During the meetings, the Mitigation Planning Contractor guided jurisdictions in considering long-term projects and goals that could benefit each jurisdiction. Due to the wide range of jurisdictions covered by Greene County, the Mitigation Planning Contractor found it more efficient to meet individually with representatives rather than holding multiple large meetings.

STEP 8: DRAFT AND ACTION PLAN

The action worksheets were reviewed and explained during the Kickoff Meeting. Each jurisdiction submitted their completed worksheets, including implementation plans, for the updated Mitigation Strategy. These submissions are detailed in Chapter 4.

STEP 9: ADOPT THE PLAN

When the final plan was complete, the participating jurisdictions presented the plan to their governments for formal adoption. These adoptions are included in Appendix C.

STEP 10: IMPLEMENT, EVALUATE, AND REVISE THE PLAN

The MPC will be responsible for updating the status of their projects and goals annually. Previously, updates were tracked through a live Google document, but this method was found to be unfeasible by the MPC and could not be located during the current update process. Moving forward, the MPC will meet annually to review and discuss progress. This process will be initiated by the OEM planners. Additionally, the Springfield-Greene County Office of Emergency Management will review the Mitigation Plan on a yearly basis and make updates as necessary. For further details, refer to Section 5.

MEETING PARTICIPATION

During the planning process, many meetings were held to discuss different aspects of the plan and mitigation strategies. The meeting participation charts give details on the name, jurisdiction, and title of everyone involved in the planning process. See Appendix E for copies of all timesheets for meetings and participants in attendance.

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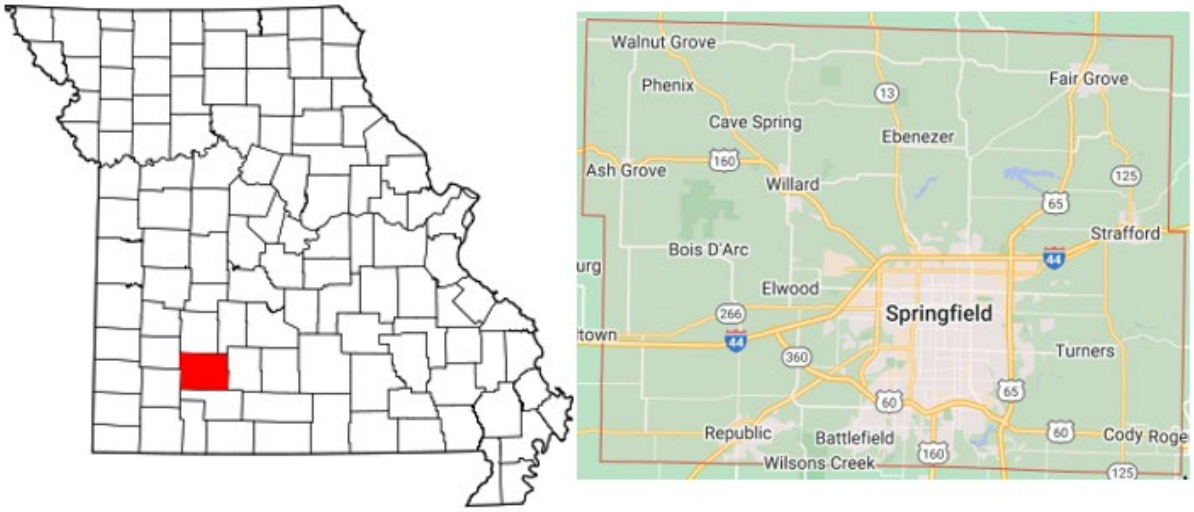
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PLANNING AREA PROFILE AND CAPABILITIES 2

2.1 GREENE COUNTY PLANNING AREA PROFILE

Greene County is in southwest Missouri. The county is bordered on the north by Polk and Dallas Counties, on the south by Christian County, on the west by Lawrence and Dade Counties, and on the east by Webster County. Greene County consists of nine different municipalities including: Ash Grove, Battlefield, Fair Grove, Republic, Rogersville, Springfield, Strafford, Walnut Grove, and Willard. The county is nearly square in shape and consists of approximately 678 square miles.

Figure 2.1 Greene County



Greene County, Missouri continues to be one of the fastest growing counties in the state. The county saw continuous growth over the last decade. Driving this growth is the area's quality of life and its consistent growth in tourism. This growth will affect the lives of Greene County citizens in nearly every facet of their daily operations. Additionally, this growth will result in more people and property being exposed to the hazards that are possible within Greene County.

Table 2.1 Population Growth (2010-2022)

	Population 2010	Population 2020	Population Estimate 2022	Percentage of Change
Greene County	275,174	298,915	303,197	10.18%
Missouri	5,988,927	6,154,913	6,177,168	3.14%
Nation	308,745,538	331,449,281	334,914,895	8.48%

Table 2.2 Median Household Income (USD) 2010-2022

	Median Income 2010	Median Income 2022	Percentage of Change
Greene County	$40,512	$54,968	35.68%
Missouri	$44,300	$65,920	48.80%
Nation	$49,445	$75,149	51.99%

Table 2.3 Median House Value – Owner Occupied (USD) 2010-2022

	Median House Value 2010	Median House Value 2022	Percentage of Change
Greene County	$125,000	$182,800	46.24%
Missouri	$137,700	$199,400	44.81%
Nation	$188,400	$281,900	49.63%

2.1.1 GEOGRAPHY, GEOLOGY, AND TOPOGRAPHY

GEOGRAPHY

Greene County, Missouri, consists of a total of 678 square miles, 675.3 of the 678 square miles is land, the remaining 2.7 square miles is water. Greene County consists of both urban and rural areas. Greene County has a Land Use Plan, and in the plan the county and its municipalities have designated areas for future urban growth. The largest urban center within the county is Springfield, Missouri, with an estimated population of 170,067 citizens. In addition, there are seven other municipalities with over 1,000 citizens. Only two municipalities, Walnut Grove and Ash Grove, have seen a decline in population over the last decade.

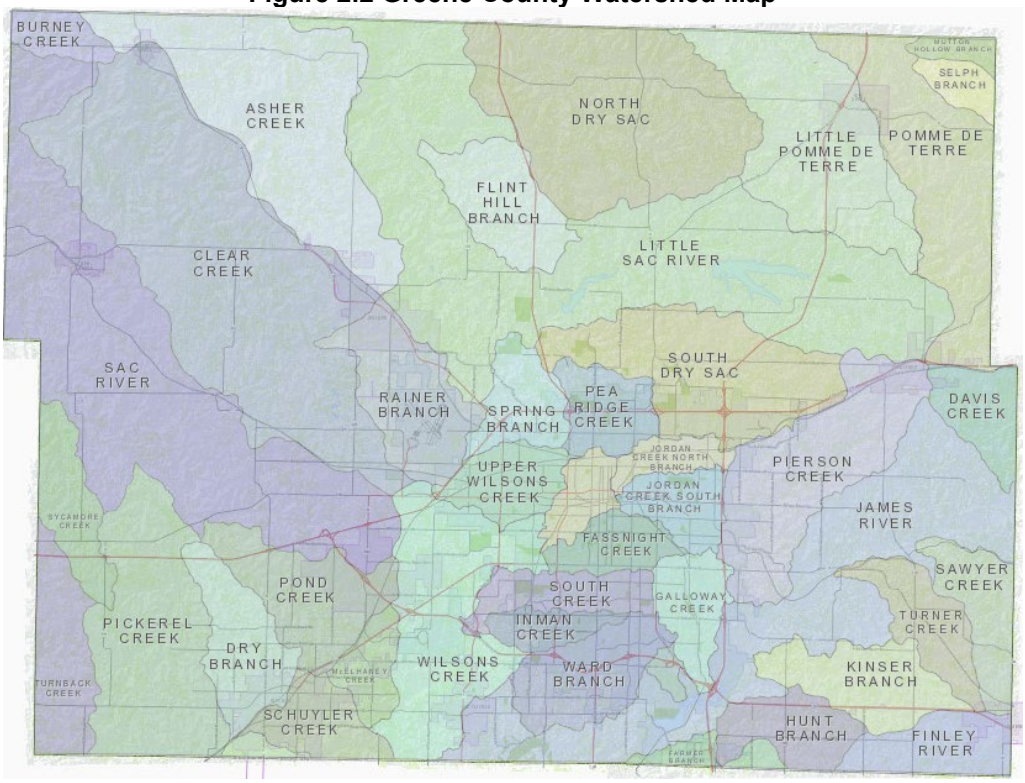
GEOLOGY

Greene County in outline, is nearly square, the east and west measurements being slightly greater than its north to south. It is situated on the Ozark Plateau. Its highest elevation measures 1,518 feet above sea level. The surface features found in Greene County are due almost exclusively to the erosion of streams, modified to some extent by folds or flexures. The rocks found within the county are mostly limestone with layers of chert and impure flint. Additionally, sandstone and shale can be found within the county, all of which vary greatly in hardness, crystalline structure, texture, and chemical composition. These minerals are variously acted upon by forces such as flexures, which produce shattering, and thus render the breaking down of the formations more easily. Furthermore, frost perpetuates this process through the chemical and erosive action of percolating water and the weathering of soft layers within the stones.

Greene County consists of 43 named watersheds, divided into two major watersheds. On the southern half there is the James River Watershed, and the northern section is the Sac River Watershed. The waters on the north flow into the Missouri River and those on the south side of the slope flow into the Mississippi River through the White River. Greene County also consists of several rivers, the largest being the Sac River and the James River. Furthermore, there are three major lakes within the county: Fellows Lake, McDaniel Lake, and Lake Springfield.

Greene County, like much of southern Missouri, has a high concentration of loam and clay within the soil. In 1969, Greene County founded their Soil and Water Conservation District to help mitigate and prevent significant soil erosion and runoff. Most of the planning area in Greene County is at low risk for surface salinization. Too much salt in the surface of the soil can be detrimental to crop growth and agricultural production. Additionally, within Greene County, many areas are at least moderately susceptible to drought. This means there can be soil stress during times with limited precipitation, but during a normal-to-good year there is an adequate amount of moisture in the soil for crop production.

Figure 2.2 Greene County Watershed Map



TOPOGRAPHY

Greene County, Missouri has Karst topographical features. Karst is a term used to describe areas with water soluble bedrock, such as limestone, dolomite, or gypsum, all of which are highly susceptible to weathering from slightly acidic ground water. Karst topographies often have features such as numerous sinkholes, losing streams, springs, caves, and other characteristic landforms. Many of these features allow for water runoff to readily permeate into groundwater through a fault or a sinkhole, then into aquifers before running into rivers and creeks from where drinking water is sourced. Historically, there have been major concerns around hazardous materials and agricultural runoff polluting groundwater sources. Greene County has adopted regulations that deal with many of these environmental concerns, especially those related to the watersheds.

2.1.2 CLIMATE

Greene County, Missouri is situated in the southwestern area of the state. The county experiences a humid climate with hot summers and cooler winters. From 2010 to 2022, temperatures ranged from an average of 86.2 degrees Fahrenheit in the summer, to an average low of 46.7 degrees Fahrenheit in the winter. Over the same length of time, Greene County saw an average of 42.29 inches of rain each year and 12.3 inches of snow.

Table 2.4 Average Temperature Summary for Greene County in Fahrenheit (2010-2022)

Element	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVG
Max F	67	73	80	83	88	95	98	99	94	86	76	67	99
Min F	23.9	26.5	37.2	45.4	55.9	65.8	69.6	67.6	60.5	47.3	35.6	29.4	46
Mean F	33.9	37.3	48.2	56.9	65.9	76	80	77.9	71.4	58.4	46.6	38.9	56.6

Source: https://www.weather.gov/sgf/climate_sgf_monthly_normals

2.1.3 POPULATION/DEMOGRAPHICS

The University of South Carolina developed an index to evaluate and rank the ability to respond to, cope with, recover from, and adapt to disasters. The index synthesizes 29 socioeconomic variables which research literature suggests contribute to reduction in a community's ability to prepare for, respond to, and recover from hazards. SoVI ® data sources include primarily those from the United States Census Bureau. The Missouri State Hazard Mitigation Plan of 2023 includes a table of the social vulnerability of each county to environmental hazards. Greene County is considered to be medium vulnerability to environmental hazards. This score is determined based on various criteria such as wealth, race, dependence and age, special needs populations, and service sector employment. Below are several tables that provide data on these criteria.

Table 2.5 Greene County Population 2010-2020 by Jurisdiction

Jurisdiction	2010 Population	2020 Population	2022 Annual Population Estimate	Number of Change (2010-2022)	Percent of Change (2010-2022)
Ash Grove	1,680	1,512	1,512	-168	-10%
Battlefield	5,044	5,990	6,214	1,170	23.20%
Fair Grove	1,343	1,582	1,582	239	17.80%
Republic	13,772	18,750	19,728	5,956	43.25%
Rogersville	2,935	3,897	3,897	962	32.78%
Springfield	158,945	169,176	170,067	11,122	7%
Strafford	1,879	2,561	2,561	682	36.30%
Unincorporated Greene County	78,915	84,159	90,473	11,558	14.65%

Source: U.S. Bureau of the Census, Decennial Census, Annual population estimates/ 5-Year Survey 2022
*Populations in portions of these cities are in adjacent counties (Rogersville overlaps into Webster County)

Table 2.6 Greene County Population by Age

Age	Population Number	Population Percentage	State of Missouri Percentage	National Percentage
Under the age of 5	16,141	5.40%	5.70%	5.60%
Under the age of 18	62,772.15	20.50%	22.10%	21.70%
Over the age of 65	51,712.30	17.30%	18.00%	17.30%

Source: U.S. Census American Community Survey, 5-year estimates

Table 2.7 Unemployment, Poverty, Education, and Language Percentage Demographics in Greene County, Missouri

Jurisdiction	Total in Labor Force	Percent of Population Unemployed	Percent of Families Below Poverty Level	Percent of Population (High School Graduate)	Percentage of Population (Bachelor's Degree or Higher)	Percent of Population with Spoken Language Other Than English
Greene County	153,862	2.40%	15.30%	28.80%	21.00%	6%
Ash Grove	675	4.20%	10.60%	33.50%	15.70%	0.30%
Battlefield	3,425	2.30%	4.20%	25.10%	27.90%	6.50%
Fair Grove	907	3.70%	5.40%	35.10%	17.80%	1.20%
Republic	9,771	2.70%	13.30%	33.50%	15.70%	3.90%
Rogersville	2,393	2.20%	15.20%	27.60%	21.10%	1.90%
Springfield	87,943	2.50%	20.20%	29.30%	20.50%	7.20%
Strafford	1,198	1.80%	16.30%	36.80%	10.10%	1.70%

2.1.4 HISTORY

MUNICIPALITY HISTORIES

Greene County

Greene County was named after American Revolutionary War General Nathanael Greene who served in the Continental Army. The county is on the Great Ozark Plateau, in the southwestern part of the State of Missouri. Greene County was originally founded in 1833 by an act of the Missouri State Legislature in session. Its eastern boundary was roughly the Gasconade River, and it extended north to the Osage Fork. Greene County now is about 40 miles from the Arkansas line and about sixty miles from the western boundary of Missouri.

Ash Grove

Ash Grove became an official part of Greene County in May 1871 as "The Town of Ash Grove". The first settler in the present Ash Grove was Joesph Kimbrough, who established a town store in 1853 and built the first dwelling. The town grew as a blacksmith shop was established, but development hit a plateau until after the Civil War. Today, Ash Grove is the epitome of small-town living. The rural town is growing and has about 1,512 residents living approximately 17 miles northwest of Springfield, according to the 2022 U.S. Census Bureau Estimate.

Battlefield

Battlefield is named for its proximity to the 1861 Battle of Wilson's Creek, the second major battle of the American Civil War. Wilson's Creek was the first major Civil War battle fought west of the Mississippi River, and the scene of the death of Nathaniel Lyon, the first Union General killed in combat. The City of Battlefield was incorporated as a fourth-class city in 1971 and has experienced rapid residential growth. The approximate population is 6,214 residents located one mile southwest of Springfield and seven miles east of Republic.

Fair Grove

The City of Fair Grove came into existence after a group of Methodist and Presbyterian people gathered at a small house for fellowship and church services. Uncle Willis Spence spoke at the meeting, naming Fair Grove after a Methodist Church that Mr. Spence once belonged to in North Carolina. Fair Grove takes great pride in its historical Wommack Mill which was constructed in 1883 and is in full operation today. The Fair Grove Heritage Reunion Festival takes place in September and draws nearly 80,000 people to the Wommack Mill every year. Fair Grove is in the northwest portion of the county, approximately eighteen miles north of Springfield and has a population of approximately 1,582 residents, according to the 2022 U.S. Census Bureau estimate.

Republic

The City of Republic residents trace the origins of their community back to the early 1840s when settlers first populated the area moving from the southeastern United States, due to events of the Civil War. The city is near the site of the Battle of Wilson's Creek. Residents of the Republic area were affected by the war efforts, many of the first families fled the area while others stayed and fought in the war. The early growth of the town, leading to eventual incorporation, was stimulated by the construction of a railroad spur in 1872 for the St. Louis and San Fransico Railroad (now the Burlington Northern Santa Fe [BNSF]). The City of Republic was officially incorporated in 1871, and the first plat of the community was filed on January 8th, 1879, by William O'Neal. The City of Republic is in the southwestern portion of Greene County, approximately 13 miles from Springfield. Since 1950, Republic's population has been rapidly growing, with over 19,728 residents, according to the U.S. Census Bureau Estimate Data.

Springfield

Springfield is the county seat of Greene County and the third largest city in Missouri. Springfield was settled in 1829 by John Polk Campbell and named for its proximity to natural springs. Springfield was incorporated as a town in 1838 and then a city in 1847. Springfield gained national attention in 1858 when the city became a stop on the Butterfield Overland Mall, a stagecoach line from Tipton, Missouri to San Francisco, California. The Springfield area was bitterly divided between Northern and Southern sympathies during the Civil War. The Battle of Wilson's Creek took place 12 miles from Springfield in August of 1861. In 1870, the first train of the Atlantic-Pacific railway arrived in Springfield. Over the years, it added much to the economic growth of the entire area. Springfield is now known as the "Queen City" of the Ozarks. Springfield occupies a total land area of approximately 73 miles in Greene County and has approximately 170,067 residents, according to the U.S. 2022 Census Bureau estimates.

Strafford

The native inhabitants of Strafford were the Osage Native Americans, which used the area mainly as a hunting ground. The area was part of Louisiana, which in the 1600s and 1700s was alternatively controlled by Spain and France. The United States purchased Louisiana from France in 1803, which set the stage for settlement in Strafford. The first explorer to record travels in Strafford was Henry Schoolcraft. He explored the area around 1818-1819. Missouri became a state in 1821; as a result, the United States began a systematic survey of southwest Missouri. Delaware Tribes moved into the area in 1822, along with the first European settler, Mr. Davis, who established a settlement about five miles southeast of present-day Strafford, near Davis Creek and the James River. Strafford is in the eastern portion of Greene County, approximately 10 miles northeast of Springfield and has approximately 2,561 residents, according to the 2022 U.S. Census Bureau estimates.

FIRE DISTRICT HISTORIES

Battlefield Fire Protection District

The Battlefield Fire Protection District was established in the early 1950s, covering an area from South Farm Road 115 on the west side to Old Highway 65, between the City of Springfield limits and the Greene County line. In 1946, the department became a dues-supported organization. In 1985, the Battlefield Fire Protection District was formed and became a tax-supported entity, operating out of one station in the City of Battlefield. Station 2 was built in 1986, followed by Station 3 in 1991. In 1995, the fire district hired their first full-time employee, a fire chief. In 2002, the district hired its first full-time firefighters. The district covers approximately 32 square miles and responds to about 2,800 calls for service a year.

Brookline Fire Protection District

The Brookline Fire Protection District has historically been a volunteer fire service in Greene County, including the area around the City of Republic and the west side of the City of Springfield. In 2021, however, the Fire District Board hired a fire chief and two full-time firefighters. Brookline Fire Protection District still relies heavily on volunteer firefighters to serve the community. They also regularly engage with their surrounding community to provide information about their services and the actions they are taking to better serve the Greene County area.

Willard Fire Protection District

The Willard Fire Protection District is a combination fire district with both paid and volunteer firefighters. The district was formed in 1954 as a community volunteer fire department. After a tax levy had been passed in 1988, the Willard Community Fire Department became the Willard Fire Protection District. The district has 10 paid personnel and approximately 25 volunteers. The district covers about 72 square miles and responds to about 1,400 calls for service each year.

PUBLIC SCHOOL DISTRICT HISTORIES

Ash Grove School District

The Ash Grove Public School District was the fourth school district to be organized in Greene County. The district consists of about 119 square miles, including 16 square miles in Dade County, 19 square miles in Lawrence County, and 84 square miles in Greene County. The district has three schools, including an elementary school, located in Bois D'Arc. For the 2023-2024 school year, Ash Grove had 745 students enrolled and an average student-to-teacher ratio of 12:1 across the district.

Logan-Rogersville School District

The first school in the Logan-Rogersville District was constructed in 1956 and the district was consolidated in 1965. The district is approximately 123 square miles and has five school buildings. 38 percent of students are located inside Greene County, 48 percent is within Webster County and the remaining 14 percent reside in Christian County. For the 2023-2024 school year, the Logan-Rogersville school district had 2,471 enrolled students, with an average student-to-teacher ratio of 15:1 across the district.

Springfield School District

Springfield Public School District is the largest fully accredited school district in Missouri. Springfield Public Schools have a reputation of academic excellence based on the outstanding performance of the students. The school district has 35 elementary schools, nine middle schools, and five high schools. The Springfield School District also has many alternative schools and programs, gifted programs, and special education programs. In November of 2009, voters approved a no-tax-increase bond issue that leveraged federal stimulus money to fund air conditioning, constructions, and improvements to technology. Without increasing the current tax rate, Springfield residents invested $50 million in schools to create quality learning

environments for all students. In April of 2013, Springfield voters approved a $71.65 million bond issue to fund technology upgrades, including a new elementary school and renovations to other schools in the district. In the 2023-2024 school year, Springfield Public Schools had 24,267 students enrolled, with an average student-to-teacher ratio of 13.5:1 across the district.

UNIVERSITY HISTORIES

Ozarks Technical Community College

Educational opportunities in the Ozarks took an important step forward on April 3, 1990, when residents of Springfield and 13 surrounding public school districts voted to establish a community college. Ozarks Technical Community College (OTC) provided an open admission, two-year college with a focus on technical education. In 1991, the college opened its doors at Cox Medical Center North and in Lincoln and Graff Hall. In 1996, OTC, on its first attempt, received accreditation from the Higher Learning Commission of the North Central Association of College and Schools. The Technical Education Center opened in the summer of 1997, Information Commons the summer of 1998, Information Commons East the summer of 1999, and the Industry and Transportation Technology Center in 2000. In August of 2005, ground was broken for the first classroom building on what is now the Richwood Valley Campus. The first classes were held at this campus in the spring of 2007. The Springfield campus spans 40 acres at the corner of Chestnut Expressway and National Avenue. The college serves almost 13,000 students across the Ozarks.

2.1.5 OCCUPATIONS

Table 2.8 Occupation Statistics in Greene County

Place	Management, Business Science, and Arts Occupations	Service Occupations	Sales and Office Occupations	Natural Resources, Construction, and Maintenance Occupations	Production, Transportation, and Material Moving Occupations
Greene County	39.7%	14.3%	23.4%	7.3%	15.4%
Ash Grove	31.6%	16.7%	28.3%	4.0%	19.3%
Battlefield	48.4%	9.1%	29.4%	2.6%	10.5%
Fair Grove	39.6%	9.2%	20.0%	13.0%	18.3%
Republic	39.1%	17.9%	21.6%	4.9%	16.5%
Springfield	35.2%	16.8%	25.9%	6.8%	15.3%
Strafford	33.2%	14.7%	21.4%	9.8%	21.0%

Source: US Census, 2022 American Community Survey, 5-Year Estimates

Table 2.9 Top Employers in Greene County

Rank	Company Name	Industry	Number of Employees
1	CoxHealth	Healthcare	12,178
2	Mercy Hospital Springfield	Healthcare	9,214
3	State of Missouri	Government	5,411
4	Walmart, Inc.	Retail	4,981
5	Springfield Public Schools	Education	3,685
6	Bass Pro Shops	Retail	2,989
7	O'Reilly Auto Parts	Retail/Manufacturing	2,631
8	United States Government	Government	2,425
9	Jack Henry & Associates, Inc.	Software Development	2,262
10	Citizens Memorial Healthcare	Healthcare	2,038
11	Burrell Behavioral Health	Healthcare	1,872
12	Missouri State University	Education	1,861
13	City Of Springfield	Government	1,857
14	SRC Holdings Corporation (HQ)	Manufacturing	1,750
15	EFCO (HQ)	Manufacturing	1,600
16	Prime Inc. (HQ)	Transportation	1,425
17	Amazon	Retail/Transportation	1,400
18	RPS (Pyramid Foods)	Retail	1,300
19	Ozarks Technical Community College	Education	1,125
20	Greene County	Government	1,113
21	Chase Card Services	Financial	1,100
22	Expedia Inc.	Telecommunications	1,100
23	Great Southern Bank (HQ)	Financial	1,100
24	American National Property & Casualty Co.	Insurance	1,034
25	Kraft Heinz Company	Manufacturing	997
26	Lowe's	Retail	969
27	City Utilities of Springfield	Utility	932
28	Ozark R-VI School District	Education	914
29	T-Mobile USA	Communications	865
30	Nixa R-II School District	Education	826

2.1.6 AGRICULTURE

Greene County has seen an overall decrease in both the number and size of farms since 2017. All the surrounding counties, except Dade, have seen a decrease in the number of farms. However, Greene County continues to have the most farms but has considerably smaller farms on average than most of the surrounding counties. Twenty-one percent of sales come from crop production, while the remaining 79 percent comes from livestock, poultry, and other animal products. The market value of goods sold by farms in Greene County increased by a mean of 26 percent, with the average reaching $43,755,000. There are 2,917 agricultural producers in Greene County, with the majority being between the ages 35 - 64. Below is the amount of land used for farms, as well as the number of farms in Greene County and surrounding counties.

Greene County Farms

General Overview of Farms	2022	% of Change Since 2017
Number Of Farms	1,668	-10%
Land in Farms (acres)	197,605	-11%
Average Size of Farms (acres)	118	-1%

Polk County Farms

General Overview of Farms	2022	% of Change Since 2017
Number Of Farms	1,380	-12%
Land in Farms (acres)	340,780	-5%
Average Size of Farms (acres)	247	7%

Webster County Farms

General Overview of Farms	2022	% of Change Since 2017
Number Of Farms	1,609	-12%
Land in Farms (acres)	266,345	0%
Average Size of Farms (acres)	166	15%

Christian County Farms

General Overview of Farms	2022	% of Change Since 2017
Number Of Farms	1,137	-3%
Land in Farms (acres)	174,620	13%
Average Size of Farms (acres)	154	17%

Lawrence County Farms

General Overview of Farms	2022	% of Change Since 2017
Number Of Farms	1,599	-6%
Land in Farms (acres)	312,640	3%
Average Size of Farms (acres)	196	10%

Dade County Farms

General Overview of Farms	2022	% of Change Since 2017
Number Of Farms	703	1%
Land in Farms (acres)	313,523	18%
Average Size of Farms (acres)	446	17%

2.1.7 FEMA HAZARD MITIGATION ASSISTANCE GRANTS IN PLANNING AREA

FEMA's Hazard Mitigation Assistance (HMA) programs provide funding for eligible mitigation activities that protect life and property from future disaster damage to build a more resilient nation. They release regular Program and Policy Guides so that participants and stakeholders can see their needs reflected. The goal of this program is to fund long term solutions that reduce the impact of future disasters.

Table 2.10 FEMA HMA Grants in Greene County 1993-2024

Disaster Declaration	Project Type	Project Title	Sub-Grantee	Date Approved	Project Total
n/a	200.1 Acquisition of Private Real Property - Riverine	Greene County Property Acquisition	Greene County	n/a	$175,000
DR-1328	200.1 Acquisition of Private Real Property - Riverine	Greene County Residential Buyout	Greene County	12/19/2000	$302,874
DR-1253	200.1 Acquisition of Private Real Property - Riverine	Greene County Shadowood Subdivision Floodplain Buyout	Greene County	12/19/2000	$233,031
DR-1256	200.1 Acquisition of Private Real Property - Riverine	Greene County Acquisition	Greene County	12/19/2000	$38,224
DR-1412	200.1 Acquisition of Private Real Property - Riverine	Greene County Property Acquisition and Demolition	Greene County	5/3/2007	$298,794
DR-1635	601.1 Generators	Missouri State University JQH Arena Initiative Generator Project	Missouri State University	5/3/2010	$257,437

DR-1631	403.1 Stormwater Management Culverts	Kansas Expressway Culvert Project	City of Springfield	3/13/2012	$402,001
DR-1822	206.2 Safe Room Public Structures	Republic R-III Community Safe Room	Republic School District	8/17/2012	$1,561,770
DR-1676	206.2 Safe Room Public Structures	Greene County/Drury University Safe Room	Greene County Emergency Management	6/12/2013	$300,000
DR-1822	206.2 Safe Room Public Structures	Springfield R-XII Community Safe Room at Hillcrest High School	Springfield School District	4/3/2014	$1,666,665
DR-1822	206.2 Safe Room Public Structures	Springfield R-XII Community Safe Room at Jeffries Elementary	Springfield School District	4/3/2014	$1,673,325
DR-1822	206.2 Safe Room Public Structures	City of Fair Grove Community Safe Room	City of Fair Grove	6/19/2014	$1,981,445
DR-1760	200.1 Acquisition of Private Real Property - Riverine	City of Springfield Voluntary Acquisition of Floodprone Structures Upper Wilson	City of Springfield	6/26/2014	$255,957
DR-1708	91.1 Local Multi-Hazard Mitigation Plan	Greene County Hazard Mitigation Plan Update	Greene County Emergency Management	12/23/2014	$47,217
DR-1980	206.2 Safe Room Public Structures	Springfield R-XII Kickapoo High School Safe Room	Springfield School District	8/17/2015	$5,087,448
DR-1980	206.2 Safe Room Public Structures	Logan-Rogersville R-VII High School Safe Room	Logan-Rogersville School District	6/28/2016	$1,969,872
DR-4238	206.2 Safe Room Public Structures	Logan-Rogersville R-VII School District Community Safe Room at Upper Elementary	Logan-Rogersville School District	9/26/2016	$1,845,000
DR-1980	206.2 Safe Room Public Structures	Logan-Rogersville Jr. High School Safe Room	Logan-Rogersville School District	3/13/2017	$1,007,726
DR- 1980	206.2 Safe Room Public Structures	Missouri State University Safe Room	Missouri State University	5/2/2017	$1,575,000

DR-4250	600.1 Warning Systems	City of Walnut Grove Siren Project	City of Walnut Grove	8/1/2017	$21,915
DR- 4451	206.2 Safe Room Public Structure	City of Strafford Public Shelter	City of Strafford	7/9/2019	$1,223,530
DR-4451	206.2 Safe Room Public Structure	City of Walnut Grove FEMA Shelter	City of Walnut Grove	7/9/2019	$1,801,801
				Total	$25,399,357

2.1.8 FEMA PUBLIC ASSISTANCE (PA) GRANTS IN PLANNING AREA

FEMA's Public Assistance Program provides supplemental grants to state, tribal, territorial, and local governments, and certain types of private non-profits so communities can quickly respond to and recover from major disasters or emergencies. FEMA also encourages protecting these damaged facilities from future events by providing assistance for hazard mitigation measures during the recovery process.

FEMA PA Grants in Greene County from 1993-2024

Disaster Declaration	Project Type	Project Size	Applicant	Project Total
DR-1463	Debris Removal	Small	City of Battlefield	$13,200.00
DR-1463	Debris Removal	Small	City of Battlefield	$29,897.74
DR-1463	Roads and Bridges	Small	City of Battlefield	$11,350.79
DR-1463	Protective Measures	Small	City of Battlefield	$19,348.24
DR-1463	Debris Removal	Small	Greene County	$15,568.45
DR-1463	Protective Measures	Small	City of Battlefield	$31,063.58
DR-1463	Protective Measures	Small	Greene County	$48,804.37
DR-1463	Public Buildings	Small	Public Water District #1	$3,000.00
DR-1463	Public Utilities	Small	City of Springfield	$42,869.18

DR-1463	Debris Removal	Small	City of Battlefield	$27,477.85
DR-1463	Public Utilities	Large	City of Springfield	$213,011.80
DR-1463	Public Buildings	Small	City of Battlefield	$35,847.03
DR-1463	Debris Removal	Small	City of Battlefield	$3,266.99
DR-1631	Public Utilities	Large	City of Springfield	$737,884.16
DR-1631	Recreational or Other	Small	City of Springfield	$24,835.35
DR-1631	Public Buildings	Small	City of Springfield	$6,991.21
DR-1673	Protective Measures	Small	City of Battlefield	$1,386.29
DR-1673	Debris Removal	Small	City of Republic	$5,671.70
DR-1673	Public Utilities	Large	City Utilities of Springfield	$481,755.69
DR-1673	Protective Measures	Small	City of Willard	$5,304.35
DR-1673	Protective Measures	Small	City of Republic	$5,616.54
DR-1673	Protective Measures	Small	City Utilities of Springfield	$5,694.00
DR-1673	Protective Measures	Small	City of Strafford	$4,584.18
DR-1673	Protective Measures	Small	City of Fair Grove	$3,513.58
DR-1673	Public Buildings	Small	City of Republic	$2,500.00
DR-1673	Protective Measures	Large	Greene County	$171,964.70

DR-1673	Protective Measures	Large	City of Springfield	$171,948.76
DR-1673	Protective Measures	Small	St. John's Hospital	$23,879.60
DR-1676	Protective Measures	Small	Greene County	$38,638.85
DR-1676	Public Buildings	Small	Logan-Rogersville School District	$1,000.00
DR-1676	Debris Removal	Large	City of Springfield	$9,923,148.14
DR-1676	Protective Measures	Small	City of Ash Grove	$1,922.67
DR-1676	Protective Measures	Large	Greene County	$153,533.40
DR-1676	Debris Removal	Large	Greene County	$2,280,826.77
DR-1676	Protective Measures	Small	City of Battlefield	$42,900.42
DR-1676	Protective Measures	Small	City of Ash Grove	$7,642.84
DR-1676	Debris Removal	Small	City of Willard	$15,884.00
DR-1676	Debris Removal	Small	City of Ash Grove	$2669.56
DR-1676	Debris Removal	Large	Greene County	$6,234,691.03
DR-1676	Protective Measures	Small	City of Ash Grove	$2,494.30
DR-1676	Debris Removal	Small	St. John's Hospital	$9,900.00
DR-1676	Debris Removal	Large	City of Republic	$539,403.60
DR-1676	Protective Measures	Large	City of Springfield	$1,257,808.98

DR-1676	Protective Measures	Small	City of Ash Grove	$4,979.57
DR-1676	Protective Measures	Small	Willard Fire District	$7,917.84
DR-1676	Protective Measures	Small	Ebenezer Fire District	$6,188.99
DR-1676	Debris Removal	Small	St. John's Hospital	$5,241.02
DR-1676	Protective Measures	Small	Strafford Fire District	$4,002.17
DR-1676	Protective Measures	Small	City of Walnut Grove	$5,943.68
DR-1676	Protective Measures	Small	Fair Haven Children's Home	$6,948.00
DR-1676	Protective Measures	Small	City of Fair Grove	$12,285.88
DR-1676	Debris Removal	Small	Fair Haven Children's Home	$4,512.60
DR-1676	Public Utilities	Small	Fair Haven Children's Home	$1,172.91
DR-1676	Protective Measures	Small	Fair Haven Children's Home	$339.60
DR-1676	Protective Measures	Small	St. John's Hospital	$27,703.28
DR-1676	Protective Measures	Small	Greene County	$8,080.28
DR-1676	Protective Measures	Small	City of Walnut Grove	$2,313.60
DR-1676	Debris Removal	Large	City of Springfield	$4,044,625.60
DR-1676	Debris Removal	Small	Springfield School District	$22,375.23
DR-1676	Debris Removal	Large	Springfield School District	$223,354.00

DR-1676	Public Buildings	Small	Springfield School District	$19,959.00
DR-1676	Debris Removal	Small	City of Willard	$21,031.22
DR-1676	Public Buildings	Small	Springfield School District	$45,875.90
DR-1676	Protective Measures	Small	Springfield School District	$25,719.80
DR-1676	Debris Removal	Small	City of Walnut Grove	$12,146.59
DR-1676	Debris Removal	Small	Burrell Behavioral Health	$11,688.30
DR-1676	Protective Measures	Small	City of Strafford	$11,085.68
DR-1676	Protective Measures	Small	Burrell Behavioral Health	$2,949.37
DR-1676	Protective Measures	Small	City of Willard	$4,547.86
DR-1676	Public Utilities	Large	City Utilities of Springfield	$28,943,379.51
DR-1676	Debris Removal	Small	City Utilities of Springfield	$19,235.64
DR-1676	Debris Removal	Small	City of Ash Grove	$50,209.75
DR-1676	Protective Measures	Large	City Utilities of Springfield	$490,391.65
DR-1676	Protective Measures	Small	City of Willard	$13,821.01
DR-1676	Protective Measures	Small	Fair Grove Fire District	$4,577.50
DR-1676	Debris Removal	Small	City of Strafford	$55,068.47
DR-1676	Protective Measures	Small	Fair Grove Fire District	$1,525.83

DR-1676	Protective Measures	Small	City of Springfield	$12,318.24
DR-1676	Protective Measures	Small	City of Walnut Grove	$5,108.15
DR-1676	Protective Measures	Small	Ash Grove Fire District	$9,437.95
DR-1676	Protective Measures	Large	Greene County	$247,488.50
DR-1676	Protective Measures	Large	Logan-Rogersville Fire District	$61,958.00
DR-1676	Protective Measures	Small	Logan-Rogersville Fire District	$25,500.30
DR-1676	Protective Measures	Small	City of Springfield	$24,384.27
DR-1676	Debris Removal	Large	City of Springfield	$2,892,968.17
DR-1676	Protective Measures	Small	Willard Fire District	$5,876.60
DR-1676	Protective Measures	Small	City of Ash Grove	$8,379.27
DR-1676	Protective Measures	Small	Greene County	$9,905.00
DR-1676	Protective Measures	Small	City of Springfield	$3,323.69
DR-1676	Protective Measures	Small	Logan-Rogersville Fire District	$1,816.12
DR-1676	Protective Measures	Small	Willard Fire District	$11,542.73
DR-1676	Protective Measures	Small	City of Springfield	$4,900.84
DR-1676	Public Buildings	Small	City of Springfield	$2,975.90
DR-1676	Protective Measures	Small	City of Republic	$2,2336.25

DR-1676	Protective Measures	Small	Ebenezer Fire District	$4,590.36
DR-1676	Protective Measures	Small	Ash Grove Fire District	$2,913.49
DR-1676	Protective Measures	Small	Strafford Fire District	$1,334.06
DR-1676	Debris Removal	Small	City of Fair Grove	$11,738.04
DR-1676	Protective Measures	Large	City of Springfield	$139,007.77
DR-1676	Public Buildings	Small	City of Springfield	$0
DR-1676	Protective Measures	Large	City of Springfield	$78,744.04
DR-1676	Protective Measures	Large	City of Republic	$107,432.09
DR-1676	Protective Measures	Small	Ebenezer Fire District	$11,515.30
DR-1676	Protective Measures	Small	City of Republic	$5,842.32
DR-1676	Protective Measures	Large	Cox Medical Center	$91,216.50
DR-1676	Debris Removal	Small	Greene County	$3,410.00
DR-1676	Protective Measures	Large	City of Springfield	$185,156.52
DR-1676	Protective Measures	Large	City of Springfield	$70,233.57
DR-1676	Protective Measures	Small	City of Springfield	$4,287.23
DR-1676	Protective Measures	Small	City of Springfield	$26,063.59
DR-1676	Protective Measures	Small	City of Republic	$37,189.88

DR-1676	Debris Removal	Large	Cox Medical Center	$72,437.00
DR-1676	Protective Measures	Small	City of Springfield	$54,967.01
DR-1676	Debris Removal	Large	Greene County	$161,463.84
DR-1676	Roads and Bridges	Large	Greene County	$522,566.18
DR-1676	Protective Measures	Large	City of Springfield	$276,989.01
DR-1676	Debris Removal	Small	City of Springfield	$15,345.60
DR-1676	Public Buildings	Large	Greene County	$18,675.05
DR-1676	Debris Removal	Large	City of Springfield	$406,955.84
DR-1676	Debris Removal	Large	Greene County	$181,183.39
DR-1676	Public Buildings	Small	City of Springfield	$50,000.00
DR-1676	Debris Removal	Small	Greene County	$4,380.00
DR-1676	Debris Removal	Large	Greene County	$207,002.84
DR-1728	Roads and Bridges	Small	Greene County	$1,440.00
DR-1728	Roads and Bridges	Small	Greene County	$2,636.59
DR-1728	Roads and Bridges	Small	Greene County	$37,119.68
DR-1728	Roads and Bridges	Small	Greene County	$1,599.23
DR-1728	Roads and Bridges	Small	Greene County	$14,482.94

DR-1728	Roads and Bridges	Small	Greene County	$1,390.02
DR-1728	Roads and Bridges	Small	Greene County	$1,998.91
DR-1728	Roads and Bridges	Small	Greene County	$9,643.51
DR-1728	Roads and Bridges	Large	Greene County	$13,612.34
DR-1728	Roads and Bridges	Small	Greene County	$29,741.75
DR-1728	Roads and Bridges	Large	Greene County	$42,675.68
DR-1728	Roads and Bridges	Small	Greene County	$59,427.80
DR-1728	Roads and Bridges	Small	Greene County	$6,853.20
DR-1728	Roads and Bridges	Large	Greene County	$54,356.73
DR-1728	Debris Removal	Small	Greene County	$14,102.57
DR-1728	Roads and Bridges	Large	Greene County	$216,636.24
DR-1728	Roads and Bridges	Large	Greene County	$24,878.80
DR-1748	Protective Measures	Large	Greene County	$92,909.48
DR-1748	Debris Removal	Small	City of Springfield	$25,950.00
DR-1748	Debris Removal	Small	City of Springfield	$17,851.04
DR-1748	Debris Removal	Small	City of Springfield	$34,480.00
DR-1748	Debris Removal	Large	City of Springfield	$205,905.55

DR-1748	Public Utilities	Large	City Utilities of Springfield	$2,467,809.67
DR-1748	Protective Measures	Small	City Utilities of Springfield	$31,331.44
DR-1748	Debris Removal	Small	City of Springfield	$54,871.10
DR-1748	Debris Removal	Small	City of Springfield	$4,019.17
DR-1748	Public Buildings	Small	City Utilities of Springfield	$24,897.00
DR-1748	Protective Measures	Large	City of Springfield	$70,441.56
DR-1748	Debris Removal	Large	City of Springfield	$160,070.74
DR-1748	Debris Removal	Large	Greene County	$157,673.00
DR-1748	Protective Measures	Small	City of Springfield	$1,082.00
DR-1748	Protective Measures	Large	City Utilities of Springfield	$970,464.52
DR-1847	Protective Measures	Small	Springfield School District	$5,897.00
DR-1847	Public Buildings	Small	Springfield School District	$4,103.00
DR-1847	Debris Removal	Small	City of Fair Grove	$24,340.53
DR-1847	Protective Measures	Small	City of Fair Grove	$3,900.58
DR-1847	Protective Measures	Small	Fair Grove School District	$1,000.00
DR-1847	Debris Removal	Small	Fair Grove School District	$13,440.00
DR-1847	Public Buildings	Small	City Utilities of Springfield	$1,982.76

DR-1847	Recreational or Other	Small	City Utilities of Springfield	$2,313.11
DR-1847	Recreational or Other	Small	City of Springfield	$6,342.09
DR-1847	Roads and Bridges	Small	City of Springfield	$1,606.52
DR-1847	Protective Measures	Small	City Utilities of Springfield	$2,366.83
DR-1847	Roads and Bridges	Small	City of Fair Grove	$5,562.99
DR-1847	Debris Removal	Small	City of Springfield	$2,307.61
DR-1847	Protective Measures	Small	City Utilities of Springfield	$17,340.95
DR-1847	Protective Measures	Small	Greene County	$18,274.61
DR-1847	Debris Removal	Large	Greene County	$116,821.06
DR-1847	Recreational or Other	Small	City Utilities of Springfield	$25,916.47
DR-1847	Public Utilities	Small	City Utilities of Springfield	$10,814.89
DR-1847	Public Utilities	Large	City Utilities of Springfield	$886,132.11
DR-1847	Protective Measures	Large	City Utilities of Springfield	$96,102.53
DR-1847	Protective Measures	Small	City Utilities of Springfield	$12,944.16
DR-1847	Public Utilities	Small	City Utilities of Springfield	$6,145.90
DR-1980	Protective Measures	Small	Diocese of Springfield-Cape Girardeau	$2,500.00
DR-1980	Protective Measures	Small	Diocese of Springfield-Cape Girardeau	$8,241.84

DR-1980	Public Buildings	Large	Diocese of Springfield-Cape Girardeau	$644,313.00
DR-1980	Protective Measures	Large	Diocese of Springfield-Cape Girardeau	$234,351.65
DR-4250	Roads and Bridges	Small	City of Springfield	$10,707.50
DR-4250	Roads and Bridges	Small	Greene County Highway Department	$7,132.09
DR-4250	Protective Measures	Small	Greene County Highway Department	$5,593.29
DR-4250	Roads and Bridges	Small	Greene County Highway Department	$8,9118.14
DR-4250	Public Utilities	Large	City of Springfield	$149,006.56
DR-4250	Debris Removal	Small	Greene County Highway Department	$43,916.07
DR-4250	Protective Measures	Small	City of Springfield	$27,754.87
DR-4250	Debris Removal	Small	City of Springfield	$3,240.63
DR-4250	Recreational Facilities	Small	City of Springfield	$3,547.15
DR-4250	Public Utilities	Small	City of Springfield	$10,026.15
DR-4250	Public Buildings	Small	City of Springfield	$80,371.98
DR-4250	Public Buildings	Small	City of Springfield	$106,674.41
DR-4317	Other Equipment Purchase	Small	Greene County	N/A
DR-4551	Public Buildings	Large	City of Strafford	$1,738,660
DR-4551	Public Buildings	Large	City of Walnut Grove	$2,365,847.21

2.2 JURISDICTIONAL PROFILES AND MITIGATION CAPABILITIES

COMMUNITY PROFILES

The following section will present individual profiles for each participating jurisdiction, along with a discussion of previous mitigation initiatives and ongoing mitigation capabilities in the planning area. Information for these profiles was gathered through data collection questionnaires and individual meetings with the participating jurisdictions. Additionally, the Mitigation Planner used information from the previous mitigation plan and online resources to complete the individual profiles. Greene County will be profiled first, followed by the incorporated communities, fire districts, and public school districts.

2.2.1 GREENE COUNTY

FORM OF GOVERNMENT

Greene County encompasses all unincorporated areas within its boundaries and operates under a non-charter form of government, meaning it is governed directly by state law. The Greene County Commission serves as the executive body, following guidelines set forth in the Revised Statues of the State of Missouri. Under that authority, the Commission enacts ordinances, resolutions, and policies; supervises county departments; sets salaries; adopts the annual budget; provides construction and other services; and conducts hearings on planning and zoning matters. Greene County has the following offices:

- Archives
- Assessor
- Auditor
- Budget Office
- Circuit Clerk/Court
- Collector
- County Clerk
- County Commission
- Health Department
- Highway Department
- Human Resources
- Juvenile Justice Center
- Medical Examiner
- Office of Emergency Management
- Pretrial Services
- Prosecuting Attorney
- Public Administrator
- Purchasing Department
- Recorder
- Resource Management
- Sheriff
- Treasurer

MITIGATION INITIATIVES AND CAPABILITIES

County Authorities and Responsibilities

The government has a responsibility to its people, and the creation of emergency plans is one way in which the government may use its authority to meet its responsibilities. The following is a general outline of some of those authorities and their responsibilities.

Authorities

- Order an evacuation, redirect funding for emergency use, order a curfew, and commandeer facilities and/or equipment and materials.
- Implement authorized lines of succession for the chief elected officials with power to initiate necessary emergency activities.
- Implement plans for analysis of possible impacts of potential disasters.
- Implement multi-hazard emergency planning.
- Complete mutual aid agreements with neighboring jurisdictions.

Responsibilities

- To protect the safety and security of citizens.
- To safeguard records, as is vital to the transparency of government.

Mitigation Management Policies

The Springfield-Greene County Office of Emergency Management is charged with planning and preparing for disaster. This duty includes advising the Greene County Commission and the Springfield City Manager on mitigation measures, and in some cases, coordinating those measures deemed appropriate by the above. In general, county and city policies encourage cooperation between agencies. Many departments such as County Resource Management, Highway Department, Sheriff's Office; City: Public Works, Police, Fire, ECC, Health Department, Parks, Airport, City Utilities, Building Development Services, and Planning identify, assess, and develop mitigation projects.

Public Safety Center (PSC)

The Public Safety Center (PSC) is 56,000 square feet, two stories with a basement, FEMA 361 complaint, and selectively seismically located. The PSC houses the Office of Emergency Management, the Emergency Operations Center, the Regional Multi-Agency Coordination Center, the 9-1-1 Emergency Communication Center, and Greene County Information Systems (IS).



Emergency Operations Center (EOC)

Activated during large-scale events, the EOC is a central location for senior officials from city, county, state, and federal agencies to coordinate response efforts, make decisions, and disseminate information. With more than 70 workstations to support operations for dozens of agencies, the EOC also serves as a clearing house for sharing information during emergencies. During large-scale emergencies, the Joint Information Center (JIC), located within the EOC, gathers information from EOC personnel to disseminate information to the public.

- **EOC Organization:** Arranged according to NIMS/ICS standards into Management, Operations, Planning, Logistics, and Finance/Administrative sections.
- **ICS-ESF Layout:** Arranged according to ICS Branch and ESF Function.
- **Communications:** The EOC has a local and wide-area information technology network, county-wide TRS 800 Mhz. radio system, analog, digital and satellite telephone systems, fully integrated audio-video display systems, video conferencing facilities, connection to external video systems,

redundant weather radar systems, Missouri's Emergency Medical Services System, Missouri WebEOC, and local and regional GIS capabilities.

- **Survivability**: The PSC is set back from the street and surrounded by perimeter fencing. It features wind and blast-resistant exterior and interior surfaces, video surveillance, and 24-hour on-site occupancy. Additional survivability measures include emergency backup generators, a centralized uninterrupted power source (UPS), reserve water and fire water storage, redundant heating/ventilation/air conditioning, and reserve waste storage tanks.
- **EOC Dimensions and Features:** The EOC measures 22,000 square feet, including the Operations Floor, EOC Conference Room, Policy Room, Control and Information Center, Situation Room, GIS Office, Joint Information Center, General Staff Rooms, Cafeteria, Dormitories, Laundry Room, Infirmary, and Media Center.
- **Technology:** The entire building utilizes a digital backbone. To facilitate the operation of all functional displays throughout the facility, a matrix system allows for fast and efficient audio/visual use from anywhere in the facility. With limited staffing, wireless technology acts as a force multiplier allowing for remote control of audio/visual, lights, and sound.

Emergency Operations Plan (EOP)

This document covers unincorporated areas of Greene County and the City of Springfield. The plan is approved by both the Greene County Commission and the Springfield City Council. The EOP is an all-hazards document divided into a Basic Plan and 20 Emergency Support Functions (ESFs).

Mitigation Project Considerations

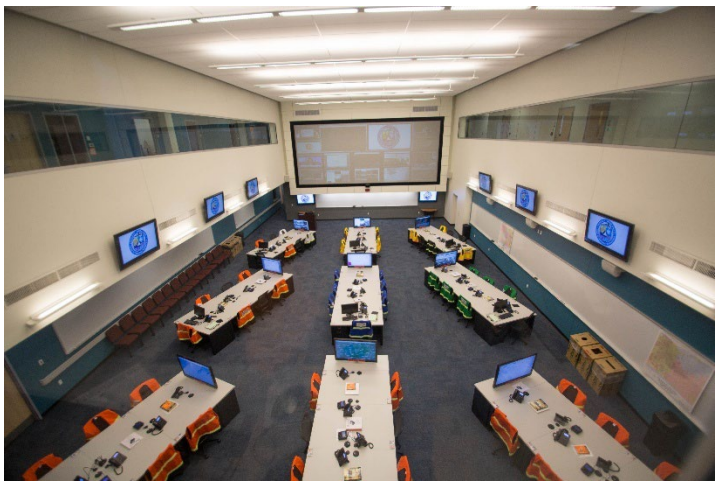
In the past, flash flooding has had the greatest impact upon the county. Comprehensive stormwater plans are in place and are kept updated as needed.

With tornadoes and severe storms always being a threat to the area, warning capability assessments have/are frequently being conducted, including Reverse 9-1-1, weather radios, placement programs, and the potential need to add additional outdoor warning sirens to areas annexed into the City of Springfield and dense population areas in unincorporated Greene County, as warranted.

Office of Emergency Management

The Springfield-Greene County Office of Emergency Management (OEM) is funded through federal, state, county, and city resources. The original purpose for the office, known as Civil Defense, was to help protect citizens from nuclear attacks. The purpose has grown since the 1980s to include planning and protection from all hazards that could cause disaster situations for the county.

OEM has ten paid staff members: Director, Deputy Director, City and County Emergency Planning Specialist, Logistics Specialist, Exercise and Training Specialist, Area Municipality Planning Specialist, Community Engagement Specialist, Public Information Officer, Administrative Services Manager, and an Administrative Coordinator. Paid staff are often augmented by reservists, contract employees, university interns, and a reserve of volunteers. In order to save lives and protect property in the face of the hazards that affect the jurisdictions of Greene County, this office, in coordination with federal, state and local agencies, applies the five mission areas of emergency management: prevention, protection, mitigation, response, and recovery.



The Office of Emergency Management is the primary control point for activating the outdoor warning siren system, which includes more than 100 sirens throughout the county. The Springfield-Greene County Emergency Communications Center (ECC) serves as the secondary control center for the system. The Public Works Maintenance Center may also activate the system, when deemed necessary. Additionally, any law enforcement officer, firefighter, trained Emergency Management weather spotter, or National Weather Service representative may activate the system if a funnel cloud or tornado is reported, threatening the safety of Greene County residents.

The Office of Emergency Management hosts an annual Severe Weather Spotter training program through the National Weather Service (NWS) for first responders and emergency management personnel. All Greene County OEM staff are required to complete this training each year.

The Office of Emergency Management runs awareness campaigns during the spring for severe storms and in the fall for severe winter weather. Special statements are issued throughout the year by appropriate departments for heat and drought (Health Department) and wildfire (National Weather Service, Department of Conservation, and local fire agencies).

Throughout the year, the Greene County Office of Emergency Management works diligently to prepare responders and the community for all hazards that are a threat to the Greene County area.

Community Partnerships

The City of Springfield and Greene County collaborate on numerous issues such as a combined Office of Emergency Management, Health Department, and Parks and Recreation Department. The Missouri Department of Transportation (MoDOT), City of Springfield, and Greene County collaborate on issues concerning transportation. The Missouri Department of Conservation (MDC) and local fire departments work together to safeguard the county's forested areas.

EMERGENCY SERVICES

9-1-1 Emergency Communications

The Springfield-Greene County 9-1-1 Emergency Communications Center serves as the central hub for emergency communications across the City of Springfield and Greene County, managing all incoming 9-1-1 calls and coordinating emergency response communications. Since its inception in 1979, the center has evolved through major milestones, including the consolidation of the Springfield Fire and Police dispatch operations in 1985, the formal establishment of the center as a municipal department in 1989, and the integration of Greene County's enhanced 9-1-1 system in 1994. Subsequent advancements, such as the adoption of a countywide 800 MHz radio network in 2002 and the consolidation of the City of Republic's dispatch operations in 2013 have strengthened regional coordination and operational efficiency.

Today, the Emergency Communications Center supports eight municipal police departments, 13 fire departments/districts, the Greene County Sheriff's Department, and coordinates with local hospitals for EMS response. This is completed by employing a team of over 80 dedicated first responders, including

emergency telecommunicators, supervisors, and administrative staff. Through robust training programs and regular coordination with regional partners, the center ensures its personnel and systems are prepared for diverse emergency scenarios, from natural disasters to large-scale public safety incidents.

The center prioritizes both technological innovation and regional collaboration to address evolving challenges and enhance resilience. The introduction of Text-to-911 in 2018 provided critical accessibility for individuals unable to make voice calls, while the planned launch of Next Generation 9-1-1 (NG911) in 2025 will enable advanced data sharing for improved situational awareness and real-time decision-making during emergencies. Alongside these advancements, the center actively fosters partnerships with neighboring jurisdictions, establishes mutual aid agreements, and engages in community outreach initiatives to ensure seamless coordination and public engagement. By integrating innovative technology with a collaborative, community-focused approach, the center continues to enhance its capabilities, safeguard operations, and reduce risks across the region.

9-1-1 Call Statistics

Year	9-1-1 Calls	Percent of Wireless Calls	Percent Answered <15 Seconds	Administrative Calls In/Out	Total Phone Interactions
2024	243,561	89%	93%	194,756	438,317
2023	268,825	88.6%	92.4%	206,672	475,497
2022	262,029	86.6%	91.8%	212,916	474,945
2021	280,305	86.1%	91.6%	246,507	526,812

LAW ENFORCEMENT

The first session of the County Court was held on March 11-14, 1833, at the house of John P. Campbell in Springfield. During this session, John D. Shannon was appointed and commissioned as the first Sheriff of Greene County. Since then, 40 men and women who have held the office of Sheriff in Greene County Missouri.

The Greene County Sheriff's Office is a full-service law enforcement agency providing 24-hour patrol. It includes divisions such as the Criminal Investigations Division, Warrants and Records Division, Civil Process Division, and the Administrative Services Division. A new jail, constructed in 2022, increased inmate capacity from 600 to 1,300.

The Sheriff's Office Patrol Division is responsible for patrolling 600 square miles of unincorporated Greene County and providing full law enforcement services for 84,159 citizens. The division consists of three squads, each led by a sergeant, and each squad includes at least two corporals and 14 deputies. The county is divided into five districts, with typically one deputy assigned to each district. The Patrol Division handles approximately 32,000 calls for service annually and makes around 20,000 traffic stops.

FIRE SERVICES

The Springfield Fire Department consists of 12 fire stations. In addition to Springfield Fire, rural Greene County is divided into 13 fire protection districts:

- Ash Grove Fire Protection District
- Battlefield Fire Protection District
- Bois D'Arc Fire Protection District
- Brookline Fire Protection District
- Ebenezer Fire Protection District
- Fair Grove Fire Protection District
- Logan-Rogersville Fire Protection District
- Strafford Fire Protection District
- Walnut Grove Fire Protection District
- West Republic Fire Protection District
- Willard Fire Protection District



For more information on the participating fire districts and services they provide, please refer to their individual profiles.

EMERGENCY MEDICAL SERVICES (EMS)

Emergency Medical Services (EMS) for Greene County are provided by Mercy Paramedics and CoxHealth Paramedics. These two private organizations have divided the county into multiple response areas, and both utilize a system status deployment model for field units. Under this system, each time an ambulance is dispatched, all on-duty ambulances adjust their positions to better cover the service area.

The CoxHealth System handles over 36,000 services requests each year. Their fleet consists of 45 ambulances staffed by approximately 175 licensed paramedics and emergency medical technicians. Additionally, CoxHealth operates a medical evacuation helicopter, which is staffed 24 hours a day with a pilot, a flight nurse, and a flight paramedic. This helicopter is based at Cox South Hospital in Springfield.

The Mercy Health System responds to more than 42,000 emergencies annually. Mercy Lifeline operates five helicopters, each staffed with a registered nurse, a paramedic, and a pilot. One helicopter is based at the main Mercy campus in Springfield off Fremont Avenue, while the other four are stationed at Mercy hospitals in the region, but not within Greene County.

PUBLIC HEALTH DEPARTMENT

In 1873, the City of Springfield established what was then known as the Department of Health. Today, with a budget of nearly $10 million and a staff of 110, the Springfield-Greene County Health Department serves a combined population of approximately 267,000 people. The department provides many services including:

- Connecting citizens to community health services
- Developing policies to promote a healthy community
- Educating our community about public health issues
- Enforcing city ordinances
- Evaluating current community health programs
- Monitoring, identifying, and investigating potential health threats
- Partnering with other community organizations to address local health issues

Many public health services go unseen, such as restaurant inspections, communicable disease investigations, well water testing, and monitoring of morbidity and mortality reports. Health education, however, is a more visible service. The goal is to promote good health, and public health efforts are focused on engaging the community and raising awareness of important issues for educational purposes.

MITIGATION PROGRAMS

The primary focus of the mitigation program in the area is floodplain management, with regulations updated in 2025, along with participation in the National Flood Insurance Program (NFIP). Floodplain management programs are based on policies to protect the general welfare and safety of county residents. The programs are designed to safeguard health, safety, and property during floods; prevent avoidable increases in flood size; mitigate losses during the construction of public facilities; and protect the public from purchasing land unsuited for the intended use due to flood hazards.

The Federal Clean Water Act requires certification for any construction, placement, and disposal of fill materials or earth movement within a floodplain or a body of water. After serious flooding in 1993, floodplain regulations were revamped and continue to be scrutinized.

In 1983, Greene County adopted Article XIX, the Floodplain Management Ordinance, requiring participation in the NFIP. This ordinance, based on a model ordinance from the Federal Emergency Management Agency (FEMA) requires any development or construction in floodplain areas to obtain a Floodplain Development Permit from the county. Please see the Risk Assessment Section on Flooding, for more information about the NFIP and its policies.

City and county floodplain regulations are aimed at restricting new developments in floodplains. Following the 1993 floods, the city and county instituted a property acquisition program, funded through FEMA's Hazard Mitigation Grant Program (HMGP), to purchase these properties through federal grant money.

Stormwater regulations are in place to minimize the harmful effects of erosion, sedimentation, and flooding caused by stormwater runoff. These regulations included measures to mitigate erosion during and after construction, the detonation and controlled discharge of differential runoff from development, and a well-designed stormwater conveyance system.

UTILITIES

Due to security concerns, utility mapping in this plan is limited. Publicly available information was used to create a secure representation of utilities in the planning area.

ELECTRIC

Four companies mainly provide electricity in Greene County. City Utilities of Springfield services the Springfield area, while Southwest Electric Co-Op, Empire District Electric Company, Associated Electric Co-Op, and Melton Electric Company power rural areas.

NATURAL GAS

Many communities and rural residents have access to natural gas for fueling appliances, while those not serviced by natural gas rely on propane for heating and cooking.

WATER

Water in Greene County is primarily provided by individual municipalities, with City Utilities of Springfield being one of the largest providers. For details on other water distribution systems, please refer to the individual municipality profiles.

MISSOURI ONE CALL

The Missouri Underground Facility Safety and Damage Prevention statute (RSMO Chapter 319) provides a notification center for participating utility companies to receive location requests. The Missouri One Call System, a non-profit Missouri corporation, serves as this center, offering a single point of contact for notifications through a statewide, toll-free telephone number available 24 hours a day, seven days a week. Established in 1986, MOCS helps utilities and excavators comply with the law by providing statewide services.

For utility location requests, the Missouri One Call System can be reached at 1-800-DIG-RITE.

WELLS



Unincorporated Greene County has thousands of private wells drilled into the groundwater system, the majority of which serve individual farms and residences. The exact number of wells is unknown. The Greene County Resource Management office is responsible for locating and tracking both active and abandoned wells in the county. Abandoned wells are often discovered during property redevelopment.

In 1987, the Missouri Department of Natural Resources (DNR) began regulating the installation of private water wells, including licensing drillers and setting standards for construction methods, materials, and casing depths. In Greene County, casing depths are set at ten feet below the Northview Formation, or at least 100 feet in other areas. These standards apply as part of “Sensitive Area C,” as defined in the Missouri Well Construction Rules. To simplify the process of determining casing depth, the Division of Geology and Land Survey-DNR has created a casing depth map for the area, indicating the required casing depth for each quarter section.

The Springfield-Greene County Health Department maintains a database of tests on private wells, which includes test results, the location of the well, the reason for the request, and the type of construction, when available. The most common tests conducted on working wells are for coliform bacteria and nitrates.
In addition to private wells, there are more than 150 public wells in unincorporated Greene County.

Abandoned Wells

A partial survey conducted by the Greene County Resource Management Department suggests that there are hundreds of abandoned wells in the county. Besides the obvious safety hazards, abandoned wells constitute a pollution hazard for groundwater by acting as an open conduit from the surface or near-surface to deeper aquifers. State laws require abandoned wells to be plugged or sealed. If the well is determined to present a threat to groundwater, the Division of Geology and Land Survey can order it to be plugged. Ultimately, homeowners are responsible for plugging abandoned wells on their property. Drill operators who encounter abandoned wells typically notify landowners of the need for plugging. A registration report must be filed with the division once the well has been plugged.

SOLID WASTE DISPOSAL



Most waste is trucked to the solid waste landfill approximately 10 miles north of Springfield, just west of Missouri Highway 13. Greene County continues to focus on reducing its solid waste through precycling, recycling, reuse, and numerous other means. However, the Springfield Sanitary Landfill remains a vital part of Springfield's Integrated Solid Waste Management System (ISWMS). The ISWMS is not supported by general tax revenue. Landfill tipping fees are the major funding source for the ISWMS, in addition to donations and revenues generated by the sale of yard waste recycling center products.

The Springfield Sanitary Landfill provides efficient, reliable, and environmentally secure disposal of municipal solid waste that cannot be recycled or reused. Presently, these wastes represent 60 to 80 percent of Springfield's solid waste generation. This facility also provides for the proper disposal of those non-hazardous commercial, industrial, and residual waste requiring special handling to meet state and federal regulations.

In addition to the Sanitary Landfill, there are also two recycling centers: a yard waste recycling center and a household chemical collection facility. These facilities give residents the option to recycle much of their waste. In addition, the ISWMS has other programs, including requiring all licensed trash haulers to offer the convenience of curbside collection of recyclables and a program of information and education, including a Recycling Hotline webpage.

IDENTIFIED ASSETS

This section provides a survey of existing fixed assets such as infrastructure, critical facilities, employment centers, commercial centers, and recreation centers as a major factor in disaster mitigation. Infrastructure includes transportation, communications, water/sewer, electricity, natural gas, solid waste disposal, law enforcement, fire prevention, emergency medical services, and emergency management.

TRANSPORTATION

Name Of Highway/Roadway	Route
Interstate 44	Major connector from St. Louis to the southwest U.S.
State Highway 13	Runs from Bethany, Missouri to Springfield.
U.S. Highway 60	Runs from Missouri's eastern border on the Mississippi River to the Oklahoma border.
U.S. Highway 65	Runs from the Iowa border into Arkansas; the main highway linkage between Springfield and Branson.
U.S. Highway 160	Runs from Springfield to Oklahoma.
James River Freeway	Connects U.S. Highway 65 to the east of Springfield to I-44 to the west of Springfield; also known as the Korean War Veterans Freeway.

The primary mode of transportation in Greene County is the private automobile. Over the past several decades, the growth in the number of vehicles has outpaced the population.

Railroads

The largest railroad in the region is the Burlington Northern Santa Fe (BNSF) system that runs from the east of Springfield and exits the area northwest of Monett and Pierce City. Historically, this rail line was part of the Frisco line that was the first major transportation route in the region. The BNSF railway provides southwest Missouri with rail connections to metropolitan areas such as St. Louis, Kansas City, Tulsa, and Memphis.

The Missouri and North Arkansas rail line, headquartered in Carthage, Missouri, provides a rail service to several industries within the City of Springfield by using tracking rights on the BNSF railroad.

BNSF Railways in Greene County



CAPABILITY ASSESSMENT

This section will discuss the capabilities of Greene County and the agencies and ordinances that help maintain mitigation efforts within the county.

Building Codes

Building and construction in the county is regulated through building codes based on a version of the International Codes. Existing codes and regulations include provisions for drainage, flooding hazards, soil types, slope, and street connectivity issues.

Planning and Zoning

Greene County is a Class 1 Missouri county. As such, the County Commission has the power to enact ordinances, rules, and regulations regarding building regulations, planning, and zoning.

Planning and zoning for unincorporated Greene County is governed by a board which meets monthly. The Planning and Zoning Board reviews and approves subdivision plats and variances and acts as an advisory board to the County Commission regarding conditional use permits, zoning requests, and amendments to the zoning regulations.

The Board of Zoning Adjustment consists of three County Commissioners and meets monthly to review and approve requests for variances from zoning regulations and conditional use permits forwarded by the Planning Board.

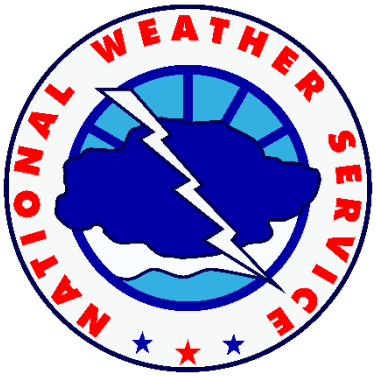
The current zoning regulations establish 18 zoning districts: Agriculture, Agriculture-Residential, Rural Residence, Conservation Development, Manufactured Home (Mobile Homes or Subdivision), Urban Residence, Suburban Residence, One- and Two-Family Residence, Multi-Family Residence (2), Professional Office, General Office, Neighborhood Commercial, General Commercial, Rural Commercial, Light Manufacturing or Industrial, General Manufacturing or Industrial, and Plot Assignment. Additional regulations address solid waste and hazardous waste.

Restrictions on hazardous waste storage, treatment, and disposal are governed by current federal and state regulations.

CAPABILITY IMPROVEMENTS

A potential improvement to Greene County's mitigation capabilities would involve expanding investments in resilient infrastructure, such as installing permeable pavement, green roofs, and stormwater capture systems to better manage runoff and reduce flood risks. Additionally, enhancing early warning systems for flooding and extreme weather events, particularly in vulnerable areas, could include the installation of additional sirens and flood warning sensors to provide more comprehensive and timely alerts to residents. Another valuable enhancement would be the use of advanced GIS mapping and data analytics to model future growth scenarios and evaluate their impact on hazard mitigation efforts. These improvements would strengthen the county's ability to adapt to changing environmental conditions and protect both people and property more effectively.

OTHER CAPABILITIES

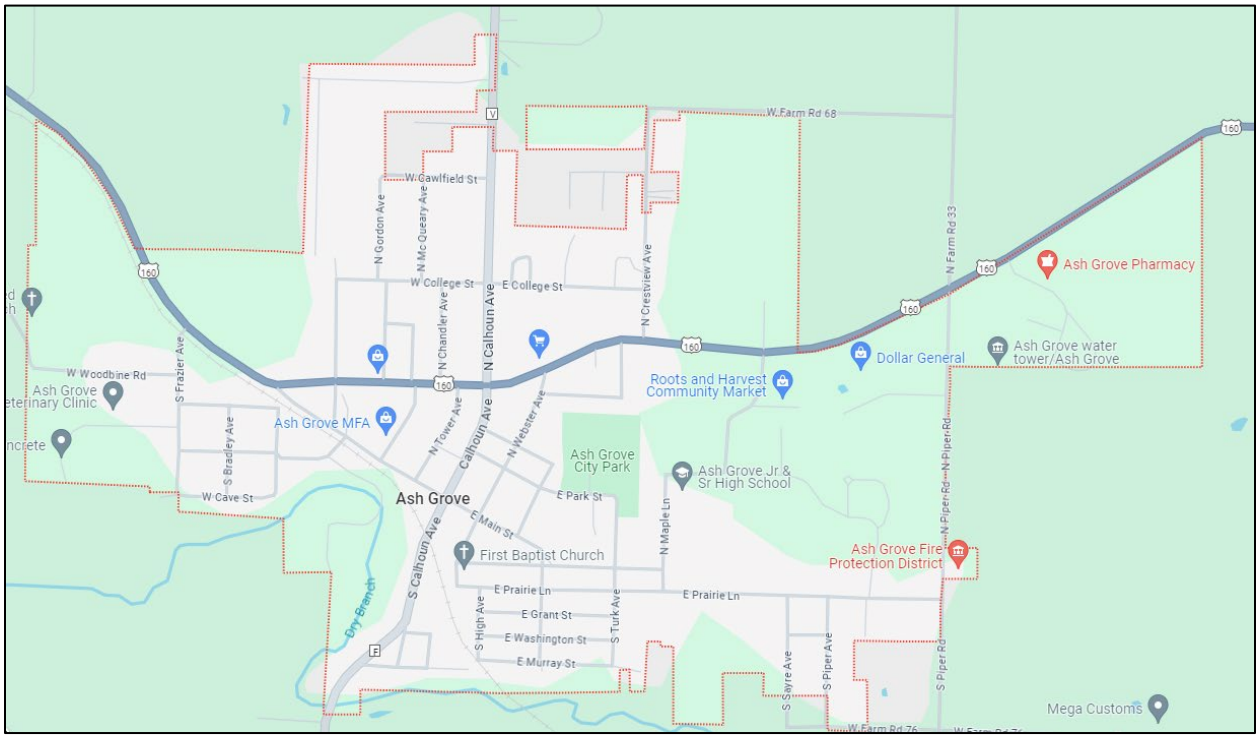


- The county and city can receive National Weather Service warnings, with the ability to alert a large portion of the population within 15-20 minutes (estimated). Responders can respond in 3 - 5 minutes (estimated), and key officials can respond and act within 15 minutes.
- Public school students receive curriculum-based training on hazards and emergency programs during the school year. Businesses, preschools, private organizations, community leaders, and citizens can attend emergency preparedness trainings.
- Geographic Information Systems (GIS) capabilities allow for limited base maps of hazardous areas to be available to interested parties.

2.2.2 CITY OF ASH GROVE

Ash Grove is in the northwest portion of the county, about seventeen miles from Springfield. The city saw a period of growth from 2000 to 2017, recently, however, Ash Grove has seen a decline in population. In 2017, the population was approximately 1,600 residents, and in 2022, the population was 1,512. Ash Grove is governed by a mayor and four aldermen. The mayor, with the aldermen's approval, appoints the following positions:

- Chief of Police
- City Clerk
- Director of Emergency Management
- Park Advisory Board
- Planning & Zoning Board
- Public Works Director



The Board of Aldermen meets at City Hall at 6:00 p.m. on the third Tuesday of each month.

Ash Grove has many community events throughout the year including car shows, concerts, Sparks in the Park, Nathan Boone Homestead Days, Christmas parades, and many more. Ash Grove has a 13-acre city park which is in the heart of the city on Parkway Avenue. The attractive facility offers many resources and community activities, including a swimming pool, tennis courts, basketball courts, disc golf, volleyball, and a playground.

The Town of Ash Grove was incorporated in 1871, 35 years after frontiersman and military serviceman Nathan Boone and his wife Olive made their family's home in a grove of walnut and ash trees. Together they raised 14 children and owned 1,200 acres of land. Ash Grove did not begin to significantly grow until after the Civil War. In 1880, there were 500 residents, however, in a matter of 30 years the population grew to 1,075 citizens. Historic sites within Ash Grove include the Berry Cemetery, the Gilmore Octagonal Barn, the Phenix Marble Quarry, the 1800s Original Quarry of Ash Grove Cement Company, and the Nathan Boone Homestead State Historic Site.



PLANNING AREA PROFILE AND CAPABILITIES 2

POPULATION AND DEMOGRAPHICS

General Population Characteristics

Characteristic	Population
Male Population	767
Female Population	850
Median Age (Years)	37.8
Total Population	1,512

Source: U.S Census Bureau American Community Survey, 5-year Estimate 2022

Race

Race	Population
White Alone	1403
Black or African American	2
Native American and Alaskan Native	12
Asian	0
Native Hawaiian and Pacific Islander	1
Other Races	11
Two or More Races	76

Source: U.S Census Bureau American Community Survey, 5-year Estimate 2022

Housing Information

Housing Occupancy	Number
Occupied Housing Units	589
Vacant Housing Units	66
Owned Occupied Housing Units	366
Renter Occupied Housing Unit	223

Source: U.S Census Bureau American Community Survey, 5-year Estimate 2022

MITIGATION INITIATIVES

Outdoor Warning Sirens

Ash Grove currently has one warning siren inside the city limits. The siren is activated by the Springfield-Greene County Office of Emergency Management. The siren is tested on the second Wednesday of every month at 10 a.m., weather permitting. The City of Ash Grove is responsible for maintaining the warning siren.

Other Initiatives

The City of Ash Grove does have major concerns regarding the vulnerability of the city. The city's current EOC is in City Hall, which is not a hardened facility and lacks many of the capabilities to fully operate during a disaster. The police and fire stations have generators for use during power outage emergencies. The city does not have a community safe room for severe weather events, however, they do have sheltering during the day for extreme temperatures. The Ash Grove School District also lacks proper sheltering. More information about current projects Ash Grove wants to implement can be found in the Mitigation Section of this plan.

National Flood Insurance Program (NFIP)

The City of Ash Grove is a member of the National Flood Insurance Program (NFIP). Locally, the Floodplain Manager (City Clerk), Emergency Management Director, Law Enforcement, Building Inspector, and Public Works Department work jointly to enforce the floodplain management activities. In addition, the city also works with partners in the surrounding communities, Greene County, and SEMA, when necessary.

Emergency Services

The Ash Grove Police Department consists of a Police Chief, four full-time officers, and currently there are no reserve officers. The police department operates from the Ash Grove City Hall. The city also has a fire and rescue department, which consists entirely of volunteer firefighters. However, the fire district is not officially affiliated with the City of Ash Grove.

Utilities

The City of Ash Grove provides sewer and water services, and a private company offers trash collection services. Waste Corporation of America (WCA) provides Ash Grove with a recycling center and has containers for glass and contaminated recycling. AT&T and Mediacom provide telephone services and high-speed internet service, and Mediacom offers cable television. Liberty Utilities provides electric services, and Spire Inc. provides natural gas services.

Historic Significant Disaster Events

Widespread flooding occurred in 1993 and again in 2007 due to weeks of rain, prompting numerous flooding events within the city. Ash Grove was without electricity for nearly a week, and recovery took several months, extending into the summer season.

VULNERABILITY

Ash Grove, a historic town, has many older buildings that cause differences in risk among jurisdictions in the planning area. Out of the 637 housing units, 202 of those homes were built in 1939 or earlier. The city also has many historic properties including the Nathan Boone Homestead State Historic Site, Berry Cemetery, and Gilmore Octagonal Barn.

CAPABILITY

Facilities

The Public Works Department has several facilities including the following:

- Water/Sewer System
- Wastewater Treatment Plant
- Lift Station
- Two Operating Wells
- Two Water Storage Tanks
- Street System
- Public Works Department Building
- Equipment Storage Building
- Testing Equipment Storage Building (for treatment plant equipment)

The administrative staff operates out of City Hall, which also serves as the location for the primary Emergency Operations Center. The City of Ash Grove has an Emergency Operations Plan (EOP) in place, along with a designated Emergency Management Team.

Building Codes

The City of Ash Grove has several codes that help keep the community safe and running smoothly. Several of the city codes and ordinances focus on building regulations. All the codes are provided on the city's website, making them easily accessible to the public.

Planning and Zoning

The Ash Grove Planning and Zoning Commission, along with the City Council, is responsible for managing the growth and development of the city's incorporated area. Development must occur in a manner that promotes logical urban patterns with long-term value, rather than focusing on short-term gain.

The Planning and Zoning Commission primarily serves as an advisory body for the citizens of Ash Grove. Under Missouri State Statute Chapter 89: Zoning and Planning: Zoning Regulations, one of the Commission's main duties is to hold public hearings where community members can express their opinions.

The Commission is a sounding board for community attitudes toward development. After a public hearing, it is required to adopt a recommendation for the City Council regarding rezoning and subdivision of land, conditional use permits, and text amendments to the regulations.

Capability Improvements

Improvement to Ash Grove's mitigation capabilities would be the development and implementation of a comprehensive Hazard Awareness Program to educate residents about local risks and promote preparedness. Additionally, establishing a Stream Maintenance Program could help reduce the risk of localized flooding by ensuring waterways remain clear of debris and obstructions. A Tree Trimming Program would further enhance public safety by minimizing the potential for downed limbs to cause damage during storms or obstruct roadways and power lines. Together, these programs would significantly strengthen Ash Grove's resilience to natural hazards and improve overall community safety.

Backup Systems

- City Hall
- East Water Well
- Waste Water Treatment Plant
- Waste Water Lift Station

Ash Grove Capabilities

Executive Summary

Ash Grove has several foundational plans and regulations in place but lacks depth in some key areas.

- **Planning**: A Comprehensive Plan is in final draft, and a Land-Use Plan is included in the county's 2018 plan. The city has access to county-level Emergency, Recovery, and Mitigation Plans, but lacks a Capital Improvement Plan, Transportation Plan, and Fire or Flood Mitigation Plans.
- **Regulations**: Strong regulatory framework includes zoning, building codes, stormwater, subdivision, and seismic ordinances. However, Ash Grove lacks a site plan review requirement and historic preservation ordinance.
- **Programs & Participation**: The city participates in the NFIP but not in the CRS program. It has planning boards, mutual aid agreements, and public education via "Ready in 3", but lacks hazard awareness and storm readiness programs.
- **Risk & Mapping**: Key risk assessments and FEMA flood studies are complete. A critical facilities inventory is being updated. No evacuation route map currently exists.
- **Staffing**: Ash Grove relies mostly on part-time or contract staff. Some key roles, like planning, are volunteer-based. There are no specialized emergency response teams in place.
- **Community & NGOs**: Supported by regional organizations like the Red Cross and local groups such as the American Legion and Tri County Ministries. No Chamber of Commerce or environmental groups are present.
- **Funding**: The city has strong financial tools, including the ability to levy taxes, apply for grants, and incur debt through multiple channels. Utility fees exist for water and sewer only.

Planning Capabilities	
Capability	**Status Including Date of Document or Policy**
Comprehensive Plan	Yes - In Final Draft
Builder's Plan	No
Capital Improvement Plan	No
County Emergency Plan	Yes
County Recovery Plan	Yes
County Mitigation Plan	Yes
Economic Development Plan	No
Transportation Plan	No
Land-use Plan	Yes - Included in County Plan- 2018
Flood Mitigation Assistance (FMA) Plan	No
Watershed Plan	No
Fire wise or other fire mitigation plan	No
Critical Facilities Plan	Yes- Located in Mitigation Plan

Zoning Ordinance	Yes
Building Code	Yes
Floodplain Ordinance	Yes
Subdivision Ordinance	Yes
Tree Trimming Ordinance	Yes
Nuisance Ordinance	Yes
Stormwater Ordinance	Yes
Seismic Construction Ordinance	Yes
Drainage Ordinance	Yes
Capability	**Status Including Date of Document or Policy**
Site Plan Review Requirements	No
Historic Preservation Ordinance	No
Landscape Ordinance	Yes
Debris Management Plan	No plan but ordinances
Program	**Status Including Date of Document or Policy**
Zoning/Land Use Restrictions	Yes
Codes Building Site/Design	Yes
National Flood Insurance Program (NFIP) Participant	Yes
NFIP Community Rating System (CRS) Participating Community	No
Hazard Awareness Program	No
National Weather Service (NWS) Storm Ready	No
Building Code Effectiveness Grading (BCEGs)	Unknown
ISO Fire Rating	6
Economic Development Program	Yes
Land Use Program	Yes
Public Education/Awareness	Yes - Ready in 3
Property Acquisition	Unknown
Planning/Zoning Boards	Yes
Stream Maintenance Program	No

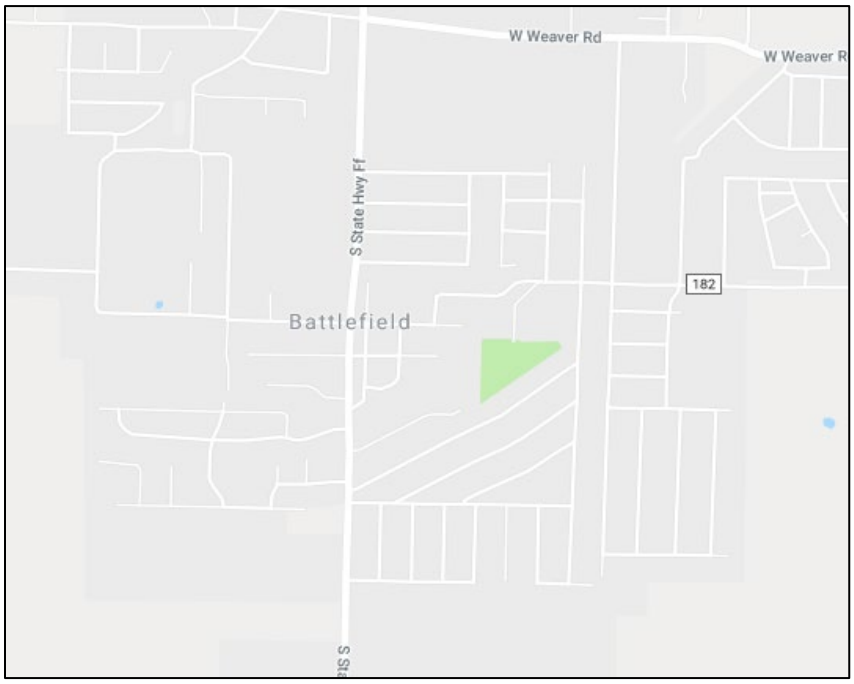
Tree Trimming Program	No
Engineering Studies for Streams (Local/County/Regional)	County
Mutual Aid Agreements	Yes
Studies/Reports/Maps	**Status Including Date of Document or Policy**
Hazard Analysis/Risk Assessment (Local)	Yes - Mitigation Plan
Hazard Analysis/Risk Assessment (County)	Yes - Mitigation Plan
Flood Insurance Maps	Yes
FEMA Flood Insurance Study (Detailed)	Yes
Evacuation Route Map	No
Critical Facilities Inventory	Yes - Currently Updating
Vulnerable Population Inventory	Yes - Mitigation Plan
Land Use Map	Yes - County Level
Staff/Department	**Status Including Date of Document or Policy**
Building Code Official	PRN Contractor
Building Inspector	PRN Contractor
Mapping Specialist (GIS)	Greene County GIS
Engineer	PRN Contractor
Development Planner	Ash Grove Planning and Zoning (Volunteer)
Public Works Official	Full-Time
Emergency Management Coordinator	Part-Time
NFIP Floodplain Administrator	Part-Time
Bomb and/or Arson Squad	No
Emergency Response Team	No
Hazardous Materials Expert	No
Local Emergency Planning Committee	Yes
County Emergency Management Commission	Yes
Sanitation Department	Waste Management
Transportation Department	Ash Grove Public Works Full-Time

Economic Development Department	No
Housing Department	No
Planning Consultant	No
Regional Planning Agencies	No
Historic Preservation	No
Non-Governmental Organizations (NGOs)	**Status Including Date of Document or Policy**
American Red Cross	Yes - Springfield
Salvation Army	Yes - Springfield
Capability	**Status Including Date of Document or Policy**
Veterans Groups	Yes - Ash Grove American Legion
Environmental Organizations	No
Homeowner Associations	No
Neighborhood Associations	No
Chamber of Commerce	No
Community Organizations (Lions, Kiwanis, etc.)	Yes - Tri County Ministries, Sunshine Center, Food Pantry
Local Funding Availability	**Status Including Date of Document or Policy**
Ability to apply for Community Development Block Grants	Yes
Ability to fund projects through capital improvements funding	Yes
Authority to levy taxes for a specific purpose	Yes
Fees for water, sewer, gas, or electric services	Water and Sewer Only
Impact fees for new development	Unknown
Ability to incur debt through general obligation bonds	Yes
Ability to incur debt through special tax bonds	Yes
Ability to incur debt through private activities	Yes
Ability to withhold spending in hazard-prone areas	Unknown

2.2.3 CITY OF BATTLEFIELD

The City of Battlefield is in the southwestern part of Greene County, approximately one mile from Springfield, and has experienced rapid growth over the years. In 2000, the city had a population of over 2,300 residents, and by 2017, this number had risen to over 5,900. Continued growth led to an estimated population of 6,214 in 2022. Battlefield was incorporated as a city in 1971 and operates under a Mayor and Board of Aldermen form of government, as permitted by Missouri State Statutes. Both the Mayor and Board of Aldermen are elected positions. The city also has a City Administrator. Currently, Battlefield is divided into three geographic wards, each represented by two aldermen who serve staggered two-year terms, while the mayor serves a two-year term. The City of Battlefield operates several departments, including:

- Animal Control
- Economic Development
- Emergency Management
- Fire
- Municipal Courts
- Park Board
- Planning and Zoning Board
- Police
- Sewer



The City of Battlefield has a community center that is available for use by both residents and non-residents for parties, meetings, and adult education classes. Free community events are held throughout the year, with all events taking place at the Battlefield Municipal Complex and Cherokee Trail of Tears Park.

Currently, there are no trails or greenways in or through the city; however, there is a walking track that encircles Cherokee Trail of Tears Park, which is co-located with the Municipal Complex. The city park spans approximately eight acres and features playground equipment for young children, one basketball court, and two tennis courts. All courts are lit and available for use until 11 p.m. during the summer months.

General Population Characteristics

Characteristic	Number
Male Population	2,899
Female Population	3,147
Median Age (Years)	40.7
Total Population	6,046

Source: U.S Census Bureau American Community Survey, 5-year Estimate 2022

Race

Race	Number
White	5,162
Black or African American	101
American Indian and Alaska Native	41
Asian	123
Native Hawaiian and Other Pacific Islander	10
Other Race	59
Two or More Races	494

Source: U.S Census Bureau American Community Survey, 5-year Estimate 2022

Housing Information

Housing Occupancy	Number
Occupied Housing Units	2,286
Vacant Housing Units	74
Owned Occupied Housing Units	1,984
Renter Occupied Housing Units	375
Total Housing Units	2,360

Source: U.S Census Bureau American Community Survey, 5-year Estimate 2022

MITIGATION INITATIVES

Outdoor Warning Sirens

There are four outdoor warning sirens within the city limits of Battlefield to alert residents of incoming storm threats. The northern and eastern parts of the city are covered by Greene County's outdoor warning sirens. Additionally, two smaller sirens have been installed on the west side of Battlefield, ensuring full coverage for all residents. The Springfield-Greene County Office of Emergency Management activates all Battlefield sirens. However, the City of Battlefield is responsible for maintaining their outdoor warning sirens.

Emergency Services

Battlefield operates its own law enforcement department, which includes a Chief of Police, a Sergeant, and six officers, offering 24/7 services. Emergency medical and fire services are provided by the Battlefield Fire Protection District, which is headquartered in the city. For more details about the Battlefield Fire Protection District, please refer to their individual profile.

The City Administrator has been appointed as the Emergency Management Director for Battlefield. Additional emergency management support is provided by the Battlefield Fire Protection District and the Springfield-Greene County Office of Emergency Management, as needed.

Utilities

The City of Battlefield collaborates closely with Greene County Public Water Supply District #1, which provides water to Battlefield and much of the surrounding area. The city operates its own sewer system. Depending on location, electricity and gas services may be provided by either Ozark Electric or City Utilities of Springfield. Gas service can be either propane or natural gas, with City Utilities of Springfield supplying natural gas to certain parts of the city. High-speed internet and cable television are provided by Mediacom and AT&T. While the City of Battlefield does not offer trash service, several vendors in the Springfield and Republic areas provide waste disposal options.

PREVIOUS MITIGATION ACTIONS

The City of Battlefield has implemented several projects to mitigate potential hazards. One such project was the purchase of a natural gas-powered generator capable of powering the entire municipal complex building. This generator enhances the ability of city staff and police to maintain operations during city, county, or regional emergency situations. Additionally, the county has invested in improving emergency communications within the city by utilizing 800 MHz radios.

IDENTIFIED ASSETS

State Highway FF: State Highway FF is a four-lane roadway with 12-foot lanes and 10-foot shoulders, under the jurisdiction of the Missouri Department of Transportation (MODOT). According to the Ozarks Transportation Organization Major Thoroughfare Plan, State Highway FF is classified as an expressway. Traffic counts show an average of 12,100 vehicles per day, with 1,210 vehicles per hour during peak evening traffic. The road is posted with a 55 MPH speed limit.

State Highway M: State Highway M is a two-lane roadway with 12-foot lanes, also under the jurisdiction of MODOT. The Ozarks Transportation Organization Major Thoroughfare Plan classifies State Highway M as a Primary Arterial. Traffic counts show an average of 7,140 vehicles per day, with 714 vehicles per hour during the peak evening period. The road is posted with a 55 MPH speed limit.

VULNERABILITY

The City of Battlefield has a population consisting of both elderly individuals and younger families. Of the 6,214 residents, 1,249 (21%) are over the age of sixty. Much of the city is residential in nature.

CAPABILITY ASSESSMENT

Facilities

The City Hall of Battlefield, built in 2005, replaced the original City Hall, which was destroyed in a tornado in 2003. The Community Center and Police Station are both located within City Hall.

Building Codes

The Building Services Department is the primary point of contact for all new construction within the City of Battlefield. The goal of the department is to ensure a high level of compliance with building codes, safeguarding life, safety, and overall community well-being. The department achieves this by enacting and enforcing building codes and standards, ensuring that every phase of construction, from site selection to final occupancy, complies with necessary life-safety requirements.

Planning and Zoning

The Planning and Zoning Commission consists of volunteers who collaborate with the City Engineer and Building Inspector to review and approve subdivision plans and enforce the Battlefield Zoning Codes. Regular meetings are held at City Hall on the second Monday of each month at 6:00 pm, with additional meetings scheduled for the fourth Monday, if necessary. To have an item added to the agenda, submission must be received by the Wednesday before the meeting.

Backup Systems

The City of Battlefield operates three servers: one master server and two subordinate servers. These servers are in different areas of the building and back up computers across both the court and city departments, which are divided between the police and city functions. The servers are backed up off-site to a local server farm, with additional backups to cloud storage. Backup data is also stored on transferable devices, enabling the City of Battlefield to restore files in the event of a disaster. These redundancies ensure city staff can recover critical resources from any location with internet access.

Capability Improvements

Improvements to the City of Battlefield's mitigation and recovery capabilities would involve the development of a Local Recovery Plan to guide post-disaster actions, ensure continuity of operations, and support long-term community recovery. Establishing a Debris Management Plan would enhance the city's ability to quickly and safely clear roads, restore services, and reduce health and safety risks following a disaster. Additionally, creating a Firewise or other fire mitigation plan would help identify and address wildfire risks, particularly in areas near wildland-urban interfaces, through strategies such as defensible space creation, community education, and fuel reduction efforts. Implementing these plans would significantly improve Battlefield's preparedness, response, and resilience to a wide range of hazards.

Battlefield Capabilities

Executive Summary

Battlefield has solid planning, regulatory, and financial foundations in place, with several areas actively being developed or improved.

- **Planning**: The city has a current Comprehensive Land-Use Plan (2021), a Transportation Plan (2024), and an updated Emergency Operations Plan (2024). A Capital Improvement Plan is in progress. However, Battlefield does not yet have a Local Recovery Plan, Debris Management Plan, or Fire Mitigation Plan.
- **Regulations**: Battlefield enforces a strong suite of ordinances, including zoning, building code (2018), floodplain (2017), drainage/stormwater, and site plan review. A Historic Preservation Ordinance has not been adopted.

- **Programs & Participation**: The city participates in the National Flood Insurance Program (NFIP) but is not part of the Community Rating System (CRS). Battlefield lacks StormReady, Firewise, and Building Code Effectiveness Grading certifications. There are currently no formal public education or awareness programs for preparedness.
- **Risk & Mapping**: Battlefield does not yet have a formal Critical Facilities Inventory or Vulnerable Population Inventory in place.
- **Staffing**: The city is supported by a mix of full-time and part-time professionals. Key roles like Building Inspector, Emergency Management Coordinator, and Floodplain Administrator are full-time. Engineering, planning, and GIS roles are filled via part-time contracts. There is no Local Emergency Planning Committee or Housing Department.
- **Community & NGOs**: Battlefield is supported by regional groups such as the American Red Cross, Salvation Army, and Veterans Groups. The city participates in the Springfield Chamber of Commerce and has five homeowner associations, four of which are active. It also works with local environmental organizations, but lacks neighborhood associations and civic organizations like Lions or Kiwanis.
- **Funding**: Battlefield has strong financial capacity. It can:
    - Apply for Community Development Block Grants
    - Fund projects through capital improvements
    - Levy taxes for specific uses
    - Charge utility and impact fees
    - Incur debt through general obligation and special tax bonds
    - Withhold spending in hazard-prone areas

    The only financial limitation noted is that it cannot incur debt through private activities.

Planning Capabilities		
Element	**Yes or No**	**Comments and/or Weblink**
Comprehensive or Land-Use Plan	Yes	8/09/2021 #21-01
Capital Improvement Plan	No, In process	TBD
Transportation Plan / Highway Department	Yes	7/14/2024, Local, and OTO
Emergency Operations Plan	Yes	4/01/2024
Local Recovery Plan	No	
Debris Management Plan	No	
Firewise or Other Fire Mitigation Plan	No	
Economic Development Plan	Yes	
Policies/Ordinances		
Zoning Ordinance	Yes	§400.290
Building Code	Yes	Version: 2018 §500.030
Floodplain Ordinance	Yes	Date:2017 §410.010

Drainage/Stormwater Ordinance	Yes	2017 §405.500
Site Plan Review Requirements	Yes	2017 §400.270
Historic Preservation Ordinance	No	
Programs		
National Flood Insurance Program (NFIP)	Yes	
NFIP Community Rating System (CRS) program	No	
National Weather Service (NWS) Storm Ready Certification	No	
Firewise Community Certification	No	
Building Code Effectiveness Grading (BCEGs)	No	
ISO Fire Rating	Rating: Class 2	Battlefield Fire Protection District
Public Education or information programs (i.e., responsible water use, fire safety, household preparedness, or environmental education)	No	
Mutual Aid Agreements	Yes	
Studies/Reports/Maps		
Critical Facilities Inventory	No	
Vulnerable Population Inventory	No	
Staff/Department	**Yes or No**	**Full-Time or Part-Time**
Building Code Official / Building Inspector	Yes	Full-Time
Engineer	Yes	Part-Time (OWN, Cochran, CMT)
Development Planner	Yes	Part-Time (CMT, OWN)
NFIP Floodplain Administrator	Yes	Full-Time
Mapping Specialist (GIS)	Yes	Part-Time (OWN)
Public Works Official	Yes	Full-Time
Emergency Management Coordinator	Yes	Full-Time
Local Emergency Planning Committee	No	
Sanitation Department	Yes	Waste Water Full-Time, Trash Part-Time
Highway/Transportation Department	Yes	Full-Time
Economic Development Department	Yes	Part-Time
Housing Department	No	

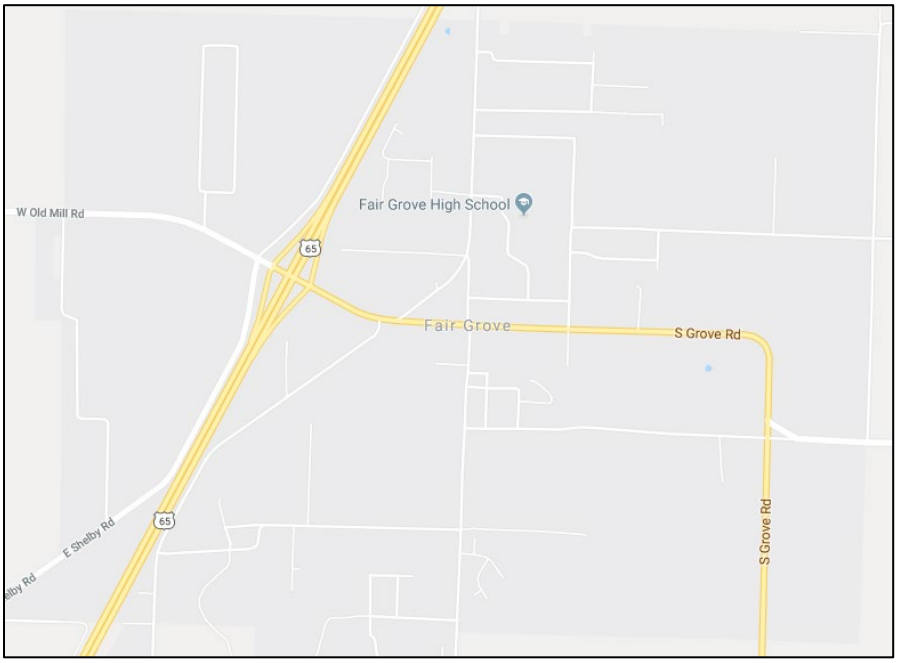
Historic Preservation	No	
Non-Governmental Organizations (NGOs)	**Local chapter? Yes or No**	**Comments and/or Weblink**
American Red Cross	Yes	Springfield/Greene County
Salvation Army	Yes	Springfield/Greene County
Veterans Groups	Yes	Springfield/Greene County
Local Environmental Organizations	Yes	MO DNR/James River Water Shed
Homeowner Associations	Yes	5 Known, 4 Active
Neighborhood Associations	No	
Chamber of Commerce	Yes	Springfield/Greene County
Community Organizations (Lions, Kiwanis, etc.)	No	
Financial Resources		**Is jurisdiction able? Yes or No**
Apply for Community Development Block Grants		Yes
Fund projects through Capital Improvements funding		Yes
Authority to levy taxes for specific purposes		Yes
Fees for water, sewer, gas, or electric services		Yes
Impact fees for new development		Yes
Incur debt through general obligation bonds		Yes
Incur debt through special tax bonds		Yes
Incur debt through private activities		No
Withhold spending in hazard prone areas		Yes

2.2.4 CITY OF FAIR GROVE

The City of Fair Grove is in the northeastern area of Greene County, approximately eighteen miles from Springfield, and has experienced steady growth over the years. In 2000, the population was approximately 1,100 residents, with an estimated population of 1,625 in 2017. By 2020 it had a population of 1,582 citizens and an estimated population of 1,551 according to the US Census Bureau 5-year estimates.

The local government operates under a Mayor and Board of Aldermen structure and is subdivided into three wards, each represented by two aldermen. The Board of Aldermen convenes bi-monthly on the second and fourth Tuesdays at 6:30 p.m. Additionally, the city is served by a Planning and Zoning Board consisting of eight members, which meets on the first Monday of each month at 6:30 p.m. The following municipal departments are also operational within the city:

- Building Codes
- City Attorney
- City Clerk
- Court Clerk
- Emergency Management
- Park Board
- Police
- Public Works



The City of Fair Grove has approximately 530 single-family homes, several multi-family buildings, duplexes, and a senior citizens housing facility offering one-bedroom apartments for 20 residents. The city is also home to over 50 businesses, including the historic district, three banks, a supermarket, a pharmacy, a convenience store, and several restaurants.

Fair Grove has two parks, each providing amenities for all ages. The parks feature walking paths, skate parks, playgrounds, sandboxes, volleyball courts, and basketball courts. Throughout the year, the parks host various events for residents, such as fireworks displays, a haunted trick-or-treat event, drive-through light displays, and more.

PLANNING AREA PROFILE AND CAPABILITIES 2

POPULATIONS AND DEMOGRAPHICS

General Population Characteristics

Characteristic	Number
Male Population	789
Female Population	836
Median Age (Years)	28.5
Total Population	1,625

Source: U.S Census Bureau American Community Survey, 5-year Estimate 2022

Race

Race	Number
White	1,446
Black or African American	3
American Indian and Alaska Native	14
Asian	10
Native Hawaiian and Other Pacific Islander	1
Other Race	14
Two or More Races	94

Source: U.S Census Bureau American Community Survey, 5-year Estimate 2022

Housing Information

Housing Occupancy	Number
Occupied Housing Units	578
Vacant Housing Units	36
Owner Occupied Housing Units	448
Renter Occupied Housing Units	159
Total Housing Units	614

Source: U.S Census Bureau American Community, 5-year Estimate 2022

MITIGATION INITIATIVES

Outdoor Warning Sirens

The City of Fair Grove currently has five warning sirens located within city limits. The Springfield-Greene County Office of Emergency Management is responsible for activating the sirens, although Fair Grove has the capability of sounding the sirens independently. The city is also responsible for siren maintenance. The sirens are tested on the second Wednesday of every month at 10 a.m., weather permitting.

Emergency Services

The City of Fair Grove operates its own police department, providing 24/7 services. The department consists of 11 officers: six full-time officers, including one Chief of Police, a Detective Sergeant, a Patrol Corporal, three patrol officers, and a reserve squad led by a sergeant and supported by three reserve officers. The school district also employs a full-time School Resource Officer.

In 2015, the Fair Grove Police Department launched its Community Resource Officer Program, designed to foster healthy civic relations between the department and the citizens. The program focuses on proactive community assistance and support.

The City of Fair Grove is also served by a full-time fire protection district, which provides services to the community and surrounding areas. For more information about the Fair Grove Fire Protection District, please refer to their individual community profile.

Utilities

The City of Fair Grove supplies several utilities to its residents. The Fair Grove Public Water Supply, established in 1968, operates three wells and three storage tanks. The water is chlorinated and tested in accordance with Department of Natural Resources (DNR) regulations. The city's primary water supply comes from two aquifers: the Springfield Plateau Aquifer and the Deep Ozark Aquifer.

Empire District Electric and Southwest Electric Cooperative provide electric service. Water and sewer services are supplied by the city at residential rates that are lower than those of many surrounding municipalities. Trash services are provided by four solid waste haulers. Total Highspeed Internet Solutions provides residential and commercial internet services to the community.

Historic Properties



The City of Fair Grove is home to numerous historic properties, including several older buildings and residences. The city takes particular pride in the Wommack Mill, which was built in 1883 and remains fully operational to this day. The mill serves as a focal point for various community events, with the Heritage Festival being the most notable. Held annually on the last weekend of September, the festival attracts approximately 80,000 attendees each year, celebrating the city's rich history and heritage.

VULNERABILITY

Homes in Fair Grove are typically older construction. In 2024, there were 578 occupied housing units, with 234 of those built before 1980.

CAPABILITY ASSESSMENT

Facilities

The City of Fair Grove is home to a City Hall that houses the police department, municipal services, and a Greene County Library. The city also owns and operates its own wastewater treatment facility, which includes three substations that serve the community. Additionally, since its opening in 2019, the fire station, has housed both Mercy paramedics and fire personnel. In times of crisis, the Fair Grove High School serves as the designated Emergency Operations Center.

Building Codes

The City of Fair Grove has building codes that all residents must follow. To make it easier for residents, the city provides these building codes and regulations on its website.

Backup Systems

The City of Fair Grove has a generator that powers one of the three sewer lift stations. A mobile generator is also available for use in the event of a power outage at the government building, though it is limited to supporting essential services. Additionally, the city maintains a HAM radio in the Office of Emergency Management for backup communications. A FEMA shelter located on the Fair Grove School Campus is equipped with its own generator for emergency use.

Capability Improvements

improvement to the City of Fair Grove's emergency management capabilities would include the development of a Local Recovery Plan to provide a structured framework for rebuilding and restoring essential services after a disaster. Implementing a Fire Mitigation Plan would help identify wildfire risks and outline prevention strategies such as public education, vegetation management, and the creation of defensible space around properties. Additionally, establishing a Debris Management Plan would enable the city to efficiently remove and dispose of debris following severe weather events or other emergencies, reducing health hazards and expediting recovery. These plans would collectively enhance Fair Grove's resilience and ability to respond effectively to future disasters.

Fair Grove Capabilities

Executive Summary

Fair Grove has several foundational planning and regulatory capabilities, though many areas remain undeveloped, outdated, or with unknown status due to limited available data.

- **Planning**: The city has a Comprehensive Land-Use Plan (1999), a Capital Improvement Plan (2012), an Economic Development Plan (2017), and an updated Emergency Operations Plan (2021). However, it lacks a Local Recovery Plan, Debris Management Plan, and Fire Mitigation Plan. There is no standalone Transportation Plan, and many planning elements are marked as "n/a" or unreported.
- **Regulations**: Fair Grove has adopted core ordinances, including a Zoning Ordinance, Building Code (2018), Floodplain Ordinance (2010), and Drainage/Stormwater Ordinance. A Historic Preservation Ordinance was adopted in 2022. However, the city does not require site plan review, which can impact development oversight.

- **Programs & Participation**: Participation in the National Flood Insurance Program (NFIP) is indicated, but information on programs like CRS, StormReady, Firewise Certification, or hazard education programs is either not applicable or unknown. The city's ISO Fire Rating is listed, but the rating itself is not provided.
- **Risk & Mapping**: There is no available data on whether Critical Facilities or Vulnerable Population Inventories have been developed.
- **Staffing**: Staffing information is unavailable for key roles such as Building Inspector, Engineer, Floodplain Administrator, GIS, Planning, Public Works, and Emergency Management. It is unclear if a Local Emergency Planning Committee or related departments are in place.
- **Community & NGOs**: Fair Grove has some local civic infrastructure, including Homeowner Associations, Neighborhood Associations, and a Chamber of Commerce. However, there are no local chapters of the American Red Cross, Salvation Army, or Environmental Organizations. Information about veterans groups and civic organizations like Lions or Kiwanis is unavailable.
- **Funding**: The city has the ability to:
    - Apply for Community Development Block Grants
    - Fund projects through capital improvements
    - Levy taxes for specific purposes

  Other financial capabilities (e.g., utility fees, impact fees, bonding authority, private financing, or spending restrictions in hazard areas) are not reported.

Planning Capabilities		
Element	**Yes, No n/a**	**Comments and/or Weblink**
Comprehensive or Land-Use Plan	Yes	12/28/1999
Capital Improvement Plan	Yes	Mar-12
Transportation Plan / Highway Department	n/a	
Emergency Operations Plan	Yes	2021
Local Recovery Plan	No	
Debris Management Plan	n/a	
Firewise or Other Fire Mitigation Plan	No	
Economic Development Plan	Yes	2017
Policies/Ordinances		
Zoning Ordinance	Yes	400.01
Building Code	Yes	2018
Floodplain Ordinance	Yes	December 10, 2010
Drainage/Stormwater Ordinance	Yes	410.48
Site Plan Review Requirements	No	
Historic Preservation Ordinance	Yes	2022

Program		
National Flood Insurance Program (NFIP)		
NFIP Community Rating System	n/a	
National Weather Service (NWS)	n/a	
Storm Ready Certification		
Firewise Community Certification	n/a	
Building Code Effectiveness Grading (BCEGs)	n/a	
ISO Fire Rating	Rating:	
Public Education or information programs (i.e., responsible water use, fire safety, household preparedness, or environmental education)	n/a	
Mutual Aid Agreements	n/a	
Studies/Reports/Maps		
Critical Facilities Inventory	n/a	
Vulnerable Population Inventory	n/a	
Staff/Department		**Full Time or Part Time?**
Building Code Official/Building Inspector	n/a	
Engineer	n/a	
Development Planner	n/a	
NFIP Floodplain Administrator	n/a	
Mapping Specialist (GIS)	n/a	
Public Works Official	n/a	
Emergency Management Coordinator	n/a	
Local Emergency Planning Committee	n/a	
Sanitation Department	n/a	
Highway/Transportation Department	n/a	
Economic Development Department	n/a	
Housing Department	n/a	
Historic Preservation	n/a	

Non-Governmental Organizations (NGOs)	Is there a local chapter? Yes or No	
American Red Cross	No	
Salvation Army	No	
Veterans Groups	n/a	
Local Environmental Organization	No	
Homeowner Associations	Yes	
Neighborhood Associations	Yes	
Chamber of Commerce	Yes	
Community Organizations	n/a	
(Lions, Kiwanis, etc.)		

Financial Resources	Is Jurisdiction Able? Yes or No
Apply for Community Development Block Grants	Yes
Fund projects through Capital Improvements funding	Yes
Authority to levy taxes for specific purposes	Yes
Fees for water, sewer, gas, or electric services	n/a
Impact fees for new development	n/a
Incur debt through general obligation bonds	n/a
Incur debt through special tax bonds	n/a
Incur debt through private activities	n/a
Withhold spending in hazard prone areas	n/a

2.2.5 CITY OF REPUBLIC

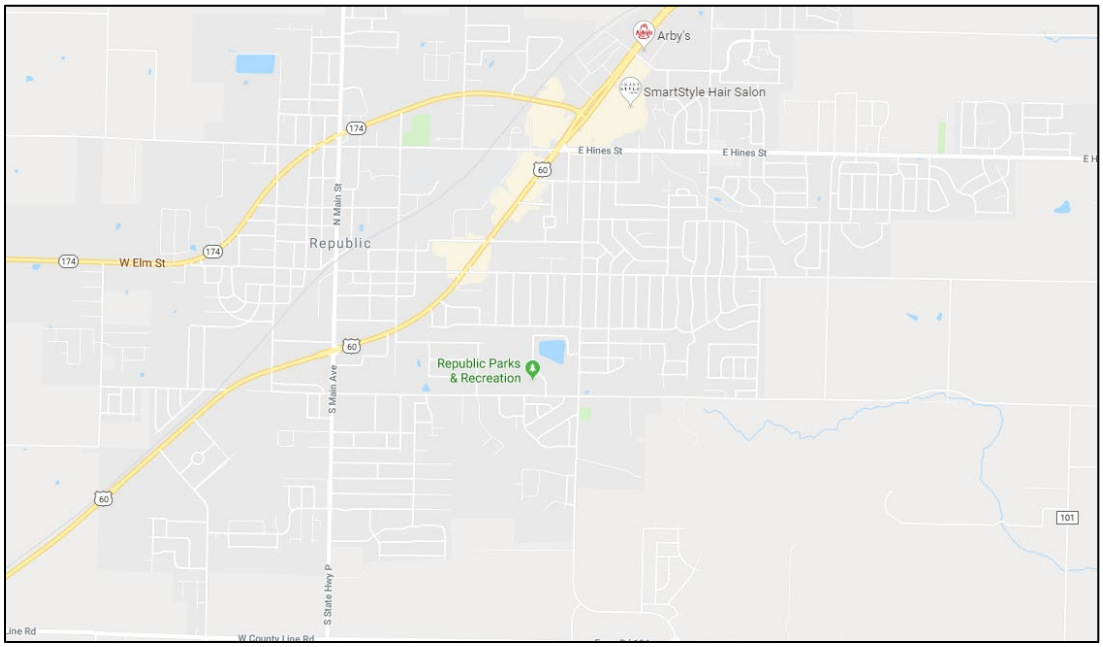
The City of Republic is in the southwestern part of Greene County, approximately thirteen miles from Springfield. Over the past few decades, the city has experienced significant growth and is now the second-largest community in the county. In 2000, the population was approximately 8,400 residents. By 2017, it had over 15,800, and by 2022, it reached 18,824.

Republic is a constitutional charter city under Article VI of the Missouri Constitution. The city government is structured with a City Council consisting of eight members elected from four wards, with two members representing each ward. The mayor, elected by the community, appoints a City Administrator, with City Council approval, to manage day-to-day city operations. The Mayor and City Council members serve two-year terms, with four council members elected each year. The City Council holds meetings on the 1st and 3rd Tuesdays of each month at 6:30 p.m.

The City of Republic operates with various departments and boards including:

- Board of Adjustments
- Communications and Public Information
- Community Development
- Emergency Management
- Finance
- Fire
- Human Resources
- Municipal Court
- Parks and Recreation
- Planning and Zoning Commission
- Police
- Public Works

The City of Republic is home to a variety of parks, providing recreational opportunities for its residents. There are nine parks strategically located throughout the city, with J.R. Martin Park being the largest. Located near the Republic School Campus, J.R. Martin Park hosts numerous events each year, including one of the city's largest Fourth of July celebrations.



General Population Characteristics

Characteristic	Number
Male Population	8,981
Female Population	9,843
Median Age (Years)	34
Total Population	18,824
Total Population	18,824

Source: U.S Census Bureau American Community Survey, 5-year Estimate 2022

Race

Race	Number
White	17,134
Black or African American	377
American Indian and Alaska Native	65
Asian	250
Native Hawaiian and Other Pacific Islander	0
Other Race	245
Two or More Races	753

Source: U.S Census Bureau American Community Survey, 5-year Estimate 2022

Housing Information

Housing Occupancy	Number
Occupied Housing Units	7,080
Vacant Housing Units	307
Owned Occupied Housing Units	4,205
Renter Occupied Housing Units	2,874
Total Housing Units	7,387

Source: U.S Census Bureau American Community Survey, 5-year Estimate 2022

MITIGATION INITIATIVES

Outdoor Warning Sirens

The City of Republic currently has 14 outdoor warning devices throughout the city to alert residents of impending hazards. Over the past several decades, these devices have evolved from mechanical horns to battery-backed mechanical sirens, and now to second-generation all-hazards electronic warning systems. This evolution allows the Republic Office of Emergency Management to deliver voice directions to the city's densely populated areas. The warning devices continuously report their operational status to the Emergency Operations Center (EOC) via two-way communication and can be activated remotely from the EOC, a fire engine, or three mobile command vehicles. Additionally, Civic Ready subscription services are available to all Republic residents through the city's webpage, and voice-enabled outdoor warning devices are strategically located at major green spaces.

Emergency Services

The City of Republic operates a full-time police department, which includes Communications, Criminal Investigations, Records, Patrol, and Auxiliary Divisions. The patrol structure consists of four squads, each supervised by a Sergeant and a Corporal. Divisional responsibilities include community policing, the protection of life and property, traffic safety and enforcement, and the apprehension of criminals, while enforcing local, state, and federal laws.

Additionally, Republic has a full-time fire district that provides 24/7 services to the community. For more information about the Republic Fire Protection District, please refer to their individual profile.

Advanced Life Support (ALS) ambulance services are provided by CoxHealth Systems, with a local ambulance base located at the city's west limits. The base is staffed 24 hours a day by state-licensed paramedics and Emergency Medical Technicians.

The city also has an Emergency Management Department, which is a division of the Republic Fire Protection District. The department consists of a director and nine part-time employees. Their responsibilities include National Weather Service storm spotting and reporting, National Incident Management Systems (NIMS) compliance, and maintaining and conducting exercises for the Emergency Operations Plan. They also collaborate with the Springfield-Greene County Office of Emergency Management.

Additional mitigation initiatives in the City of Republic include stormwater management through ongoing Flood Plain Management and Continuity of Operations (COOP) Planning.

Utilities

The City of Republic has a Public Works Department, which includes several divisions such as Animal Control, Street Division, Wastewater, and Water. The city provides its own water and sewer services to the residents. Electric service is provided by City Utilities of Springfield, Empire Electric, or Ozark Electric. Gas services are available through Spire or City Utilities of Springfield. Internet and cable services are provided by AT&T, Total Wireless, Cable America, and several other providers.

Historic Significant Disaster Events

The City of Republic and surrounding areas were impacted by a nationally declared disaster in January 2007. The 2007 Ice Storm caused a power outage that lasted for 30 hours, with full power restoration taking five days. During this time, city offices operated from the Emergency Operations Center (EOC) located within the Police Department.

In January 2008, Republic was also affected by a tornado, which caused damage along the north-central portion of the city, including the Lyon Elementary campus. Fortunately, there were no injuries or fatalities.

However, one business sustained damage and reopened within 30 days. Other damages included the destruction of six homes, moderate damage to an automotive repair shop, and the removal of a roof from the west wing of Lyon Elementary.

VULNERABILITY

BNSF operates railway tracks through the City of Republic, connecting the ports of California to the southeastern United States. This section of the rail line is frequently busy, transporting a wide range of potentially hazardous materials through the area. Additionally, Republic contains a significant number of older homes; of the 4,489 detached homes in the city, 3,245 were built in 1980 or earlier. The city also has 82 mobile homes and approximately 1,100 apartment units.

CAPABILITY ASSESSMENT

Facilities

Republic's City Hall serves as the central hub for most city departments.

The City of Republic's Community Development Department consists of six full-time employees, including the Community Development Director, Administrative Assistant, Principal Planner, Senior Planner, Building Official, and Code Compliance Official. The department's primary goal is to serve the citizens of Republic by providing guidance and assistance in the city's development through strategic planning, marketing efforts, and the oversight and enforcement of the city's Building Codes, Zoning Codes, and Subdivision Regulations.

Planning and Zoning

The City of Republic has a Planning and Zoning Commission consisting of seven citizens, all appointed by the mayor with the majority approval of the City Council. All members must be residents of the city, and each member serves a four-year term. The Planning and Zoning Commission meets on the second Monday of each month to review and make recommendations to the City Council regarding the approval or denial of rezoning cases, preliminary plats, special use permits, and amendments to the Zoning and Subdivision Regulations. The Commission's primary responsibility is to create, adopt, and amend a Comprehensive Plan that guides the city's development.

Backup Systems

Internal communication is supported by on-site servers with cloud-based backups. The city plans to establish a second server at a remote location to further enhance internal communication and storage capabilities. Key wastewater infrastructure, including lift stations and the wastewater facility, is equipped with emergency generators to ensure continued operation. The Police Department, Emergency Operations Center (EOC), and server room are also equipped with emergency generators, each providing a minimum of 30 hours of fuel storage. Additionally, all deep-water wells have emergency power backup.

Capability Improvements

Improvements for the City of Republic would be to develop a comprehensive Transportation Plan to guide the planning, maintenance, and expansion of transportation infrastructure. This plan could address traffic flow, public transit options, pedestrian and bicycle pathways, and emergency evacuation routes, enhancing mobility and safety for residents. Additionally, establishing a dedicated Sanitation Department would improve waste management services, including regular trash collection, recycling programs, and sanitation facility maintenance, contributing to public health, environmental protection, and overall community well-being. Implementing these capabilities would support Republic's sustainable growth and improve quality of life for its residents.

CITY OF REPUBLIC CAPABILITIES

Executive Summary

The City of Republic demonstrates a high level of readiness and organization, with comprehensive planning, robust staffing, and strong regulatory and financial capacity in place.

- **Planning**: Republic maintains an up-to-date Comprehensive Plan, a Capital Improvement Plan updated annually, and a current Emergency Operations Plan (Draft 2024). It has both a Local Recovery Plan (2018) and a Debris Management Plan (Draft 2024). A Fire Mitigation Plan (2004) is also in place. There is no standalone Transportation Plan, and an Economic Development Plan is not reported.
- **Regulations**: The city has adopted a full set of ordinances, including zoning, building codes (IBC 2018), floodplain, stormwater, and site plan review requirements. However, there is no Historic Preservation Ordinance currently in effect.
- **Programs & Participation**: Republic participates in the National Flood Insurance Program (NFIP) and has maintained National Weather Service (NWS) engagement since 2003. While it has not obtained StormReady or Firewise Community Certification, the city does offer public education programs through its Community Risk Reduction (CRR) initiative. Mutual aid agreements are active.
- **Risk & Mapping**: The city maintains both a Critical Facilities Inventory and a Vulnerable Population Inventory, supporting a data-driven approach to hazard mitigation and emergency response.
- **Staffing**: Republic is well-staffed across critical departments, including full-time positions for building code enforcement, engineering, planning, GIS, public works, emergency management, and floodplain administration. It also has a Local Emergency Planning Committee. The only notable gaps are the absence of a Sanitation and Housing Department.
- **Community & NGOs**: Republic benefits from strong community and regional support, with local chapters of the American Red Cross, Salvation Army, Veterans Groups, and active homeowner and neighborhood associations. The city is engaged with a Chamber of Commerce and other community organizations. It does not currently have a partnership with local environmental organizations.
- **Funding**: Republic has broad financial capability. It can:
    - Fund projects through Capital Improvement mechanisms
    - Levy taxes for specific uses
    - Charge fees for utility services
    - Collect impact fees
    - Incur debt through general obligation and special tax bonds
    - Withhold spending in hazard-prone areas

    The city's ability to apply for Community Development Block Grants or incur debt through private activities is not reported.

Planning Capabilities		
Element	**Yes, No n/a**	**Comments and/or Weblink**
Comprehensive or Land-Use Plan	Yes	https://republicmo.com/DocumentCenter/View/5367
Capital Improvement Plan	Yes	Updated Annually
Transportation Plan / Highway Department	n/a	
Emergency Operations Plan	Yes	Draft 2024

Local Recovery Plan	Yes	9/2018
Debris Management Plan	Yes	Draft 2024
Firewise or Other Fire Mitigation Plan	Yes	2004 CRR
Economic Development Plan	N/A	
Policies/Ordinances		
Zoning Ordinance	Yes	
Building Code	IBC	2018
Floodplain Ordinance	Yes	December 10, 2010
Drainage/Stormwater Ordinance	Yes	
Site Plan Review Requirements	Yes	Builds TRT
Historic Preservation Ordinance	No	
Program		
National Flood Insurance Program (NFIP)	Yes	
NFIP Community Rating System	n/a	
National Weather Service (NWS)	Yes	Maintained since 2003
Storm Ready Certification		
Firewise Community Certification	No	
Building Code Effectiveness Grading (BCEGs)	n/a	
ISO Fire Rating	Rating: 2	
Public Education or information programs (i.e., responsible water use, fire safety, household preparedness, or environmental education	Yes	CRR
Mutual Aid Agreements	Yes	
Studies/Reports/Maps		
Critical Facilities Inventory	Yes	
Vulnerable Population Inventory	Yes	
Staff/Department		**Full Time or Part Time?**
Building Code Official/Building Inspector	Yes	Full Time
Engineer	Yes	Full Time
Development Planner	Yes	Full Time
NFIP Floodplain Administrator	Yes	Full Time

Mapping Specialist (GIS)	Yes	Full Time
Public Works Official	Yes	Full Time
Emergency Management Coordinator	Yes	Full Time
Local Emergency Planning Committee	Yes	
Sanitation Department	No	
Highway/Transportation Department	Yes	
Economic Development Department	Yes	
Housing Department	No	
Historic Preservation	Yes	
Non-Governmental Organizations (NGOs)	**Is there a local chapter? Yes or No**	
American Red Cross	Yes	
Salvation Army	Yes	
Veterans Groups	Yes	
Local Environmental Organization	No	
Homeowner Associations	Yes	
Neighborhood Associations	Yes	
Chamber of Commerce	Yes	
Community Organizations (Lions, Kiwanis, etc.)	Yes	

Financial Resources	**Is jurisdiction able? Yes or No**
Apply for Community Development Block Grants	N/A
Fund projects through Capital Improvements funding	Yes
Authority to levy taxes for specific purposes	Yes
Fees for water, sewer, gas, or electric services	Yes
Impact fees for new development	Yes
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Incur debt through private activities	n/a
Withhold spending in hazard prone areas	Yes

2.2.6 CITY OF SPRINGFIELD

Springfield, the county seat of Greene County, is the third-largest city in Missouri and has experienced consistent growth over the years. In 2000, Springfield's population was approximately 151,000. By 2017, this number had risen to 165,785, and in 2022, the city's estimated population reached 170,062. Springfield operates under a non-partisan City Council and a council-manager form of government. The City Council sets policy and direction, while the City Manager oversees the day-to-day operations of city departments.

Under the city's charter, eight council members are elected for four-year terms, and the mayor is elected for a two-year term. The mayor serves as the presiding officer at council meetings. Council meetings are held every other Monday at 6:30 p.m., with additional lunch meetings on Tuesdays at noon. These meetings are broadcast on Mediacom channels 15.1 and 80, AT&T U-verse Channel 99, and are also available for online viewing. The City Manager, appointed by the City Council, serves as the city's chief administrative officer.

The City of Springfield has a variety of departments, including the following:

- Airport
- Art Museum
- Attorney
- Building Development
- City Manager
- City Clerk
- Economic Development
- 9-1-1 Emergency Communications
- Emergency Management
- Environmental Services
- Finance
- Fire
- Hazelwood Cemetery
- Health
- Human Resources
- Information Systems
- Licensing
- Municipal Court
- Parks and Recreation
- Planning and Development
- Police
- Public Information
- Public Works
- Purchasing
- Workforce Development



As the largest city in Greene County, Springfield serves as a hub for many residents of surrounding counties who commute to participate in various activities and programs. The city is home to numerous parks, which are detailed in the Risk Assessment Section.

General Population Characteristics

Characteristic	Number
Male Population	84,789
Female Population	85,273
Median Age (Years)	33
Total Population	170,062

Source: U.S. Census Bureau American Community Survey, 5 year- 2018-2022

Race

Race	Number
White	137,235
Black or African American	8,063
American Indian and Alaska Native	1,334
Asian	3,853
Native Hawaiian and Other Pacific Islander	304
Other Race	3,731
Two or More Races	14,656

Source: U.S. Census Bureau American Community Survey, 5 year- 2018-2022

Housing Information

Housing Occupancy	Number
Occupied Housing Units	77,278
Vacant Housing Units	7,051
Owned Occupied Housing Units	34,322
Renter Occupied Housing Units	50,007
Total Housing Units	84,329

Source: U.S. Census Bureau American Community Survey, 5 year- 2018-2022

MITIGATION INITIATIVES

The City of Springfield's primary mitigation programs focus on floodplain management, which includes regulations updated in 2002, and participation in the National Flood Insurance Program (NFIP). These programs are designed to protect the health, safety, and welfare of residents. The goals include safeguarding health and property during floods, minimizing the increase in flood size, mitigating losses when public facilities are constructed, and preventing the purchase of land unsuitable for development due to flood risks.

Under the Federal Clean Water Act, any construction, placement, or disposal of fill material or earth movement within a floodplain or water body requires certification. Following the severe flooding of 1993, floodplain regulations were revised and are continually reviewed.

The City of Springfield actively participates in the National Flood Insurance Program. The city's floodplain ordinance requires that all structures within floodplains be elevated 12 inches above the Base Flood Elevation (BFE), or the 100-year water surface elevation, as established by FEMA. The ordinance also limits development in floodways to projects that will not increase the BFE. These regulations have positively impacted stormwater quality, erosion control, and pollution runoff into streams and tributaries, promoting the development of buffer strips along major waterways. For more information on Springfield's participation in the NFIP, please refer to Section 3.6.

Both city and county floodplain regulations aim to restrict new development in floodplains. After the 1993 floods, a property acquisition program was initiated, funded through FEMA's Hazard Mitigation Grant Program. To date, 120 properties (110 homes and 10 vacant properties) have been purchased in Springfield, funded through a combination of grants and Stormwater Level Property Tax monies, totaling $9 million since 1993.

Stormwater regulations are designed to reduce the harmful effects of erosion, sedimentation, and flooding caused by stormwater runoff. This is achieved through measures to mitigate erosion during and after construction, the detention and controlled discharge of runoff from new developments, and a well-planned stormwater conveyance system.

Outdoor Warning Systems

The City of Springfield currently operates 52 outdoor warning sirens throughout the city. The Springfield-Greene County Office of Emergency Management is responsible for activating the warning sirens, with the Emergency Communications Center for the City of Springfield serving as the secondary activation center. The sirens are maintained by the Springfield Public Works Department to ensure they function properly.

The sirens are tested on the second Wednesday of every month at 10:00 AM, unless weather conditions prevent testing. Sirens are activated under the following conditions:

- The National Weather Service (NWS) issues a tornado warning that includes areas within the warned polygon and in the storm's path.
- A trained spotter reports rotation, funnel clouds, or a tornado within the jurisdiction, including storms tracking from Greene County or adjacent counties.
- The NWS issues a thunderstorm warning for life-threatening winds of 75 mph or greater.
- Maintenance is required for the sirens.

EMERGENCY SERVICES

Springfield Police Department

The City of Springfield operates a large police department. Consisting of 367 sworn officers and 81 civilian employees, serving a population of 170,188 across 82.5 square miles. The department is organized into two bureaus and provides a wide range of services, including patrol, criminal investigations, traffic units, specialized units, and more. The Springfield Police Department has several stations and substations

throughout the city. Additionally, the department contracts with local universities to provide security and services to the large university communities in Springfield.

Springfield Police Department Locations

Facility	Location
Headquarters	321 E. Chestnut Expressway
South District Station	2620 W. Battlefield Road
MSU Sub-Station	363 E. Elm Street

Springfield Fire Department

The City of Springfield is served by a large fire protection district with 13 strategically located stations throughout the city. The department offers a wide range of services, including fire suppression, water rescue, hazardous materials response, medical services, fire prevention, technical rescue, investigations, and inspections. Serving over 82 square miles, the department is staffed by more than 220 dedicated full-time professionals and is accredited with an ISO 2 rating.

Springfield Fire Department Locations

Facility Name	Address
Springfield Fire Department Offices	830 N. Boonville Avenue
Station 1	720 E. Grand Street
Station 2	608 W. Commercial Street
Station 3	205 N. Patterson Avenue.
Station 4	2423 N. Delaware Street
Station 5	2750 W. Kearney Street
Station 6	2620 W. Battlefield Road
Station 7	2129 E. Sunshine Street
Station 8	1405 S. Scenic Avenue
Station 9	450 W. Walnut Lawn Street
Station 10	2245 E. Galloway Street
Station 11	4940 S. Fremont Avenue
Station 12	2455 S. Blackman Road
Station 13	1900 W. College Street

Springfield Health Care Facilities

Hospital Name	Location	About
CoxHealth	Cox South - 3801 S. National Avenue Springfield	CoxHealth has six hospitals, more than 80 physician clinics, five emergency departments, a Level 1 trauma center, walk-in clinics, and urgent care facilities, including a 24/7 urgent care in Springfield.
	Cox North - 1423 N. Jefferson Avenue Springfield	
Mercy Hospital Springfield	1235 E. Cherokee Street Springfield	Mercy Springfield has an Emergency Department, urgent care, air ambulance, a Burn Center, a Level 1 Trauma Center and is a Medical Research Institute.

MEDIA RELATIONS

Newspapers and Magazines

The Springfield News-Leader and the Springfield Daily Citizen are the official newspapers of Springfield. Additionally, the Springfield Business Journal offers in-depth coverage of local business news. All three publications provide comprehensive coverage of planning and mitigation issues. Several other newspapers and magazines, owned by colleges or private organizations, focus on specialized local topics.

Springfield Area Newspapers and Magazines

Source	Location
Springfield Neighborhood News	Springfield
Springfield Daily Citizen	Springfield
Daily Events	Springfield
Springfield News-Leader	Springfield
Springfield Business Journal	Springfield
Drury Mirror	Drury University
The Standard	Missouri State University

Springfield Radio Stations

Springfield is served by 28 radio stations, many of which provide in-depth coverage of local issues. The city's broadcast media also offers weather reports and warnings, specifying which cities and counties are at risk. Most radio stations cover all jurisdictions within Greene County. A complete list of media outlets is provided below:

FM Radio Frequencies

KWND 88.3 FM	K204DT 88.7 FM	KWFC 89.1 FM
KCKJ 89.5 FM	KOZO 89.7 FM	KSCV 90.1 FM
KSMS 90.5 FM	KSMU 91.1 FM	WJFM 91.5 FM
KQOH 91.9 FM	K222CT 92.3 FM	KOSP 92.9 FM
KBFL 97.7 FM	KTTS 94.7 FM	KTOZ 95.5 FM
KSPW 96.5 FM	KXUS 97.3 FM	KDRU 98.1 FM
KTXR 98.7 FM	KYOO 99.1 FM	KADI 99.5 FM
KBFL 99.9 FM	KOMC 100.1 FM	KSWF 100.5 FM
KWTO 101.3 FM	KQRA 102.1 FM	KHBZ 102.9 FM
KWPQ 103.3 FM	KJEL 103.7 FM	KSGF 104.1 FM
KKLH 104.7 FM	KOMG 105.1 FM	KGBX 105.9 FM
KRZK 106.3 FM	KRVI 106.7 FM	K298CI 107.5 FM
KIRS 107.7 FM	KVTS 107.9 FM	

AM Radio Frequencies

KWTO 560 AM	KBNN 750 AM	WHB 810 AM
KKOW 860	KSWM 940 AM	KRMO 990 AM
KBFL 1060 AM	KJCW 1100 AM	KYOO 1200 AM
KCAX 1220 AM	KSGF 1260 AM	KICK 1340 AM
KGMY 1400 AM	KMRF 1510 AM	KRZD 1550 AM
KBCV 1570 AM		

Cable Television

There are several cable providers offering services to Springfield-Greene County residents, including Suddenlink, Mediacom, AT&T, Spring Net, and others. The Springfield-Greene County Emergency Communications Center has access to the cable-interrupt system. Below is a list of local television stations that provide emergency information:

Cable Television Channels

KYTV, NBC	KOLR, CBS	KRBK, FOX
PBS	KSPR, ABC	KOZK, Ozark Public Broadcasting
KSFX	City View Local Government News	

Employment

The economy in Springfield is diverse, with a greater reliance on the services and trade sectors compared to the state. The table below provides a profile of employment across various economic segments in Springfield.

Industry	Number Of Employees	Percentage
Agriculture, forestry, fishing and hunting, and mining	764	.06%
Construction	7,098	5.1%
Manufacturing	11,724	8.5%
Wholesale Trade	4,497	3.3%
Retail Trade	18,523	13.4%
Transportation, Warehousing, and Utilities	6,772	4.9%
Information	3,138	2.3%
Finance and Insurance, real estate, rental and leasing	8,945	6.5%
Professional, Scientific, management, administrative and waste management services	13,945	10.1%
Educational Services, health care and social assistance	36,478	26.4%
Arts, entertainment, recreation, accommodation and food service	14,341	10.4%
Other services, expect public administration	7,625	5.5%
Public administration	4,233	3.1%

Source: U.S Census Bureau 5 Year Estimates

Springfield Major Employers

Company Name	Industry	Region	Company-Wide
CoxHealth	Healthcare	11,669	11,669
Mercy Hospital Springfield	Healthcare	10,950	41,585
Walmart, Inc.	Retail	5,372	2,300,000
Springfield Public Schools	Education	4,100	4,100
State of Missouri	Government	4,018	51,399
Bass Pro Shops	Retail/Manufacturing	3,341	32,915
United States Government	Government	3,005	2,811,000
Missouri State University	Education	2,874	2,998
Jack Henry and Associates, Inc.	Software Development	2,174	6,347
O'Reilly Auto Parts (HQ)	Retail/Manufacturing	2,042	61,312

Source: Springfield Chamber of Commerce

LARGE RECREATION CENTERS

Brightspeed Ice Park

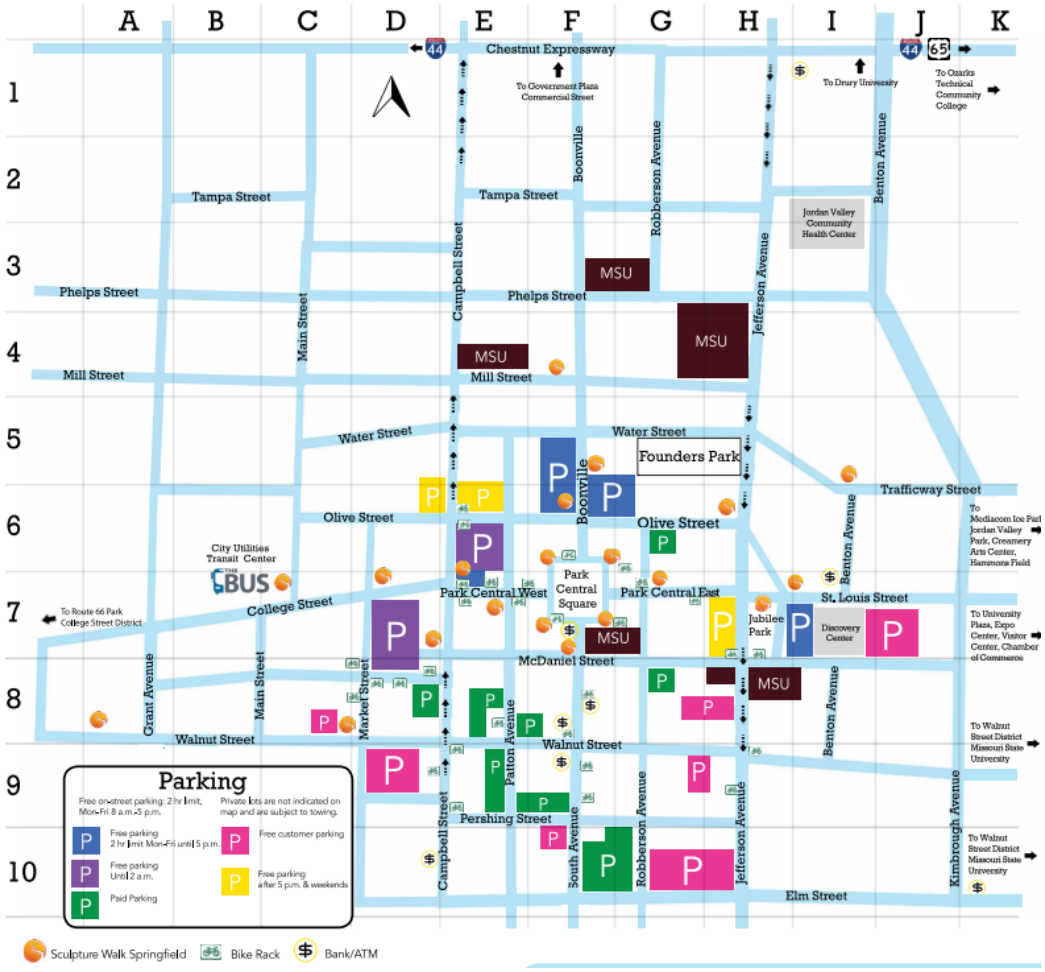
Springfield's downtown has experienced significant changes over the last five years, aiming to attract more citizens to its businesses, shops, and recreational facilities. A central feature of the Downtown Revitalization Program is Jordan Valley Park. Designed to blend open space, buildings, water features, meadows, playgrounds, and plazas, the park offers a space for both recreation and revitalization. Spanning 250 acres across multiple city blocks, the park includes the Brightspeed Ice Park, previously the Jordan Valley Ice Park, which serves as a venue for both recreational and competitive ice skating. Citizens can enjoy open ice skating, figure skating, and even join a hockey team.

The Ice Park is home to several organizations, including the Missouri State University (MSU) Hockey Bears, the Springfield Youth Hockey Association, the Jordan Valley Figure Skating Club, and the Springfield Wolfpack, an indoor football team. The facility is also available for rent for parties, group functions, or special events.

Springfield Exposition Center

The Springfield Exposition Center, a 112,000-square-foot conference facility, is in downtown Springfield. It hosts trade shows, conventions, concerts, sporting events, and a wide variety of activities throughout the year.

Downtown Springfield



Downtown Springfield offers several parking options, including a 900-vehicle multi-level parking garage with retail space on the street level. In total, downtown boasts 6,000 parking spaces, as shown on the accompanying map. The area also hosts multiple events throughout the year, including the Birthplace of Route 66 Festival, which attracts over 55,000 attendees.

Great Southern Arena

Located on the Missouri State University campus, the Great Southern Arena is home to the MSU Bears basketball teams. In addition to sporting events, the arena hosts concerts, church events, graduations, bull riding, and a variety of other activities. The arena has a seating capacity of 11,000.

Founders Park

Founders Park is located on a 0.7-acre site at the corner of Jefferson Avenue and Water Street, marking the location where John Polk Campbell made the original tree blaze in 1829, signifying the beginning of Springfield's development. The site has a rich history, having previously hosted a stone quarry, blacksmith shop, the Herman-Stanford Horse Collar Factory, the Silsby Stove and Hardware Company, a lumberyard, and a railroad right-of-way. Today, Founders Park features a 250-seat amphitheater with an 18’ by 30’ stage, offering a venue for various community events.

Hammons Field



Hammons Field, which opened in April 2004, is the home of the Springfield Cardinals, a Class AA minor league baseball team, and the Missouri State University Baseball Bears. The 8,056-seat stadium boasts 28 luxury box suites with kitchenettes and a variety of concessions. For families looking for a more affordable option, Hammons Field also provides hillside seating, where fans can spread out blankets and enjoy the game from a grassy knoll with a great view of the park, offering an authentic baseball experience.

The stadium is comparable to any top-tier minor league facility in the country, featuring a state-of-the-art drainage system than can withstand monsoon-like rains, allowing the field to be ready for play within 30 to 45 minutes. Additionally, Hammons Field is home to the largest video scoreboard of any minor league park in the United States.

Ozark Empire Fairgrounds



The Ozark Empire Fair began in the early 1900s as a traveling display of local crafts and handmade goods. Initially held at various locations within Springfield, the fair lacked a permanent home. In the late 1920s and early 1930s, the event was held at a site near what is now Pickwick and Grand Streets. However, as the fair grew, the need for a permanent location became clear.

In the early 1930s, a group of local businessmen, led by Louis Reps, began searching for a suitable site. They found an ideal location adjacent to the city's zoo grounds, which included the city's racetrack and grandstand. This site was perfect due to its large acreage and picturesque, tree-filled hills. Although the racetrack was somewhat basic, it was adequate for the grandstand events planned for future fairs.

The land was already owned by the Springfield Park Department, and once the site was approved, the committee proposed a ¼-mill tax levy to fund improvements to the grounds. Stocks were issued and sold to investors at ten dollars per share, along with special donations, to provide the initial working capital for the Fair's first year.

EPlex and Event Center



The Ozark Empire Fairgrounds and Event Center features the EPlex, which offers 85,100 square feet of clear-span exhibit space for year-round use. In addition, the complex includes an 8,000-seat roofed Grandstand for outdoor events.

The EPlex houses three heated and air-conditioned exhibition halls, connected by the 2,000-square-foot Darr Family Lobby. The East, West, and Center Halls can be used individually or combined for larger events. These exhibit halls are ideal for consumer and private trade shows, exhibitions, receptions, meetings, seminars, and training sessions.

Both the East and West Halls have convenient cargo access with large overhead drive-in doors and loading docks, facilitating efficient move-in and move-out. The facility offers ample parking space, with a capacity for 4,000 vehicles located adjacent to the Fairgrounds. Each of the East and West Halls measure 150' x 250', offering 33,000 square feet of net usable space. The halls feature their own restrooms, water fountains, concession stands, seminar rooms, and small offices. Each hall can accommodate approximately 170 10x10 booths. The ceiling height is 28' at the center, 18' at the side walls, and 14' of clearance at the exposed sidewall columns.

Center Hall Features

Designed for flexibility, Center Hall can be fully opened to accommodate various events, such as:

- Forty-two 10' x 10' booths for trade shows
- 4,000 seats for banquets
- 1,000 seats in a theater-style arrangement

Center Hall can also be divided into as many as six smaller rooms using folding partition walls. These walls and the upper plenum are designed to minimize sound interference from concurrent events, and the space features controllable lighting. Center Hall also has its own restrooms and sealed concrete floors.

Each year, for a ten-day period from late July to early August, the Ozark Empire Fairgrounds hosts the Ozarks Empire Fair. This 10-day event features park rides, games, food vendors, entertainment, attracting thousands of visitors from the surrounding region.

Wilson Logistics Areana

Opened in January 2024, the arena offers over 6,400 seats, including 2,800+ in the upper level. With a concrete floor that can be transformed into a dirt floor, the 100,000-square-foot venue accommodates a variety of events, such as trade shows, concerts, sporting events, cheer competitions, motor sports, horse shows, livestock exhibitions, and more.

The venue includes dining options like the Triple S Properties Bar and Grill, seating 130 with a full kitchen, perfect for private events. There are also three remote concession stands for easy access to food and drinks.

For VIP experiences, the Little Ranch and Cattle Club offers a private setting with a glass front for a view into the arena, plus additional VIP seating overlooking the arena bowl. This space can host up to 300 guests and is ideal for meetings, parties, or exclusive VIP access during events. The Ed & Carol Pinegar Ag

Learning Center, located on the lower level, features 10,000 square feet of trade show space available for rent separately. This versatile facility is perfect for large-scale gatherings and offers exceptional flexibility for all types of events.

Public Involvement

Springfield hosts many events throughout the year to educate and raise awareness about severe weather and safety among Springfield-Greene County residents. Held at Battlefield Mall in March, the Severe Weather Expo is designed to equip southwest Missouri families with the tools and knowledge they need to prepare for severe weather. The event offers educational materials, safety tips, and access to emergency preparedness resources to help families stay safe during weather emergencies.

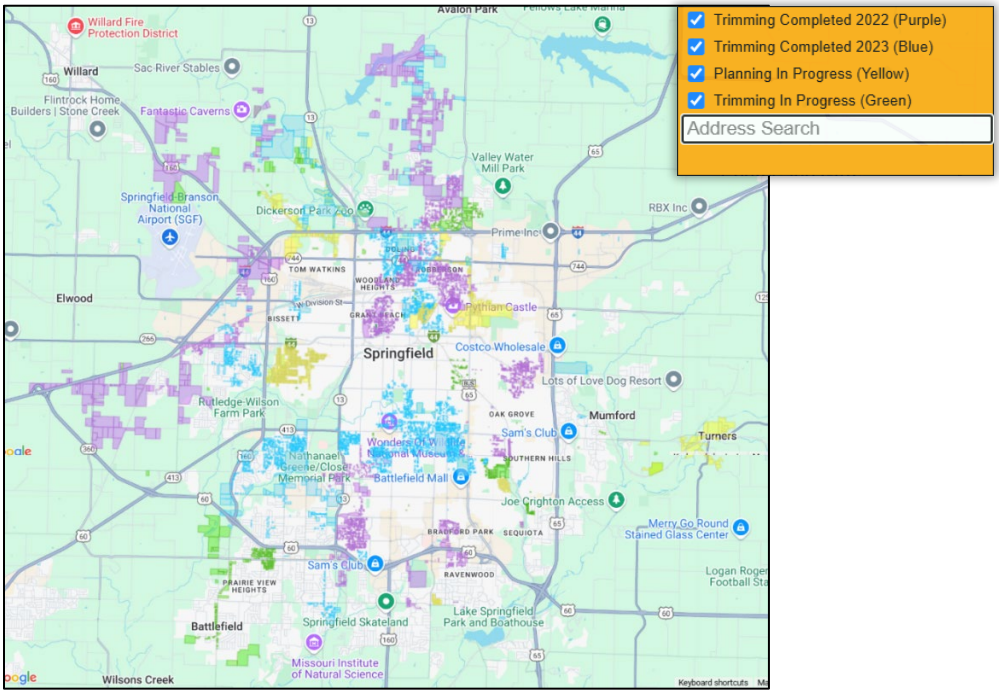
Safe Kids Springfield is an organization dedicated to providing safety programs for children, including water safety education, parent training, bike safety, car seat/seatbelt safety, fire safety, home safety, and many other topics. Springfield is committed to making Greene County residents healthier, safer, and better prepared for emergencies.

Public Programs

The Springfield Fire Department is committed to enhancing community safety by offering a range of educational programs designed to empower residents with essential emergency preparedness skills. One such program is Stop the Bleed, which teaches individuals how to control bleeding in mass casualty events or emergencies. The fire department also offers CPR and AED training to help individuals learn life-saving techniques for performing cardiopulmonary resuscitation (CPR) and using an Automated External Defibrillator (AED). Fire extinguisher training, fire safety presentations, home safety surveys, and overcrowding prevention are all programs that are part of the Fire Department's efforts to enhance public safety and provide education to the community.

Tree Trimming

City Utilities regularly conducts tree trimming services in the Springfield-Greene County area to maintain safety and ensure reliable utility services. Below is a map highlighting past and upcoming tree trimming locations.



Source: CU interactive Tree Trimming Map 2025

Utilities

City Utilities provides electricity and natural gas to all residents within the Springfield city limits. Serving an area of 320 square miles and approximately 229,000 residents, City Utilities employs around 940 full-time staff members.

Electricity

City Utilities supplies electricity to customers within the city limits and the urban service area. The utility operates two fossil fuel power-generating plants with a combined capacity of 758 MW, as well as three combustion turbine power-generating stations that provide a combined 359 MW capacity. Additionally, City Utilities manages the Noble Hill Landfill Renewable Energy Center and utilizes long-term purchased power sources, including the CU Solar Farm (5 MW) and Smoky Hills Wind Energy (50 MW).

As Springfield continues to grow, the demand for electricity also increases. In 1980, City Utilities supplied electricity to 60,000 customers; today, that number has grown to over 200,000.

Natural Gas

In partnership with their natural gas supplier, City Utilities provides natural gas service to residents and businesses within the city limits of Springfield and the urban service area, which extends just outside the city's corporate boundaries.

Waste Facilities

Facility Name	Address
Noble Hill Sanitary Landfill	3545 W. Farm Road 34, Willard, MO
Franklin Recycling Center	731 N. Franklin Street, Springfield, MO
Lone Pine Recycling Center	3020 S. Lone Pine Avenue, Springfield, MO
Household Chemical Collection Center	1226 W. Nichols Street, Springfield, MO
Yard Waste Recycling Center	3790 S. Farm Road 119, Brookline, MO

Stormwater Engineering

The Stormwater Engineering Division of the Department of Public Works, along with the Water Quality Division of the Department of Environmental Services, work together to provide programs, projects, and services aimed at addressing the community’s stormwater management needs and protecting the quality of the area’s streams, rivers, and lakes. In April 2018, the City of Springfield published the Flood Control and Water Quality Protection Manual, which provides detailed information on stormwater design specifically for Springfield. This manual can be found on the City of Springfield’s website.

Historic Properties and Districts/Archaeological Sites

Founded in 1835 by John Polk Campbell and named after the spring and field on his property, Springfield was officially established in 1838. In 1858, the town gained national recognition as a stop on the Butterfield Overland Mail route, a stagecoach line connecting Tipton, Missouri, to San Francisco. Springfield was also a site of significant conflict, particularly during the Battle of Wilson Creek in August 1861, Zagonyi’s Charge in October 1861, and the Battle of Springfield in 1863. The arrival of the first train from the Atlantic-Pacific Railway in 1870, which later became the St. Louis-San Francisco Railway (known as "Frisco"), marked a major milestone in the area’s economic development.

For a complete list of historical sites in Greene County, please see Table 3.9.

The Pearson Creek Archaeological District, also known by names such as the Pierson Creek Mines, Phelps Diggings, and Schoolcraft's Camps, is in a restricted-access area of Springfield.

IDENTIFIED ASSETS

The quality of life and the economy of Springfield depend on the efficient movement of people and goods, both locally and beyond, including regionally, nationally, and internationally. Below is a list of major roadways within the City of Springfield. In addition to these, many residents also utilize highways and roadways that extend throughout the county, such as Interstate 44. This list, however, specifically focuses on roadways located within Springfield.

Major Springfield Corridors

Streets	Location
Kearney Street	East/West corridor from east of U.S. Highway 65 to the Springfield/Branson Regional Airport
Division Street	East/West corridor from east of U.S. Highway 65, west into the county (State Highway EE)
Chestnut Expressway	East/West corridor from east of U.S. Highway 65, west into the county (State Highway 266)
Sunshine Street	East/West corridor from U.S. Highway 65, turning into State highway 13, west into the county
Battlefield Road	East/West corridor from just east of U.S. Highway 65 to the West Bypass
Republic Road	East/West corridor from approximately Glenstone Avenue, west into the county (State Highway M)
National Avenue	North/South corridor from just north of I-44, south into the county
Glenstone Avenue	North/South corridor from north of I-44 to the James River Freeway
Campbell Avenue	North/South corridor from I-44 to the south into the county (U.S. Highway 160)
Kansas Expressway	North/South corridor from north of I-44 to Republic Road
West Bypass	North/South corridor from north of I-44, turning into State Highway FF

The primary mode of transportation in Springfield is the private automobile. Over the past several decades, the number of vehicles has grown at a rate that exceeds the population growth. The goal in planning the area's streets and highways is to create an adequate system of thoroughfares that supports logical community development, ensures safe and efficient movement of people and goods, and maximizes the economical use of public funds.

Airports



The Springfield-Branson National Airport is the largest airport in Southwest Missouri. In May of 2009, the airport moved from the terminal accessed via Kearney Street to the new 275,000 square foot Midfield Terminal, located at 2300 Airport Boulevard. The move was necessary because the previous airport site was landlocked by industrial buildings and runways.

The Midfield Terminal is designed to be environmentally efficient, minimizing heat absorption and loss of air conditioning, while utilizing clean-burning natural gas for heating. The building's design reflects the natural beauty of the Ozarks, with porcelain tiles wrapping around interior and exterior walls, inspired by the dramatic rock formations along Highway 65.

The terminal currently features 10 fully functional gates, with the capacity to expand to 60 gates as demand grows. Everything in the terminal is on one level, with direct flights to 10 destinations offered by four airlines: American, Allegiant, Delta, and United Airlines. Passengers can fly directly to Las Vegas, Los Angeles, Phoenix, Denver, Dallas, Chicago, Atlanta, Fort Meyers, Tampa, and Orlando.

Additionally, Springfield is home to a privately owned airport open for public use. It covers an area of 160 acres and has one runway.

CAPABILITY ASSESSMENT

Center City

Center City Springfield consists of four distinct districts: Downtown, Commercial Street, Walnut Street, and the Government Plaza/Central Street Corridor. This area aims to develop these urban districts, each centered around high-quality public spaces, and connected to one another as a unified whole, collectively recognized as Center City. Key goals for Center City development include:

- Transforming Center City into four unique, vibrant districts
- Designing each district around attractive public streets and spaces
- Clearly defining boundaries and creating strong links between the districts
- Strengthening the Urban District Alliance to guide the development of Center City

Cultural Planning

The Springfield Regional Cultural Plan serves as a community-wide blueprint for promoting and developing healthy arts and cultural organizations. It focuses on creating a vibrant Center City with rich artistic elements, accessible arts education, leadership in regional cultural development, and an environment that attracts, supports, and retains artists. A Cultural Plan Steering Committee, facilitated by the Springfield Regional Arts Council, has been established to provide comprehensive stewardship throughout the planning, implementation, and evaluation stages of the Cultural Plan. The goals of the Five-Year Plan include:

- Foster and build a community of artists and supporters of the arts, such as teachers, churches, visual arts organizations, performing arts organizations, and cultural organizations, to strengthen Springfield's reputation as an authentic, arts-rich community.

- Fund and support the growth of arts and cultural development through targeted investments and strategic partnerships.
- Stabilize and strengthen arts and cultural organizations by offering not only funding but also fostering collaboration, leadership development, training, and effective communication.
- Provide leadership for regional arts and cultural development, positioning Springfield as the cultural hub of the Ozarks.
- Increase interest, participation, and support from both residents and visitors for arts and cultural events across the Springfield region.
- Raise awareness of the economic impact of the arts, demonstrating its role as a key building block in economic and community development.
- Contribute to the further creation of a vibrant Center City as the region's heart, enriched by arts and culture.
- Strengthen lifelong education efforts, ensuring access for all ages and fostering partnerships in higher education, schools, and the community, with a focus on education through the arts.

Growth Management and Land Use

The Growth Management Action Plan outlines a five-year strategic approach to the actions found in the Growth Management and Land Use Plan, which is one element of the Springfield-Greene County Comprehensive Plan. This strategic plan will guide citizens and elected officials in managing growth and land use throughout Springfield and Greene County over the next five years.

Strategic Action Plan

- Implement a Unified Development Ordinance for the Urban Service Area by initiating an ordinance change. This will standardize development regulations in both Springfield and Greene County for greater consistency.
- Reserve adequate public right-of-way for any future arterial roads by adopting an "official map" of the planned road system. For any road right-of-way needed beyond what may be required during land subdivision, the necessary land should be acquired by purchase. The required width of the future arterial roads should be based upon the standards outlined in the Vision 20/20 Transportation Plan.
- Enhance quality of life by using parks and linear public open spaces. These spaces will provide recreation and exercise opportunities, protect sensitive environmental resources, guide and enhance development, and shape the community's overall form.
- Establish the future function and design for all roads in and around Springfield as far in advance as possible. This can be achieved by adopting and following the Vision 20/20 Transportation Plan, which outlines future road alignments, functional classifications, and right-of-way dimensions.

Public Education

Strategic Action Plan

- Develop a public awareness plan to inform the community about the unique learning opportunities at Springfield Public Schools, using non-tax dollars. This plan will highlight the quality of education currently available to students and enhance public recognition of the district's strengths.
- Expand efforts to secure alternative revenue sources such as income tax or sales tax, to increase funding for Springfield Public Schools and ensure a more stable revenue stream.
- Continue the Vision 20/20 Education Planning Group to monitor the progress of accepted recommendations and provide ongoing feedback on critical issues involving education.

- Support the creation of a Commission on Children to focus on important early childhood initiatives and issues, ensuring a strong foundation for the youngest learners.
- Offer school choice options within the public school district by providing programs and schools that offer unique learning environments and opportunities for students.
- Emphasize academic achievement by maintaining or reducing class sizes to the “desirable” level, as defined in the Missouri School Improvement Plan, ensuring quality education for every student.

Regional Planning

The Springfield-Greene County area has become a metropolitan region where each community in the region has ties with many others. Better transportation systems, population growth, jobs, education, and health care facilities have served to create interdependence among the various communities in the region.

Over time, organizations have been formed to address issues that go beyond city and county, such as environmental issues, transportation concerns, economic development, and others. Coordination among agencies with overlapping boundaries or scope can provide opportunities for collaboration and avoid duplication.

Strategic Action Plan

- Develop growth area or urban service area agreements among Springfield, surrounding communities in Greene County, and Nixa, Ozark, and Fremont Hills in Christian County.
- Determine where regional organizations can share or consolidate resources or responsibilities.
- Coordinate transportation issues on a multi-county level.
- Ensure appropriate labor-skill levels throughout the region to meet workforce needs.
- Encourage Open Space and Greenway planning and trail development on a regional scale that provides connections throughout the region.
- Continue to market the region as a tourist destination and incorporate the concept of eco-tourism to take advantage of our natural features, including streams, National Forests, and multitudes of outdoor activities and challenges.

Building Codes

The City of Springfield is a Class 1 city with a municipal government established under its City Charter, operating as a "council-manager government." In accordance with the Charter, and subject only to the limitations set by the state constitution and the Charter itself, all powers of the city are vested in an elected council. This council is responsible for enacting local legislation, adopting budgets, determining policies, and appointing a city manager, who is tasked with executing laws and administering the city's administration.

The city possesses all powers of local self-government and home rule, as well as any powers granted by the Missouri constitution and state laws. The city may exercise all municipal powers, functions, rights, privileges, and immunities unless prohibited by the constitution or state laws. These powers are exercised in the manner prescribed by the Charter, or, if not specified, as determined by the council.

Springfield has adopted the 2012 versions of the International Building Code, International Residential Code, International Mechanical Code, International Plumbing Code, International Fuel Gas Code, International Private Sewage Disposal Code, International Fire Code, and the 2011 National Electrical Code.

Additionally, the city has established ordinances related to apartment safety, housing, dangerous buildings, and zoning. These regulations and standards ensure the safety and welfare of the community's occupants.

Capability Improvements

improvement for the City of Springfield would be the development and implementation of a Flood Mitigation Assistance (FMA) Plan aimed at identifying flood risks and prioritizing projects to reduce flood damage to homes, infrastructure, and critical facilities. Additionally, creating a Firewise or other fire mitigation plan would help address wildfire risks by promoting community education, vegetation management, and the establishment of defensible spaces in vulnerable areas. These plans would enhance Springfield's overall resilience by reducing the potential impacts of flooding and wildfires, improving public safety, and supporting more effective emergency response and recovery efforts.

Other Capabilities

- Both the county and city can receive National Weather Service warnings. Much of the population can be alerted within 15-20 minutes of an incident, while responders are notified within 3-5 minutes, and key officials within 15 minutes.
- Public school students receive training on hazards and emergency programs during the school year. Additionally, businesses, preschools, private organizations, community leaders, and average citizens have the opportunity to attend emergency preparedness training sessions.
- Geographic Information Systems (GIS) capabilities provide limited hazard areas base maps, which are available to interested parties.

City of Springfield Capabilities

Executive Summary

The City of Springfield demonstrates a high level of emergency preparedness, planning sophistication, and regulatory strength, supported by comprehensive staffing, community partnerships, and access to county-wide resources. A few areas remain to be clarified or improved.

- **Planning**: Springfield has a wide array of adopted and actively updated plans. These include a Comprehensive Plan (2000; update started in 2019), Builder's Plan, Capital Improvement Plan, and Transportation Plan (2001; update also underway). It also benefits from county-level Emergency Operations, Recovery, and Mitigation Plans, all current as of 2019 and updated regularly. However, there is no dedicated Flood Mitigation Assistance Plan, and the city lacks a formal Firewise Plan.
- **Regulations**: Springfield has a comprehensive regulatory framework, including ordinances for zoning, building codes, floodplain management, subdivision, stormwater, drainage, tree trimming, seismic construction, nuisance control, and site plan review. The city also enforces a Historic Preservation Ordinance and a Landscape Ordinance.
- **Programs & Participation**: Springfield is a participant in the National Flood Insurance Program (NFIP) but is not currently enrolled in the Community Rating System (CRS). It lacks StormReady Certification and does not report a Building Code Effectiveness Grading (BCEGs). However, it maintains strong programs in zoning enforcement, building design codes, public education, property acquisition, and land use. Additional programs include stream maintenance, tree trimming, and mutual aid agreements with local and regional partners.
- **Risk & Mapping**: The city has access to detailed data and mapping tools, including:
    - A County Hazard Analysis/Risk Assessment
    - FEMA Flood Insurance Maps and Flood Insurance Studies
    - An Evacuation Route Map
    - Inventories for Critical Facilities and Vulnerable Populations, integrated into the Mitigation Plan

  - A Land Use Map
- **Staffing**: Springfield is well-staffed with full-time personnel in all key areas: building inspection, engineering, GIS mapping, planning, public works, and emergency management. The city also has designated officials for floodplain administration and employs specialized teams, including a bomb/arson squad, emergency response team, and hazardous materials experts (via Springfield Police and Fire). Departments for sanitation, transportation, economic development, housing, and historic preservation are all active. A planning consultant is also on board.
- **Community & NGOs**: The city benefits from strong partnerships with NGOs and civic organizations, including:
  - American Red Cross
  - Salvation Army
  - Veterans Groups
  - Environmental Organizations
  - Homeowner and Neighborhood Associations
  - Chamber of Commerce
  - Civic groups such as Lions and Kiwanis
- **Funding**: Springfield has robust financial tools, including the ability to:
  - Apply for Community Development Block Grants
  - Fund capital projects through Capital Improvements
  - Levy taxes for specific purposes
  - Charge fees for utilities and new development
  - Withhold spending in hazard-prone areas (Note: currently not authorized)

  The city's ability to incur debt via general obligation bonds, special tax bonds, or private activities is not clearly reported.

Capability	Status Including Date of Document or Policy
Comprehensive Plan	Yes 2000 - Update started 2019
Builder's Plan	Yes
Capital Improvement Plan	Yes
County Emergency Operations Plan	Yes - Updated 2019
County Recovery Plan	Yes-2019
County Mitigation Plan	Yes - Updated every 5 years
Economic Development Plan	Yes
Transportation Plan	Yes - 2001 Update Started 2019
Land-use Plan	Yes – 2018
Flood Mitigation Assistance (FMA) Plan	No
Watershed Plan	Yes
Fire wise or other fire mitigation plan	No
School Mitigation Plan	Included in Mitigation Plan

Critical Facilities Plan (Mitigation/Response/Recovery)	Yes - Mitigation Plan
Policies/Ordinance	**Status Including Date of Document or Policy**
Zoning Ordinance	Yes
Building Code	Yes
Floodplain Ordinance	Yes
Subdivision Ordinance	Yes
Tree Trimming Ordinance	Yes
Nuisance Ordinance	Yes
Stormwater Ordinance	Yes
Seismic Construction Ordinance	Yes
Drainage Ordinance	Yes
Capability	**Status Including Date of Document or Policy**
Site Plan Review Requirements	Yes
Historic Preservation Ordinance	Yes
Landscape Ordinance	Yes
Debris Management Plan	Yes
Program	**Status Including Date of Document or Policy**
Zoning/Land Use Restrictions	Yes
Codes Building Site/Design	Yes
National Flood Insurance Program (NFIP) Participant	Yes
NFIP Community Rating System (CRS) Participating Community	No
National Weather Service (NWS) Storm Ready	No
Building Code Effectiveness Grading (BCEGs)	No
ISO Fire Rating	2
Economic Development Program	Yes
Land Use Program	Yes
Public Education/Awareness	Yes
Property Acquisition	Yes
Planning/Zoning Boards	Yes

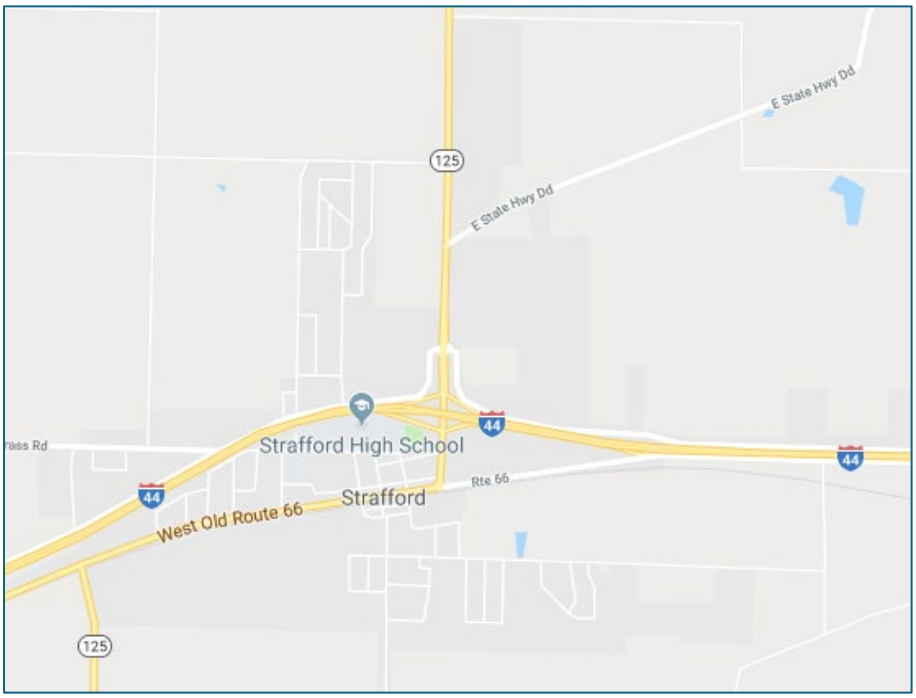
Stream Maintenance Program	Yes
Tree Trimming Program	Yes
Engineering Studies for Streams (Local/County/Regional)	County
Mutual Aid Agreements	Yes
Studies/Reports/Maps	**Status Including Date of Document or Policy**
Hazard Analysis/Risk Assessment (County)	Yes - Mitigation Plan
Flood Insurance Maps	Yes
FEMA Flood Insurance Study (Detailed)	Yes
Evacuation Route Map	Yes
Critical Facilities Inventory	Yes - Located in Mitigation Plan
Vulnerable Population Inventory	Yes - Located in Mitigation Plan
Land Use Map	Yes
Staff/Department	**Status**
Building Code Official	Yes
Building Inspector	Yes
Mapping Specialist (GIS)	Yes
Engineer	Yes
Development Planner	Yes
Public Works Official	Yes
Emergency Management Coordinator	Yes
NFIP Floodplain Administrator	Yes
Bomb and/or Arson Squad	Yes - Springfield Police and Fire Department
Emergency Response Team	Yes
Hazardous Materials Expert	Yes - Springfield Fire Department
Local Emergency Planning Committee	Yes
County Emergency Management Commission	Yes
Sanitation Department	Yes
Transportation Department	Yes
Economic Development Department	Yes

Housing Department	Yes
Planning Consultant	Yes
Regional Planning Agencies	No
Historic Preservation	Yes
Non-Governmental Organizations (NGOs)	**Status Including Date of Document or Policy**
American Red Cross	Yes
Salvation Army	Yes
Capability	**Status Including Date of Document or Policy**
Veterans Groups	Yes
Environmental Organization	Yes
Homeowner Associations	Yes
Neighborhood Associations	Yes
Chamber of Commerce	Yes
Community Organizations (Lions, Kiwanis, etc.)	Yes
Local Funding Availability	**Status Including Date of Document or Policy**
Ability to apply for Community Development Block Grants	Yes
Ability to fund projects through Capital Improvements funding	Yes
Authority to levy taxes for a specific purpose	Yes
Fees for water, sewer, gas, or electric services	Yes
Impact fees for new development	Yes
Ability to incur debt through general obligation bonds	Unknown
Ability to incur debt through special tax bonds	Unknown
Ability to incur debt through private activities	Unknown
Ability to withhold spending in hazard prone areas	No

2.2.7 CITY OF STRAFFORD

The City of Strafford is in the eastern part of Greene County, approximately thirteen miles from Springfield. Over the years, Strafford has seen steady growth. In 2000, the city's population was around 1,800, and by 2017, it had grown to over 2,100. By 2020 the population had increased to 2,561 citizens, the 5-year community estimate created by the US Census Bureau in 2023 estimates that there are now 2,570 residents of Strafford. The city operates under a government led by an elected Mayor and a Board of Aldermen. Strafford is divided into three wards, each represented by two aldermen. Both the Mayor and Aldermen serve two-year terms. The Board holds meetings on the first and third Monday of each month. In addition, Strafford has a Planning and Zoning Commission, a Board of Adjustment, as well as the following departments:

- Administration
  - City Administrator
  - City Clerk
- Utilities
- Public Works
- Police Department
- Municipal Court
- Planning
- Building and Development
- Parks
- Emergency Management
- Animal Control



The City of Strafford has two parks: Howard Smith Community Park and Croxdale Park. Howard Smith Community Park, located on Bumgarner Road, features two pavilions for picnics and meetings, two sets of playground equipment with slides, several charcoal grills, and a walking track. Croxdale Park, situated on the north side of town on Airport Road, offers a pavilion for picnics, a playground, and shaded areas provided by trees.

PLANNING AREA PROFILE AND CAPABILITIES 2

POPULATION AND DEMOGRAPHICS

General Population Characteristics

Characteristic	Number
Male Population	1,237
Female Population	1,333
Median Age (Years)	35
Total Population	2,570

Source: U.S. Census Bureau American Community Survey, 5 year- 2018-2022

Race

Race	Number
White	2,395
Black or African American	18
American Indian and Alaska Native	14
Asian	7
Native Hawaiian and Other Pacific Islander	0
Other Race	10
Two or More Races	166

Source: U.S. Census Bureau American Community Survey, 5 year- 2018-2022

Housing Information

Housing Occupancy	Number
Total Housing Units	1,014
Occupied Housing Units	1,009
Vacant Housing Units	5
Owned Occupied Housing Units	753
Renter Occupied Housing Units	261
Total Housing Units	1,014

Source: U.S. Census Bureau American Community Survey, 5 year- 2018-2022

MITIGATION INITIATIVES

Outdoor Warning Sirens

Strafford currently has three warning sirens located within the city limits. The sirens are activated by the Springfield-Greene County Office of Emergency Management, the Springfield-Greene County 9-1-1 Emergency Communications Center, or the Springfield Public Works Department. The sirens are tested on the second Wednesday of every month at 10 a.m., weather permitting. The City of Strafford is responsible for maintaining these sirens.

Other Initiatives

Strafford has many older homes, with 647 homes in total. Of these, 319 were built before 1980, making them more vulnerable to damage in severe disasters. Additionally, 44 homes were built during or before 1939. Strafford's location off I-44 and its large commercial industry attracts many commuters, causing the population to exceed the official resident count when combined with interstate traffic. The city has a FEMA Storm Shelter for the school system, which is accessible to residents before and after school hours.

Emergency Services

The Strafford Police Department provides 24/7 service to the community. The department consists of seven officers: a Chief, a Sergeant, five officers, and two reserve officers. Additionally, the school district employs a School Resource Officer.

Strafford also has a fire protection district which operates two stations. For more information about the fire district, please refer to their individual profile.

The City of Strafford has an Emergency Manager who works closely with the Springfield-Greene County Office of Emergency Management. However, the city does not have a designated Emergency Operations Center (EOC). In the event of an incident, the emergency EOC location is Strafford City Hall.

Utilities

The City of Strafford provides clean water to its residents and businesses through a comprehensive water system. This system includes three elevated storage tanks with a total capacity of 550,000 gallons, three wells with a combined capacity of approximately 800 gallons per minute, and a distribution network with pipes ranging from 1 inch to 10 inches. While the water pressure is sufficient under normal conditions, fire flow in some areas of the system is less than ideal. All water lines are owned and maintained by the City of Strafford, with the Maintenance Department handling daily upkeep and repairs. The city contracts with external companies to manage the maintenance of the water towers.

In addition to the water service, Strafford is responsible for wastewater (sewer) services. The city's sewer system consists of one regional station and 11 lift stations, nine of them equipped with generators. While the sewer lines and lift stations are owned and maintained by the city, the City of Springfield accepts all Strafford sewage for a fee. The Maintenance Department ensures the proper functioning of the sewer lines and lift stations through routine maintenance and repairs.

Trash service is mandatory in Strafford and is provided by Republic Services, with trash fees included in the utility bills. Electric service is provided by Liberty Utilities, Southwest Electric, Webster County Electric, and Springfield City Utilities. City Utilities also supplies natural gas.

Identified Assets

There are approximately 45,000 to 50,000 vehicles that travel through Strafford on any given day. Some key roadways include:

- **Interstate Highway System**: Strafford is divided into three distinct sections. The northern part of the town lies north of Interstate 44. The central area is situated between Interstate 44 and State Highway 125, while the southern section is located south of State Highway 125 and the railroad.
- **Historic Route 66**: Springfield is recognized as the Birthplace of Route 66, a designation that dates back to the 1920s when the federal government established the national highway system. A commemorative plaque on the east side of Park Central Square marks Springfield's 1992 designation as the official birthplace of Route 66. One of the last remaining original segments of Route 66 is located at Glenstone Avenue and Kearney Street. Today, this stretch, now home to a Route 66-themed Kum & Go Fresh Market, remains accessible to motorists.
- **Air and Rail Transportation**: Strafford currently does not have air service. The railroad tracks that run through the town are used exclusively for freight transportation. The last passenger train service in Strafford ended in May 1967.

CAPABILITY ASSESSMENT

Facilities

The City of Strafford operates a police station, a City Hall building that also serves as the Emergency Operations Center (EOC), and a Public Works facility.

Strafford is supported by three ground-source water wells and two water towers, providing a total water storage capacity of 500,000 gallons.

Building Codes

The City of Strafford enforces a set of building codes that must be followed by both residents and businesses, which are available for public access on the city's website.

Planning and Zoning

The City of Strafford's Planning and Zoning Committee, composed of volunteers, is responsible for the city's development and zoning regulations. The committee conducts studies and makes recommendations to the Board of Aldermen regarding plans, goals, and objectives for the city's growth, development, and redevelopment. Additionally, they provide input on matters such as preliminary plat approvals, conditional use permits, and proposed changes to the Zoning Map.

Backup Plans

Strafford has established a robust back-up system that includes generators, radios, and a computer server to ensure continuity in case of emergencies. Furthermore, the city utilizes a disaster recovery cloud service and software, enabling access to vital city information even if the EOC is compromised during a disaster.

Capability Improvements

Improvements for the City of Strafford would involve developing several key planning documents to strengthen its growth management and hazard mitigation capabilities. Creating a Builder’s Plan would provide guidelines for construction practices that promote safety, sustainability, and resilience. Implementing a Capital Improvement Plan would help prioritize and fund essential infrastructure projects, ensuring the city’s facilities and services keep pace with growth and community needs. Developing a Flood Mitigation Assistance (FMA) Plan would identify flood risks and outline strategies to minimize flood damage to properties and infrastructure. Finally, establishing a Watershed Plan would support the protection and management of local water resources, addressing issues like stormwater runoff, water quality, and ecosystem health. Together, these plans would enhance Strafford’s ability to manage development responsibly and improve its preparedness for natural hazards.

MITIGATION CAPABILITIES FOR GROWTH

Strafford has identified several areas that they can improve in their mitigation efforts. This includes adding sirens to areas that historically do not have access to them, offering public education on hazards as well as reducing harm hazardous materials from their sewer system can cause during flooding events.

City of Strafford Capabilities

Executive Summary

The City of Strafford demonstrates a modest but growing capacity in hazard mitigation, land use management, and emergency planning. While core regulatory frameworks and county partnerships are in place, several key planning documents and operational programs remain under development or absent, indicating opportunities for future investment and resilience-building.

- **Planning**: Strafford has an adopted Comprehensive Plan and Land-Use Plan, both currently undergoing updates. The city participates in the County Emergency Operations Plan (2019), County Recovery Plan (2014), and the County Mitigation Plan (updated every five years). A Transportation Plan is also in place. However, the city lacks a Builder's Plan, Capital Improvement Plan, Debris Management Plan, Flood Mitigation Assistance Plan, and Watershed Plan.
- **Regulations**: The city maintains several critical ordinances, including:
    - Zoning, Building Code (2012), and Floodplain Ordinance (2010)
    - Subdivision, Stormwater, Site Plan Review, and Seismic Construction Ordinances
    - A Landscape Ordinance is also in effect

  Notably, Strafford lacks ordinances for tree trimming, nuisance abatement, drainage, and historic preservation.
- **Programs & Participation**: Strafford participates in the National Flood Insurance Program (NFIP) but not the Community Rating System (CRS). The city has programs in zoning/land use enforcement, building site design, and economic development. It also maintains mutual aid agreements with Greene County and Fair Grove. However, there is no formal hazard awareness program, StormReady certification, or public education initiatives.
- **Risk & Mapping**: Risk and planning resources include:
    - Local and County Hazard Analyses (via the Mitigation Plan)
    - Flood Insurance Maps
    - Critical Facilities and Vulnerable Population Inventories
    - A current Land Use Map

  The city does not maintain a FEMA Flood Insurance Study or an Evacuation Route Map.
- **Staffing**: The city uses a hybrid staffing model:
    - Part-time Building Code Official and Inspector
    - Contracted GIS Specialist and Engineer
    - The City Administrator serves in multiple roles, including Planner, Emergency Manager, Floodplain Administrator, and Economic Development Director
    - Public Works is staffed full-time

  There is no emergency response team, bomb/arson squad, or hazardous materials expert, though Springfield-based services may be utilized when needed.
- **Community & NGOs**: Strafford collaborates with:
    - American Red Cross and Salvation Army (Springfield)
    - Veterans Groups
    - Homeowner Associations (regulated by subdivision code)
    - A Chamber of Commerce

The city lacks active environmental groups, neighborhood associations, and civic organizations like Lions or Kiwanis.

- **Funding**: Financially, the city is capable of:
  - Applying for Community Development Block Grants
  - Funding initiatives through capital improvements
  - Levying taxes for specific purposes
  - Charging utility and impact fees
  - Incurring debt through general obligation and special tax bonds

  The city cannot incur debt through private activities, and its ability to withhold spending in hazard-prone areas is unknown.

Capability	Status Including Date of Document or Policy
Comprehensive Plan	Yes - Update in progress
Builder's Plan	No
Capital Improvement Plan	No
County Emergency Operations Plan	Yes- 2019
County Recovery Plan	Yes- 2014
County Mitigation Plan	Yes - Updated Every 5 Years
Economic Development Plan	No
Transportation Plan	Yes
Land-use Plan	Yes - Update in progress
Flood Mitigation Assistance (FMA) Plan	No
Watershed Plan	No
Critical Facilities Plan (Mitigation/Response/Recovery)	Yes - Located in Mitigation Plan
Policies/Ordinance	**Status Including Date of Document or Policy**
Zoning Ordinance	Yes - Chapter 400 Municipal
Building Code	Yes - 2012
Floodplain Ordinance	Yes - 10/4/2010 Chapter 415
Subdivision Ordinance	Yes
Tree Trimming Ordinance	No
Nuisance Ordinance	No
Stormwater Ordinance	Yes
Seismic Construction Ordinance	Yes

Drainage Ordinance	No
Capability	**Status Including Date of Document or Policy**
Site Plan Review Requirements	Yes
Historic Preservation Ordinance	No
Landscape Ordinance	Yes
Debris Management Plan	No
Program	**Status Including Date of Document or Policy**
Zoning/Land Use Restrictions	Yes
Codes Building Site/Design	Yes
National Flood Insurance Program (NFIP) Participant	Yes
NFIP Community Rating System (CRS) Participating Community	No
Hazard Awareness Program	No
National Weather Service (NWS) Storm Ready	No
Building Code Effectiveness Grading (BCEGs)	Unknown
ISO Fire Rating	3
Economic Development Program	Yes
Land Use Program	Yes
Public Education/Awareness	No
Property Acquisition	No
Planning/Zoning Boards	Yes
Stream Maintenance Program	No
Tree Trimming Program	No
Engineering Studies for Streams (Local/County/Regional)	County
Mutual Aid Agreements	Yes - Greene County and Fair Grove
Studies/Reports/Maps	**Status Including Date of Document or Policy**
Hazard Analysis/Risk Assessment (Local)	Yes - Mitigation Plan
Hazard Analysis/Risk Assessment (County)	Yes - Mitigation Plan
Flood Insurance Maps	Yes

FEMA Flood Insurance Study (Detailed)	No
Evacuation Route Map	No
Critical Facilities Inventory	Yes - Mitigation Plan
Vulnerable Population Inventory	Yes - Mitigation Plan
Land Use Map	Yes
Staff/Department	**Status Including Date of Document or Policy**
Building Code Official	Yes - Part time
Building Inspector	Yes - Part Time
Mapping Specialist (GIS)	Yes - Contract
Engineer	Yes - Contract
Development Planner	Yes - City Administrator
Public Works Official	Yes - Full-Time
Emergency Management Coordinator	Yes - City Administrator
NFIP Floodplain Administrator	Yes - City Administrator
Bomb and/or Arson Squad	No
Emergency Response Team	No
Hazardous Materials Expert	No
Local Emergency Planning Committee	Yes
County Emergency Management Commission	Yes
Sanitation Department	Yes - Contract Revenue Service
Transportation Department	Yes - Public Works
Economic Development Department	Yes - City Administrator
Housing Department	Yes
Planning Consultant	Yes
Regional Planning Agencies	No
Historic Preservation	Yes
Non-Governmental Organizations (NGOs)	**Status Including Date of Document or Policy**
American Red Cross	Yes - Springfield
Salvation Army	Yes - Springfield

PLANNING AREA PROFILE AND CAPABILITIES 2

Capability	Status Including Date of Document or Policy
Veterans Groups	Yes
Environmental Organization	No
Homeowner Associations	Yes - By Subdivision Code
Neighborhood Associations	No
Chamber of Commerce	Yes
Community Organizations (Lions, Kiwanis, etc.)	No
Local Funding Availability	**Status Including Date of Document or Policy**
Ability to apply for Community Development Block Grants	Yes
Ability to fund projects through Capital Improvements funding	Yes
Authority to levy taxes for a specific purpose	Yes
Fees for water, sewer, gas, or electric services	Yes
Impact fees for new development	Yes
Ability to incur debt through general obligation bonds	Yes
Ability to incur debt through special tax bonds	Yes
Ability to incur debt through private activities	No
Ability to withhold spending in hazard prone areas	Unknown

2.2.10 SUMMARY OF JURISDICTIONAL CAPABILITIES

COMPARATIVE EXECUTIVE SUMMARY – REGIONAL CAPABILITIES OVERVIEW

1. Planning & Strategic Documents

- **Comprehensive Plan**: Adopted in all nine jurisdictions.
- **Builder's Plan**: Only in Battlefield and Springfield; otherwise absent.
- **Capital Improvement Plan**: Present in Battlefield, Fair Grove, Republic, Springfield; lacking in others.
- **Emergency & Recovery Planning**: All jurisdictions benefit from county-level Emergency, Recovery, and Mitigation Plans.
- **Debris Management Plan**: Present in Uninc. Greene County, Fair Grove, Republic, Springfield; absent in others.
- **Economic Development Plan**: Present in Fair Grove, Republic, Springfield, Willard; gaps elsewhere.
- **Transportation Plan**: Active in all except Ash Grove, Walnut Grove, and Willard.
- **Land-Use Plan**: Present across all entities.
- **Flood Mitigation Assistance Plan**: Lacking or limited across most jurisdictions, except Fair Grove and possibly unincorporated county.
- **Watershed Plan**: Only Unincorporated Greene County and Springfield appear to have such a plan.
- **Firewise / Fire Mitigation Plan**: Scarce; only Republic has one.
- **Critical Facilities Plan**: Present in all jurisdictions via mitigation frameworks.

2. Regulatory Frameworks

- **Zoning, Building Code, Floodplain Ordinance, Seismic Ordinance, Landscape Ordinance**: Uniformly adopted across all jurisdictions (with minor exceptions in Walnut Grove for building code).
- **Subdivision, Tree Trimming, Stormwater, Drainage, Site Plan Review, Nuisance, Historic Preservation:** Varying levels of adoption—most robust in Springfield, Republic, and county; more limited in smaller communities like Ash Grove, Battlefield, Fair Grove, Strafford, Walnut Grove, and Willard.

3. Programs, Certifications & Participation

- **NFIP Participation**: Universal across all jurisdictions.
- **CRS Participation**: None are participating in the CRS.
- **Hazard Awareness or Education Programs**: Present in Uninc. Greene County, Fair Grove, Springfield, Willard; mostly absent elsewhere.
- **StormReady Certification**: Held by Uninc. Greene County, Republic, Willard—not by others.
- **BCEG Grading**: Only Republic reports a BCEG rating (5/4).
- **ISO Fire Rating**: Varied—Ash Grove (6), Fair Grove (4), Republic & Springfield (2), Strafford (3), Willard (4); some are "N/A".
- **Economic Development Program & Land Use Program**: Broadly present, especially in larger communities; limited in smaller towns.
- **Public Education/Awareness Programs**: Active in most, except Battlefield, Strafford, and Walnut Grove.
- **Property Acquisition**: Mostly present in county, Battlefield, Springfield; unknown or absent in others.
- **Stream Maintenance & Tree Trimming Programs**: Primarily in county and Springfield; generally lacking in smaller jurisdictions.
- **Mutual Aid Agreements**: Established across all.

4. Risk Assessments & Mapping Resources

- Hazard Risk Assessment (Local/County): Conducted in all jurisdictions.
- Flood Insurance Maps & Detailed FEMA Studies: Flood maps are universal; FEMA studies are less widespread.
- Evacuation Route Maps: Only available in county and Springfield.
- Critical Facilities & Vulnerable Population Inventories, Land Use Maps: Widely available via mitigation plans across all jurisdictions.

5. Staffing & Organizational Capacity

- Core Staff (Building Official, Inspector, GIS, Engineer, Planner, Public Works, Emergency Manager, Floodplain Admin): Fully staffed in county, Battlefield, Republic, Springfield; partial or less formal staffing in smaller towns (Ash Grove, Fair Grove, Strafford, Walnut Grove, Willard).
- Emergency Response Teams / Specialized Experts: Present in county and Springfield; largely absent in smaller jurisdictions.
- Sanitation, Transportation, Economic Development, Housing, Historic Preservation Departments: Robust in county and Springfield; variable or absent in smaller towns.

6. Community & NGO Engagement

- American Red Cross & Salvation Army: Present regionally across all jurisdictions.
- Veterans Groups: Active in most, except Battlefield and smaller towns.
- Environmental Organizations: Only Springfield lists one.
- Homeowner Associations: Present in several, especially Springfield, Republic, Willard, and county.
- Neighborhood Associations: Predominantly in county, Springfield, and Willard.
- Chambers of Commerce: Active in county, Fair Grove, Republic, Springfield, Willard.
- Civic Groups (Lions, Kiwanis, etc.): Active in multiple jurisdictions including county, Fair Grove, Republic, Springfield, Willard.

7. Financial Resources & Capacity

- Community Development Block Grants, Capital Improvements Funding, Utility Fees: Widely available across most jurisdictions; county, Ash Grove, Battlefield, Fair Grove, Republic, Springfield, Strafford, Willard benefit; Walnut Grove limited on some items.
- Impact Fees: Adopted in most; exceptions include Ash Grove, Fair Grove, and some others marked “No” or “Unknown”.
- Debt Authority:
    - General Obligation Bonds: Present in most, but not universal (e.g., Fair Grove, Willard).
    - Special Tax Bonds: Similar pattern.
    - Private Activity Debt: Rare; only Unincorporated Greene County and Ash Grove show “Yes”.
- Withhold Spending in Hazard-Prone Areas: Available only in county and Republic; otherwise absent or unknown.

Overview Insights

- Larger jurisdictions (Unincorporated Greene County, Springfield, Republic) have comprehensive coverage across planning, regulatory, programmatic, staffing, and funding dimensions.
- Mid-sized jurisdictions (Fair Grove, Battlefield, Strafford, Willard) show good progress in core planning and ordinances but face gaps in staffing, specialized programs, and emergency resources.
- Smaller towns (Ash Grove, Walnut Grove) possess foundational plans and basic regulations but lack advanced capabilities like emergency teams, financial flexibilities, and resilience programming.

PLANNING AREA PROFILE AND CAPABILITIES 2

Capabilities	Uninc. Greene County	Ash Grove	Battlefield	Fair Grove	Republic	Springfield	Strafford	Walnut Grove	Willard
Planning Capabilities									
Comprehensive Plan	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Builder's Plan	No	No	Yes	No	No	Yes	No	No	No
Capital Improvement Plan	No	No	Yes	Yes	Yes	Yes	No	No	No
County Emergency Plan	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
County Recovery Plan	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
County Mitigation Plan	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Debris Management Plan	Yes	No	No	Yes	Yes	Yes	No	No	No
Economic Development Plan	No	No	No	Yes	Yes	Yes	No	No	Yes
Transportation Plan	Yes	No	Yes	Yes	Yes	Yes	Yes	No	No
Land-Use Plan	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
Flood Mitigation Assistance (FMA) Plan	N/A	No	Unknown	Yes	No	No	No	No	No
Watershed Plan	Yes	No	Unknown	No	No	Yes	No	No	No
Firewise or Other Fire Mitigation Plan	No	No	Unknown	No	Yes	No	No	No	No
Critical Facilities Plan (Mitigation/Response/Recovery)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

PLANNING AREA PROFILE AND CAPABILITIES 2

Policies/Ordinances									
Zoning Ordinance	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Building Code	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Floodplain Ordinance	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Subdivision Ordinance	Yes	Yes	Yes	No	No	Yes	Yes	No	No
Tree Trimming Ordinance	Yes	Yes	Yes	No	No	Yes	No	No	No
Nuisance Ordinance	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
Seismic Construction Ordinance	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Stormwater Ordinance	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Drainage Ordinance	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
Site Plan Review Requirements	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	No
Historic Preservation Ordinance	Yes	No	No	Yes	Yes	Yes	No	No	No
Landscape Ordinance	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Programs									
Zoning/Land Use Restrictions	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Codes building Site/Design	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
National Flood Insurance Program (NFIP) Participant	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NFIP Community Rating system (CRS) Participating community	No	No	No	No	No	No	No	No	No
Hazard Awareness Program	No	No	No	Yes	No	Yes	No	No	Yes
National Weather Service (NWS) Storm Ready	Yes	No	No	No	Yes	No	No	No	Yes

Building code Effectiveness Grading (BCEGs)	No	No	No	No	5/4	No	No	No	No
ISO Fire Rating	N/A	6	N/A	4	2	2	3	N/A	4
Economic Development Program	No	Yes	Yes	No	Yes	Yes	Yes	No	Yes
Land Use Program	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Public Education/Awareness	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes
Property Acquisition	Yes	Unknown	Yes	No	Unknown	Yes	No	No	No
Planning/Zoning Boards	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Stream Maintenance Program	Yes	No	Yes	No	No	Yes	No	No	No
Tree Trimming Program	Yes	No	No	Yes	No	Yes	No	No	No
Engineering Studies for Streams (Local/County/Regional)	County	County	County	County	County	County	County	County	County
Mutual Aid Agreements	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Studies/Reports/Maps									
Hazard Analysis/Risk Assessment (Local)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Hazard Analysis/Risk Assessment (County)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Flood Insurance Maps	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
FEMA Flood Insurance Study (Detailed)	Yes	Yes	No	No	Yes	Yes	No	No	No
Evacuation Route Map	Yes	No	No	No	No	Yes	No	No	No
Critical Facilities Inventory	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Land Use Map	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

PLANNING AREA PROFILE AND CAPABILITIES 2

Staff/Department									
Building Code Official	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Building Inspector	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Mapping Specialist (GIS)	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes
Engineer	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Development Planner	Yes	Yes	Yes	No	Yes	Yes	Yes	No	Yes
Public Works Official	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Emergency Management Coordinator	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NFIP Floodplain Administrator	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Emergency Response Team	Yes	No	No	No	No	yes	No	No	NO
Hazardous Materials Expert	No	No	No	No	NO	Yes	No	No	No
Local Emergency Planning Committee	Yes	Yes	Yes	Yes	Yes	Yes	Yes	yes	Yes
County Emergency Management Commission	N/A	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sanitation Department	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes
Transportation Department	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Economic Development Department	Yes	No	No	No	Yes	Yes	Yes	No	Yes
Housing Department	Yes	No	Yes	No	No	Yes	Yes	No	No
Historic Preservation	Yes	No	No	No	No	Yes	Yes	No	No

Non-Governmental Organizations (NGOs)									
American Red Cross	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Salvation Army	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Veterans Groups	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes
Environmental Organization	No	no	No	No	No	Yes	No	No	NO
Homeowner Associations	Yes	no	Yes	Yes	Yes	Yes	Yes	No	Yes
Neighborhood Associations	Yes	No	No	No	No	Yes	No	No	No
Chamber of Commerce	Yes	No	No	Yes	Yes	Yes	Yes	No	Yes
Community Organizations (Lions, Kiwanis, etc.)	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes
Financial Resources									
Apply for Community Development Block Grants	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Fund Projects Through Capital Improvement Funding	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Authority to Levy taxes for Specific Purposes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	No
Fees for water, Sewer, Gas, or Electric Services	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Impact Fees on New Development	Yes	Unknown	Yes	No	Yes	Yes	Yes	Yes	Yes
Incur debt Through General Obligation Bonds	Yes	yes	Yes	No	Yes	Unknown	Yes	Yes	No
Incur Debt Through Special Tax Bonds	Yes	Yes	Yes	No	Yes	Unknown	Yes	Yes	No
Incur debt Through Private Activities	Yes	Yes	No	No	No	Unknown	No	No	No
Withhold Spending in Hazard Prone Areas	Yes	Unknown	No	No	Yes	No	No	No	No

Source: Data Collection Questionnaire, 2024

2.3 SPECIAL DISTRICTS

Within Greene County, the only participating special districts are the Fire Protection Districts. The county is served by nine Fire Protection Districts, and the profiles below provide detailed information about each of them.

2.3.1 BATTLEFIELD FIRE PROTECTION DISTRICT



The Battlefield Fire Protection District covers approximately 32 square miles, primarily consisting of residential housing. The district operates from four strategically located fire stations, each staffed full-time to provide services to both residents and visitors. The district boasts a state-of-the-art training center, which is certified by the state as a recognized training facility. Training programs offered include various courses, such as the Emergency Medical Technician Basics course. The district is funded through a property tax levy, with the authority to levy taxes set by the voters.

EQUIPMENT

- 6 Engine Pumpers
- 2 Brush Trucks
- 4 Portable Generators
- 4 Command Vehicles
- 1 Support Vehicle
- 1 Medium Rescue Truck/Unit
- 1 Aerial Ladder
- 1 Rescue Boat
- 1 Water Tender
- 44 800Mhz
- 5 MOSWIN Radios
- 14 VHF Mobile Radios
- 20 VHF Portable Radios
- 1 Snowplow
- 1 Medium Rescue
- 1 Special Ops Trailer
- 1 Incident Command Team Cache
- 25 Computers
- 4 Generators
- 1 Forklift

PERSONNEL

Type Of Training	Number of Trained Staff
Paramedic	0
EMT	42
Firefighter 1	42
Firefighter 2	42
Hazmat	5
Water Rescue	15

STATION LOCATIONS

- Battlefield Fire Protection District Station 1 – 4117 W. 2nd Street, Battlefield, Missouri
- Battlefield Fire Protection District Station 2 – 2251 E. Farm Road 188, Ozark, Missouri
- Battlefield Fire Protection District Station 3 – 3490 W. Beechwood Street, Springfield, Missouri
- Battlefield Fire Protection District Station 4 – 1268 W. Farm Road 182, Springfield, Missouri
- District Headquarters – 4117 W. 2nd Street, Battlefield, Missouri

The Battlefield Fire Protection District is governed by a five-member Board of Directors, elected by the district's constituents. The Board is responsible for providing direction and oversight to ensure compliance with all applicable laws and ordinances. Additionally, the Board approves organizational goals, ensures adequate funding, and seeks new sources of revenue to support the district's growth. The Fire Chief is the only member of the district who reports directly to the Board. The Battlefield Fire District has the following staff:

- Chief
- 1 Deputy Chief
- 1 Assistant Chief
- 3 Battalion Chiefs
- 2 Division Chiefs
- 1 Chaplain
- 2 Building and Fleet Management Personnel
- 1 Administrative Support Personnel

The district has 44 full-time employees, 42 who are response capable. The staff includes administrative personnel. The district currently has no volunteers.

SERVICES PROVIDED

The district responds to approximately 2,800 calls annually. Current services provided by the district include:

- Fire Suppression
- Emergency Medical Response Basic Life Support
- Vehicular/Equipment Extrication
- Swift Water Rescue
- Type III Structural Collapse (Region D)
- Incident Management Team Type III

The district is a certified training entity for EMS in Missouri.

MITIGATION INITIATIVES

Battlefield is committed to improving mitigation abilities in many ways such as hoping to increase public outreach, training for fire fighters and ensuring they can collaborate effectively with the city and surrounding areas in a crisis situation. This can be achieved in many ways including those outlined int the Mitigation Projects section of this plan.

CAPABILITY IMPROVEMENTS

To improve the district’s capabilities, enhancements are needed across service delivery, training, public outreach, and interagency collaboration. Expanding emergency medical services to include Advanced Life Support would elevate on-scene care. Broadening specialized training to cover advanced technical rescues and leadership development would strengthen operational expertise. Public outreach efforts focused on fire prevention, emergency preparedness, and CPR training would empower residents and help reduce emergencies. Investing in upgraded equipment and technologies, such as GIS mapping for real-time incident management, would improve efficiency and response coordination. Finally, developing a detailed mitigation plan with clear objectives and timelines would provide a structured path for continuous improvement. Collectively, these measures would significantly enhance the district’s readiness and its ability to protect the community.

Mutual Aid Agreements

The district has automatic aid agreements with every agency that borders the district. The district is also part of the statewide mutual aid agreement through the Division of Fire Safety.

The Battlefield Fire Protection District has a Department Operations Center for Emergency Management. All stations have redundancy for power. The district is also MOSWIN capable in the field.

BACK UP SYSTEMS

The Battlefield Fire District has the following back-up-systems:

- Fire Extinguishers
- Personal Protective Equipment (Bunker Gear)
- Portable Generators
- Computers

2.3.2 BROOKLINE FIRE PROTECTION DISTRICT



The Brookline Fire Protection District has historically been a volunteer fire service in Greene County, including the area around the City of Republic and the west side of the City of Springfield. In 2021, however, the Fire District Board hired a fire chief and two full-time firefighters. Brookline Fire Protection District still relies heavily on volunteer firefighters to serve the community. They also regularly engage with their surrounding community to provide information about their services and the actions they are taking to better serve the Greene County area. The service area covers many unincorporated areas around Republic and Springfield. Currently they do not publicly track the number of calls they receive but intend to in the future.

EQUIPMENT

- Three Engines
  - Engine 1 - 2023 Ferrara Pumper w/1,000 gallons of water
  - Engine 2 - 2014 International Pumper w/1,000 gallons of water
  - Engine 3 - 1999 Freightliner Pumper w/1,000 gallons of water
- (1) Aerial:
  - Ladder 1 - 2002 HME Aerial w/ 500 gallons of water of 103' platform
- (2) Water Tenders:
  - Water Tender 4
  - Water Tender 5
- (2) Brush Trucks:
  - Brush Truck 1
  - Brush Truck 2
- (1) Utility/Staff SUV:
  - Rescue 2
- (2) Command SUVs:
  - Chief 1
  - Battalion Chief 3
- (1) Mobile Class A Live Fire Training Trailer:

PERSONNEL

- Career Staff - 16 full time; 1 part time (administrative assistant)
- Volunteer Staff - 14

Type Of Training	Number of Trained Staff
Paramedic	2
EMT	18
Firefighter 1	20
Firefighter 2	20
Hazmat	0
Swift Water Rescue	10
Firefighter 1 Instructor	12
Firefighter 2 Instructor	3

STATION LOCATIONS

- Station 1 - 3504 E Orr St, Brookline, MO 65619
- Station 2 - 2655 E Hines St, Republic, MO 65738
- Training Facility - 3505 E Orr St, Brookline, MO 65619

SERVICES PROVIDED

The district provides the following services:

- Non-transport EMS
- Fire Suppression
- Hazardous Materials Response
- Technical Rescue
- Swiftwater Rescue
- Public Education

MITIGATION INITIATIVES

Mutual Aid Agreements

The district has Mutual Aid Agreements with the following departments and districts:

- Ash Grove Fire Protection District
- Battlefield Fire Protection District
- Billings Fire Protection District
- Bois D'Arc Fire Protection District
- City of Republic Fire District
- City of Springfield Fire District
- Clever Fire Protection District
- Ebenezer Fire Protection District
- Fair Grove Fire Protection District
- Logan-Rogersville Fire Protection District
- Nixa Fire Protection District
- Ozark Fire Protection District
- Strafford Fire Protection District
- Walnut Grove Fire Protection District
- West Republic Fire Protection District
- Willard Fire Protection District

The Brookline Fire Protection District also takes the following actions to mitigate disaster in the community:

- Smoke Detector Checks/Installations (ensuring all residences have working smoke detectors)
- Commercial Business Pre-Plans
- Public Education (Schools and Community Event Outreaches)

Brookline Fire Protection District is a smaller district within the planning area. The department intends to increase training for current firefighters as well as recruit more volunteers in order to expand on their mitigation capabilities.

CAPABILITY IMPROVEMENTS

Brookline Fire Protection District could enhance its disaster mitigation efforts by expanding smoke detector programs to include regular community-wide inspections and free installation services for vulnerable populations. The district might also develop more comprehensive commercial business pre-plans that incorporate risk assessments and coordinated response strategies with local businesses. Increasing public education efforts through partnerships with schools, community organizations, and social media campaigns could further raise awareness and preparedness.

BACK UP SYSTEMS

- Generators (6)
- Reserve Engine (Engine 3)
- Reserve Command/Staff SUV (Rescue 2)

2.3.3 WILLARD FIRE PROTECTION DISTRICT



The Willard Fire Protection District is a combination fire district, staffed by both paid and volunteer firefighters. The district employs 18 full-time personnel and 16 volunteers, covering an area of 72 square miles and serving approximately 25,000 residents. The district responds to an average of 1,300 calls per year. Funding for the district comes from taxes collected through a district levy, with all tax measures approved by public vote. The district maintains a Duty Roster, Emergency Operations Plan, and an Evacuation Plan to ensure effective response and preparedness.

EQUIPMENT

- 1 Engine Pumper with Aerial Ladder
- 4 Engine Pumpers
- 3 Tenders
- 1 Light Rescue Truck
- 2 Brush Trucks
- 1 ATV
- 3 Support Vehicles
- 800 MHz Radios

PERSONNEL

Type of Training	Number of Staff Trained
Paramedic	3
EMT	22
Firefighter 1	26
Firefighter 2	25
Hazmat	25
Water Rescue	6

STATION LOCATIONS

- Station 1 – 240 N. State Highway Z, Willard, Missouri (Headquarters)
- Station 2 – 3891 W. Farm Road 94, Springfield, Missouri
- Station 3 – 2455 N. Pine Avenue, Springfield, Missouri

A five-member Board of Directors governs the Willard Fire Protection District. The board consists of a president, vice president, secretary/treasurer, and two additional members.

The district also has the following staff:

- 1 Chief
- 1 Assistant Chief
- 2 Battalion Chiefs
- 3 Captains

SERVICES PROVIDED

- Fire Suppression
- Emergency Medical Response
- Fire Protection
- Advanced Life Support
- Hazardous Materials response
- Brush Fire Response
- Technical Vehicle Extraction
- Investigations
- Public Relations
- Fire Training Academy Instruction
- Swift Water Rescue

MITIGATION INITIATIVES

The district features a dedicated shelter room for staff and firefighters, fully reinforced and designed to withstand various emergency situations. Additionally, the district maintains its own HAM radio frequency, along with separate computer backups, ensuring enhanced communication reliability.

Public education efforts have expanded significantly in recent years, with the Willard Fire District now providing educational services to the entire Willard School District, which encompasses eight facilities and combined enrollment of over 8,000 students. As the population of Willard and surrounding areas continues to grow, large annual events are also expected to increase. Major events include Willard's Freedom Fest, the Southwest Missouri Veterans Day Parade, and Fall on the Frisco.

CAPABILITY IMPROVEMENTS

The district could improve its capabilities by expanding and diversifying its service offerings and strengthening mitigation initiatives. Enhancements might include broadening specialized training in advanced technical rescues, hazardous materials handling, and incident investigation techniques to ensure a highly skilled response team. Investing in state-of-the-art equipment for brush fire suppression, swift water rescue, and technical vehicle extraction would improve operational effectiveness. The district could also establish a more robust public relations strategy to increase community engagement and awareness. On the mitigation side, while the existing dedicated shelter room and HAM radio communications provide a strong foundation, the district could integrate redundant communication systems such as satellite phones and deploy mobile command centers for greater flexibility during large-scale incidents. Expanding public education programs beyond schools to include outreach at community events and vulnerable populations would further enhance preparedness. With population growth and increasing large public events like Freedom Fest and Veterans Day Parade, developing comprehensive event-specific emergency plans and increasing volunteer recruitment and training would help ensure public safety during these gatherings. These improvements would collectively elevate the district's readiness, resilience, and community support.

MUTUAL AID AGREEMENTS

Currently, the district has mutual aid agreements with all bordering departments and fire protection districts.

ADDITIONAL INFORMATION

The Willard Fire Protection District has a community room with a seating capacity of 70, which is occasionally used for trainings hosted by other organizations in the community.

Willard has seen a steady growth rate of 4% each year. The district is growing each year with the total call volume topping over 1,800 calls in 2022. Willard is one of the few departments in the county that are an Advanced Life Support department. The intent of the district is to remain a combination (professional and volunteer) full-time department.

BACKUP SYSTEMS

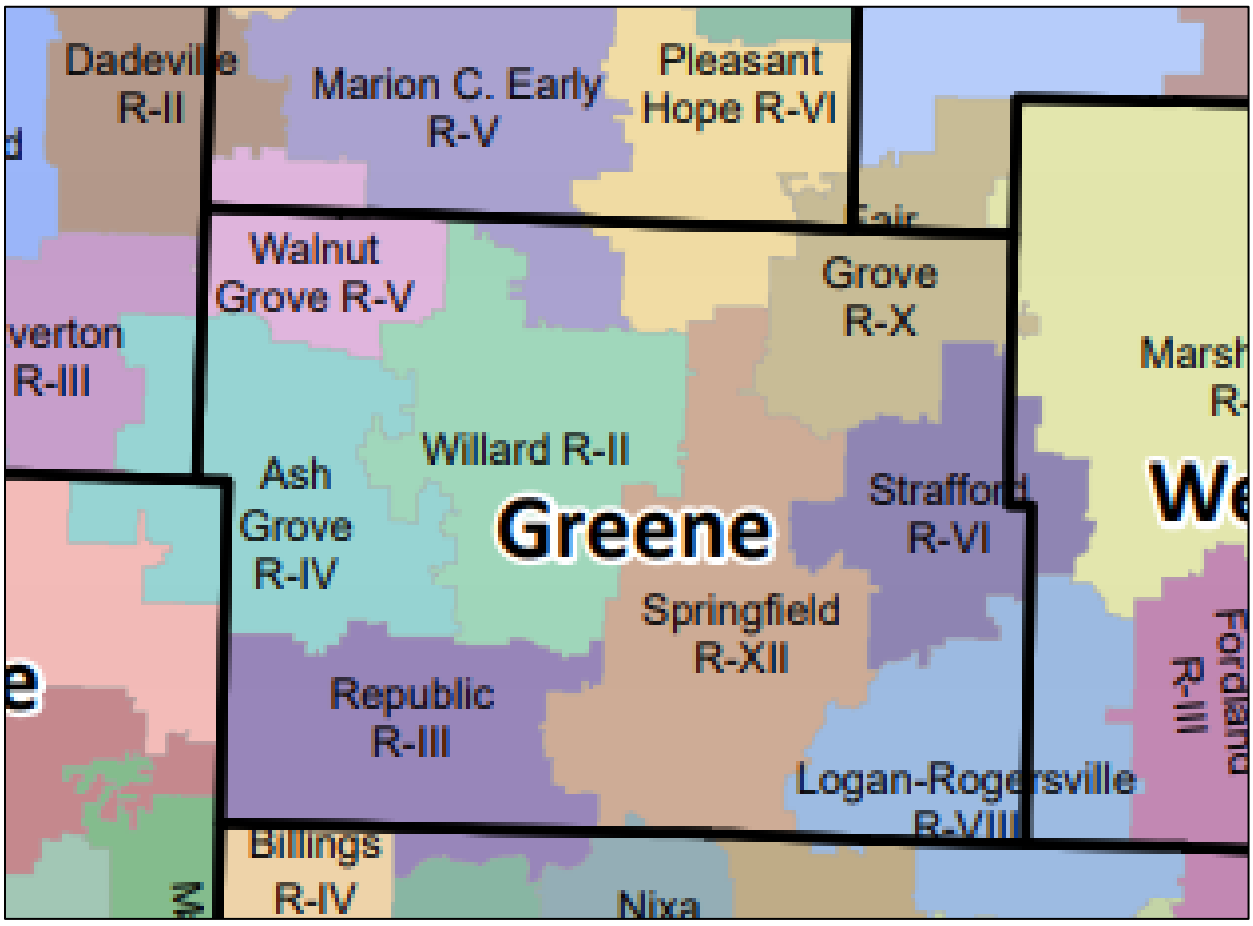
The Willard Fire Protection District has the following back-up systems:

- Fire Extinguishers
- HAM Radios
- VHF Repeaters
- VHF Portable Radios
- Emergency Generator
- Command Generator
- V-Tac Narrow Band

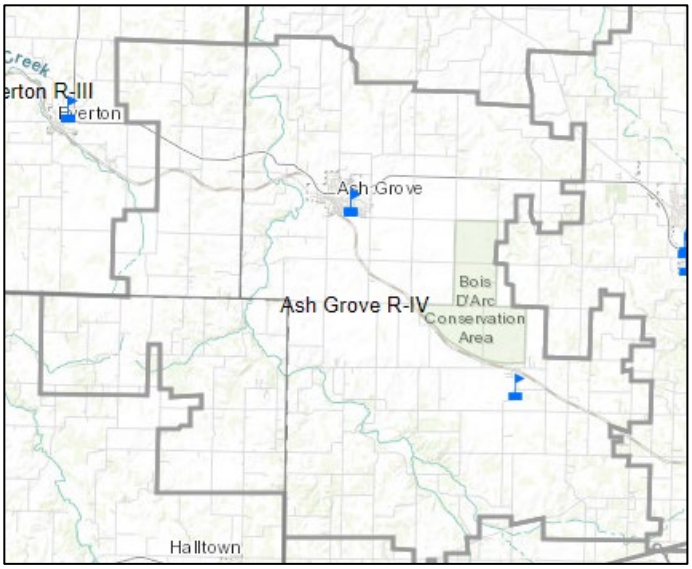
2.4 PUBLIC SCHOOL DISTRICT PROFILES AND MITIGATION CAPABILITIES

Most of the Greene County School Districts participated in the 2025 Multi-Jurisdictional Hazard Mitigation Plan. Each school district serves different portions of Greene County. Each school district has an individual profile included within this section. Their profiles list buildings, enrollment information, mitigation capabilities, and other information about the district. There are eight school districts in Greene County, they are as follows: Ash Grove School District, Fair Grove School District, Logan-Rogersville School District, Republic School District, Springfield School District, Strafford School District, Walnut Grove School District and Willard School District. Only Ash Grove School District, Logan-Rogersville School District and Springfield School District Participated in this update.

SCHOOL DISTRICT BOUNDARIES IN GREENE COUNTY



2.4.1 ASH GROVE PUBLIC SCHOOL DISTRICT

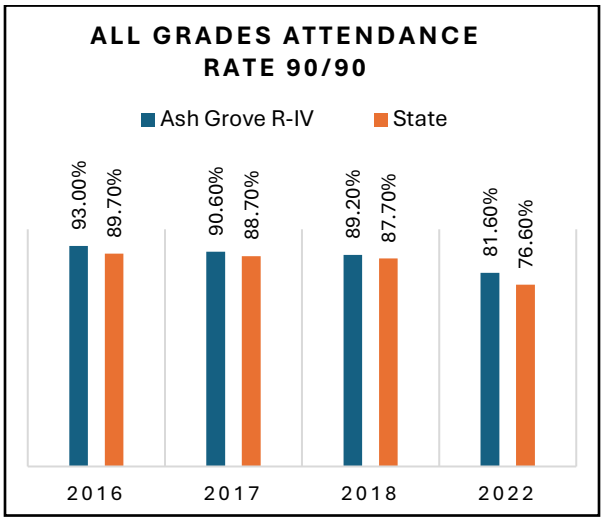


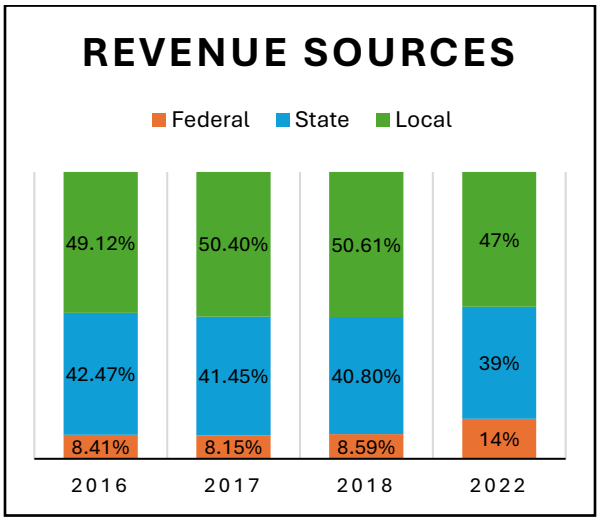
The Ash Grove School District spans 119 square miles across three counties: 16 square miles in Dade County, 19 square miles in Lawrence County, and 84 square miles in Greene County. The district offers a variety of programs for its students, including:

- Special Education Programs
- Counseling Services
- Gifted Program
- Athletics
- Music

The Ash Grove School District is governed by a seven-member Board of Education, which includes a president, vice president, treasurer, and four other members, each serving three-year terms. The district's vision is to foster an educational environment where children are supported through a collaborative effort involving faculty, staff, students, parents, and the community.

ASH GROVE R-IV DATA





The Ash Grove School District does cover more than one county; the enrollment information provided on the next page, as well as the tables above, covers the whole district, not just Greene County.

PLANNING AREA PROFILE AND CAPABILITIES 2

Ash Grove Buildings and Enrollment Data 2023-24

District Name	Building Name	Building Address	Building Enrollment	Building Teachers
Ash Grove R-IV	Ash Grove Elementary	100 N. Maple Lane	218	20
Ash Grove R-IV	Ash Grove High	100 N. Maple Lane	334	34
Ash Grove R-IV	Bois D'Arc Elementary	10315 W. State Highway T	152	15

PERSONNEL

Type of Personnel	Quantity Available
Resource Officer	0
Nurse(s)	2
Counselors	2
Bilingual Staff	0
Special Education	7

EQUIPMENT

- Two-Way Radios
- Buses
- Phone/Internet/Computers
- Portable Generators
- Cell Phones

BACKUP SYSTEMS

Currently, the school district has limited redundant systems in place to ensure continued communication, electricity, water, and other essential services during emergencies. The primary service available is emergency lighting in each school.

CAPABILITY IMPROVEMENTS

Ash Grove Schools could significantly improve safety and communication capabilities by constructing one or more tornado safe rooms designed to provide secure shelter for students and staff during severe weather events. These safe rooms would be built to meet or exceed FEMA standards, ensuring maximum protection against high winds and debris. Additionally, establishing a dedicated Public Information Officer (PIO) role would enhance the school district's ability to manage communications before, during, and after emergencies. A PIO could coordinate timely and accurate information dissemination to parents, staff, students, and the broader community through multiple channels, including social media, local media, and emergency alert systems. Together, these enhancements would strengthen Ash Grove Schools' emergency preparedness and improve overall safety and community trust.

Ash Grove Public School District Mitigation Capabilities

Executive Summary

The Ash Grove Public School District demonstrates a solid commitment to emergency preparedness, supported by foundational planning documents, well-defined leadership roles, and a variety of financial resources. While the district shows strong progress in key areas such as safety training and mitigation investments, a few gaps remain—particularly in personnel capacity and physical infrastructure.

- **Planning**: Ash Grove has several foundational plans in place, including a Master Plan (2019), Capital Improvement Plan (2019), and School Emergency Plan (2018). A longstanding weapons policy, implemented in 2001, further supports the district's preparedness posture. These documents provide a solid framework for emergency response and long-term mitigation strategies.
- **Personnel Resources**: The district is led by building principals and a superintendent who also serves as the emergency manager. However, there is currently no dedicated grant writer or public information officer, which may limit access to external funding and efficient emergency communication.
- **Financial Resources**: Ash Grove is financially positioned to support its mitigation efforts through multiple funding sources:
    - Local funds
    - General obligation bonds
    - Special tax bonds
    - Capital improvement project funds
    - Private donations
    - State and federal grants

  These resources have enabled recent investments in security enhancements across the district.
- **Programs & Preparedness**: The district has implemented a variety of safety initiatives, including:
    - Fire evacuation training
    - Tornado sheltering exercises
    - Lockdown security drills

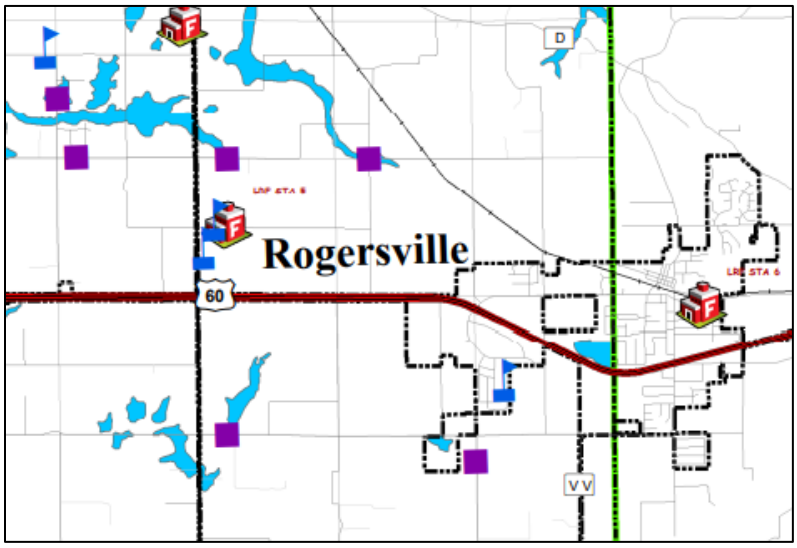
  Public education programs are also in place to raise awareness. All buildings are equipped with intercom-based public address systems and NOAA weather radios. A recent bond measure supported installation of new security cameras and secure entrances. The district is privately insured.
- **Emergency Infrastructure**: While Ash Grove has made important safety upgrades, it currently lacks a dedicated tornado shelter or saferoom—an identified area for future improvement. There is also no on-campus police department, though the Ash Grove Police Department provides security support as needed.

Planning Elements	
Capability	**Ash Grove School District**
Master Plan/Date	Yes - 4/4/2019
Capital Improvement Plan/Date	Yes -2019
School Emergency Plan/Date	Yes -2018
Weapons Policy/Date	Yes -2001
Personnel Resources	
Full-Time Building Official (Principal)	Yes

Emergency Manager	Yes - Superintendent
Grant Writer	No
Public Information Officer	No
Financial Resources	
Capital Improvements Project Funding	Yes
Local Funds	Yes
General Obligation Bonds	Yes
Special Tax Bonds	Yes
Private Activities/Donations	Yes
State and Federal Funds/Grants	Yes
Other	
Public Education Programs	Yes
Privately or Self-Insured?	Privately
Fire Evacuation Training	Yes
Tornado Sheltering Exercises	Yes
Public Address/Emergency Alert System	Yes - Each building has an intercom system
NOAA Weather Radios	Yes
Lock-Down Security Training	Yes
Mitigation Programs	Yes - Bond for new security cameras, secure entrances
Tornado Shelter/Saferoom	No
Campus Police	Ash Grove Police handles security needs

Source: Data Collection Questionnaire (2024)

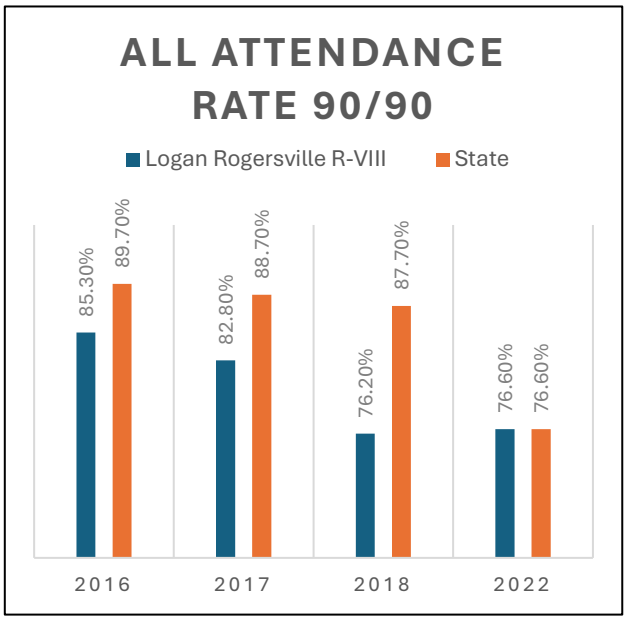
2.4.2 LOGAN-ROGERSVILLE SCHOOL DISTRICT

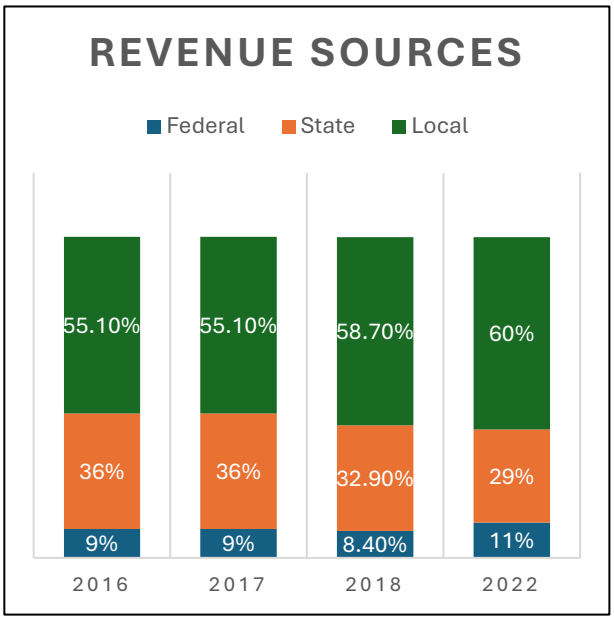


The Logan-Rogersville Schools within Greene County limits are marked with a blue flag. The Logan-Rogersville R-VIII School District is located in Southwest Missouri at the intersection of Greene, Webster, and Chris-tian counties, and encompasses an area of approximately 123 square miles. Student data indicates that approximately 38% of the district's students reside in Greene County, 48% in Webster County, and 14% in Christian County. The district serves approximately 2,300 students and is governed by a board of seven members. The district's vision is to foster an educational environment where children are supported through a collaborative effort involving faculty, staff, students, parents, and the community. The school district offers a variety of programs for its students including the following:

- A
- + Program
- ACT Prep
- Student Council
- Project Lead the Way
- Special Education

LOGAN-ROGERSVILLE R-VIII DATA





The Logan-Rogersville School District does cover more than one county; the enrollment information provided on the next page, as well as the tables above, covers the whole district, not just Greene County.

Logan-Rogersville Buildings and Enrollment Data 2023-24

District Name	Building Name	Building Address	Building Enrollment	Building Teachers
Logan-Rogersville R-VIII	Primary School	512 Sentry Drive	456	38
Logan-Rogersville R-VIII	Elementary School	7297 E Farm Road 164	358	25
Logan-Rogersville R-VIII	Upper Elementary School	306 S Mill Street	519	34
Logan-Rogersville R-VIII	Middle School	476 N Missouri Boulevard	510	34
Logan-Rogersville R-VIII	High School	300 N Missouri Boulevard	740	48

PERSONNEL

Type Of Personnel	Quantity Available
Police Officer(s)	2
Nurse(s)	6
Counselors	7
Bilingual Staff	3
Special Education	15

BACK UP SYSTEMS

Currently, the school district has limited redundant systems in place to ensure continued communication, electricity, water, and other essential services during emergencies. The primary service available is emergency lighting in each school.

CAPABILITY IMPROVEMENTS

The Logan-Rogersville Public School District could enhance its emergency preparedness by installing a comprehensive emergency alert system that provides timely notifications to students, staff, and parents during critical situations. This system could include sirens, text and phone alerts, and integration with local emergency services to ensure rapid communication. Additionally, constructing tornado safe rooms within school facilities would offer secure shelter during severe weather events, protecting occupants from high winds and debris. These improvements would greatly increase the district's ability to safeguard its community and respond effectively to emergencies.

Logan-Rogersville Public School District Mitigation Capabilities

Executive Summary

The Logan-Rogersville Public School District demonstrates a developing approach to emergency preparedness, with core planning documents in place and strong physical infrastructure for severe weather. While the district has taken important steps in safety training and sheltering capacity, there are notable gaps in staffing, communication systems, and formalized funding mechanisms.

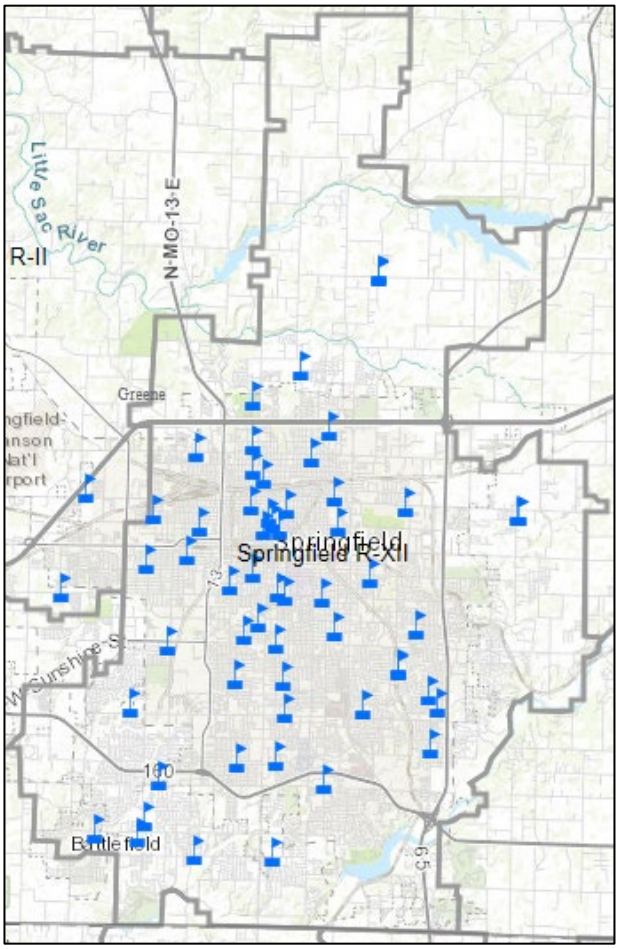
- **Planning**: The district maintains an updated set of core documents, including a Master Plan, Capital Improvement Plan (2025), School Emergency Plan (2025), and Weapons Policy (2025). These recent updates reflect a commitment to planning, though implementation details and integration across departments remain unclear.

- **Personnel Resources**: Each of the district's five buildings is staffed with a full-time principal. However, there is no designated emergency manager, grant writer, or public information officer. This lack of specialized personnel may hinder emergency coordination, access to external funding, and communication during crises.
- **Financial Resources**: No information is currently available regarding the district's financial capabilities for mitigation, including the status of local funds, bonds, grants, or donations. Clarifying and strengthening these funding streams will be essential to support long-term resilience and safety initiatives.
- **Programs & Preparedness**: Safety training is consistently implemented across the district:
    - Fire evacuation drills are conducted twice per year
    - Tornado sheltering drills also occur twice annually, with each building equipped with a storm shelter
    - Lockdown security training is provided annually
      NOAA weather radios are present in all buildings. However, there is no centralized public address or emergency alert system reported, and public education programs and broader mitigation initiatives are not currently documented.
- **Emergency Infrastructure**: The district is notably well-equipped with tornado shelters—five in total, one in each building—ensuring shelter-in-place capacity for severe weather events. Additionally, campus security is supported by two dedicated police officers, which enhances onsite response capabilities.

Planning Elements	
Capability	**Logan-Rogersville District**
Master Plan/Date	Yes
Capital Improvement Plan/Date	Yes, 2025
School Emergency Plan/Date	Yes, 2025
Weapons Policy/Date	Yes, 2025
Personnel Resources	
Full-Time Building Official (Principal)	5
Emergency Manager	0
Grant Writer	0
Public Information Officer	0
Financial Resources	
Capital Improvements Project Funding	N/A
Local Funds	N/A
General Obligation Bonds	N/A
Special Tax Bonds	N/A
Private Activities/Donations	N/A

State and Federal Funds/Grants	N/A
Other	
Public Education Programs	N/A
Privately or Self-Insured?	N/A
Fire Evacuation Training	Drills 2x/year
Tornado Sheltering Exercises	Drills 2x/year – each building has a storm shelter
Public Address/Emergency Alert System	N/A
NOAA Weather Radios	In each building
Lock-Down Security Training	Annually
Mitigation Programs	N/A
Tornado Shelter/Saferoom	5
Campus Police	2

2.4.3 SPRINGFIELD PUBLIC SCHOOL DISTRICT



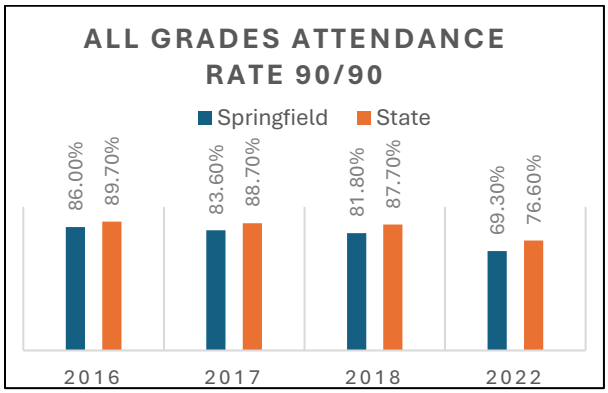
The Springfield Public School District is the largest school district in the state of Missouri, covering 137 square miles. Serving over 25,000 students, the district employs more than 4,000 staff members. With a long-standing commitment to providing quality education, Springfield Public Schools consistently exceed community expectations. The district offers a wide range of programs and services, including:

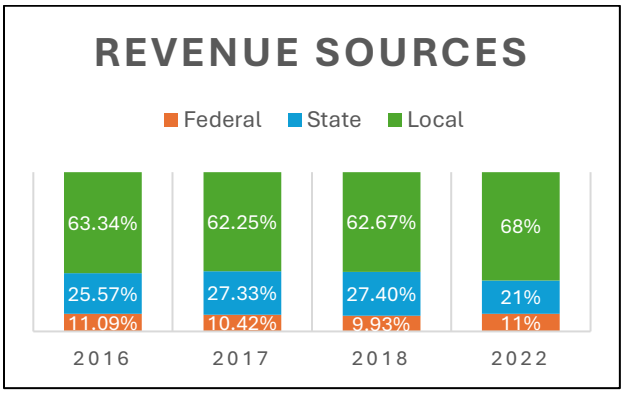
- A+ Program
- Attendance Services
- Choice Program
- Counseling Services
- Early Childhood Learning
- GOCAPS
- Health and Wellness Services
- Nutrition services
- Project Lead the Way
- Special Education Services
- Study Alternative Center

The Springfield Public Schools Board of Education consists of seven members, each serving a three-year term. The board includes a president, a vice president, and five other members. To serve on the board, members must be residents of the district, have lived in Missouri for at least one year prior to their election or appointment, and be at least 24 years of age. The board holds full legislative authority and control over the district, as outlined by state law. The Springfield Board of Education generally meets twice a month at 5:30 p.m. at the Kraft Administrative Center.

Springfield Public Schools' mission is to commit to the well-being of each student by providing high-quality academic opportunities. Their vision is to be the district of choice that equips each student to pursue their goals and highest potential as as an engaged contributer to society.

SPRINGFIELD R-XII DATA





The SPS District is only located inside the boundaries of Greene County. The information above and below reflects the entire district.

Springfield School District Building and Enrollment Data

District Name	Building Name	Building Address	Building Enrollment	Building Teachers
Springfield R-XII	Arthur Mallory Early Childhood Center	2525 West College Rd.	-	13
Springfield R-XII	Bingham Elementary	2126 E. Cherry St.	436	72
Springfield R-XII	Bissett Elementary	3014 W. Calhoun	244	25
Springfield R-XII	Bowerman Elementary	2148 N. Douglas Ave	264	28
Springfield R-XII	Boyd Elementary	1409 Washington St.	175	24
Springfield R-XII	Campbell Early Childhood Center	506 S. Grant Ave.	151	19
Springfield R-XII	Carver Middle	3325 W. Battlefield Rd.	766	59
Springfield R-XII	Central High	423 E. Central St.	1,728	180
Springfield R-XII	Cherokee Middle	420 E. Farm Road 182	926	55
Springfield R-XII	Cowden Elementary	2927 S. Kimbrough Ave.	310	27
Springfield R-XII	David Harrison Elementary	3055 W. Kildee Ln.	368	26
Springfield R-XII	Delaware Elementary	1505 S. Delaware St.	235	34
Springfield R-XII	Field Elementary	2120 Barataria St.	414	31
Springfield R-XII	Fremont Elementary	2814 N. Fremont Ave.	384	32
Springfield R-XII	Glendale High	2727 S. Ingram Mill Rd.	1377	88
Springfield R-XII	Gray Elementary	2102 W. Farm Road 182	523	33
Springfield R-XII	Hickory Hills Elementary	4650 E. State Highway YY	426	30
Springfield R-XII	Hickory Hills Middle	4650 E. State Highway YY	488	40
Springfield R-XII	Hillcrest High	3319 N. Grant Ave.	1090	73
Springfield R-XII	Holland Elementary	2403 S. Holland Ave.	271	25
Springfield R-XII	Horace Mann Elementary	3745 S. Broadway Ave.	395	29
Springfield R-XII	Jarrett Middle	840 S. Jefferson St.	499	41
Springfield R-XII	Jeffries Elementary	4051 S. Scenic Ave.	488	36
Springfield R-XII	Kickapoo High	3710 S. Jefferson	1809	102
Springfield R-XII	Mark Twain Elementary	3252 S. Weaver Rd.	394	32
Springfield R-XII	McBride Elementary	5005 S. Farm Road 135	494	33

Springfield R-XII	McGregor Elementary	1221 W. Madison	274	38
Springfield R-XII	Parkview High	516 W. Meadowmere St.	1392	97
Springfield R-XII	Pershing Elementary	2120 Ventura St.	186	16
Springfield R-XII	Pershing Middle	2120 Ventura St.	736	49
Springfield R-XII	Pipkin Middle	1215 Booneville Ave	598	50
Springfield R-XII	Pittman Elementary	2934 E. Bennett St.	315	25
Springfield R-XII	Pleasant View Elementary	2210 E. State Highway AA	192	19
Springfield R-XII	Pleasant View Middle	2210 E. State Highway AA	333	29
Springfield R-XII	Portland Elementary	906 W. Portland St.	234	21
Springfield R-XII	Reed Middle	2000 N. Lyon St.	674	56
Springfield R-XII	Robberson Elementary	1100 E. Kearney St.	222	21
Springfield R-XII	Rountree Elementary	1333 E. Grand St.	257	21
Springfield R-XII	Sequiota Elementary	3414 S. Mentor Rd.	395	27
Springfield R-XII	Shady Dell Early Childhood Center	2757 E. Division St.	429	36
Springfield R-XII	Sherwood Elementary	2524 S. Golden Ave.	551	37
Springfield R-XII	Study Alternative High	2343 W. Olive St.	300	21
Springfield R-XII	Sunshine Elementary	421 E. Sunshine St.	181	18
Springfield R-XII	Truman Elementary	3850 N. Farm Road 159	317	29
Springfield R-XII	Walt Disney Elementary	4100 S. Fremont Ave.	611	36
Springfield R-XII	Watkins Elementary	732 W. Talmage St.	268	29
Springfield R-XII	Weaver Elementary	1461 N. Douglas St.	258	29
Springfield R-XII	Weller Elementary	1630 N. Weller St.	342	33
Springfield R-XII	Westport Elementary	415 S. Golden Ave.	405	28
Springfield R-X-II	Westport Middle Schools	415 S. Golden Ave	462	50
Springfield R-XII	Wilder Elementary	2526 S. Hillsboro St.	420	30
Springfield R-XII	Williams Elementary	2205 W. Kearney St.	311	31
Springfield R-XII	Wilson’s Creek 5-6	4035 W. Weaver Rd.	475	33
Springfield R-XII	York Elementary	2100 Nichols St.	249	25

Source: http://mcds.dese.mo.gov/quickfacts/pages/district-and-school -information.aspx, 2024

PERSONNEL

Type Of Personnel	Quantity Available
Police Officer(s)	30
Nurse(s)	61
Counselors	84
Bilingual Staff	Unknown
Special Education	522

EQUIPMENT

- Computers
- Two-Communications
- Telephone (Land Based)
- Telephone (Cellular)
- Buses
- District Vehicles
- Intercom Systems
- Shelters
- Camera Systems
- 800 MHz Radio
- Weather Radio

BACKUP SYSTEMS

There are 150 backup servers supporting more than 12,000 computers within the district. Additionally, the district is equipped with 65 fire detection systems and EMCCS intercoms.

OTHER CAPABILITIES

The district has developed more than 65 emergency procedures to address individual site and district-wide policies. These procedures are regularly tested through tabletop exercises. Additional funding would enhance these emergency procedures, both in terms of planning and practical exercises.

CAPABILITY IMPROVEMENTS

Springfield Public Schools could enhance its emergency preparedness and funding opportunities by installing NOAA weather radar systems or partnering with local agencies to receive real-time weather data, enabling quicker and more accurate responses to severe weather events. Additionally, hiring or designating a dedicated grant writer could significantly improve the district's ability to secure external funding for safety improvements, educational programs, and infrastructure upgrades. Together, these steps would strengthen the district's capacity to protect students and staff while supporting ongoing development through expanded financial resources.

Springfield School District Mitigation Capabilities

Executive Summary

The Springfield School District demonstrates a comprehensive and proactive approach to emergency preparedness, backed by strong planning, robust staffing, reliable funding sources, and well-integrated safety infrastructure. With well-established partnerships and procedures in place, the district serves as a model for school-based mitigation practices, though there remains a minor gap in real-time weather alerting systems.

- **Planning**: The district operates under a detailed and current planning framework, including:
  - A Facilities Master Plan (2016)
  - A Capital Improvement Plan (Proposition S, 2019)
  - A School Emergency Plan (2018), updated annually in collaboration with the Greene County Office of Emergency Management (GCOEM)
  - A clearly defined weapons policy (2018, Student Handbook)

  This structured planning environment ensures alignment between operations, safety priorities, and long-term development.
- **Personnel Resources**: Each building has a full-time principal, and the district benefits from a designated School Resource Officer serving as the emergency manager. A Public Information Officer supports communications. However, the district currently lacks a dedicated grant writer, which may limit opportunities for supplemental funding.
- **Financial Resources**: The district is well-resourced with multiple funding streams available for capital and emergency-related investments, including:
  - Local funds
  - Capital improvement project funding
  - General obligation and special tax bonds (e.g., for storm shelters and secure entrances)
  - Private donations
  - State and federal grants

  This diversified financial base has enabled significant safety infrastructure and facility upgrades across the district.
- **Programs & Preparedness**: The district maintains a well-rounded suite of emergency preparedness initiatives, including:
  - Fire evacuation drills
  - Tornado sheltering exercises
  - Lockdown security training
  - Public education programs

  Academic buildings are equipped with a public address/emergency alert system featuring distinct warning tones for various hazards. Routine safety assessments are conducted by GCOEM. The only noted gap is the absence of NOAA weather radios, which could enhance early severe weather notification.
- **Emergency Infrastructure**: Springfield is equipped with tornado shelters/saferooms in six schools, offering significant protection during weather events. Security across the district is managed by a highly capable team of 26 commissioned campus police officers, ensuring rapid response and a strong security presence on school grounds.

Planning Elements	
Capability	**Springfield School District**
Master Plan/Date	Yes - 11/15/2016 Facilities Master Plan
Capital Improvement Plan/Date	Yes - 4/2/2019 Proposition S Projects
School Emergency Plan/Date	Yes - 10/1/2018 Annually updated by GCOEM
Weapons Policy/Date	Yes - 7/1/2018 Page 68 Student Handbook
Personnel Resources	
Full-Time Building Official (Principal)	Yes - Each Building has a principal
Emergency Manager	Yes - School Resource Officer
Grant Writer	No
Public Information Officer	Yes

Financial Resources	
Capital Improvements Project Funding	Yes
Local Funds	Yes
General Obligation Bonds	Yes
Special Tax Bonds	Yes - Storm Shelters, Secure entrances
Private Activities/Donations	Yes
State and Federal Funds/Grants	Yes
Other	
Public Education Programs	Yes
Privately or Self-Insured?	Privately
Fire Evacuation Training	Yes
Tornado Sheltering Exercises	Yes
Public Address/Emergency Alert System	Yes - Academic buildings include warning tones for different hazards.
NOAA Weather Radios	No
Lock-Down Security Training	Yes
Mitigation Programs	Yes - Routine safety assessments are provided by GCOEM
Tornado Shelter/Saferoom	Yes - 20 saferooms
Campus Police	Yes - 30 commissioned officers

Source: Data Collection Questionnaire, 2024

2.5 HIGHER EDUCATION PROFILES AND MITIGATION CAPABILITIES

Greene County has two eligible higher education districts: Missouri State University (MSU) and Ozarks Technical Community College (OTC). However, MSU did not participate in the most recent update and is therefore not included below. The Springfield-Greene County area has several other colleges, including Drury University and Evangel University.

2.5.2 OZARKS TECHNICAL COMMUNITY COLLEGE

Ozarks Technical College (OTC) is the largest community college in the area with its main campus located in Springfield. The college offers both seated and online courses for students wanting to pursue higher education. The college serves over 12,000 students across the area on average each semester.

Ozarks Technical Community College provides area citizens with a variety of educational options including:

- High School juniors and seniors can participate in half-day job skill programs through OTC's area vocational-technical school.
- Specific training can be custom designed for business and industry at the work site.
- Non-credit personal and professional enrichment courses are offered at local high schools.
- English as a Second Language classes are available throughout the year.
- Adult Education and Literacy is available to adults working towards the high school equivalency test in a variety of locations throughout the Ozarks.

Ozarks Technical Community College (OTC) has a comprehensive mission that focuses on job-skill training and college transfer preparation. During the 2023-24 academic year, the college served approximately 20,974 individuals with more than 14,396 enrolled in college credit classes. OTC is poised for a promising future as faculty, staff, and community members collaborate to provide the best possible educational opportunities and value for all residents of the Ozarks.

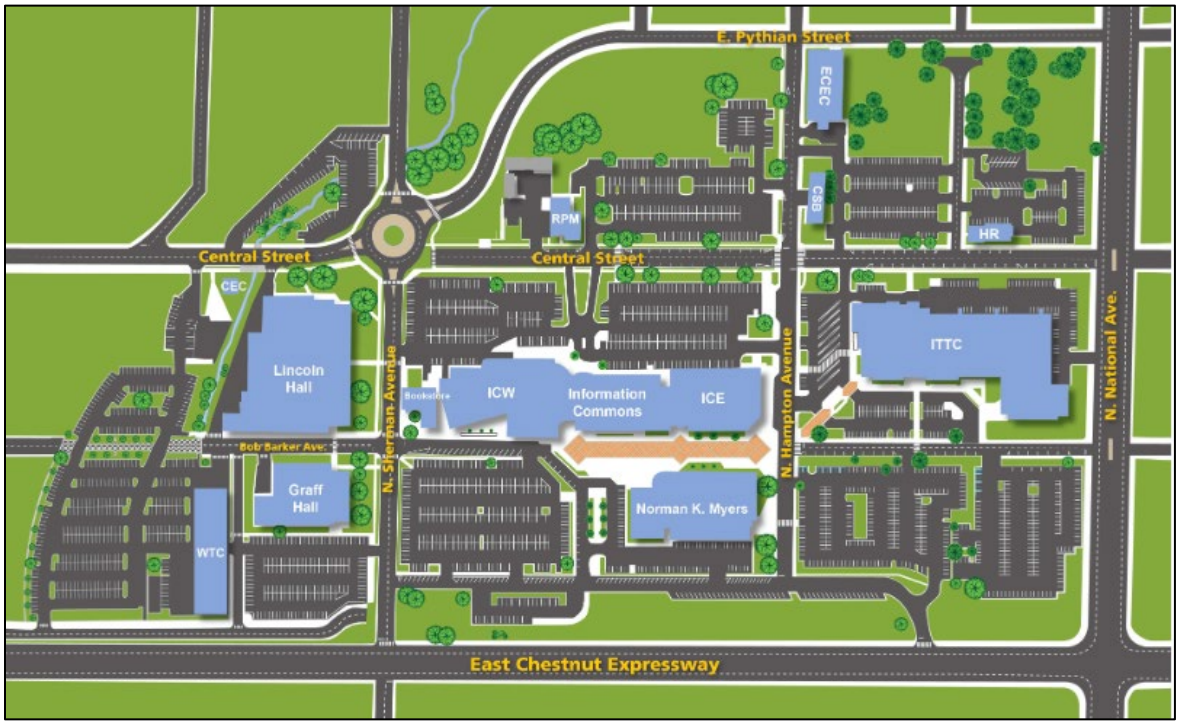
Ozarks Technical Community College has multiple campuses across the Ozarks. The main campus is located in Springfield, with smaller campuses in Nixa, Hollister, Lebanon, Republic and Waynesville. A new building is currently being built in Springfield. OTC does not provide transportation services, and students are not housed on campus. However, OTC collaborates with local high schools to offer specific classes for junior and senior students. Additionally, the college partners with Springfield School District to provide "Middle College" classes to at-risk juniors and seniors.

The Springfield Campus covers 40 acres at the corner of Chestnut Expressway and National Avenue.

Key facilities on the Springfield campus include:

- Norman K. Myers Technical Education Center: Houses classrooms, electronic media labs, and science labs.
- Information Commons: Home to the college's business office, administrative offices, and the Learning Resources Center.
- Information Commons East: Includes additional classrooms, faculty and administrative offices, and the Area High School Office.
- Industry Transportation and Technology Center: Equipped with the latest technology and lab facilities for various technical degree programs.

- Allied Health Programs: Located in historic Lincoln Hall, along with additional technical program labs.
- Graff Hall: Houses the Networking and Computer Services Department, Information Technology, Fire Science, and Business and Marketing programs and labs. It also includes the Adult Education and Literacy programs.
- Continuing Education Center: Located at 800 E. Central Street, Springfield, Missouri.
- Center for Workforce Development: Located at 614 N. Washington Avenue, Springfield, Missouri.
- Early Childhood Education Center: Offers daycare services and is located at 936 N. Hampton, Springfield, Missouri.



2022-2023 Student Enrollment

2023 SNAP SHOT
(Fall Enrollment)

11,045	Credit Students	4,804	Full-Time Students
105,429	Credit Hours	6,241	Part-Time Students
2,454	A+ Students	6,366	Female Students
5,398	Enrolled in at Least One Online Class	4,679	Male Students
6,537	First Generation Students	19	Average Age of Full-Time Students
766	AEL Student Enrollment*	20	Average Age of Part-Time Students
140	Students Enrolled in at Least One Developmental Course	19	Average Age of All Students
6,873	Receive Financial Aid	716	Student Veterans

Summer 2022-Spring 2023

EQUIPMENT

- Computers
- Telephones
- Security Systems
- PA System
- Mass Notification System

BACKUP SYSTEMS

OTC currently does not have a backup system for fire alarms or fire detection devices. The Springfield Campus has a generator in the event of power outages on the west side of ITTC.

OTHER CAPABILITIES

The Early Childhood Education Center at the Springfield Campus has a basement, but the campus does not currently have a designated storm shelter.

OTC is equipped with a system-wide mass media notification system, which includes notifications through the college website, text messaging, voicemail, and a telephone alert system to inform employees and students of emergency situations.

CAPABILITY IMPROVEMENTS

Ozark Technical Community College, OTC, could greatly improve campus safety by constructing tornado shelters or safe rooms strategically located throughout its facilities. These shelters would provide students, faculty, and staff with secure refuge during severe weather events, built to meet or exceed FEMA guidelines for wind and debris protection. Incorporating clear signage, regular drills, and accessible design would ensure that all campus occupants can quickly and safely reach these shelters when needed. This enhancement would significantly bolster the college's emergency preparedness and protect the campus community during tornadoes and other extreme weather incidents.

Ozarks Technical Community College Mitigation Capabilities

Executive Summary

Ozarks Technical Community College (OTC) demonstrates a mature and well-integrated approach to emergency preparedness and mitigation. With strong planning, professional staffing, reliable communication systems, and close coordination with law enforcement, OTC maintains a high level of operational readiness. While the college does not currently have dedicated tornado shelters or access to bond funding, its internal safety infrastructure is robust and proactive.

- **Planning**: OTC operates under a comprehensive set of foundational plans, all updated in 2019:
  - Master Plan
  - Capital Improvement Plan
  - School Emergency Plan
  - Weapons Policy

  These planning elements form a clear framework for emergency preparedness, facility management, and institutional safety.
- **Personnel Resources**: OTC is staffed with key personnel in all essential areas:
  - A full-time building official
  - A dedicated Emergency Manager (Director of Safety and Security)
  - A Public Information Officer (via the Communications and Marketing Department)
  - A Grant Department actively supporting funding efforts

  This structure enables coordinated emergency planning, communication, and funding acquisition.

- **Financial Resources**: The college supports mitigation and safety projects through:
  - Capital improvement funding
  - Local funds
  - Private donations
  - State and federal grants

  OTC does not currently utilize general obligation or special tax bonds, which may limit some large-scale funding opportunities.
- **Programs & Preparedness**: OTC has implemented a broad range of preparedness activities:
  - Fire evacuation and tornado sheltering exercises
  - Lockdown security training
  - Public education programs focused on safety and emergency awareness

  The campus is equipped with a robust emergency alert system using internal phone lines and overhead speakers, supplemented by NOAA weather radios for real-time weather monitoring.
- **Emergency Infrastructure**: While OTC does not have a designated tornado shelter or saferoom, its safety and security operations are well-staffed and professional:
  - A full-time Safety and Security Department operates during all hours of college activity, including special events
  - Most security officers are certified law enforcement professionals with Missouri Peace Officer certification
  - Additional support is provided by off-duty Springfield Police Department officers during operational hours

  Campus police presence ensures a rapid and informed response to any incidents.

Planning Elements	
Capability	**Ozarks Technical Community College**
Master Plan/Date	Yes - 2019
Capital Improvement Plan/Date	Yes - 2019
School Emergency Plan/Date	Yes - 2019
Weapons Policy/Date	Yes - 2019
Personnel Resources	
Full-Time Building Official (Principal)	Yes
Emergency Manager	Yes - Director of Safety and Security
Grant Writer	Yes - Grant Department
Public Information Officer	Yes - Communications and Marketing
Financial Resources	
Capital Improvements Project Funding	Yes
Local Funds	Yes
General Obligation Bonds	No
Special Tax Bonds	No
Private Activities/Donations	Yes

State and Federal Funds/Grants	Yes
Other	
Public Education Programs	Yes
Privately or Self-Insured	Privately
Fire Evacuation Training	Yes
Tornado Sheltering Exercises	Yes
Public Address/Emergency Alert System	Yes - Internal phone systems and overhead speakers
NOAA Weather Radios	Yes
Lock-Down Security Training	Yes
Mitigation Programs	Yes
Tornado Shelter/Saferoom	No
Campus Police	Yes

OTC maintains a full-time Safety and Security Department with staff on duty during the operational hours of the college and special events. Most security officers are either current or retired law enforcement officers, holding a Missouri Department of Public Safety Peace Officer certification.

In addition to the Springfield Campus security team, off-duty Springfield Police Department officers provide additional security during most operational hours.

2.6 SUMMARY OF SCHOOL CAPABILITIES

Executive Summary

Ash Grove School District, Springfield School District, and Ozarks Technical Community College (OTC) each demonstrate a structured and proactive approach to emergency preparedness and mitigation. While all three institutions share common strengths in planning, training, and funding, their capabilities vary in areas such as personnel specialization, infrastructure, and law enforcement presence. These differences highlight opportunities for targeted improvement and shared learning across institutions.

- **Planning**: All three institutions have core planning documents in place, including:
  - Master Plan
  - Capital Improvement Plan
  - School Emergency Plan
  - Weapons Policy

  These foundational plans ensure a clear structure for facility development and emergency response across all campuses.
- **Personnel Resources**:
  Each institution maintains full-time building officials and a designated emergency manager. OTC stands out as the only institution with a dedicated grant writer and a public information officer. Springfield also has a public information officer, while Ash Grove has neither, indicating room for growth in communication and funding capacity for that district.
- **Financial Resources**:
  All three entities have access to:
  - Local funds
  - Capital improvements project funding
  - Private donations
  - State and federal grants

  Ash Grove and Springfield additionally utilize general obligation bonds and special tax bonds, while OTC does not—potentially limiting its capacity for large-scale capital projects.
- **Programs & Preparedness**:
  Each organization maintains a consistent level of preparedness, including:
  - Fire evacuation training
  - Tornado sheltering exercises
  - Lockdown security training
  - Public education programs

  All three have emergency alert systems in place. NOAA weather radios are available in Ash Grove and OTC, but not in Springfield, representing a minor gap in severe weather monitoring for the latter.
- **Emergency Infrastructure**:
  Springfield leads in terms of physical safety infrastructure, with tornado shelters/saferooms in place at six schools. OTC and Ash Grove currently lack dedicated tornado shelters, though OTC has strong security operations and facility readiness.
  Springfield and OTC maintain campus police forces (26 and multiple officers, respectively), while Ash Grove relies on external law enforcement from the local police department.

Capability	Ash Grove	Springfield	Ozarks Technical Community College
Planning Elements			
Master Plan/Date	Yes	Yes	Yes
Capital Improvement Plan/Date	Yes	Yes	Yes
School Emergency Plan/Date	Yes	Yes	Yes
Weapons Policy/Date	Yes	Yes	Yes
Personnel Resources			
Full-Time Building Official (Principal)	Yes	Yes	Yes
Emergency Manager	Yes	Yes	Yes
Grant Writer	No	No	Yes
Public Information Officer	No	Yes	Yes
Financial Resources			
Capital Improvements Project Funding	Yes	Yes	Yes
Local Funds	Yes	Yes	Yes
General Obligation Bonds	Yes	Yes	No

Special Tax Bonds	Yes	Yes	No
Private Activities/Donations	Yes	Yes	Yes
State and Federal Funds/Grants	Yes	Yes	Yes
Other			
Public Education Programs	Yes	Yes	Yes
Privately or Self-Insured	Privately	Privately	Privately
Fire Evacuation Training	Yes	Yes	Yes
Tornado Sheltering Exercises	Yes	Yes	Yes
Public Address /Emergency Alert System	Yes	Yes	Yes
NOAA Weather Radios	Yes	No	Yes
Lock-Down Security Training	Yes	Yes	Yes
Mitigation Programs	Yes	Yes	Yes
Tornado Shelter/Saferoom	No	Yes	No
Campus Police	No	Yes	Yes

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RISK ASSESSMENT 3

44 CFR Requirement §201.6(c)(2): [The plan shall include] A risk assessment that provides the factual basis for activities proposed in the strategy to reduce losses from identified hazards. Local risk assessments must provide sufficient information to enable the jurisdiction to identify and prioritize appropriate mitigation actions to reduce losses from identified hazards.

The objective of the risk assessment is to evaluate the potential impacts within the planning area, encompassing loss of life, personal injury, property damage, and economic repercussions resulting from hazardous events. This process enables communities, fire protection districts, and schools within the planning area to gain a comprehensive understanding of their vulnerability to identified hazards. Furthermore, it establishes a foundation for the development and prioritization of mitigation strategies aimed at reducing the risks associated with future hazard events.

This chapter is divided into the following main parts:

- **Section 3.1 Hazard Identification** identifies the hazards that threaten the planning area and provides a factual basis for elimination of hazards from further consideration.

- **Section 3.2 Assets at Risk** provides the planning area's total exposure to hazards, considering critical facilities and other community assets at risk.

- **Section 3.3 Land Use and Development** discusses development that has occurred since the last plan update and any increased or decreased risk that resulted. This section also discusses areas of planned future development and any implications for risk/vulnerability.

- **Section 3.4 Hazard Profiles and Vulnerability Analysis** provides more detailed information about the hazards that impact the planning area. For each hazard, there are three sections: 1) Hazard Profile, which provides a general description and discusses the threat to the planning area, the geographic location and risk, potential Strength/Magnitude/Extent, previous occurrences of hazard events, probability of future occurrence, risk summary by jurisdiction, and impact of future development on the risk; 2) Vulnerability Assessment further defines and quantifies populations, buildings, critical facilities and other community resources, fire protection districts, and schools' assets at risk to natural hazards; and 3) Problem Statement briefly summarizes the problem and develops possible solutions.

3.1 HAZARD IDENTIFICATION

HAZARD ANALYSIS

The Greene County 2025 Multi-Jurisdictional Hazard Mitigation Plan participants updated the hazard profiles from the 2020 Mitigation Plan. This process included reviewing each profile, updating them with new information, and adding any missing information that was unavailable or not completed in the 2020 Mitigation Plan. The 2025 Multi-Jurisdictional Hazard Mitigation Plan did not add or remove any hazards from the 2020 plan. The hazard analysis for Greene County will have three different sections of hazards including natural, technological, and human-caused. Each section of hazards will be explained below.

NATURAL HAZARDS

A natural hazard is a natural phenomenon that might have a negative effect on humans or the environment. In the 2025 Multi-Jurisdictional Hazard Mitigation Plan, natural hazards have been divided into two separate groups: weather-related and other. Weather-related events are the most likely hazards to affect the Springfield-Greene County planning area and include hazards like tornadoes, damaging wind, flood, hail, and lightning. Other hazards that are not weather related include: animal disease, earthquakes, land subsidence, wildfires, and communicable disease. More details for each natural hazard can be found in the hazard's individual profile.

TECHNOLOGICAL HAZARDS

A technological hazard can be defined as hazards originating from technological or industrial accidents, dangerous procedures, infrastructure failures, or specific human activities that may cause the loss of life or injury, property damage, social and economic disruption, or environmental degradation. This hazard section was added for the first time in the 2015 Mitigation Plan. Some of the technological hazards listed in the 2025 Multi-Jurisdictional Hazard Mitigation Plan are airplane crashes, cave/mine collapse, dam failure, hazardous materials, and train derailment. More details about each technological hazard can be found in the hazard's individual profile.

HUMAN-CAUSED HAZARDS

Human-caused hazards result from the intentional actions of an adversary, such as threatened or actual attacks against a community or group of people. Some of the human-caused hazards that the 2025 Multi-Jurisdictional Hazard Mitigation Plan include are biological, chemical, civil unrest, cyber, explosives, nuclear, and radiological. More details for each human-caused hazard can be found in the hazard's individual profile.

A full list of hazards included in the 2025 multi-jurisdictional Hazard Mitigation Plan can be found on the next page.

Identified Hazards for Greene County

Natural Hazards	Technological Hazards	Human-Caused Hazards
Weather: ● Damaging Wind ● Drought ● Extreme Temperatures ● Flood ● Severe Thunderstorms-High winds, Hail, Lightning ● Severe Winter Weather-Ice and Snow ● Tornado Other: ● Animal Disease ● Communicable Disease ● Earthquake ● Land Subsidence (Sinkholes) ● Wildfire	● Airplane Crash ● Cave/Mine Collapse ● Dam Failure ● Hazardous Materials ● Power Failure ● Train Derailment ● Urban Fire	● Biological ● Chemical ● Civil Unrest ● Cyber ● Explosives ● Nuclear ● Radiological ● Sabotage ● Targeted Violence ● Waste

3.1.1 REVIEW OF EXISTING MITIGATION PLANS

The 2015 Multi-Jurisdictional Hazard Mitigation Plan introduced significant changes to the organization of hazard categories. Notably, a new section, "Technological Hazards," was added, with previously included technological hazards being reclassified from the human-caused hazards section. The 2015 plan also incorporated new hazards, such as targeted violence, cybercrime, and sabotage. Additionally, tornadoes, severe thunderstorms, hail, and lightning were separated into individual categories, whereas they had previously been grouped together under a single category titled "Tornado, Severe Storms, Hail, and Lightning." For the 2020 plan, the Mitigation Planning Committee (MPC) opted to maintain the existing hazard categories without modification. Similarly, for the 2025 plan, the MPC determined that no changes were necessary, as the current hazards accurately represented the dangers in Greene County. However, adjustments were made by consolidating extreme heat and extreme cold into a single category, "Extreme Temperatures," and re-merging "Severe Storms, Hail, and Lightning" back into one category. Severe Winter Weather is another combination referring to Ice + Snow.

In Missouri, local plans typically include only natural hazards, as federal regulations only require that natural hazards be included and discussed. The MPC determined the importance of including human-caused and technological hazards in the 2025 Multi-Jurisdictional Hazard Mitigation Plan because the community wants to mitigate all hazards, not just natural ones. Springfield-Greene County Office of Emergency Management adheres to the National Standards in Emergency Management, and according to Standard 4.1.1 “The Emergency Management program identifies the natural and human-caused hazards that potentially impact the jurisdiction using multiple sources. The Emergency Management program assessed the Risk and Vulnerability of people, property, the environment, and its own operations from these hazards.” To continue adhering to these standards, the MPC must include human-caused hazards in the mitigation plan.

Levee failure was excluded from the mitigation planning process as there are no mapped levees or associated levee protection areas within or immediately upstream from Greene County.

3.1.2 REVIEW OF DISASTER DECLARATION HISTORY

State and federal disaster declarations may be issued when the severity and magnitude of an event surpasses the ability of the local government to respond to and recover from the disaster. Disaster assistance is supplemental and sequential. When the local government's capacity has been surpassed, a state disaster declaration may be issued, allowing for the provision of state assistance. If the disaster is so severe that neither the local government or the state governmental capacities are exceeded, then a federal emergency or disaster declaration may be issued allowing for the provision of federal assistance.

Missouri State of Emergencies are Executive Orders (E.O.) signed by the Governor. For disasters, a State of Emergency could lead to a Federal Disaster Declaration. Since the last plan update, no non-federally declared events resulted in a significant event impacting the planning area.

FEMA also issues emergency declarations which are more limited in scope and do not include the long-term Federal Recovery Programs of major disaster declarations. Determining factors for declaration types are based on scale and type of damages, as well as institutions or industrial sectors affected.

From January of 1965 to August of 2024 there have been 25 federally declared disasters within the planning area.

Table 3.1 FEMA Disaster Declarations that Included Greene County, Missouri, 1965-Present

Disaster Number	Description	Declaration Date Incident Period	Individual Assistance (IA) and Public Assistance (PA)
439	Severe Storms and Flooding	06/10/1974-06/10/1974	N/A
3017	Drought	09/24/1974-09/24/1974	N/A
867	Severe Storms and Flooding	05/15/1990-05/31/1990	N/A
995	Severe Storms and Flooding	07/09/1993-10/25/1993	N/A
1412	Severe Storms, Tornadoes, and Flooding	04/24/2002-06/10/2024	IA: N/A PA: $35,299,777.93
1463	Severe Storms, Tornadoes, and Flooding	05/04/2003-05/30/2003	IA: $8,779,157.72 PA: $19,562,866.26
3232	Hurricane Katrina Evacuation into Missouri	08/29/2005-10/01/2005	IA: N/A PA: $1,816,226.90
1631	Severe Storms, Tornadoes, and Flooding	03/08/2006-03/16/2006	IA: $1,587,654.74 PA: $5,542,439.50
1673	Severe Winter Weather	11/30/2006-12/02/2006	IA: N/A PA: $6,654,375.10
1676	Severe Winter Weather and Flooding	01/12/2007-01/22/2007	IA: N/A PA: $106,468,427.80
1728	Severe Storms and Flooding	08/19/2007-08/21/2007	IA: N/A PA: $5,571,824.46
3281	Severe Winter Weather	12/08/2007-12/15/2007	N/A
1748	Severe Winter Weather and Flooding	02/10/2008-02/14/2008	IA: N/A PA: $10,068,998.77

1749	Severe Storms and Flooding	03/17/2008-05/9/2008	IA: $13,924,227.09 PA: $26,045,574.54
1773	Severe Storms and Flooding	06/01/2008-08/13/2008	IA: $5,367,078.69 PA: $28,697,245.28
3303	Severe Winter Weather	01/26/2009-01/28/2009	N/A
1847	Severe Storms, Tornadoes, and Flooding	05/08/2009-05/16/2009	IA: $5,417,824.37 PA: $27,072,334.75
3317	Severe Winter Weather	01/31/2011-02/05/2011	N/A
3374	Severe Storms, Tornadoes, Straight-line Winds, and Flooding	12/22/2015-01/09/2016	N/A
4250	Severe Storms, Tornadoes, Straight-line Winds, and Flooding	12/23/2015-01/09/2016	IA: $13,173,843 PA: $35,000,668.13
4317	Severe Storms, Tornadoes, Straight-line Winds, and Flooding	04/28/2017-05/11/2017	IA: $12,527,583.31 PA: $83,150,578.92
4451	Severe Storms, Tornadoes, and Flooding	04/29/2019-07/06/2019	IA: $7,477,718.54 PA: $79,107,190.85
3482	Missouri COVID-19	01/20/2020-05/11/2023	N/A
4490	Missouri COVID-19 Pandemic	01/20/2020-05/11/2023	IA: $68,290,878.93 PA: $626,478,510.45
4741	Severe Storms, Straight-line Winds, Tornadoes, and Flooding	07/29/2023-08/14/2023	IA: N/A PA: $6,255,355.35

Source: Federal Emergency Management Agency https://www.fema.gov/data-visualization/disaster-declarations-states-and-counties

3.1.3 RESEARCH ADDITIONAL SOURCES

The only centralized source of data for many of the weather-related hazards is the National Oceanic and Atmospheric Administration's (NOAA) National Centers for Environmental Information (NCEI). Although it is usually the best and most current source, there are limitations to the data which should be noted. The NCEI documents the occurrence of storms and other significant weather phenomena having sufficient intensity to cause loss of life, injuries, significant property damage, and/or disruption to commerce. In addition, it is a partial record of other significant meteorological events, such as record maximum or minimum temperatures, or precipitation that occurs in connection with another event. Some information appearing in the NCEI may be provided by or gathered from sources outside the National Weather Service (NWS), such as the media, law enforcement and/or other government agencies, private companies, individuals, etc. An effort is made to use the best available information, but because of time and resource constraints, information from these sources may be unverified by the NWS. Those using information from NCEI should be cautious, as the NWS does not guarantee the accuracy or validity of the information.

The NCEI damage amounts are estimates received from a variety of sources, including those listed above in the Data Sources section. For damage amounts, the NWS makes an educated guess, using all available data at the time of the publication. Property and crop damage figures should be considered as a broad estimate. Damage reported is in dollar values at the time of the storm event, not current dollar values.
The database currently contains data from January 1950 to March 2014, as entered by the NWS. Due to changes in the data collection and processing procedures over time, there are unique periods of records

available, depending on the type of event. The following timelines show the timespans for each period of unique data collection and processing procedures.

1. Tornado: From 1950 through 1954, only tornado events were recorded.
2. Tornado, Thunderstorm Wind, and Hail: From 1955 through 1992, only tornadoes, thunderstorm wind, and hail events were keyed from the paper publications into digital data. From 1993 to 1995, only tornado, thunderstorm wind, and hail events have been extracted from the Unformatted Text Files.
3. All Event Types (48 from Directive 10-1605): From 1996 to present, 48 event types are recorded as defined in NWS Directive 10-1605.

Injuries and deaths caused by a storm are reported on an area-wide basis. Please note that when reviewing a table generated from an NCEI search by county, the deaths or injuries listed may not have occurred within only Greene County.

Additionally, the following sources were used to collect data that involves Greene County and the planning area:

- Springfield-Greene County Library District
- The Missouri Department of Natural Resources
- The U.S. Geological Survey
- SEMA GIS Data
- FEMA
- United States Agricultural Statistics Service
- Missouri Department of Health and Senior Services
- Federal Aviation Administration

3.1.4 HAZARDS IDENTIFIED

The table on the next page outlines each jurisdiction and the associated hazards within the planning area. An "x" in the hazard columns indicates the hazards that are expected to impact specific jurisdictions. While certain hazards, such as tornadoes and straight-line winds, affect the entire planning area, others, such as dam failures and train derailments, may not directly impact all jurisdictions within Greene County.

Table 3.2 Hazards Identified for Each Jurisdiction

Jurisdiction	Drought	Flood	Hazardous Materials	Cyber	Severe Thunderstorms: High Winds, Hail, Lightning	Tornado	Ice + Snow	Communicable Disease	Animal Disease	Extreme Temperatures	Airplane Crash	Power Failure	Wildfire	Biological	Chemical	Land Subsidence	Civil Unrest	Targeted Violence	Urban Fire	Dam Failure	Explosives	Earthquake	Nuclear	Sabotage	Train Derailment	Waste	Cave/Mine Collapse	Radiological
Greene County	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
City of Ash Grove	x	x		x	x	x	x	x		x	x	x		x		x	x	x				x				x	x	x
City of Battlefield	x	x		x	x	x	x	x		x	x	x		x		x	x	x		x		x				x		x
City of Fair Grove	x	x		x	x	x	x	x		x	x	x		x		x	x	x				x				x		x
City of Republic	x	x		x	x	x	x	x		x	x	x		x		x	x	x		x		x				x		x
City of Springfield	x	x		x	x	x	x	x		x	x	x		x	x	x	x	x		x		x				x		x
City of Strafford	x	x		x	x	x	x	x		x	x	x		x	x	x	x	x		x		x				x		
City of Walnut Grove	x	x		x	x	x	x	x		x	x	x		x		x	x	x				x						
City of Willard	x	x		x	x	x	x	x		x	x	x		x		x	x	x				x						
Ash Grove School District	x	x		x	x	x	x	x		x		x						x				x						
Fair Grove School District	x	x		x	x	x	x	x		x		x						x				x						
Logan-Rogersville School District	x	x		x	x	x	x	x		x		x						x				x						
Republic School District	x	x		x	x	x	x			x		x						x		x		x						
Springfield School District	x	x		x	x	x	x	x		x		x						x		x		x						
Strafford School District	x	x		x	x	x	x	x		x		x						x		x		x						
Walnut Grove School District	x	x		x	x	x	x	x		x		x						x				x						
Willard School District	x	x		x	x	x	x	x		x		x						x				x						
Missouri State University	x	x		x	x	x	x	x		x		x					x	x				x						
Ozarks Technical Community College	x	x		x	x	x	x	x		x		x					x	x				x						
Ash Grove Fire Protection District	x	x	x		x	x	x		x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x			x
Battlefield Fire Protection District	x	x	x		x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			x
Bois D'Arc Fire Protection District	x	x	x		x	x	x		x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x			x
Brookline Fire Protection District	x	x	x		x	x	x		x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x			x
Ebenezer Fire Protection District	x	x	x		x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			x
Fair Grove Fire Protection District	x	x	x		x	x	x		x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x			x
Logan-Rogersville Fire Protection District	x	x	x		x	x	x		x	x	x	x	x	x	x	x	x	x	x		x	x	x	x	x			x
Strafford Fire Protection District	x	x	x		x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			x
Walnut Grove Fire Protection District	x	x	x		x	x	x		x	x	x	x	x	x	x	x	x	x	x		x	x	x		x			x
West Republic Fire Protection District	x	x	x		x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Willard Fire Protection District	x	x	x		x	x	x		x	x	x	x	x	x	x	x	x	x	x		x	x	x		x			

3.1.5 MULTI-JURISDICTIONAL RISK ASSESSMENT

The 2025 Greene County Multi-Jurisdictional Hazard Mitigation Plan is an update to the previously-approved 2020 Multi-Jurisdictional Hazard Mitigation Plan that was approved in July of 2020. Due to the limited differences in geography, topography, climate, and infrastructure between the multiple jurisdictions within Greene County, it was determined there was no significant variance in the risk and vulnerability to many of the hazards that were identified in previous plans. Many of the hazards were, therefore, analyzed holistically, to gain a comprehensive picture of the risks and vulnerability of the hazards. Greene County's hazard analyses and vulnerability studies include all municipalities, fire protection districts, school districts, and higher education institutions. However, all participants were asked to include their own hazard analysis and vulnerability study, only if they were different from the Greene County Vulnerability Assessment. The differences in vulnerabilities will be discussed in each hazard's individual profile.

3.2 ASSETS AT RISK

This section assesses the planning area population, structures, critical facilities and infrastructure, and other important assets that may be at risk to hazards. The planning area has grown since the last update, in both population and infrastructure. It is important to note that the value of assets in Greene County has also increased accordingly. Greene County has 97 facilities that are owned by the state and 38 that are leased out by the state.

3.2.1 TOTAL EXPOSURE OF POPULATION AND STRUCTURES

The population data presented in the following tables is based on the 2020 Census Bureau data, along with the 2023 population estimates where indicated. Building counts and exposure values are derived from parcel data provided by the State of Missouri's Geographic Information Systems (GIS) database. This data, organized by county, was made accessible to the Mitigation Planning Contractor via a Google Drive link referenced in the sources section of this chapter. Content exposure values were calculated by applying a multiplier to the building exposure values, adjusted according to the building's usage type. These multipliers were sourced from HAZUS, a GIS modeling software developed by FEMA. Land values have intentionally been excluded from consideration, as land typically remains after disasters, and any market devaluation is often temporary and difficult to quantify. Additionally, state and federal disaster assistance programs generally do not address land loss, except in the case of crop insurance. It is important to note that the total value of buildings is based on county assessors' data, which may not reflect current values. Government-owned properties are often subject to different tax assessments or are exempt from taxation, which may affect the accuracy of their reported value. Public school district and special district assets are included in the total exposure values for each community and county.

Table 3.3 shows the total population, building count, estimated value of buildings, estimated value of contents, and estimated total exposure to parcels for the unincorporated county and each incorporated city. For multi-county communities, the population and building data may include data assets located outside of the planning area. Table 3.4 below provides the building value exposures for the county and each city in the planning area, broken down by usage type. Finally, Table 3.5 provides the building count total for the county and each city in the planning area, broken out by building usage types (residential, commercial, industrial, and agricultural).

Table 3.3 Maximum Population and Building Exposure by Jurisdiction

Jurisdiction	2023 Annual Population Estimate	Building Count	Building Exposure ($)	Content Exposure ($)	Total Exposure ($)
Greene County (Unincorporated)	298,915	48,938	$5,933,440	$3,102,416	**$9,035,856**
City of Ash Grove	1,512	786	$147,638	$88,087	**$235,725**
City of Battlefield	6,046	7,993	$334,750	$173,525	**$508,275**
City of Fair Grove	1,625	760	$119,419	$67,851	**$187,270**
City of Republic	18,824	5,786	$1,000,255	$573,027	**$1,573,282**
City of Springfield	170,188	61,544	$11,758,392	$7,208,228	**$18,966,620**
City of Strafford	2,570	991	$182,559	$109,478	**$292,037**
City of Walnut Grove	529	356	$61,709	$33,656	**$95,365**
City of Willard	6,342	2,078	$353,493	$197,241	**$550,734**
Grand Total	**298,915**	**129,232**	**$19,891,655**	**$11,553,509**	**$31,445,164**

Table 3.4 Building Values/Exposure by Usage Type

Jurisdiction	Residential	Commercial	Industrial	Agricultural	Total
Greene County (Unincorporated)	$5,471,726	$263,491	$58,551	$83,188	**$5,876,957**
City of Ash Grove	$96,557	$35,653	$2,281	$437	**$134,928**
City of Battlefield	$317,751	$12,224	$760	$68	**$330,804**
City of Fair Grove	$87,689	$20,033	$2,281	$880	**$110,884**
City of Republic	$843,067	$124,276	$15,208	$1,323	**$983,874**
City of Springfield	$8,881,764	$2,125,248	$398,452	$1,141	**$11,406,606**
City of Strafford	$136,461	$29,880	$6,844	$290	**$173,474**
City of Walnut Grove	$44,994	$9,507	$0	$233	**$54,734**
City of Willard	$297,553	$31,578	$10,646	$823	**$340,600**
Grand Total	**$16,177,563**	**$2,651,892**	**$495,024**	**$88,384**	**$19,412,863**

Table 3.5 Building Counts by Usage Type

Jurisdiction	Residential Counts	Commercial Counts	Industrial Counts	Agricultural Counts	Total
Greene County (Unincorporated)	33,321	776	77	14,650	**48,824**
City of Ash Grove	588	105	3	77	**773**
City of Battlefield	1,935	36	1	12	**1,984**
City of Fair Grove	534	59	3	155	**751**
City of Republic	5,134	366	20	233	**5,753**
City of Springfield	54,087	6,259	524	201	**61,071**
City of Strafford	831	88	9	51	**979**
City of Walnut Grove	274	28	0	41	**343**
City of Willard	1,812	93	14	145	**2,064**
Grand Total	**98,516**	**7,810**	**651**	**15,565**	**122,542**

Although schools and special districts' total assets are shown in the tables above, further discussion is needed based on data from the Data Collection Questionnaire and district websites. The number of enrolled students in the participating public school districts is provided in Table 3.6 below. Additional information includes the number of buildings, building values (building exposure), and content value (contents exposure). These figures represent the total enrollment and building count for the public school districts, regardless of the county in which they are located.

Table 3.6 Population and Building Exposure by Jurisdiction – Public School Districts

Public-School District	Enrollment	Building Count	Building Exposure ($)	Content Exposure ($)	Total Exposure ($)
Ash Grove School District	732	9	$11,975	$0.00	**$11,975**
Fair Grove School District	1,261	6	$7,984	$0.00	**$7,984**
Logan-Rogersville School District	2,471	1	$1,331	$0.00	**$1,331**
Republic School District	5,316	9	$11,975	$0.00	**$11,975**
Springfield School District	23,873	231	$307,367	$0.00	**$307,367**
Strafford School District	1,412	6	$7,984	$0.00	**$7,984**
Walnut Grove School District	279	4	$5,322	$0.00	**$5,322**
Willard School District	4,732	9	$11,975	$0.00	**$11,975**
Grand Total:	**40,076**	**275**	**$409,822**	**$0.00**	**$409,822**

3.2.2 CRITICAL AND ESSENTIAL FACILITIES AND INFRASTRUCTURE

This section includes information from the Data Collection Questionnaire and other sources regarding the vulnerability of the participating jurisdictions' critical, essential, high-potential loss, and transportation/lifeline facilities to identified hazards. Definitions of each type of facility are provided below.

- **Critical Facility**: Facilities that are essential for providing utility or direction during response or recovery operations.
- **Essential Facility**: Facilities that, if damaged, would have devastating impacts on disaster response and/or recovery.
- **High-Potential Loss Facilities**: Facilities that would have a significant loss or impact on the community.
- **Transportation and Lifeline Facilities**: Facilities and infrastructure are critical to transportation, communications, and essential utilities.

Table 3.7 includes a summary of the inventory of critical and essential facilities and infrastructure in the planning area. The list was compiled from the Data Collection Questionnaire and the following sources:

- 2023 Missouri State Hazard Mitigation Plan and Hazard Mitigation Viewer
- U.S. Census Bureau
- American Community Survey 5-Year Data

For a detailed inventory of all critical facilities, please refer to Appendix A.

Table 3.7 Critical Facilities of Greene County

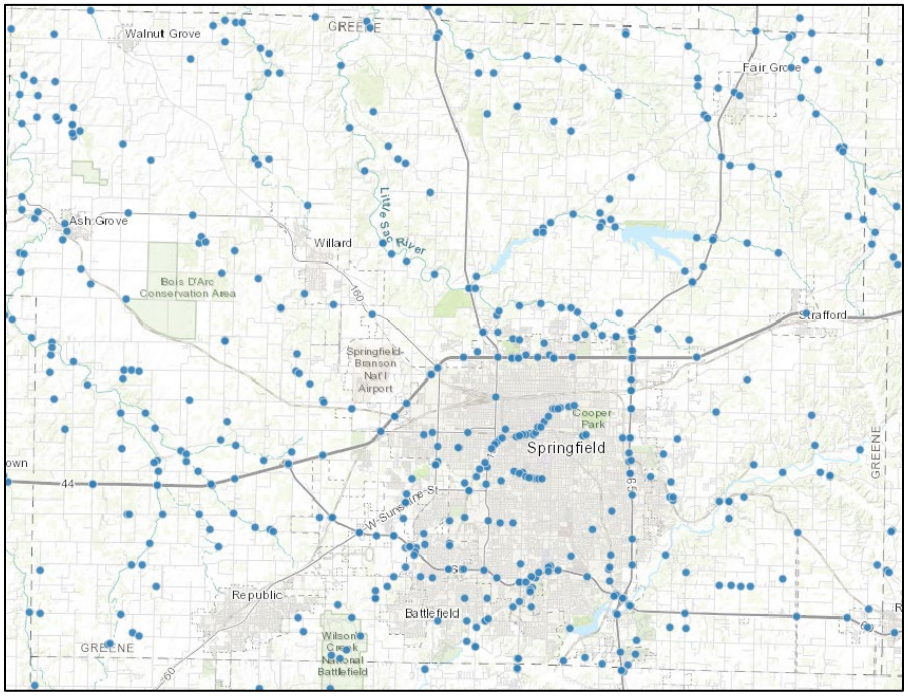
Jurisdiction	Airport Facility	Bus Facility	Childcare Facility	Churches	Electric Power Facility	Emergency Communications	Fire Service	Government	Housing (2020 Census Data)	Shelters	Hospital/Health	Military	Natural Gas Facility	Nursing Homes	Police Stations	Potable Water Facility	Rail	Sanitary Pump Stations	School Facility	Stormwater Pump Stations	Tier II Chemical Facilities	Wastewater Facility	Total
Ash Grove	x	x	5	7	x	x	1	1	655	1	2	x	x	1	1	x	x	1	3	x	6	x	**684**
Battlefield	x	x	2	9	x	x	3	1	2,360	x	x	x	x	1	1	1	x	x	x	x	3	x	**2,381**
Fair Grove	x	x	3	10	x	x	2	1	614	1	x	x	x	2	1	2	x	3	3	x	5	x	**647**
Republic	x	x	27	22	1	x	2	5	7,387	3	4	x	x	4	1	1	x	x	7	x	5	x	**7,469**
Springfield	2	1	147	210	4	1	13	52	84,016	53	57	8	2	42	3	2	2	19	53	x	302	2	**84,991**
Strafford	x	x	5	7	x	x	3	1	1,000	6	x	x	x	1	1	x	x	2	3	1	14	x	**1,044**
Walnut Grove	x	x	1	4	x	x	1	1	291	x	x	x	x	1	1	x	x	x	2	x	3	x	**305**
Willard	x	x	4	18	x	x	3	1	2,426	9	x	x	x	2	1	x	x	1	11	x	13	x	**2,489**
Greene County	x	x	x	4	x	x	8	4	37,701	x	x	x	x	x	1	x	x	x	x	x	43	x	**37,761**
Totals	**2**	**1**	**194**	**291**	**5**	**1**	**36**	**67**	**136,450**	**73**	**63**	**8**	**2**	**54**	**11**	**6**	**2**	**26**	**82**	**1**	**394**	**2**	**137,771**

The term “Scour Critical” refers to one of the database elements in the National Bridge Inventory. This element is quantified using a “scour index”, which is a number indicating the vulnerability of a bridge to scour, meaning the process of water eroding the soil around structures such as bridges and roads, during a flood. Bridges with a scour index between 1 and 3 are considered “scour critical”, or a bridge with a foundation determined to be unstable for the observed or evaluated scour condition.

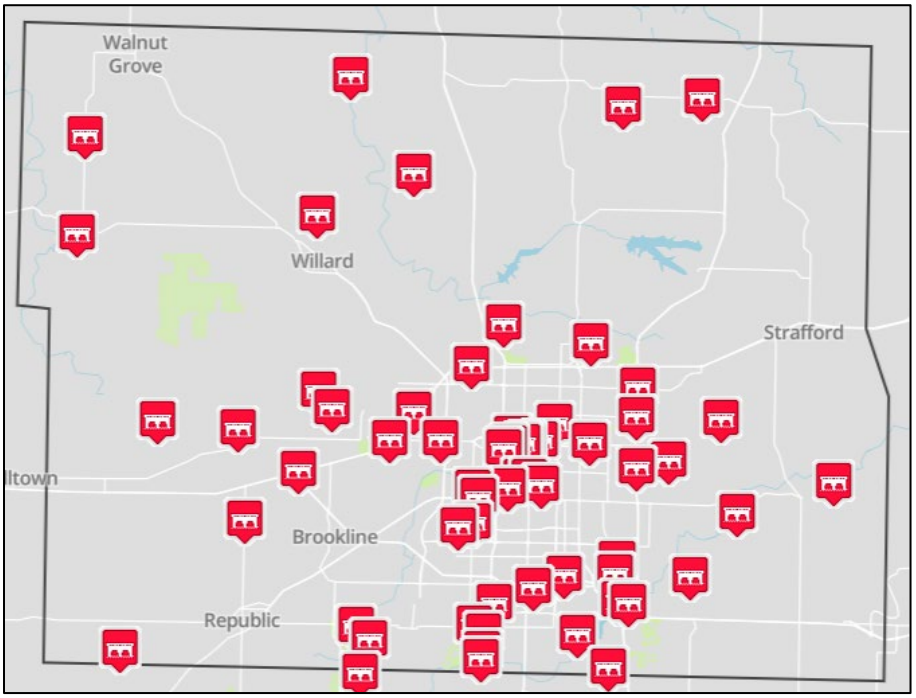
Condition of Bridges in Greene County

County	Bridge Counts				Bridge Area (Square Meters)			
	All	Good	Fair	Poor	All	Good	Fair	Poor
Greene	493	220	247	26	269,792	98,010	163,511	8,271

GREENE COUNTY BRIDGES



GREENE COUNTY STRUCTURALLY DEFICIENT BRIDGES



3.2.3 OTHER ASSETS IN GREENE COUNTY

Assessing the vulnerability of the planning area to disasters requires comprehensive data on the region's natural, historical, cultural, and economic assets. This information is essential for several key reasons, outlined as follows:

- These resources often require heightened protection due to their unique, irreplaceable nature, and their significant contribution to the overall economy.
- Advanced knowledge of these assets enables timely consideration and prioritization immediately following a hazard event, when the potential for damage is heightened.
- The guidelines for reconstruction, restoration, rehabilitation, or replacement may differ for designated resources of this type.
- Natural resources, such as wetlands and riparian habitats, can mitigate the impacts of future natural hazards by, for example, absorbing floodwaters.
- Losses to critical economic assets, such as major employers or key sectors, can severely affect a community’s resilience and its capacity for recovery following a disaster.

One significant asset in Greene County is the presence of threatened and endangered species. Table 3.8 below provides a list of the federally threatened, endangered, proposed, and candidate species in the county.

Table 3.8 Threatened and Endangered Species in Greene County

Common Name	Scientific Name	Status
Gray Bat	Myotis Grisescens	Endangered
Indiana Bat	Myotis Sodalis	Endangered
Northern Long Eared Bat	Myotis Seprentrionalis	Endangered
Tricolored Bat	Perimyotis Subflavus	Proposed Endangered
Alligator Snapping Turtle	Macrochelys Temminckii	Proposed Threatened
Niangua Darter	Etheostoma Nianguae	Threatened
Ozark Cavefish	Amblyopsis Rosae	Threatened
Monarch Butterfly	Danaus Plexippus	Candidate
Western Regal Fritillary	Argynnis Idalia Occidentalis	Proposed Threatened
Geocarpon Minimum	N/A	Threatened
Missouri Bladderpod	Physaria Filiformis	Threatened
Virginia Sneezeweed	Helenium Virginicum	Threatened

Greene County and its planning jurisdictions are home to several documented parks. The Missouri Department of Conservation (MDC) maintains a database of land it owns, leases, or manages for public use. Additionally, local city websites were consulted to identify parks and conservation areas within the region. This information is summarized in Table 3.9 below, which includes the name, address, and city location for each park or conservation area.

Table 3.9 Parks and Conservation Areas in Greene County

Park/Conservation Area	Address	City
Archery Range at the Davis House	5780 S. Farm Rd. 141	Springfield
Ash Grove City Park	300 E. Parkway Street	Ash Grove
Battlefield City Park	5434 Tower Drive	Battlefield
Brookline Park	2696 E. Sawyer Road	Republic
Butterfield Stage Park	Not Available	Battlefield
Champion Park	2561 S. Grant Avenue	Springfield
Chesterfield Park	2511 W. Republic Road	Springfield
Cooper Park	2300-2700 E. Pythian Street	Springfield

Cowden Park	2927 S. Kimbrough Avenue	Springfield
Cub's Lake Park	6886 N. Farm Road 9	Ash Grove
Croxdale Park	405 N. Airport Road	Strafford
Cruse Dog Park	2100 W. Catalpa Street	Springfield
Dan Kinney Park	2701 S. Blackman Road	Springfield
David C. Murray Park	4769 N. Farm Road 141	Springfield
Davis House	5780 S. Farm Road 141	Springfield
Dickerson Park Zoo	1400 W. Norton Road	Springfield
Doling Museum	301 E. Talmage Street	Springfield
Doling Park	301 E. Talmage Street	Springfield
Edna Norris Park	2056 S. Farm Road 133	Springfield
Eugene Field Park	2120 Barataria Avenue	Springfield
Ewing Park	1400 S. Scenic Avenue	Springfield
Fair Grove City Park	81 S. Orchard Boulevard	Fair Grove
Fassnight Park	1305 S. Campbell Avenue	Springfield
Founders Park	330 E. Water Street	Springfield
Frisco Highline Linear Park	U.S. Highway 160 - NW	Springfield
Frisco Highline Sports Complex	8326 W. Farm Road 64	Willard
Frisco Highline Trail	11956 State Highway BB	Walnut Grove
Garoutte Field	210 E. Hines Street	Republic
George Washington Carver Park	800 S. Belview Street	Springfield
Glenwood Park	451 N. Cedarbrook Avenue	Springfield
Grant Beach Park	1401 N. Grant Avenue	Springfield
Hartman Park	4001 S. Hemlock Avenue	Springfield
Hawthorn Park	801-843 S. Market Avenue	Springfield
Howard Smith Park	408 E. Bumgarner Road	Strafford
Jackson Street Park	220 W. Jackson Street	Willard
Jenny Lincoln Park	300 E. Harrison Street	Springfield
Jordan Valley Park	635 E. Trafficway Street	Springfield

J.R. Martin Park	300 E. Hines Street	Republic
Kirkwood Park	2201 E. Seminole Street	Springfield
Lake Springfield	5324 S. Kissick Avenue	Springfield
Living Memorial Park	4323 S. Nature Center Way	Springfield
Loren Street Park	2155 W. Catalpa Street	Springfield
Lost Hill Park	4705 N. Farm Road 151	Springfield
Lurvey Park	950 S. Oak Grove Avenue	Springfield
McDaniel Park	2405 S. National Avenue	Springfield
McKee Park	674 W. O'Neal Road	Republic
Miller Park	711 E. Miller Road	Republic
Mizumoto Japanese Stroll Garden	2400 S. Scenic Avenue	Springfield
Monroe-Ooley Park	2624 E. Monroe Terrace	Springfield
Moore Park	901 N. Boston Lane	Republic
Nathanael Greene Park	2400 S. Scenic Avenue	Springfield
Nichols Park	1900 W. Nichols Street	Springfield
Oak Grove Park	1538 S. Oak Grove Avenue	Springfield
Overhill Park	1100 S. Overhill Road	Springfield
Owen Park	440 N. Bailey Avenue	Republic
Parkwood Park	2600 N. Barnes Street	Springfield
Phelps Grove Park	950 E. Bennett Street	Springfield
Pocket Park	213 N. Main Street	Republic
Ray D. Kelly Park	2225 S. Fremont Avenue	Springfield
Ritter Springs Park	3683 W. Farm Road 92	Springfield
River Bluff Cave House	2327 W. Farm Road 190	Springfield
Rivercut Park	2320 W. Farm Road 190	Springfield
Roundtree Park	2975 W. Bennett Street	Springfield
Rutledge-Wilson Farm Park	3825 W. Farm Road 146	Springfield
Sanford Park	3114 S. Franklin Avenue	Springfield
Sequiota Park	3500 S. Lone Pine Avenue	Springfield

Shuyler Creek Trail	1150 U.S. Highway 60	Republic
Silver Springs Park	1100 N. Hampton Avenue	Springfield
Smith Park	1536 E. Division Street	Springfield
Springfield Botanical Gardens	2400 S. Scenic Avenue	Springfield
Tara Bass Memorial Park	117 S. Main Street	Springfield
The Gray Campbell Farmstead	2400 S. Scenic Avenue	Springfield
Timmons Hall	1055 E. Webster Street	Springfield
Tom Watkins Park	2100 W. High Street	Springfield
Valley Water Mill Park	2450 E. Valley Water Mill Road	Springfield
Valley Water Mill Park Equestrian Center	4007 N. Farm Road 171	Springfield
Walnut Grove Park	212 E. College Street	Walnut Grove
Washington Park	1600 N. Summit Avenue	Springfield
Westgate Park	3550 W. State Street	Springfield
Willard Sports Complex	233 N. State Highway Z	Willard
Wommack Mill Park	38 S. Main Street	Fair Grove

Greene County, like many regions across the United States, is home to buildings listed on the National Register of Historic Places, the official registry of cultural resources deemed worthy of preservation. Established under the National Historic Preservation Act of 1966, this program facilitates and supports both public and private initiatives to identify, evaluate, and protect historic and archaeological resources. The National Register is managed by the National Park Service under the direction of the Secretary of the Interior. Properties listed on the Register encompass districts, sites, buildings, structures, and objects of significance in American history, architecture, archaeology, engineering, and culture. Historic resources are vital to mitigation plans due to their role in shaping cultural identity and their potential economic value through tourism.

Table 3.10 Greene County National Register of Historic Places

Property	Address	City	Date Listed
Abou Ben Adhem Shrine Mosque	601 E. St. Louis Street	Springfield	9/9/1982
Ambassador Apartments	1235 E. Elm Street	Springfield	10/29/2008
Anderson, Elijah Teague, House	406 N. Pine Avenue	Republic	11/14/1980
Bailey School	501 W. Central Street	Springfield	11/2/2016
Bentley House	603 E. Calhoun Street	Springfield	11/14/1980
Benton Avenue AME Church	830 N. Benton Avenue	Springfield	10/14/2001

Berry Cemetery	1431 W. Farm Road 74	Ash Grove	11/13/2004
Beverly Apartments	529 E. Cherry Street	Springfield	7/10/2017
Boegel and Hine Flour Mill -Wommack Mill	Intersection MO 125	Fair Grove	11/6/1986
Nathan Boone House	On Highway V	Ash Grove	10/1/1969
Camp Manor Apartments	423 E. Elm Street	Springfield	12/6/2005
Campbell Avenue Historic District	200 and 300 Blocks of S. Campbell Ave. and 300 Block of Park Central West	Springfield	6/25/1999
Campbell Avenue Historic District (Boundary Increase)	318 and 322-326 S. Campbell Avenue	Springfield	12/23/2005
Christ Episcopal Church	601 E. Walnut Street	Springfield	3/26/1987
College Apartments	408 E. Walnut Street	Springfield	5/1/2003
Commercial Street Historic District	Commercial Street	Springfield	5/24/1983
Day House	614 South Avenue	Springfield	11/7/1976
Fallin Brothers Building	211-229 S. Market Avenue	Springfield	7/25/2012
Fallin Garage	423 W. Olive Street	Springfield	9/15/2023
Finkbiner Building	509-513 W. Olive Street	Springfield	5/25/2005
Franklin Springfield Motor Co. Building	312-314 E. Olive Street	Springfield	11/15/2006
Gillioz Theater	325 Park Central East	Springfield	7/9/1991
Gilmore Barn	U.S. 160, 3.5 miles east of Ash Grove	Ash Grove	4/8/1994
Gottfried Furniture Co. Building	326 Boonville Avenue	Springfield	12/18/2007
Greene County Courthouse	940 N. Boonville Avenue	Springfield	11/14/2007
Heer's Department Store	138 Park Central Square	Springfield	10/24/2002
Heercleff	6405 S. Campbell Avenue	Springfield	11/7/2016
Holland Building	205 Park Central East	Springfield	11/15/2000
Hotel Sansone	312 Park Central East	Springfield	5/5/2000
Jefferson Street Footbridge	Jefferson Ave. between Commercial St. and Chase St.	Springfield	9/2/2003
Keet-McElhany House	435 E. Walnut Street	Springfield	3/22/1984
J.E. King Manufacturing Co.	1350 E. St. Louis Street	Springfield	7/27/2005
Robert B. and Vitae A. Kite Apartment Building	769-771 South Avenue	Springfield	1/28/2004
Landers Theater	311 E. Walnut Street	Springfield	8/12/1977

Lincoln School	815 N. Sherman Avenue	Springfield	5/31/2000
McDaniel Building	316 Park Central East	Springfield	10/22/2014
Marquette Hotel	400 E. Walnut Street	Springfield	5/5/2000
Marx-Hurlburt Building	311-315 E. Park Central Square	Springfield	9/2/2003
Mid-Town Historic District	Roughly bounded by Pacific St., Clay Ave., Pythian St., Summit Ave., Calhoun St., Washington Ave., Central St., Benton Ave., Division St., and Jefferson Ave.	Springfield	7/13/1989
Mid-Town Historic District (Boundary Increase)	Roughly along N. Robberson Ave. and N. Jefferson Ave.	Springfield	8/9/2002
Netter-Ullman Building	317 Park Central East	Springfield	4/18/2003
Oberman D. M, Manufacturing Co. Building	600 N. Boonville Avenue	Springfield	4/18/2002
Old Calaboose	409 W. McDaniel Street	Springfield	11/14/1980
Palace Hotel	501 College Street	Springfield	11/27/2002
Pearl Apartments and Windsor Apartments	728 and 722 S. Jefferson Ave.	Springfield	12/6/2005
Pearson Creek Archaeological District	Off Hwy. 60 between Wilson's Creek and the James River	SE of Springfield	10/11/1978
Producers Ice and Manufacturing Company	524 W. Chase Street	Springfield	1/29/2018
Producers Produce Co. Plant	501 N. Main Avenue	Springfield	4/12/2010
Pythian Home of Missouri	1451 E. Pythian Street	Springfield	10/7/2009
Rail Haven Motel	203 S. Glenstone Avenue	Springfield	5/10/2010
Rock Fountain Court Historic District	2400 W. College Street	Springfield	4/2/2003
Route 66 Steak 'N Shake	1158 E. St. Louis Street	Springfield	8/1/2012
St. John's Mercy Hospital Building	620 W. Scott Street	Springfield	9/2/2003
St. Paul Block	401 South Avenue	Springfield	1/15/2009
Henry Schneider Building	600 College St. and 219-231 S. Main Avenue	Springfield	8/24/2006
South Avenue Commercial Historic District	Walnut and Pershing Street; South and Robberson Avenue	Springfield	6/25/1999
South-McDaniel-Patton Commercial Historic District	Roughly bounded by S. Campbell Avenue, W. McDaniel Street, South Avenue, and W. Walnut Street	Springfield	3/7/2003
Springfield Furniture Co.	601 N. National Avenue	Springfield	7/5/2006
Springfield Grocer Co. Warehouse	323 N. Patton Avenue	Springfield	7/8/2010

Springfield National Cemetery	1702 E. Seminole Street	Springfield	8/27/1999
Springfield Public Square Historic District	149, 138, 137, 134, 127, 132, 124, and 122 Park Central Square; 219 & 221 South Ave.	Springfield	5/5/2006
Springfield Public Square Historic District (Boundary Increase)	E. side of Public Square, part of the 300 block of Park Central E., N. side of 200 block of W. Olive Street	Springfield	1/13/2010
Springfield Seed Co. Office and Wholesale Building	319 N. Main Avenue	Springfield	9/14/2006
Springfield Warehouse and Industrial Historic District	E. Water St., W. Mill St., W. Phelps St., and Boonville Ave.	Springfield	6/25/1999
Stone Chapel	Drury College Campus, Benton Avenue and Central Street	Springfield	10/21/1982
U.S. Customhouse and Post Office	830 N. Boonville Avenue	Springfield	6/27/1979
Walnut Street Historic Commercial District	Walnut Street	Springfield	6/25/1999
Walnut Street Historic District	Roughly bounded by McDaniel Street, Walnut Street, Elm Street, and Sherman Parkway	Springfield	3/21/1985
Walnut Street Historic District (Boundary Decrease)	Along E. Elm Street	Springfield	10/19/2001
Walnut Street Historic District (Boundary Increase)	700 and 800 blocks of E. Walnut Street	Springfield	8/5/2002
West Walnut Street Commercial Historic District	Roughly 400-300 blocks of W. Walnut St. and 300-400 blocks of S. Campbell Avenue	Springfield	3/20/2002
E.M. Wilhoit Building	300-330 E. Pershing Street	Springfield	1/31/2005
Edward M. and Della C. Wilhoit House	903 S. Weller Avenue	Springfield	12/23/2004
Wilshire Apartments	520 S. Jefferson Street	Springfield	4/10/2008
Wilson’s Creek National Battlefield	6424 W. Farm Road 182	Republic	10/15/1966
Wise Feed Co. Building	438-440 S. Campbell Avenue	Springfield	1/6/2003
Woods-Evertz Stove Co. Historic District	Bounded by N. Jefferson Ave., E Phelps St., N. Robberson Ave., and E. Tampa Street	Springfield	10/23/2003

Table 3.11 Greene County Major Non-Governmental Employers

Employer Name	Main Locations	Product or Service	Employees
CoxHealth	3805 S. Kansas Expressway Springfield, MO	Healthcare	12,178
Mercy Hospital Springfield	1235 E. Cherokee Street Springfield, MO	Healthcare	9,214
Walmart & Sam's Club	N/A	Retail/Manufacturing	4,981
Springfield Public Schools	1359 E. St. Louis Street Springfield, MO	Education	3,685
Bass Pro Shops	1 Bass Pro Drive Springfield, MO	Retail/Manufacturing	2,989
O'Reilly Auto Parts	233 S. Patterson Avenue Springfield, MO	Retail/Manufacturing	2,631
Jack Henry and Associates, Inc.	3725 E. Battlefield Road Springfield, MO	Finance	2,262
Burrell Behavioral Health	1300 E. Bradford Pkwy. Bldg. A, Springfield, MO	Healthcare	1,872
Missouri State University	901 S. National Avenue Springfield, MO	Education	1,861
SRC Holdings (HQ)	531 S. Union Avenue Springfield, MO	Manufacturing	1,750

Within Greene County, 9.6 percent of jobs are related to agriculture. In 2021, the Missouri Economic Contribution of Agriculture and Forestry was completed and divided. The top three agricultural industries in Greene County are listed below:

Table 3.12 Agriculture-Related Jobs in Greene County

Job Type	Employees	Millions in Total Value Added ($)
Primary Food Processing	8,920	$903.20
Other Food Processing	5,919	$490.40
Forestry	2,328	$266.00

3.3 LAND USE AND DEVELOPMENT

The following section discusses land use within the planning area and the development that has occurred since the last plan update. Recognizing the growth and development of the planning area is essential, as it provides valuable context for understanding the evolving conditions of the area in relation to hazard discussions.

3.3.1 DEVELOPMENT SINCE PREVIOUS PLAN UPDATE

Over the past five years, Greene County has experienced growth in various regions of the planning area. All major cities within the county, except for Walnut Grove, saw an increase in building construction from 2019 to 2023. The tables below provide details on the number and value of buildings constructed since 2019 for each jurisdiction, as well as unincorporated Greene County. Walnut Grove is excluded from this data, as no permits were issued during this period.

Ash Grove Building Permits		
Year	**# of Buildings**	**Value of Buildings ($)**
2019	0	$0
2020	0	$0
2021	0	$0
2022	4	$1,000,000
2023	7	$1,834,000

Battlefield Building Permits		
Year	**# of Buildings**	**Value of Buildings ($)**
2019	12	$2,910,000
2020	30	$7,338,000
2021	70	$24,504,500
2022	5	$2,090,000
2023	2	$600,000

Fair Grove Building Permits		
Year	**# of Buildings**	**Value of Buildings ($)**
2019	5	$750,000
2020	11	$2,615,182
2021	0	$0
2022	6	$1,639,818
2023	4	$1,093,212

Greene County (Unincorporated) Building Permits		
Year	**# of Buildings**	**Value of Buildings ($)**
2019	387	$100,305,246
2020	607	$145,488,674
2021	411	$141,980,216
2022	362	$142,109,340
2023	478	$216,188,699

Springfield Building Permits		
Year	**# of Buildings**	**Value of Buildings ($)**
2019	110	$22,170,498
2020	147	$82,910,198
2021	87	$65,217,789
2022	167	$57,271,541
2023	91	$25,853,340

Republic Building Permits		
Year	**# of Buildings**	**Value of Buildings ($)**
2019	104	$40,938,235
2020	165	$39,270,177
2021	233	$57,068,715
2022	186	$37,235,136
2023	257	$72,964,191

Willard Building Permits		
Year	# of Buildings	Value of Buildings ($)
2019	18	$3,273,000
2020	28	$3,689,090
2021	49	$10,578,000
2022	9	$2,635,000
2023	38	$8,618,880

Strafford Building Permits		
Year	# of Buildings	Value of Buildings ($)
2019	17	$3,842,695
2020	18	$4,068,736
2021	22	$5,385,277
2022	27	$7,379,181
2023	35	$9,685,346

In addition to the growth in building construction within the planning area, many regions have also experienced population increases. However, Walnut Grove saw a population decline between 2010 and 2023. The Mitigation Planner utilized data from the U.S. Census Bureau's American Community Survey 5-Year Estimates, as well as the most recent census data, to assess population trends. Overall, the county has experienced growth and is projected to continue seeing population increases in most jurisdictions within the planning area.

Table 3.13 County Population Growth 2010 - 2023

Jurisdiction	Total Population 2010	Total Population 2023	2010-2023	2000-2023
			# Change	% Change
Greene County	275,174	298,915	23,741	24.35%
City of Ash Grove	1,680	1,512	-168	8.08%
City of Battlefield	5,044	6,046	1,002	153.50%
City of Fair Grove	1,343	1,625	282	46.79%
City of Republic	13,772	18,824	5,052	123.09%
City of Springfield	158,945	170,188	11,243	12.28%
City of Strafford	1,879	2,570	691	40.13%
City of Walnut Grove	767	529	-238	-16.03%
City of Willard	4,960	6,342	1,382	98.62%

Source: American Community Survey 5-year Estimates

Table 3.14 Change in Housing Units 2010-2023

Jurisdiction	Housing Units 2010	Housing Units 2024	2010-2023	2000-2023
			# Change	% Change
Greene County	125,546	140,112	14,566	34.06%
City of Ash Grove	633	689	56	10.42%
City of Battlefield	1,935	2,600	665	189.86%
City of Fair Grove	585	607	22	42.15%
City of Republic	5,952	7,840	1,888	136.86%
City of Springfield	78,070	85,608	7,538	22.51%
City of Strafford	797	1,014	217	42.22%
City of Walnut Grove	306	270	-36	-5.26%
City of Willard	1,998	2,204	206	84.59%

Source: American Community Survey 5-year Estimates

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3.1 HAZARD PROFILES

Requirement §201.6(c)(2)(i): The risk assessment shall include a description of the…location and extent of all natural hazards that can affect the jurisdiction. The plan shall include information on previous occurrences of hazard events and on the probability of future hazard events.

Each hazard will be analyzed individually in a hazard profile. The profile will consist of a general description of the hazard, its location, strength/magnitude/extent, previous events, future probability, a discussion of risk variations between jurisdictions, and how anticipated development could impact risk. At the end of each hazard profile, there will be a vulnerability assessment, followed by a summary problem statement.

The hazards identified in section 3.1.4 will be profiled individually in this section. There are three groups of hazards: Natural Hazards, Technological Hazards, and Human-Caused Hazards and will be discussed alphabetically. The level of information presented in the profiles will vary by hazard, depending on the available information. With each update to this plan, new information will be incorporated to provide a better evaluation and prioritization of the hazards affecting the planning area. Detailed profiles for each identified hazard will include information categorized as follows:

- **Hazard Description**: This section provides a general description of the hazard and the types of impacts it may have on a community, school, or special district.
- **Geographic Location**: This section describes the geographic areas within the planning area that are affected by the hazard. Where available, maps should be used to indicate specific locations within the planning area that are vulnerable to the hazard. For some hazards, the entire planning area may be at risk.
- **Strength/Magnitude/Extent:** This section includes information about the strength, magnitude, and extent of the hazard. For some hazards, this is described using a value from an established scientific scale or measurement system, such as an EF2 tornado on the Enhanced Fujita Scale. It should also include information about the typical or expected strength/magnitude/extent of the hazard in the planning area. Strength, magnitude, and extent may also refer to the speed of onset and the duration of hazard events. Describing the strength, magnitude, and extent of a hazard is distinct from describing its potential impacts on a community. These factors define the characteristics of the hazard, regardless of the people or property it affects.
- **Previous Occurrences**: This section includes available information on historic incidents and their impacts, with historical event records providing a solid basis for probability calculations.
- **Probability of Future Occurrence:** The frequency of past events is used to estimate the likelihood of future occurrences, and probability is determined by dividing the number of recorded events by the number of years of available data and multiplying by 100. This gives the probability, as a percentage, of the event occurring in any given year. For events that occur more than once annually, the probability will be reported as 100 percent in any given year, along with the average number of events per year. For hazards like drought, which may have a gradual onset and extended duration, probability will be based on the number of months in drought over a given time period and expressed as the probability of a given month being in drought. This section will also include a narration on probability using the following table as reference.

Degree Of Risk		
Level	**Criteria**	**Index Value**
Unlikely	Less than 1% annual probability	1
Possible	Between 1 and 10% annual probability	2
Likely	Between 10 and 100% probability	3
Highly Likely	100% annual probability	4

- **Changing Future Conditions Considerations**: For natural hazards, information from the NOAA Climate Explorer is used to discuss how future conditions may evolve and how these changes could impact each hazard.

VULNERABILITY ASSESSMENTS

Following the hazard profile for each hazard, the vulnerability assessment will be presented. The vulnerability assessment further defines and quantifies the populations, buildings, critical facilities, and other community assets at risk of damage from natural hazards. The vulnerability assessments should be based on the best available data, including data collected for the 2023 State Hazard Mitigation Plan Update. Within this update, SEMA provides online access to risk assessment data and associated mapping for the 114 counties in the state, including the independent city of St. Louis.

The vulnerability assessments in the Greene County plan will also be based on:

- Written descriptions of assets and risks provided by participating jurisdictions
- Existing plans and reports
- Personal interviews with planning committee members and other stakeholders
- Other sources as cited

The Vulnerability Assessment will be divided into the following sections:

- **Vulnerability Overview**: This section will provide an overall summary of each jurisdiction's vulnerability to the identified hazards. It will identify structures, systems, populations, or other community assets, as defined by the communities, which are susceptible to damage, losses, or hazardous events.
- **Potential Losses to Existing Development:** This section will discuss assets within the county that are already built or are in the process of construction, and how they could be affected by the defined hazards. This may include residential neighborhoods, agricultural land, and business areas of the county.
- **Previous and Future Development**: This section will include information on how changes to development in Greene County have impacted the community's vulnerability to the identified hazards.
- **Hazard Summary by Jurisdiction:** This section will provide an overview of how each identified hazard impacts the jurisdictions differently within the planning area.

PROBLEM STATEMENTS

Each identified hazard will have a problem statement. The purpose is to provide a brief summarized analysis of the hazard, the dangers it poses to the community, and potential ways to mitigate the problem within the planning area.

3.1.1 NATURAL HAZARDS: DROUGHT

HAZARD DESCRIPTION

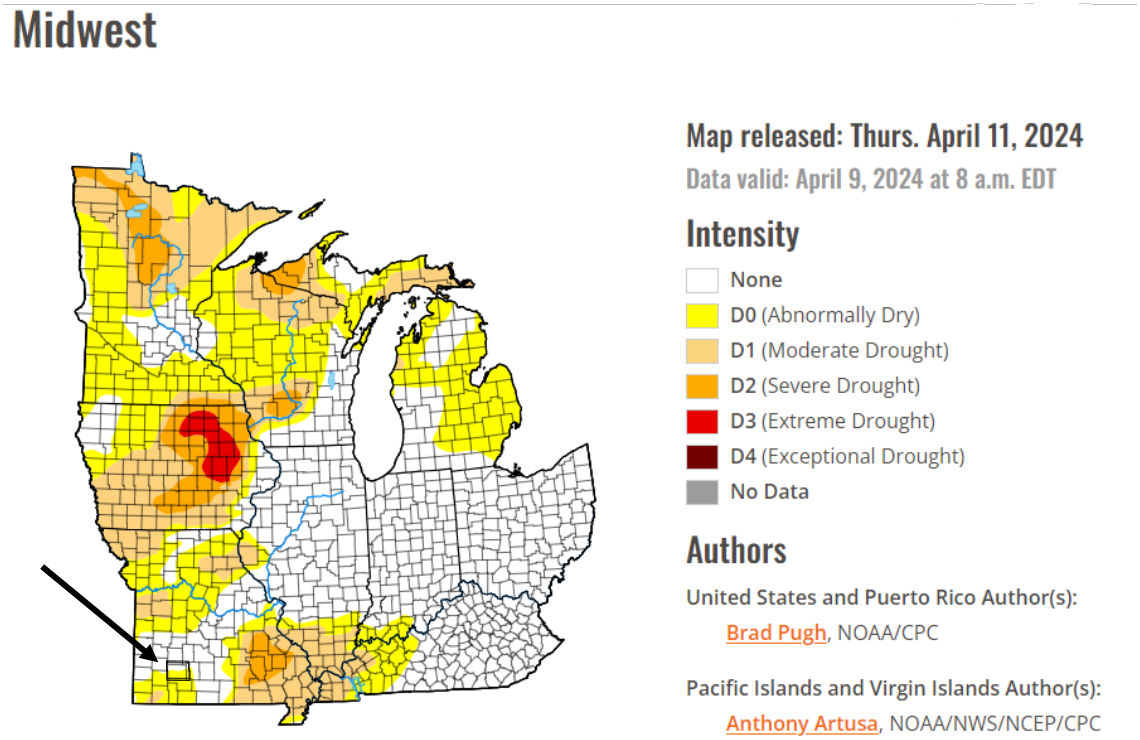
Drought is generally defined as a deficiency in precipitation or moisture over an extended period, usually a season or more, resulting in a water shortage. This can lead to adverse impacts on people, animals, or vegetation over a large area. According to the National Oceanic and Atmospheric Administration (NOAA) and the National Integrated Drought Information System, there are five types of droughts that can have a significant impact on Missouri. They are as follows:

- **Meteorological drought** is defined based on the degree of dryness (in comparison to a "normal" or average amount) and the duration of the dry period. A meteorological drought must be considered region-specific since the atmospheric conditions that cause precipitation deficiencies are highly variable from region to region.
- **Hydrological drought** is associated with the effects of precipitation shortfalls (including snowfall) on surface or subsurface water supplies (e.g., streamflow, reservoir and lake levels, and groundwater). The frequency and severity of hydrological drought are often defined on a watershed or river basin scale. Although all droughts originate from a deficiency in precipitation, hydrologists are more concerned about how this deficiency affects the hydrologic system. Hydrological droughts usually occur later than meteorological and agricultural droughts and often lack the same timing. Precipitation deficiencies take longer to manifest in components of the hydrological system, such as soil moisture, streamflow, groundwater, and reservoir levels. As a result, the impacts are also out of phase with those in other economic sectors.
- **Agricultural drought** focuses on the effects of soil moisture deficiencies on agricultural crops, including differences between actual and potential evaporation, reduced groundwater levels, or lower reservoir levels. Plant water demand depends on prevailing weather conditions, biological characteristics of specific plants, their stage of growth, and the physical and biological properties of the soil.
- **Socioeconomic drought** occurs when a physical water shortage begins to affect people. This happens when the demand for an economic good exceeds supply as a direct result of a weather-related deficit in water supplies.
- **Ecological drought** refers to an episodic deficit in water availability that pushes ecosystems beyond thresholds of vulnerability, impacts ecosystem services, and triggers feedback into natural and/or human systems. This type of drought encompasses environmental consequences, such as plant and animal loss.

GEOGRAPHIC LOCATION

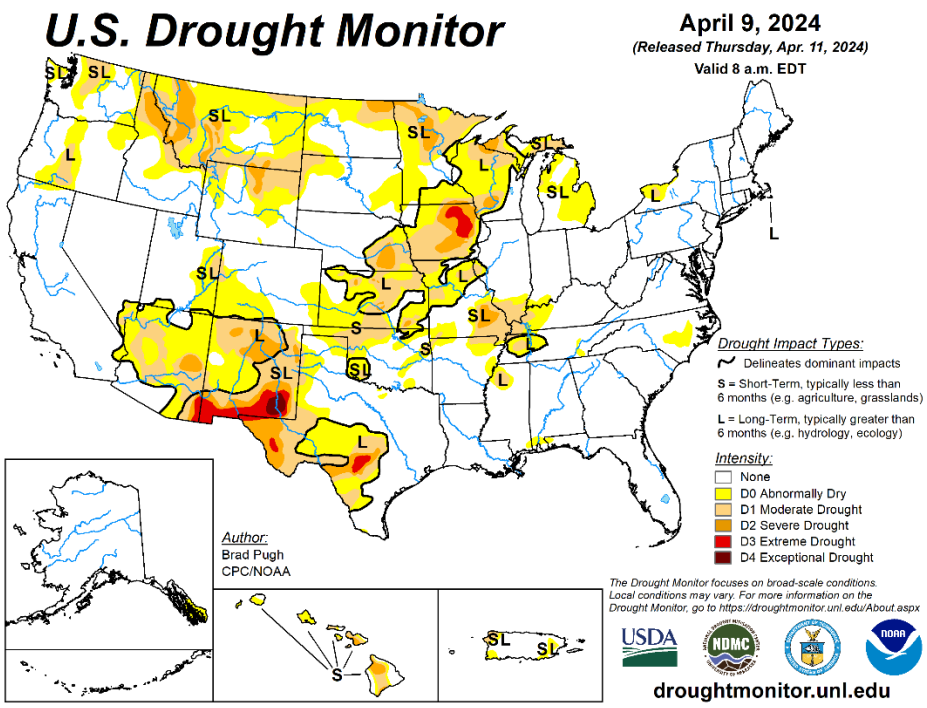
The entire planning area is vulnerable to drought, with the agricultural sector being the most significantly impacted. According to the 2022 Census of Agriculture, the county is home to 1,668 farms, encompassing a total of 197,605 acres of land, of which 69,133 acres are dedicated solely to crop production. Although Greene County has experienced a 10 percent decline in the number of operational farms, the area remains at risk of experiencing drought conditions that could adversely affect agricultural operations throughout the region.

Figure 3.4.1 U.S. Drought Monitor Map of Missouri: Trends Midwest Region

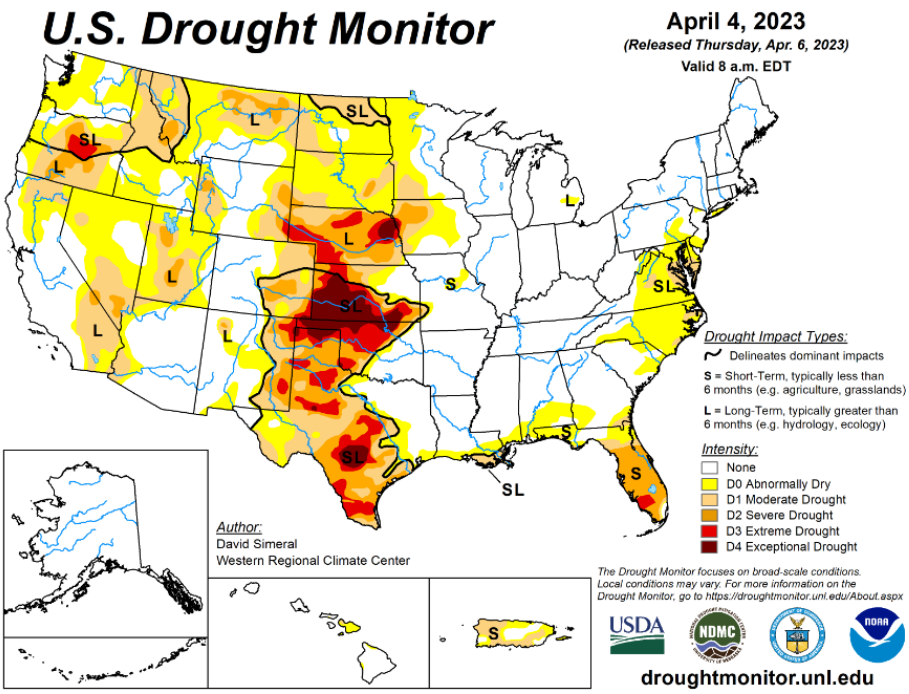


Source: https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?Midwest

Figure 3.4.2 U.S. Drought Monitor Map of Missouri: Trends



Source: https://droughtmonitor.unl.edu/



Source: https://droughtmonitor.unl.edu/Maps/MapArchive.aspx

STRENGTH/MAGNITUDE/EXTENT

The Palmer Drought Severity Index (PDSI) is a standardized drought index based on a simplified soil-water balance model that estimates relative soil moisture conditions. The PDSI quantifies the severity of deviations from normal moisture levels, with values above +2 (W0-W4) indicating very wet conditions and values below -2 (D0-D4) representing extreme drought. The supply component of the PDSI is calculated using temperature and soil moisture data, while the demand component is more complex, being influenced by factors such as evapotranspiration and groundwater recharge rates, which are difficult to measure directly. To address this, Palmer developed an algorithm that approximates these demand factors based on the most readily available climatic data, specifically precipitation and temperature.

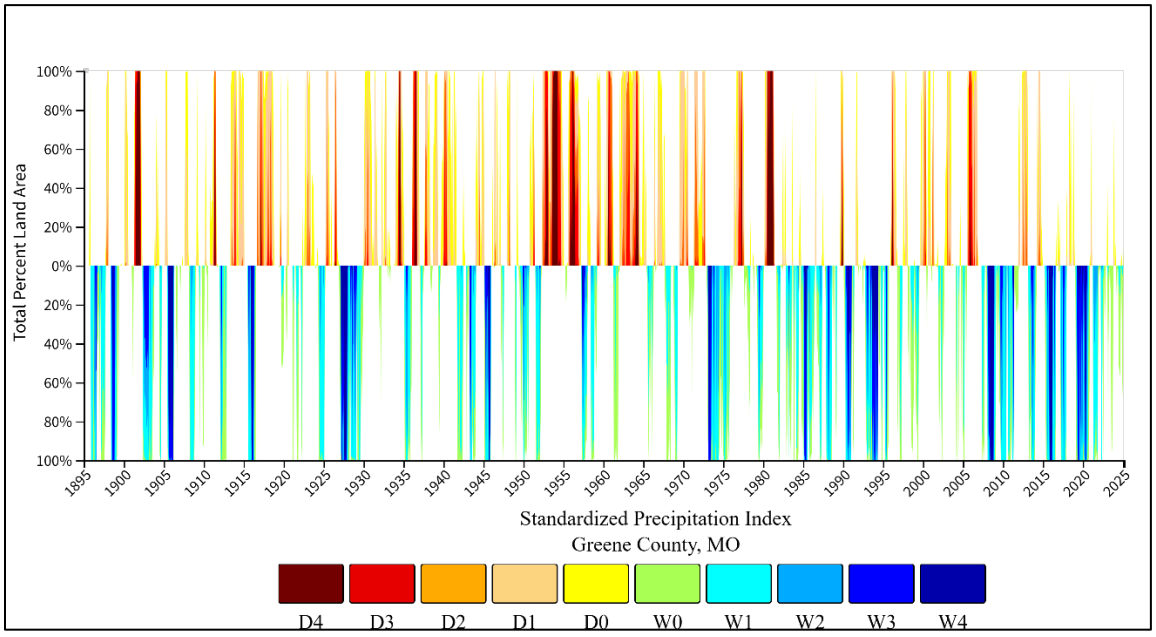
The PDSI is particularly effective at detecting long-term droughts, typically spanning several months. However, its reliability diminishes over shorter timescales, such as weeks, due to its inherent lag in response to rapid changes in moisture conditions. Additionally, Palmer introduced a method for localizing the index, standardizing drought calculations for each individual site based on the variability in temperature and precipitation at that location. This allows the PDSI to be applied to any region with adequate historical data on temperature and precipitation.

The National Integrated Drought Information System shows historically that Greene County has been at risk for drought in all severity types (D0-D4). Below is a table explaining the PDSI (Table 3.4.1) as well as Figure 3.4.# Historical Conditions for Greene County.

Table 3.4.1 Palmer Drought Severity Index

Measure of Deviation	Drought Category	Meaning
Above 2.0	W0	Exceptional Wet Conditions
1.6 to 1.9	W1	Extreme Wet Conditions
1.3 to 1.5	W2	Severe Wet Conditions
0.8 to 1.2	W1	Moderate Wet Conditions
0.5 to 0.7	W0	Abnormally Wet Conditions
0.4 to -0.4	-	Near Normal Conditions
-0.7 to -0.5	D0	Abnormally Dry
-1.2 to -0.8	D1	Moderate Drought
-1.5 to -1.3	D2	Severe Drought
-1.9 to -1.6	D3	Extreme Drought
Below -2.0	D4	Exceptional Drought

Figure 3.4.# Historical Conditions of Greene County Missouri



PREVIOUS OCCURENCES

The following tables show the last 10 years of insured crop losses due to drought. Agricultural droughts have the largest impact on Greene County as they affect both the economy and the food supplies within the planning area.

Insured Crop Loss Payments – 2023

Year	Crop	Reason	Total Amount of Loss
2023	Corn	Drought	$71,282
2023	Corn	Drought	$24,159
2023	Corn	Drought	$21,512
2023	Corn	Drought	$196,078
2023	Corn	Drought	$21,021
2023	Corn	Drought	$5,607
2023	Corn	Drought	$31,980
2023	Soybeans	Drought	$26,975
2023	Soybeans	Drought	$4,399
2023	Soybeans	Drought	$21,558
2023	Soybeans	Drought	$4,418
2023	Soybeans	Drought	$70,446
2023	Soybeans	Drought	$5,025
2023	Soybeans	Drought	$65,301
Source: rma.usda.gov/data/cause.html		**TOTAL**	**$569,761**

Insured Crop Loss Payments – 2022

Year	Crop	Reason	Total Amount of Loss
2022	Corn	Drought	$42,453
2022	Corn	Drought	$211,231
2022	Corn	Drought	$285,957
2022	Corn	Drought	$20,631
2022	Corn	Drought	$602,823
2022	Soybeans	Drought	$398,628
2022	Soybeans	Drought	$45,152
2022	Soybeans	Drought	$121,811
2022	Soybeans	Drought	$77,245
2022	Soybeans	Drought	$55,556
Source: rma.usda.gov/data/cause.html		**TOTAL**	**$1,861,487**

Insured Crop Loss Payments – 2021

Year	Crop	Reason	Total Amount of Loss
2021	Soybeans	Drought	$7,322
2021	Soybeans	Drought	$17,998
2021	Soybeans	Drought	$8,210
Source: rma.usda.gov/data/cause.html		**TOTAL**	**$33,530**

Insured Crop Loss Payments – 2018

Year	Crop	Reason	Total Amount of Loss
2018	Corn	Drought	$3,547.00
2018	Corn	Drought	$145,227.44
2018	Corn	Drought	$105,455.13
2018	Soybeans	Drought	$2,161.00
2018	Soybeans	Drought	$91,461.80
2018	Soybeans	Drought	$94,276.72
Source: rma.usda.gov/data/cause.html		**TOTAL**	**$442,129.09**

Insured Crop Loss Payments – 2017

Year	Crop	Reason	Total Amount of Loss
2017	Corn	Drought	$3,969.00
2017	Soybeans	Drought	$4,930.50
2017	Soybeans	Drought	$12,517.00
Source: rma.usda.gov/data/cause.html		**TOTAL**	**$21,143.50**

Insured Crop Loss Payments – 2015

Year	Crop	Reason	Total Amount of Loss
2015	Soybeans	Drought	$874.50
Source: rma.usda.gov/data/cause.html		**TOTAL**	**$874.50**

Over the last five years, the paid cost of crops affected by drought in Greene County has increased by $2,000,631. Even with a decrease in the number of farms within the planning area, drought continues to be a serious hazard in Greene County. The graphs above only display the payments of farmers who insured their crops. It is safe to say many other crops within the planning area have been negatively affected in a similar way.

Table 3.4.2 Previous Drought Events 2015-2024

Begin Date	End Date	Name Of Event	Description
1/1/2023	2/1/2024	Grapevines Lost	Grapevines in the Springfield area have dried out over the past several years. One vineyard and winery lost 20 percent of their 2.5 acres of grapevines to drought and late season frost. No grapes were harvested this last season, for the first time.
7/7/2023	N/A	Pumps Bolster Lake Levels	Springfield City Utilities activated the Stockton Lake pumps in early July as drought reduced lake levels.
12/4/2023	1/4/2024	Pumps Bolster Lake Levels	Drought has lowered lake levels in the Springfield area, leaving them about 5 percent lower than average. Total storage at City Utilities' lakes was 76.4 percent, below the 81.8 percent average, according to the CU website. Water was pumped from Stockton Lake into Fellows Lake to bolster water supplies.
1/1/2023	12/18/2023	Hay Production Down 40 percent	Several counties, including Greene, have seen a 40 percent decrease in hay production. This has led to farmers having to feed hay early, increasing the cost of raising cattle. This has caused many farmers to exit the cattle industries.
5/31/2023	5/1/2024	Drought Declaration for Missouri	Governor Mike Parson signed an executive order to extend Missouri's drought alert until May 1, 2024. The drought alert began on May 31, 2023, in response to severe drought conditions. Many ranchers had to sell livestock early and were looking for alternative feed.
7/30/2023	N/A	Serious Hay Shortage	Several counties, including Greene, have seen a hay shortage. Drought and heat in the Ozarks have cut into hay production, leaving the region seriously short of hay. The Farm Service Office in Bolivar was working with farmers to help them purchase hay. As a result, many farmers have had to take second jobs.
7/13/2023	N/A	Thistles	Musk and bull thistles have taken hold in many southwest Missouri pastures weakened by drought. Missouri law requires landowners to control all Canada, musk, and Scotch thistles and prevent them from going to seed.
9/24/2020	N/A	Pastures Not Growing	Pastures in the Ozarks were dry and not growing back, forcing some producers to begin feeding winter hay. Watering holes were also going dry.

6/1/2018	3/25/2019	Missouri Cattle Deaths	Drought during the summer reduced available hay and grass supplies, leaving farmers to feed questionable-quality hay to their livestock. The hay that was provided contained large amounts of nitrates, which caused up to 200 cattle deaths across the state, including Greene County.
10/11/2018	N/A	High Nitrate Levels	Missouri farmers were warned to test baled cornstalks before feeding them to livestock, as the dry summer caused high levels of nitrates.
8/5/2018	8/5/2018	Crops Suffering	Grass was brown and crunchy, and farm crops were suffering. The tree leaves were turning yellow due to the lack of moisture.
4/16/2017	N/A	Toxic Fescue	All Missouri farmers were warned that forages stressed from the winter drought and warm spring might produce seed heads early.
6/1/2016	3/21/2017	Livestock Water Shortage and Grass Fires	As drought conditions worsened in southwest Missouri, water sources for livestock, such as streams and ponds, were decreasing. Fire departments reported that grass fires affected crops.

PROBABILITY OF FUTURE OCCURRENCE

According to the USDA, Greene County is one of 22 counties most susceptible to the negative effects of drought. In 2023, emergency loans were made available for these 22 counties to help them recover from the drought during the primary growing season. Over the last 25 years Greene County has experienced 92 months with drought conditions. This means that for any given month there is a 31 percent chance of the planning area experiencing a drought. Missouri has seen an increase in abnormally dry seasons, and it can be assumed with this information that a drought within the next five years for Greene County is likely.

CHANGING FUTURE CONDITIONS AND CONSIDERATIONS

According to the Missouri State Mitigation Plan, droughts are a natural part of Missouri's and Greene County's climate. As future evaporation rates increase due to higher temperatures, these naturally occurring droughts may intensify. Although Greene County historically experiences wetter weather in the spring, summer droughts are expected to become more severe. Increased evaporation and reduced summer rainfall could potentially lower river flows.

While the number of heavy rainfall events is predicted to increase, researchers currently expect little change in total rainfall amounts. This suggests that the periods between heavy rainfall will be characterized by an increasing number of dry days. Higher temperatures and increased evapotranspiration further elevate the likelihood of drought, which could lead to agricultural droughts and suppressed crop yields across the planning area.

VULNERABILITY OVERVIEW

The Missouri State Hazard Mitigation Plan places Greene County in Region B when looking at droughts. Region B is central and east-central Missouri. According to the plan, Greene County has a medium-low vulnerability to severe drought. Groundwater resources are adequate to meet domestic and municipal water

needs, but due to the required well depths, irrigation wells are very expensive. The topography is generally unsuitable for row-crop irrigation.

POTENTIAL LOSSES TO EXISTING DEVELOPMENT

The National Drought Monitor Center at the University of Nebraska at Lincoln summarized the potential impacts of drought as follows, “Drought can create economic impacts on agriculture and related sectors, including forestry and fisheries, because of the reliance of these sectors on surface and subsurface water supplies. In addition to losses in crop yields and livestock production, drought is associated with increases in insect infestations, plant disease, and wind erosion which can lead to reduced growth. The instances of forest and range fires increase substantially during extended droughts, which in turn, places both human and wildlife populations at higher levels of risk. Income loss is another indicator used in assessing the impacts of drought because so many sectors are affected. Finally, while drought is rarely a direct cause of death, the associated heat, dust, and stress can all contribute to increased mortality.”

Droughts can put Greene County's agricultural and rural areas at risk and may increase the vulnerability to urban and wildfires. A drought combined with extreme heat events can be particularly harmful and devastating. According to the Environmental Protection Agency, Earth's water cycle has accelerated due to rising temperatures from climate change. This has led to an increased rate of evaporation from soil and transpiration from plants. While this increase makes more water available in the atmosphere for precipitation, it also contributes to the excessive drying of some land areas, resulting in less moisture remaining in the soil. As the climate continues to change, it is predicted that historically wet areas will experience more precipitation, increasing the risk of flooding, while historically dry areas will see progressively less precipitation, heightening the risk of severe drought.

IMPACT OF PREVIOUS AND FUTURE DEVLOPMENT

Greene County is a growing community. As the county’s population increases, so does the risk of more people being affected by drought. When a community’s population grows, the demand for treated water also rises, which can place additional strain on water supply systems. There is ample land in Greene County that is not currently being used for specific purposes, leaving room for both urban and agricultural development. Increases in the acreage planted with crops could lead to more agricultural losses if the planning area were to experience a severe drought.

EMAP CONSEQUENCE ANALYSIS

Table 3.4.3 EMAP Impact Analysis: Drought

Subject	Detrimental Impacts
Public	Droughts create many safety concerns. Wildfires and urban fires are at elevated risk during droughts. Droughts also pose threats to citizens through water shortages and extreme heat, which is often accompanied by droughts. Children, the elderly, and those with respiratory problems are at elevated risks. Illness can also come from contaminated water. All these elements create multiple safety concerns.
Responders	Greene County has no reports on life threatening situations to responders or any impact to response function due to a drought. Responders can be vulnerable to fatigue, and this can cause response functions to be impacted.
Continuity of Operations	There have been no reports of impact on service operations due to droughts in Greene County.

Property, Facilities, and Infrastructure	Property damage is often minor but is impacted especially when considering the issues that may arise due to a water shortage. There have been no reports of infrastructure damage due to droughts in Greene County. However, water shortage can create an impact on some infrastructure.
Environment	Significant widespread damage to the environment has occurred in Greene County due to drought incidents. The environment can take years to recover from droughts. Wildfires and wildlife are also highly affected. Water and soil contamination is also probable.
Economic Condition of Jurisdiction	Many rural areas depend on crops and livestock, while the cities need a large amount of water to support the larger populations. Many rural homes and areas that survive off their own wells will also suffer greatly from a drought.
Public Confidence in Jurisdiction Governance	Public confidence can be affected if food and water supplies are scarce. This factor is heavily dependent on how the crisis is handled by the government.

HAZARD SUMMARY BY JURISDICTION

Greene County:

All jurisdictions in Greene County could be impacted by extreme droughts. While drought conditions would be the same across the county, their effects would vary between urban and rural areas. In rural areas, severe droughts can lead to crops and plant loss due to water shortages and intense heat. In urban areas, however, the same water shortage could drive up the cost of water utilities for homes. Severe droughts could have widespread adverse effects across the entire planning area, impacting farms, homes, businesses, and schools. All cities and fire protection districts within Greene County have addressed this hazard in their planning efforts. However, schools in the county did not specifically address drought, as they would depend heavily on the resources and support of fire departments and cities if drought-related issues, such as fires, were to affect them.

City of Ash Grove

The City of Ash Grove, located within Greene County, Missouri, is a community that experiences drought with a frequency similar to the rest of the county. However, the impacts of drought in rural areas such as Ash Grove tend to be more pronounced due to the region’s strong reliance on agriculture. When drought conditions occur, they can severely affect crop yields, leading to financial strain for local farmers and increased costs for food production. Livestock operations also suffer, as water sources dry up and forage becomes scarce, resulting in additional costs for feed and water, and sometimes even a reduction in herd sizes.

Beyond the economic implications, prolonged drought can also strain local water resources, impacting not only farms but also households and small businesses. Infrastructure in rural areas may not be as resilient or well-equipped to handle extended dry periods compared to urban centers, further exacerbating the challenges.

Historically Ash Grove has not experienced extreme financial loss or death from drought but as climate changes become more frequent drought events could become more intense and prolonged.

City of Battlefield

The City of Battlefield, located in Greene County, Missouri, is a semi-rural community that experiences drought conditions with a frequency similar to other parts of the county. While not as heavily agricultural as some nearby towns, Battlefield still feels the effects of drought in both environmental and economic ways.

Local farms and agricultural operations in and around Battlefield can face significant challenges during periods of drought. Reduced rainfall affects crop production and pasture quality, which in turn impacts food supply chains and local economies. Livestock operations may also suffer due to limited access to water and feed, increasing the cost of care and sometimes forcing reductions in herd size.

In addition to agricultural concerns, drought places a strain on residential water usage and the city's infrastructure. Prolonged dry spells can lower groundwater levels and stress local water systems, affecting both homeowners and businesses. Because smaller communities like Battlefield may have fewer resources to respond to extended drought events, the impacts can linger longer than in larger urban areas.

City of Fair Grove

Although smaller in size, Fair Grove shares many of the same environmental and economic challenges during dry periods as its neighboring towns.

Agriculture plays a significant role in and around Fair Grove, and drought conditions can take a serious toll on local farming operations. Reduced rainfall impacts crop yields and pasture health, which can disrupt food production and strain local economies. Livestock owners often face additional burdens, such as increased feed costs and limited water availability, which can lead to tough decisions like downsizing herds.

Beyond agriculture, drought also affects daily life for Fair Grove residents. Extended dry spells can deplete groundwater supplies and put pressure on the city’s water infrastructure, affecting both households and local businesses. As a smaller community, Fair Grove may have fewer resources to combat and recover from prolonged drought, making preparedness and conservation efforts especially important.

City of Republic

As one of the larger communities in Greene County, the City of Republic still faces many of the same environmental and economic challenges brought on by drought as the surrounding region.

Prolonged dry periods can significantly impact daily life, reducing rainfall and lowering groundwater levels. These conditions place added pressure on Republic’s water infrastructure, affecting residential water usage and business operations alike.

Even with more developed resources, larger cities like Republic must remain proactive in managing the effects of drought. Strategic water management, infrastructure investment, and conservation efforts are key to ensuring the city remains resilient during extended dry spells.

City of Springfield

Springfield, the largest city in Greene County, remains vulnerable to the impacts of drought. Beyond straining residential and commercial water use, drought also affects agricultural areas on the city's outskirts. Prolonged dry spells can damage local parks and surrounding farmland, while the hardened, dry ground increases the risk of flash flooding when rain does return. Drought can also impact tourism tied to local waterways and create especially challenging conditions for vulnerable populations, including the unhoused.

City of Strafford

Prolonged dry periods can significantly impact daily life, reducing rainfall and lowering groundwater levels. These conditions place added pressure on Strafford's water infrastructure, affecting residential water usage and business operations alike.

Even with more developed resources, cities like Strafford must remain proactive in managing the effects of drought. Strategic water management, infrastructure investment, and conservation efforts are key to ensuring the city remains resilient during extended dry spells.

City of Walnut Grove

Walnut Grove shares many of the same environmental and economic challenges during dry periods as its neighboring towns.

Agriculture plays a significant role in and around Walnut Grove, and drought conditions can take a serious toll on local farming operations. Reduced rainfall impacts crop yields and pasture health, which can disrupt food production and strain local economies. Livestock owners often face additional burdens, such as increased feed costs and limited water availability, which can lead to tough decisions like downsizing herds.

Beyond agriculture, drought also affects daily life for Walnut Grove residents. Extended dry spells can deplete groundwater supplies and put pressure on the city's water infrastructure, affecting both households and local businesses. As a smaller community, Walnut Grove may have fewer resources to combat and recover from prolonged drought, making preparedness and conservation efforts especially important.

City of Willard

Willard shares many of the same environmental and economic challenges during dry periods as its neighboring towns.

Agriculture plays a significant role in and around Willard, and drought conditions can take a serious toll on local farming operations. Reduced rainfall impacts crop yields and pasture health, which can disrupt food production and strain local economies. Livestock owners often face additional burdens, such as increased feed costs and limited water availability, which can lead to tough decisions like downsizing herds.

Beyond agriculture, drought also affects daily life for Willard residents. Extended dry spells can deplete groundwater supplies and put pressure on the city's water infrastructure, affecting both households and local businesses. As a smaller community, Willard may have fewer resources to combat and recover from prolonged drought, making preparedness and conservation efforts especially important.

Ash Grove School District

Ash Grove School District is located in the City of Ash Grove and can be impacted by drought. Ash Grove has never had a large loss of life or economical loss, but periods of drought are often associated with high heat, which can more negatively affect young populations. Elementary aged children who play outside could be at risk of dust inhalation which could cause complications for children with asthma or other respiratory problems. In a severe drought food supply could be impacted which would have an adverse effect on school lunches and breakfasts, which would directly impact families.

Logan Rogersville School District

Logan Rogersville School District can be negatively impacted by drought. Logan Rogersville has never had a large loss of life or economic loss, but periods of drought are often associated with high heat, which can more negatively affect young populations. Elementary aged children who play outside could be at risk of dust inhalation which could cause complications for children with asthma or other respiratory problems. In a severe drought food supply could be impacted which would have an adverse effect on school lunches

and breakfasts, which would directly impact families. Older high schoolers who drive could be at risk driving to and from school if there were to be a dust storm.

Springfield School District

The Springfield School District is the largest in Greene County and serves the most children within the county. They would face similar challenges to the other school district in the area but at a larger scale. Young populations could be impacted by excess dust and heat. In severe droughts there could be shortages in food which could impact school meals. It is less likely that road conditions would be hazardous in the city as there are less underdeveloped areas.

Ozark Technical College

Ozark Technical College, OTC, is a community college within Greene County. Young adults are generally at lower risk when it comes to extreme temperatures but without proper hydration, they could still experience complications. Additionally, as OTC is a large campus the risk of a large fire could be a concern. Individuals with respiratory problems such as asthma could be at risk if there is excess dust and other vulnerable populations like older adults going back to school could be at risk.

Battlefield Fire Protection District

Battlefield Fire Protection District serves a large area containing both urban and rural areas. In addition, they have agreements with all surrounding fire departments. Droughts increase the danger of fires, often they spread faster, start easier and can cause extremely devastating damage. Drought conditions, especially in the summer, can increase the number of calls the Battlefield Fire Protection District responds to.

Brookline Fire Protection District

Brookline Fire Protection District has a more rural area compared to that of the other participating districts, but there are still many homes in their response area. Droughts increase the danger of wildfires and urban fires. Drought can increase the risk of fires spreading, and the damage they do which can quickly become a devastating event.

Willard Fire Protection District

Willard Fire Protection District serves a large area containing both urban and rural areas. In addition, they have agreements with all surrounding fire departments. Droughts increase the danger of fires, often spread faster, start easier and can cause extremely devastating damage. Drought conditions, especially in the summer, can increase the number of calls Willard Fire Protection District responds to.

PROBLEM STATEMENT

Droughts are extreme hazards that can last for months or even years, posing a threat to all areas of Greene County. Jurisdictions with agricultural activity are more likely to experience significant impacts from droughts. While droughts can occur at any time of the year, they are more common and severe during the summer months. Droughts can lead to reduced water supplies, crop losses, and even adverse effects on public health. Mitigation measures for droughts include public education, establishing public shelters with access to drinking water, and ongoing drought monitoring.

3.4.2 NATURAL HAZARD: EARTHQUAKE

HAZARD DESCRIPTION

An earthquake is a sudden shaking or trembling of the ground caused by the release of energy that has built up within or along the edges of the Earth's tectonic plates. Earthquakes primarily occur along fault lines and fractures in the Earth's crust. As stress builds along with these faults and fractures, it can cause one side of the fault to slip, releasing compressive and sheer energy that results in shaking and damage to structures. The most significant damage typically occurs closest to the earthquake's epicenter, the point on the Earth's surface directly above the location of fault movement. The type of geological materials between the epicenter and the affected areas plays a key role in how the energy is transmitted to buildings and other structures.

GEOGRAPHIC LOCATION

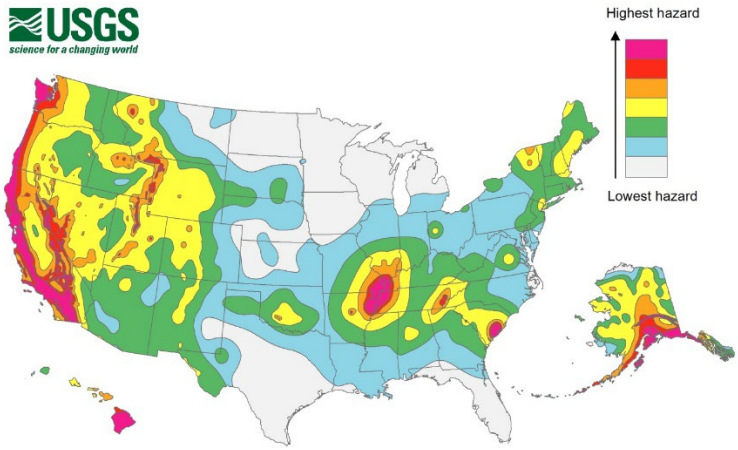
The New Madrid Seismic Zone

Until 2014, the New Madrid Seismic Zone (NMSZ) was regarded as the most seismically active region east of the Rocky Mountains. While the New Madrid Fault remains highly active, Oklahoma experienced a significant increase in seismic activity in 2014. Since 1974, seismometers—sensitive instruments designed to measure ground motion—have recorded thousands of small-to-moderate earthquakes. The fault systems responsible for these earthquakes are not easily visible on the surface in the New Madrid region due to erosion by river processes and burial by river sediments, which can reach thicknesses of 100 to 200 feet in certain areas. The NMSZ extends approximately 150 miles and spans parts of southeastern Missouri, northeastern Arkansas, western Tennessee, western Kentucky, and southern Illinois. On average, the NMSZ experiences micro-seismic events (with magnitudes below 1.0 to approximately 2.0) every other day. A major earthquake originating in the NMSZ would have widespread effects throughout Missouri, including Greene County, and could potentially impact neighboring states and other regions across the United States.

The Nemaha Ridge

The Nemaha Ridge, also referred to as the Nemaha Uplift, is a buried structural feature located in the Central United States. It is associated with a high amount of Pre-Cambrian granite in the basement rock, extending from approximately Omaha, Nebraska, to Oklahoma City, Oklahoma. The ridge is linked to the seismically active Humboldt Fault Zone and is also part of the Proterozoic Midcontinent Rift System, which extends into northern Kansas, roughly fifty miles west of the Nemaha Ridge. While earthquakes originating from this region tend to be less intense than those from the New Madrid Seismic Zone, the potential for seismic events impacting Greene County, though unlikely, cannot be entirely ruled out.

Figure 3.4.3 United States Seismic Hazard Map



Source: United States Geological Survey

STRENGTH/MAGNITUDE/EXTENT

The extent or severity of earthquakes is generally measured in two ways: 1) The Richter Magnitude Scale is a measure of earthquake magnitude; and 2) the Modified Mercalli Intensity Scale is a measure of earthquake severity. The two scales are defined as follows.

Richter Magnitude Scale

The Richter Magnitude Scale, developed in 1935, is a logarithmic scale used to quantify the size of earthquakes. The magnitude of an earthquake is determined by calculating the logarithm of the maximum amplitude of seismic waves recorded by seismographs. Corrections are made to account for the variation in distance between the seismographs and the earthquake's epicenter. On the Richter scale, magnitude is represented as whole numbers and decimal fractions. For instance, a magnitude 6.3 earthquake is ten times greater in amplitude than a magnitude 5.3 earthquake, reflecting the logarithmic nature of the scale. Each integer increase in magnitude corresponds to a tenfold increase in the amplitude of seismic waves, and each whole number increment represents approximately 31 times more energy released.

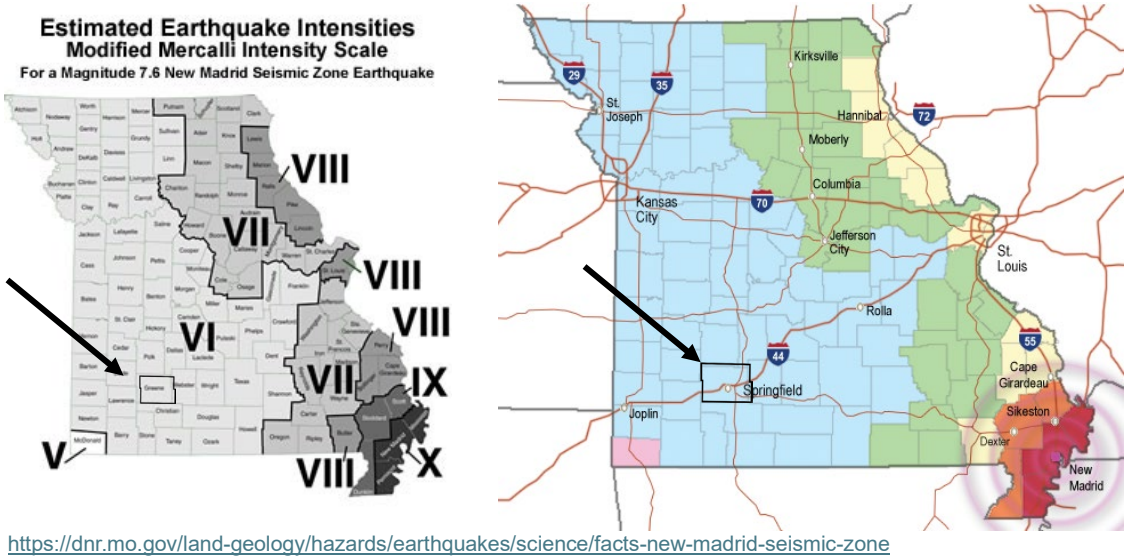
Modified Mercalli Intensity Scale

The intensity of an earthquake is quantified based on its observed effects on the Earth's surface. The intensity scale measures the impact of the seismic event, including phenomena such as human perception (e.g., people waking up), displacement of objects (e.g., movement of furniture), and structural damage (e.g., damage to chimneys). In the United States, the Modified Mercalli (MM) Intensity Scale is used to assess earthquake intensity. Developed in 1931, this scale consists of 12 progressively increasing levels, ranging from imperceptible shaking to catastrophic destruction. Each level is assigned a Roman numeral from I to XII. Unlike the Richter Scale, the Modified Mercalli Scale does not rely on a mathematical formula but is based on subjective observations of the earthquake's effects. This scale provides a more accessible understanding of an earthquake's severity, particularly for non-experts.

Table 3.4.4 Modified Mercalli Intensity Scale

I	Instrumental: Detected only by instruments	**VII**	Very strong: Noticed by people in cars, damage to poor construction
II	Very feeble: Noticed only by people at rest	**VIIII**	Destructive: Chimneys may fall, damage done to a substantial amount of buildings, heavy furniture is overturned
III	Slight: Felt by people at rest, like passing of a truck	**IX**	Ruinous: Extensive damage done to a substantial amount of buildings, the ground will crack, pipes will break
IV	Moderate: Generally perceptible by people in motion, loose objects disturbed	**X**	Disastrous: Many buildings destroyed
V	Rather strong: Dishes broken, bells ring, pendulum clocks stopped, people are awakened	**XI**	Very Disastrous: Few structures left standing
VI	Strong: Felt by all, some people frightened, slight damage, some plaster will crack	**XII**	Catastrophic: Total destruction

Figure 3.4.4 Impact Zones for a 7.6 Earthquake on the New Madrid Fault



Source: https://dnr.mo.gov/land-geology/hazards/earthquakes/science/facts-new-madrid-seismic-zone
https://sema.dps.mo.gov/earthquake_preparedness/EQ_MM/

The figure above illustrates the projected impacts on the State of Missouri from a 7.6 magnitude earthquake, which scientists anticipate as a likely scenario for the next significant event within the New Madrid Seismic Zone. Damage estimates for this event are derived from the Modified Mercalli Intensity Scale. Greene County, indicated in blue, is classified at an intensity level of VI, signifying that all individuals within the planning area would experience perceptible ground motion. Additionally, structures with substandard construction or those that are aging may incur slight damage. In residential buildings, effects could include broken dishes, glassware, and windows, the displacement of objects from shelves, and potential cracking of plaster on walls.

PREVIOUS OCCURRENCES

A series of three major earthquakes that occurred between 1811 and 1812 are commonly referred to as the New Madrid earthquakes. Due to the extensive damage across 600,000 square kilometers, the vast area of perceptibility extending over 5,000,000 square kilometers, and the significant physiographic changes that occurred, the New Madrid earthquakes of 1811-1812 are considered among the largest in U.S. history. These earthquakes were the largest to occur east of the Rocky Mountains, in both the U.S. and Canada. The damage caused by these earthquakes was ten times greater than the damage from the 1906 San Francisco earthquake.

PROBABILITY OF FUTURE OCCURRENCE

The United States Geological Survey (USGS) has projected that an earthquake of magnitude 7.5 to 8.0 at the New Madrid Fault has a probability of occurrence between 7-10 percent over the next 50 years. They also predict an earthquake of 6.0-7.0, has a probability of 28-46 percent over the next 50 years. With this information, it is likely that, over the next 5-10 years, the Greene County area and its jurisdictions will be affected by an earthquake. The New Madrid Fault is fairly active producing small earthquakes (1-2.1 magnitude) at least monthly. However, these earthquakes have no effect on the planning area.

CHANGING FUTURE CONDITIONS AND CONSIDERATIONS

According to the Missouri State Hazard Mitigation Plan, scientists are beginning to explore a potential connection between changing climate conditions and earthquakes. The redistribution of weight over fault lines, caused by shifting ice caps and rising sea levels, could potentially influence earthquake occurrences. However, no studies currently quantify this relationship in sufficient detail, so recent earthquakes should not be directly linked to climate change. While not conclusive, preliminary research suggests that more intense earthquakes and tsunamis may eventually be added to the list of adverse consequences associated with changing future conditions.

VULNERABILITY OVERVIEW

The impacts and severity of earthquakes in Missouri can be significant, particularly in counties closer to the New Madrid Fault, where catastrophic damage is possible. In the event of a 7.6 magnitude earthquake in the New Madrid Seismic Zone (NMSZ), Greene County would fall within the “VI” portion of the Modified Mercalli Intensity Scale. This means the entire planning area could experience ground movement. There is a risk of damage to poorly constructed buildings, and household items such as glassware and dishes could break. Some individuals may even have trouble walking at certain points. Pictures could fall from walls, and cracks may form in the plaster. Additionally, Greene County could face an influx of people from areas closer to the fault as they evacuate to safer regions within the county.

Earthquake Insurance

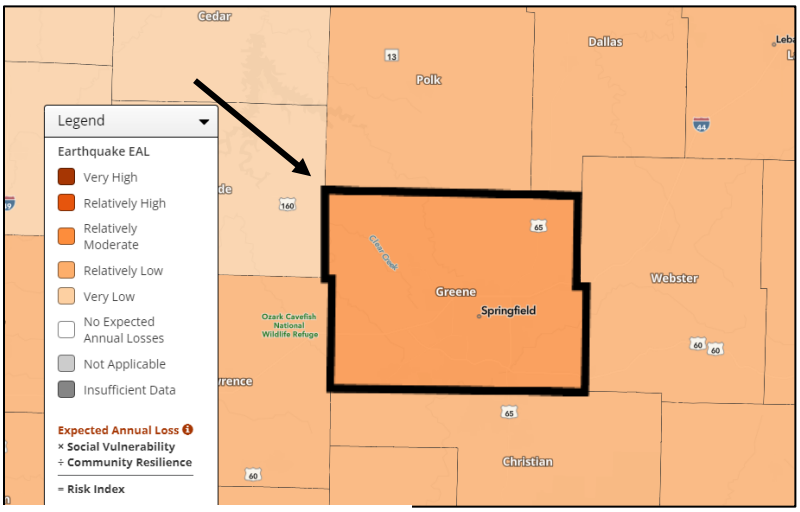
Missouri is one of the top three largest markets for earthquake insurance, alongside California and Washington. Standard insurance plans do not cover damage from earthquakes, land movement, or landslides. After the 1990s, many insurance companies stopped offering earthquake insurance, as projections suggested that a major earthquake could potentially bankrupt these companies. The Federal Emergency Management Agency (FEMA) states that, despite Missouri being one of the top three markets for earthquake insurance, only 11.4 percent of its residents had earthquake insurance as of 2022. In contrast, 60 percent of residents were insured in 2000. Over the past two decades, earthquake insurance premiums in Missouri have risen sharply. Additionally, earthquake coverage often includes two high deductibles: rather than a fixed dollar amount, deductibles are a percentage of the cost of rebuilding the home, with a separate deductible for the home's contents. Deductibles of 10-20 percent are common. For example, with a 20 percent deductible, the owner of a $200,000 home could be responsible for paying up to $40,000 in deductibles for damage to the dwelling before receiving any benefit from their earthquake insurance policy.

POTENTIAL LOSSES TO EXISTING DEVELOPMENT

The Missouri Department of Insurance reports that a joint assessment conducted by the Mid-America Earthquake Center at the University of Illinois and FEMA suggests that the New Madrid seismic event could result in the highest total economic loss of any natural disaster in U.S. history.

According to the National Risk Index (NRI) developed by FEMA, Greene County could incur economic losses amounting to approximately $7,260,942 in the event of an earthquake. This is considered a moderate loss relative to the projected national economic impact of a similar event. Additionally, the NRI estimates that approximately $3,524,741,119,000 worth of assets, including buildings, infrastructure, population, and agricultural resources would be exposed to earthquake hazards across the United States. The figure below illustrates the estimated losses in Greene County in comparison to neighboring counties.

Figure 3.4.5 Earthquake Estimated Annual Loss



Source: https://hazards.fema.gov/nri/map

EMAP CONSEQUENCE ANALYSIS

Table 3.4.6 EMAP Impact Analysis: Earthquakes

Subject	Detrimental Impacts
Public	An earthquake that affected Greene County would most likely result in few minor injuries and no deaths. There would be small safety concerns for the public.
Responders	There would be little to no impact on responders and response function in Greene County due to an earthquake.
Continuity of Operations	An earthquake would cause little to no impact on service operations.
Property, Facilities, and Infrastructure	Greene County could experience property damages to buildings that are not structurally sound or of poor quality. An earthquake could also create a minor impact to some key infrastructures, such as road damage or power losses in some areas; however, it would not be widespread. Earthquakes may cause damage to weak facilities, windows could be broken, and other minor isolated instances of damage.
Environment	The environment would experience little to no impact from an earthquake.

Economic Condition of Jurisdiction	Damage to property, facilities, or infrastructure will have a very minor impact on Greene County's economy.
Public Confidence in the Jurisdiction's Governance	An earthquake would result in little to no loss in public confidence in governance in Greene County.

HAZARD SUMMARY BY JURISDICTION

Greene County

Earthquake intensity is expected to be relatively uniform across the planning area, resulting in a consistent level of seismic risk throughout the region. However, the extent of damage may vary depending on local factors. For instance, Ash Grove, with its older infrastructure, could experience more significant damage to residential and commercial properties compared to other jurisdictions. In contrast, Springfield, with its higher concentration of buildings and infrastructure, may face more substantial financial losses in the event of an earthquake.

Despite being located hundreds of miles from the New Madrid Seismic Zone (NMSZ), Greene County remains vulnerable to potential minor damage and a possible influx of evacuees in the event of a major seismic event in the NMSZ. Several cities, particularly those on the eastern side of the county, have incorporated earthquake hazard mitigation strategies into their planning processes. Notably, schools in this area have emphasized the importance of educating students and families on safety protocols to ensure the protection of both staff and students during an earthquake.

City of Ash Grove

Earthquake intensity is expected to be relatively uniform across the planning area, resulting in a consistent level of seismic risk throughout the region. However, the extent of damage may vary depending on local factors. For instance, Ash Grove, with its older infrastructure, could experience more significant damage to residential and commercial properties compared to other jurisdictions.

City of Battlefield

The city of Battlefield is subject to a similar level of seismic risk as the surrounding region, with earthquake intensity expected to be fairly consistent across the area. However, local factors could influence the extent of damage. Due to its newer infrastructure and fewer historic buildings, Battlefield may experience less damage to residential and commercial properties compared to areas with older, more vulnerable structures.

City of Fair Grove

Earthquake intensity is expected to be relatively uniform across the planning area, resulting in a consistent level of seismic risk throughout the region. However, the extent of damage may vary depending on local factors. For Fair Grove this could include damage to historic buildings and vulnerable populations such as the elderly could become disoriented and experience harm as a secondary effect.

City of Republic

Earthquake intensity is expected to be relatively uniform across the planning area, resulting in a consistent level of seismic risk throughout the region. However, the extent of damage may vary depending on local factors. For Republic this could include damage to historic buildings and vulnerable populations such as the elderly could become disoriented and experience harm as a secondary effect. Local fire departments would also most likely see an influx of calls in and around the city.

City of Springfield

Springfield, with its combination of historic buildings and newer construction, faces a similar level of seismic risk as the surrounding region, with earthquake intensity expected to be consistent across the area. However, local factors, including the city's diverse infrastructure, could influence the extent of damage. While the earthquake is not anticipated to cause casualties, Springfield, home to the largest population in the region, may experience an influx of people fleeing more heavily affected areas, placing additional strain on local resources and emergency services.

City of Strafford

Earthquake intensity is expected to be relatively uniform across the planning area, resulting in a consistent level of seismic risk throughout the region. However, the extent of damage may vary depending on local factors. For Strafford this could include damage to historic buildings and vulnerable populations such as the elderly could become disoriented and experience harm as a secondary effect. Local fire departments would also most likely see an influx of calls in and around the city.

City of Walnut Grove

Earthquake intensity is expected to be relatively uniform across the planning area, resulting in a consistent level of seismic risk throughout the region. However, the extent of damage may vary depending on local factors. For instance, Walnut Grove, with its older infrastructure, could experience more significant damage to residential and commercial properties compared to other jurisdictions.

City of Willard

Earthquake intensity is expected to be relatively uniform across the planning area, resulting in a consistent level of seismic risk throughout the region. However, the extent of damage may vary depending on local factors. For Willard this could include damage to historic buildings and vulnerable populations such as the elderly could become disoriented and experience harm as a secondary effect. Local fire departments would also most likely see an influx of calls in and around the city.

Ash Groves School District

Ash Groves School District has only three school buildings, because of this, if an earthquake was to cause damage to even one of them the consequences could be very long-lasting. Just like the other participating jurisdictions, the intensity of a potential earthquake is expected to be uniform across the county. The buildings in Ash Grove School District are well maintained but still older construction.

Logan Rogersville School District

The Logan Rogersville School District has five school buildings, all of which serve different age ranges. Damage to a building would cause long-term complications for affected students and staff. Just like the other participating jurisdictions, the intensity of a potential earthquake is expected to be uniform across the county.

Springfield School District

Springfield School District is in Springfield, and the district has both new and old construction. The intensity of an earthquake is expected to be relatively uniform across the planning area but would more strongly impact older under maintained buildings. There are some schools Springfield Public Schools is actively working to replace but as an Earthquake could happen at relatively any moment, older schools would be at the highest risk. The Springfield School District is the largest district in the county and serves the most children within Greene County, because of this there would be the most lives at risk if the event was to happen during school hours.

Ozark Technical College

Ozark Technical College, OTC, is a community college mostly in Springfield but has several satellite buildings, including a building in the City of Republic. The intensity of a potential earthquake in the planning area is expected to be uniform. Damages could occur on older buildings or buildings with a lot of glass. Newer buildings are at a lower risk but could see some cracking in plaster and things will fall off the walls.

Battlefield Fire Protection District

Earthquake intensity is expected to be relatively uniform across the planning area, resulting in a consistent level of seismic risk throughout the region. However, the extent of damage may vary depending on local factors. Because of this, fire departments would expect to see an influx of calls across the planning area. There could be older houses that experience problems such as water main or gas leaks, which could cause house fires or health concerns.

Brookline Fire Protection District

Earthquake intensity is expected to be relatively uniform across the planning area, resulting in a consistent level of seismic risk throughout the region. However, the extent of damage may vary depending on local factors. Because of this, fire departments would expect to see an influx of calls across the planning area. There could be older houses that experience problems such as water main or gas leaks, which could cause house fires or health concerns. Brookline is a more rural area compared to the other participating jurisdictions and they could potentially see damages from fallen dead limbs or other debris in roadways.

Willard Fire Protection District

Earthquake intensity is expected to be relatively uniform across the planning area, resulting in a consistent level of seismic risk throughout the region. However, the extent of damage may vary depending on local factors. Because of this, fire departments would expect to see an influx of calls across the planning area. There could be older houses that experience problems such as water main or gas leaks, which could cause house fires or health concerns.

PROBLEM STATEMENT

The New Madrid Seismic Zone (NMSZ) poses a significant seismic risk to all of Missouri, including Greene County, with the potential for substantial earthquakes. These events could lead to significant damage and injury within the planning area, particularly impacting vulnerable populations and older structures. Older homes and buildings, which may not meet current seismic standards, are at higher risk of structural damage during a major earthquake.

Mitigation strategies for large-scale seismic events in Greene County should include ongoing educational initiatives, such as those currently being implemented in local public-school districts. Additional measures could include providing earthquake preparedness training to large businesses, securing heavy furniture to walls, and encouraging individual and community-level preparedness efforts to minimize risks and enhance resilience in the event of an earthquake.

3.4.3 NATURAL HAZARD: EXTREME TEMPERATURES

HAZARD DESCRIPTION

Extreme temperature events, whether hot or cold, can have significant impacts on human health and mortality, natural ecosystems, agriculture, and various economic sectors. According to FEMA, extreme heat is defined as temperatures that exceed the average high temperature for the region by 10 degrees or more, lasting for several weeks. Ambient air temperature, in conjunction with relative humidity, creates an apparent temperature. The Heat Index (HI) chart, shown below, combines these factors to indicate the relative intensity of heat conditions.

Extreme cold often accompanies severe winter storms and can lead to hypothermia and frostbite in individuals lacking adequate clothing protection. Cold temperatures can cause fuel to congeal in storage tanks and supply lines, disrupting electric generators. They can also overwhelm a building's heating system, causing water and sewer pipes to freeze and rupture. Additionally, extreme cold increases the likelihood of ice jams in flat rivers or streams. When combined with high winds from winter storms, extreme cold can lead to hazardous wind chill conditions, which further jeopardize health and safety.

The National Institute on Aging estimates that more than 2.5 million elderly Americans are especially vulnerable to hypothermia, with isolated elders being at the highest risk. Approximately 10 percent of people over the age of 65 have a temperature-regulation defect, and 3-4 percent of all hospital patients over 65 are hypothermic. People without shelter, those who are stranded, or individuals living in poorly insulated homes or homes without heat are also at risk.

Other impacts of extreme cold include asphyxiation due to toxic fumes from emergency heaters, household fires caused by fireplaces and emergency heaters, and the freezing or bursting of pipes.

GEOGRAPHIC LOCATION

Extreme temperatures, both hot and cold, are area-wide hazardous events. The risk of extreme heat or extreme cold temperatures does not vary across the planning area and can affect all populations in Greene County.

STRENGTH/MAGNITUDE/EXTENT

The National Weather Service (NWS) employs an alert system consisting of advisories, watches, and warnings to inform the public when the Heat Index (HI) is expected to significantly impact public safety. The issuance of these alerts is based on the anticipated severity of the heat.

An **Excessive Heat Warning** is issued when extremely dangerous heat conditions are expected within 12 hours. This warning is triggered when the maximum heat index is projected to reach 105°F or higher for at least two consecutive days, and nighttime air temperatures are not expected to drop below 75°F.

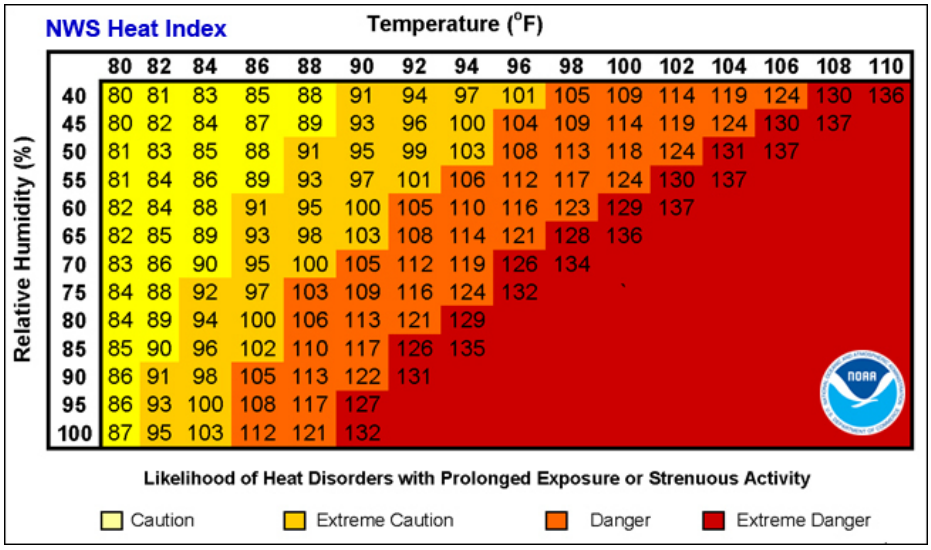
An **Excessive Heat Watch** is issued when conditions are favorable for the occurrence of an excessive heat event within the next 24 to 72 hours. This alert signifies an increased risk of a heat wave, though the exact timing and occurrence remain uncertain.

A **Heat Advisory** is issued within 12 hours of the onset of dangerously high heat conditions. The advisory is typically issued when the maximum Heat Index is expected to reach 100°F or higher for at least two consecutive days, with nighttime temperatures not dropping below 75°F.

These advisories, watches, and warnings aim to provide advance notice to the public to mitigate the health risks associated with extreme heat.

The following Chart is used in the Previous Occurrences section to illustrate what level of danger the record temperatures of the planning area fall under.

Figure 3.4.6 Heat Index (HI) Chart

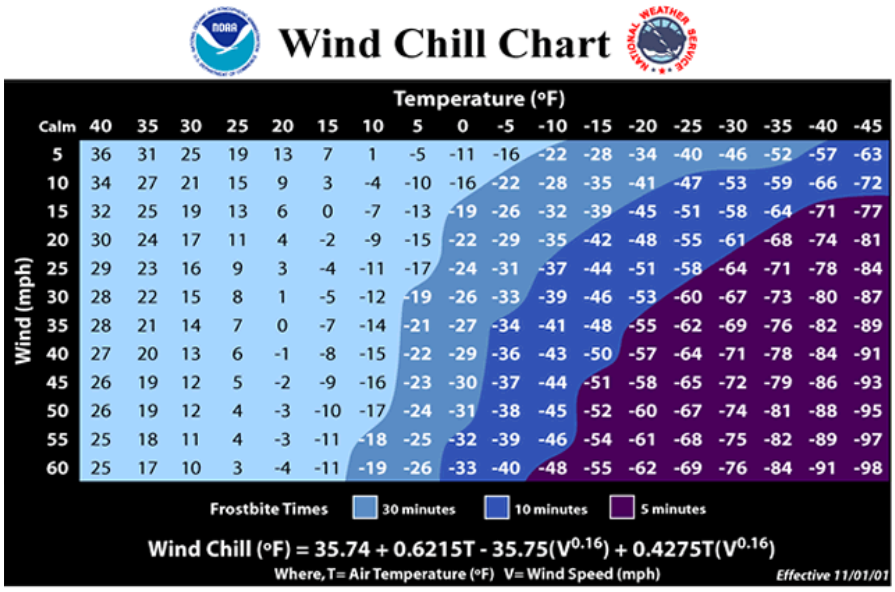


Source: https://www.weather.gov/safety/heat-ww

*Note: Exposure to direct sun can increase Heat Index (HI) values by as much as 15°F. The shaded zone above 105°F corresponds to a heat index that may cause increasingly severe heat disorders with continued exposure and/or physical activity.

The National Weather Service Wind Chill Temperature (WCT) index uses advances in science, technology, and computer modeling to provide an accurate, understandable, and useful formula for calculating the dangers from winter winds and freezing temperatures. The wind speed is calculated at 5 feet, a typical height of an adult human face. This model also accounts for the heat transfer theory based on the loss of body heat to the surrounding environment during cold, breezy, or windy conditions.

Figure 3.4.7 Wind Chill Chart



Source: https://www.weather.gov/safety/cold-wind-chill-chart

The planning area experiences both extreme heat and wind chill advisories throughout the year. They have a profound effect on aging and young populations. Heat index and wind chill are important for critical facilities such as schools and nursing homes to consider. The charts above describe the conditions and how they could affect someone in the elements. This includes how quickly they could experience frost bite and how likely they are to develop a heat related illness like a heat stroke.

PREVIOUS OCCURRENCES

The table below shows the record temperatures for Springfield Missouri, the largest city in the planning area. This data is summarized by the National Weather Service from January of 1888 to 2024. While Greene County has not seen air temperatures as high as 113 since 1954, Springfield, Missouri did reach a heat index of 122 on August 21, 2023.

Record Temperatures – Springfield

Temperature	Degree Fahrenheit	Date Set	Danger Level
Heat (High)	113	07/14/1954	Extreme Caution
Cold (Low)	-29	02/12/1899	Frostbite could occur in 30 minutes

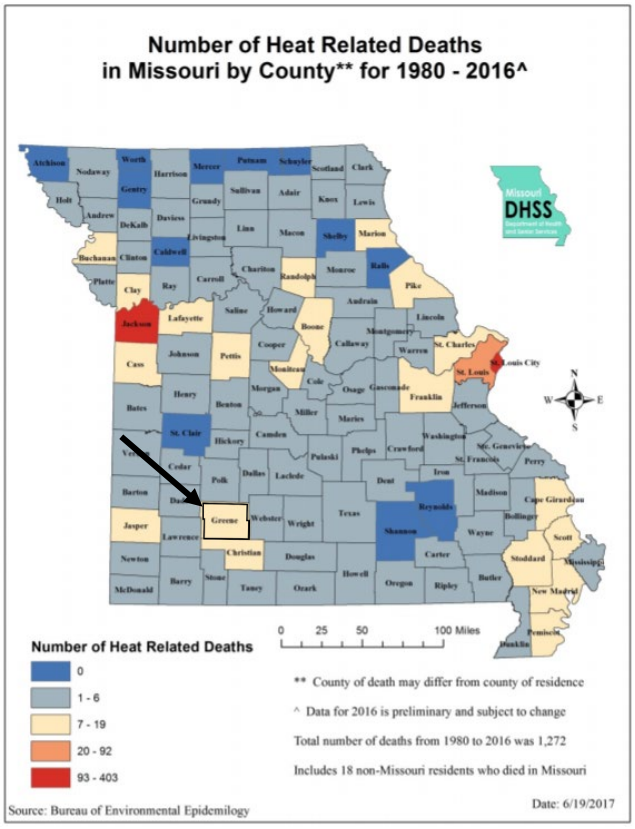
Record Heat Indices Recorded in Springfield

Date	Heat Index	Level of Danger
August 21, 2023	122	Danger
August 3, 2011	115	Danger
July 4, 1954	114	Danger
July 2, 2020	112	Extreme Caution
August 19, 2023	110	Extreme Caution

Record Low Temperatures in Springfield

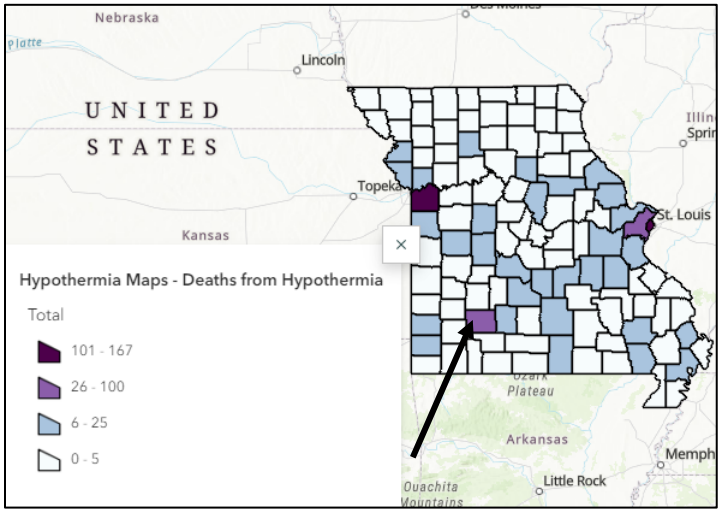
Date	Temperature	How Fast Frostbite Could Occur
January 12, 1918	-19	30 minutes
February 12, 1899	-29	30 minutes
December 23, 1989	-16	30 minutes

Figure 3.4.8 Severe Heat Related Deaths 2018-2022



The above graphic is the most recent summarization of data on heat-related deaths. Greene County no longer provides data publicly on Heat related deaths. It can be assumed however as the surrounding counties have maintained a similar number of deaths, that Greene County has also maintained or reduced the number of deaths. NCEI reported 2 deaths between 1950-2024 being related to a reported severe heat event.

Figure 3.4.9 Severe Cold Related Deaths 1980 – 2022



Source: https://storymaps.arcgis.com/stories/5b575e3a854245ada5ce8ee812a8079c

The above graphic shows how many deaths there have been in Greene County over a 42-year period because of hypothermia. Greene County is in the 26-100 deaths range, hyperthermia is more likely in populations that do not have adequate shelter from extreme temperatures.

Extreme temperatures, including both hot and cold, can cause stress for crops and animals. Between 2019 and 2023, there were five insured claims about crop loss due to extreme heat. None were reported as a result of severe cold weather. Most of the claims during this period were related to excessive precipitation. Those five claims are seen in the table below.

Table 3.4.5 Agricultural Insurance Claims due to Extreme Temperatures (2019-2023)

Crop	Year	Reason	Total Amount of Loss
Corn	2022	Heat	$53,271
Corn	2022	Heat	$29,106
Soybeans	2022	Heat	$15,678
Soybeans	2022	Heat	$48,950
Soybeans	2023	Heat	$7,042
		TOTAL	**$154,047**

Extreme heat can also strain electricity distribution systems, potentially overloading infrastructure during peak air conditioning demand in extreme heat events. Additionally, prolonged exposure to extreme heat can cause damage to road infrastructure. Asphalt-paved roads, driveways, and parking lots may experience buckling due to prolonged heat.

Extreme cold can adversely affect infrastructure in homes, particularly through frozen and burst water pipes. Precipitation during extreme cold conditions can also lead to cracks and holes in pavement due to the expansion of water.

In 2023, Missouri reported 34 Missouri residents had died from heat related illnesses. Heat related deaths are less closely tracked due to the fact heat can cause underlying health issues to become the cause of death. However, hypothermia is easier to track. From 1980 to 2022, extreme cold contributed to 971 deaths in the state. According to the National Weather Service, extreme temperatures cause more annual deaths than any other natural hazard.

PROBABILITY OF FUTURE OCCURRENCES

As temperatures continue to rise as an effect of climate change, it is very likely that Greene County will experience more frequent and extremely high temperatures. Using the charts above, figures 3.4.6 and 3.4.7, to determine risk, any month with an average high temperature of 90 or more or an average low temperature of 20 or less is considered a month the planning area was at risk of complications due to extreme temperatures. Below are the average high and low temperatures for each month over the last 25 years. Using this information, it can be determined that the planning area experienced 17 months where the average extreme temperatures would be within the range of danger to citizens. This does not account however for record breaking heat or cold events. It can be estimated that Greene County has a 7.6 percent chance of extreme temperatures on any given month and can be assumed that it is possible for continued events. Extreme temperatures are likely to become more frequent as the climate changes.

Monthly Mean Max Temperature for Springfield Area, MO (ThreadEx)

Click column heading to sort ascending, click again to sort descending.

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2000	44.8	55.3	60.3	67.4	76.9	79.2	85.0	92.1	84.1	71.8	48.7	31.9	66.5
2001	39.9	48.0	52.7	72.8	76.0	83.2	88.5	88.2	78.7	68.5	61.6	49.0	67.3
2002	47.0	48.6	54.4	69.3	72.2	84.7	89.1	89.1	85.2	65.0	54.4	46.0	67.1
2003	39.6	43.3	58.0	68.8	74.3	80.0	89.7	90.5	76.5	70.0	58.1	46.1	66.2
2004	42.5	47.0	59.7	67.7	77.7	82.0	83.8	83.1	84.3	70.5	57.7	48.7	67.1
2005	45.3	51.7	56.4	66.9	76.5	87.8	91.9	90.7	84.8	69.7	60.2	44.1	68.8
2006	55.5	49.4	60.2	73.4	76.1	86.5	92.4	91.9	78.9	67.2	58.7	49.8	70.0
2007	41.1	45.5	66.9	65.0	79.2	84.3	87.4	92.8	81.0	71.5	58.7	45.6	68.3
2008	44.4	43.9	57.9	64.1	73.8	82.1	87.3	86.7	77.9	68.1	54.2	44.5	65.4
2009	41.1	52.1	59.6	64.5	72.9	85.7	83.7	83.8	75.7	60.5	60.7	39.9	65.0
2010	35.9	39.1	56.3	71.9	75.3	87.9	89.1	92.9	80.1	71.6	58.3	41.8	66.7
2011	39.9	44.7	56.4	70.1	72.5	89.0	96.2	92.7	77.6	70.1	56.5	47.6	67.8
2012	50.1	50.8	69.9	70.5	81.1	87.7	97.6	89.7	78.5	64.9	59.8	51.0	71.0
2013	47.4	45.9	51.7	65.7	73.7	83.6	86.8	85.4	83.1	66.9	53.9	42.5	65.6
2014	40.9	43.1	56.4	68.0	77.4	82.7	84.6	92.0	79.9	70.6	51.7	44.5	66.0
2015	45.7	39.8	58.9	68.5	75.8	85.3	88.3	84.7	82.9	71.1	60.4	54.4	68.0
2016	44.3	53.5	63.8	70.7	73.8	88.4	89.0	87.8	84.1	76.0	62.4	45.9	70.0
2017	49.3	60.4	62.1	70.7	76.1	84.0	90.4	82.8	83.5	71.7	61.4	46.2	69.9
2018	43.3	50.4	58.5	62.9	84.3	90.5	91.5	87.7	81.6	67.9	49.8	48.0	68.0
2019	42.8	47.5	54.0	70.7	76.3	83.4	88.1	85.9	88.6	65.9	55.0	50.6	67.4
2020	45.3	47.7	60.5	64.9	70.8	86.1	90.2	87.1	81.1	67.4	61.7	49.4	67.7
2021	43.0	36.1	62.0	66.1	71.4	85.1	86.9	89.1	85.4	69.7	59.2	59.5	67.8
2022	43.7	47.6	58.9	65.7	75.8	87.2	95.4	89.5	82.4	71.4	56.0	45.3	68.2
2023	48.5	54.9	55.8	69.5	77.7	85.9	90.9	88.7	83.9	69.4	60.1	52.0	69.8
2024	39.2	59.5	64.1	70.4	78.6	86.0	86.8	88.3	82.7	78.2	60.6	51.0	70.5
2025	40.0	45.8	66.3	M	M	M	M	M	M	M	M	M	50.7
Mean	43.9	48.1	59.3	68.2	75.8	85.1	89.2	88.5	81.7	69.4	57.6	47.0	67.2
Max	55.5 2006	60.4 2017	69.9 2012	73.4 2006	84.3 2018	90.5 2018	97.6 2012	92.9 2010	88.6 2019	78.2 2024	62.4 2016	59.5 2021	71.0
Min	35.9 2010	36.1 2021	51.7 2013	62.9 2018	70.8 2020	79.2 2000	83.7 2009	82.8 2017	75.7 2009	60.5 2009	48.7 2000	31.9 2000	50.7

Monthly Mean Min Temperature for Springfield Area, MO (ThreadEx)

Click column heading to sort ascending, click again to sort descending.

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2000	24.7	33.0	38.9	41.0	56.5	60.7	67.2	69.7	56.0	50.8	30.3	14.6	45.3
2001	21.6	27.0	30.0	50.3	55.1	62.6	70.0	67.2	55.2	44.6	39.4	28.6	46.0
2002	23.5	27.1	31.1	47.4	51.6	64.1	68.0	67.0	60.2	45.6	32.8	25.6	45.3
2003	17.9	24.0	33.8	46.4	54.0	59.5	68.7	69.4	55.7	47.0	38.4	28.6	45.3
2004	23.1	25.9	38.4	45.6	57.2	61.8	65.3	62.0	57.6	51.8	40.7	26.8	46.4
2005	28.1	31.8	32.5	45.7	51.9	64.9	66.8	69.7	62.8	47.0	36.4	24.2	46.8
2006	32.2	24.1	37.3	50.4	57.0	62.7	69.4	71.1	54.9	45.2	37.1	30.5	47.7
2007	23.9	23.9	45.7	42.2	60.4	66.4	68.4	70.5	61.3	50.1	35.2	26.6	47.9
2008	22.5	25.9	34.0	41.9	53.7	64.2	68.2	65.8	58.2	46.3	34.7	21.9	44.8
2009	19.9	29.5	37.1	44.5	53.8	65.3	64.6	63.7	58.5	43.4	40.6	23.4	45.4
2010	20.1	22.2	35.1	48.5	55.9	68.6	71.0	69.7	60.1	44.9	35.7	22.9	46.2
2011	19.7	23.8	36.7	46.3	53.1	67.7	73.0	69.0	53.4	44.9	39.0	28.9	46.3
2012	26.1	30.4	46.2	48.8	58.1	64.3	70.9	64.3	58.4	43.1	35.0	31.4	48.1
2013	25.9	27.7	31.5	42.6	53.9	63.8	66.6	67.3	60.7	46.7	33.3	21.8	45.2
2014	17.2	20.3	29.2	44.3	56.2	66.3	63.7	67.6	59.5	48.9	30.0	32.1	44.6
2015	23.5	18.4	35.3	47.8	57.2	67.3	71.2	65.0	62.9	48.4	39.5	33.4	47.5
2016	24.1	29.6	40.0	48.0	53.3	67.4	71.2	70.0	62.2	54.0	40.7	25.9	48.9
2017	28.8	35.4	40.9	49.4	54.8	63.6	69.1	64.5	60.0	48.4	38.6	27.1	48.4
2018	20.2	28.2	36.3	39.0	62.4	69.1	69.4	68.1	63.6	48.9	29.5	30.5	47.1
2019	25.7	27.8	33.1	47.4	56.9	63.5	68.7	69.3	68.1	44.6	31.8	30.6	47.3
2020	28.4	27.3	41.5	42.4	53.4	65.4	70.3	65.1	58.3	43.6	38.2	27.1	46.8
2021	27.7	17.3	39.7	43.4	53.5	65.1	68.3	69.5	61.0	51.6	35.2	37.7	47.5
2022	20.2	22.4	36.0	43.9	57.5	65.7	71.6	68.0	59.0	44.8	34.2	28.1	45.9
2023	29.5	31.8	35.5	44.1	56.6	63.1	68.9	68.8	60.4	48.9	37.6	34.0	48.3
2024	21.4	34.6	40.4	48.4	59.2	66.5	68.3	67.8	59.8	49.8	40.3	31.2	49.0
2025	20.0	24.3	39.2	M	M	M	M	M	M	M	M	M	27.8
Mean	23.7	26.7	36.7	45.6	55.7	64.8	68.8	67.6	59.5	47.3	36.2	27.7	46.0
Max	32.2 2006	35.4 2017	46.2 2012	50.4 2006	62.4 2018	69.1 2018	73.0 2011	71.1 2006	68.1 2019	54.0 2016	40.7 2016	37.7 2021	49.0
Min	17.2 2014	17.3 2021	29.2 2014	39.0 2018	51.6 2002	59.5 2003	63.7 2014	62.0 2004	53.4 2011	43.1 2012	29.5 2018	14.6 2000	27.8

CHANGING FUTURE CONDITIONS AND CONSIDERATIONS

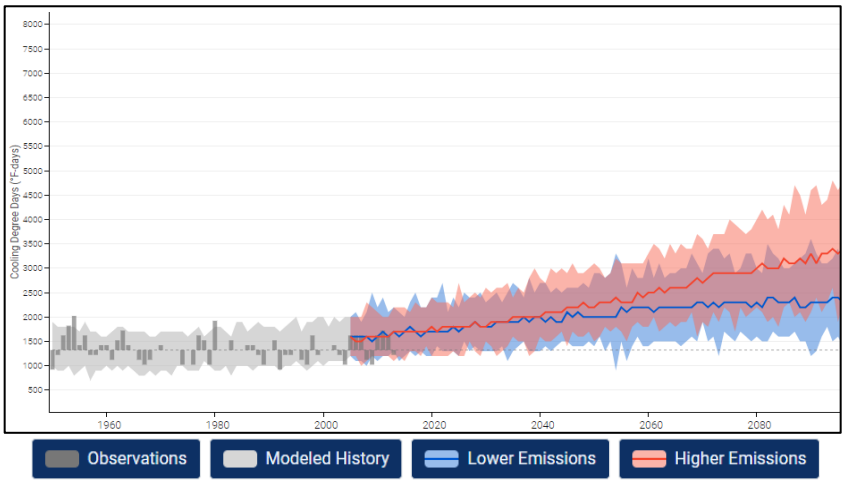
According to the Missouri State Mitigation Plan under the Higher Emissions Pathway, historically unprecedented warming is projected by the end of the century. Even under a lower greenhouse gas emissions scenario, average annual temperatures are expected to exceed historical records by the middle of the 21st century. These temperature increases will lead to more intense heat waves in the future, which is a concern for Greene County, already experiencing hot and humid conditions.

The impacts of extreme temperatures primarily affect the elderly and other vulnerable populations. Extreme temperatures also lead to higher electricity demand, as people try to stay warm or cool. With Greene County's growing population, the risks associated with extreme temperatures will likely increase as the population continues to rise.

Number of Cooling Degree Days

The number of cooling degree days at any location reflects the amount of energy people use to cool a building when it is warm outside. Higher numbers of cooling degree days indicate higher demand for energy.

Figure 3.4.10 Cooling Degree Days – Greene County Missouri



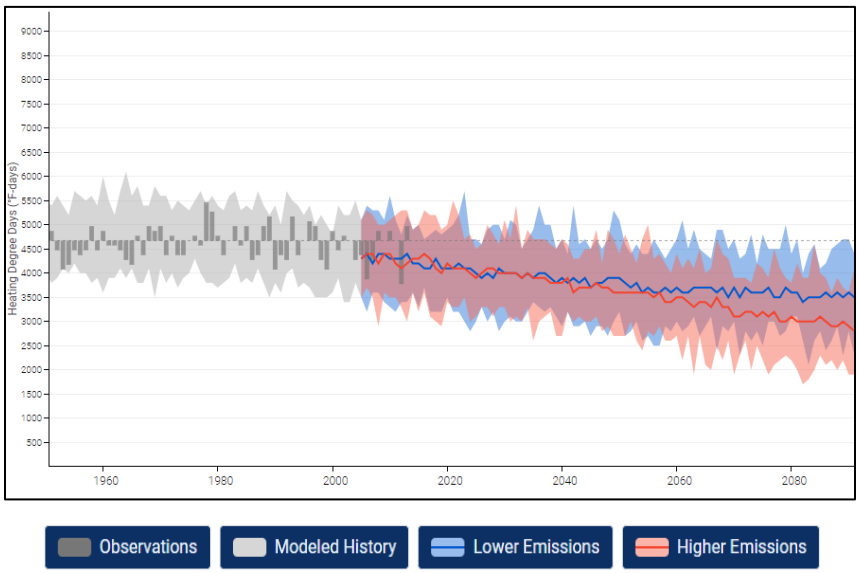
Source: The Climate Explorer

In the chart above, there is a steady increase in the number of cooling degree days for the next 70 years. In those 70 years, Greene County could see an influx in population, causing extreme heat to pose more of a danger than it already does.

Heating Degree Days

The number of heating degree days at any location reflects the amount of energy people use to heat a building when it is cool outside. A lower number of heating degree days indicate lower demand for energy.

Figure 3.4.11 Heating Degree Days - Greene County



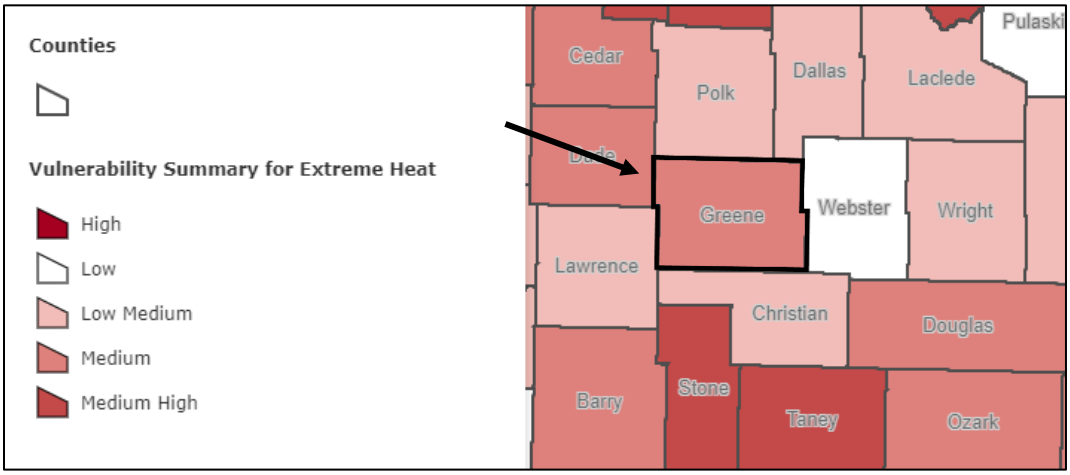
Source: The Climate Explorer

Both the graphs above show that it is possible in the next 70 years to see hotter days more frequently. Extreme heat can be potentially dangerous to Greene County's vulnerable populations and can also cause a rise in energy use.

VULNERABILITY OVERVIEW

The entire planning area is at risk of experiencing extreme temperatures, both hot and cold. Those most at risk for heat-related illnesses include infants and children up to five years of age, individuals 65 years and older, people who are overweight, and those who are ill or taking certain medications. However, even young and healthy individuals are vulnerable if they engage in strenuous physical activities during hot weather. In agricultural areas, the exposure of farm workers and livestock to extreme temperatures is a significant concern.

Figure 3.4.12 Vulnerability to Extreme Heat



Source: https://topwood.maps.arcgis.com/apps/webappviewer/index.html?id=da60949594ca46c89d5d8322e3990ac7

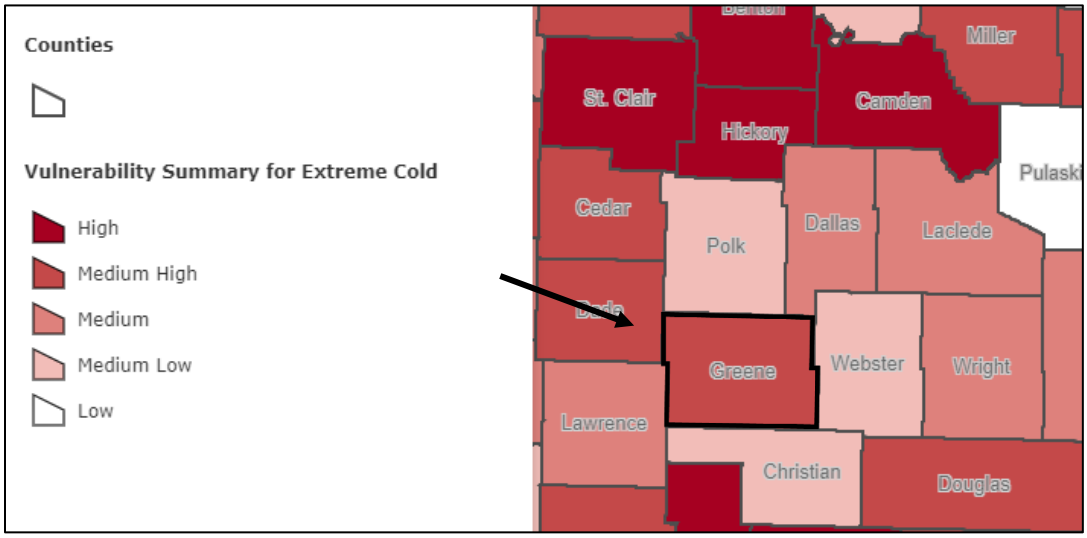
Health Impacts of Extreme Heat

- Fatigue
- Heatstroke
- Heat Cramps
- Heat Exhaustion

Hypothermia

When a body temperature sinks below 96°F, a person has hypothermia. Hypothermia can occur in temperatures as warm as 60°F. Older adults and children are at the most risk. Some tips to help avoid hypothermia are to dress in layers, wrap up well when going outside in the cold, avoid breezes and drafts indoors, and eat hot food and drinks throughout the day.

Figure 3.4.13 Vulnerability to Extreme Cold



Source: https://topwood.maps.arcgis.com/apps/webappviewer/index.html?id=da60949594ca46c89d5d8322e3990ac7

Health Impacts of Extreme Cold

- Heart Problems
- Hypothermia
- Frostbite

POTENTIAL LOSSES TO EXISTING DEVELOPMENT

The planning area can expect to see more agricultural losses due to extreme temperatures, more so extreme heat. As demonstrated in the agricultural charts earlier in this section, agricultural insurance claims are continuing to increase. Temperatures are getting warmer, and as this occurs, agricultural property becomes more at risk.

IMPACT OF PREVIOUS AND FUTURE DEVELOPMENT

The majority of the planning area, excluding Walnut Grove and Ash Grove, is experiencing a growth in population. Population growth can result in an increased number of individuals that are vulnerable to extreme temperatures, including elderly and infant populations. Population growth can also place a strain on power grids, as Greene County residents use their heating and air conditioning units. The planning area is anticipating seeing continued growth over the next five years.

Table 3.4.6 EMAP Consequence Analysis

Subject	Detrimental Impacts
Public	Greene County documents cases of injuries and illnesses from extreme heat incidents every year. The elderly, youth, and over or underweight populations are at increased risk for heath related illnesses. People are also extremely vulnerable to extreme heat if they work outdoors, are military personnel, or athletes. Greene County also has documented cases of injury, illness, and death from extreme cold. The elderly, youth, and over or underweight populations are at increased risk of extreme cold-related illness.
Responders	There are no reports of life-threatening issues to responders, and no reports of impact on response functions. However, extreme temperatures can create safety issues for responders.
Continuity of Operations	There have been no reports of impact on service operations in Greene County.
Property, Facilities, and Infrastructure	Extreme heat in Greene County has resulted in minor isolated instances of property damage. Extreme cold may cause frozen pipes. Greene County has experienced minor instances of infrastructure damages due to extreme heat. There have been no reports of facility damage due to extreme temperatures.
Environment	Extreme temperatures can negatively affect wildlife, plants, and trees.
Economic Condition of Jurisdiction	Extreme temperature incidents in Greene County have affected the economic condition in areas throughout the area. Cities need a large amount of water to keep injury and illness from growing. Many rural homes and areas that receive service from their own wells will also suffer greatly from extreme heat if there is a lack of water. Extreme heat will also slow productivity.
Public Confidence in Jurisdiction Governance	Public confidence can be affected when water supplies become scarce due to extreme heat. The confidence in the government can rise or fall depending on how the situation is handled.

HAZARD SUMMARY BY JURISDICTION

Those at the greatest risk for heat-related illnesses and deaths include children up to five years of age, individuals 65 years and older, people who are overweight, and those who are ill or taking certain medications. Data from the 2020 population census was used to determine the percentages of populations in the planning area vulnerable to extreme temperatures. Data for overweight individuals and those on medications vulnerable to extreme heat was not available. The table below the jurisdiction summaries shows vulnerable populations in the participating jurisdictions. Note that schools and special districts are not included in the table, as students and employees of special districts are not typically within these age groups.

City of Ash Grove

Populations most vulnerable to extreme temperatures include those over 65 and children under 5. In Ash Grove, 30.5 percent of the population falls into these higher-risk categories. Families living in homes without proper heating or air conditioning are also at an increased risk of temperature-related illnesses and conditions.

City of Battlefield

Populations most vulnerable to extreme temperatures include those over 65 and children under 5. In Battlefield, 23.2 percent of the population falls into these higher-risk categories. Families living in homes without proper heating or air conditioning are also at an increased risk of temperature-related illnesses and conditions.

City of Fair Grove

Populations most vulnerable to extreme temperatures include those over 65 and children under 5. In Fair Grove, 20.3 percent of the population falls into these higher-risk categories. Families living in homes without proper heating or air conditioning are also at an increased risk of temperature-related illnesses and conditions.

City of Republic

Populations most vulnerable to extreme temperatures include those over 65 and children under 5. In Republic, 23.1 percent of the population falls into these higher-risk categories. Families living in homes without proper heating or air conditioning are also at an increased risk of temperature-related illnesses and conditions.

City of Springfield

Populations most vulnerable to extreme temperatures include those over 65 and children under 5. In Springfield, 21 percent of the population falls into these higher-risk categories. Families without access to proper heating or air conditioning are also at an increased risk for temperature-related illnesses. Vulnerable groups, such as the unhoused, are not always reflected in census data but face an even greater risk during extreme temperature events. While Springfield provides cooling and warming centers throughout the city during extended periods of extreme temperatures, individuals over 65 or under 5, especially in vulnerable situations, remain at an elevated risk.

City of Strafford

Populations most vulnerable to extreme temperatures include those over 65 and children under 5. In Strafford, 23.1 percent of the population falls into these higher-risk categories. Families living in homes without proper heating or air conditioning are also at an increased risk of temperature-related illnesses and conditions.

City of Walnut Grove

Populations most vulnerable to extreme temperatures include those over 65 and children under 5. In Walnut Grove, 27.4 percent of the population falls into these higher-risk categories. Families living in homes without proper heating or air conditioning are also at an increased risk of temperature-related illnesses and conditions.

City of Willard

Populations most vulnerable to extreme temperatures include those over 65 and children under 5. In Willard, 17.2 percent of the population falls into these higher-risk categories. Families living in homes without proper heating or air conditioning are also at an increased risk of temperature-related illnesses and conditions.

Ash Grove School District

Ash Grove School District is located in the City of Ash Grove; 9 percent of its population is less than 5 and is a demographic of people who are at increased risk in extreme temperatures. Many of these children are in Pre-K or Kindergarten classes. Risks of extreme temperatures could be life threatening or distressing.

Logan Rogersville School District

Logan Rogersville School District is located in the City of Logan Rogersville; 10.3 percent of its population is less than 5 and is a demographic of people who are at increased risk in extreme temperatures. Many of these children are in Pre-K or Kindergarten classes. Risks of extreme temperatures could be life threatening or distressing.

Springfield School District

Springfield School District is located in the City of Springfield; 5.1 percent of its population is less than 5 and is a demographic of people who are at increased risk in extreme temperatures. Many of these children are in Pre-K or Kindergarten classes. Risks of extreme temperatures could be life threatening or distressing.

Ozark Technical College

Ozark Technical college is a community college in Greene County, there serve roughly 11,000 students each semester. They do not record the ages of individual students in a public way but about 56 percent of their population is either a first-year student or a high school student. It can be assumed most of the population are not at an extreme risk when it comes to extreme temperatures, however returning elderly students or people with disabilities may experience symptoms of extreme temperatures easier.

Battlefield Fire Protection District

Extreme temperatures make responding to fires difficult. This is especially true in instances of extreme heat. Overheating, exhaustion and loss of life are all possible when firefighters are placed under extreme conditions while on duty. Battlefield Fire Protection District, like all of the jurisdictions in the planning area have mutual aid agreements with the surrounding districts, this means during large fire events such as uncontrolled wildfires they could respond. Large fires are already dangerous, and extreme heat multiplies this fact.

Brookline Fire Protection District

Extreme temperatures make responding to fires difficult. This is especially true in instances of extreme heat. Overheating, exhaustion and loss of life are all possible when firefighters are placed under extreme conditions while on duty. Brookline Fire Protection District, like all of the jurisdictions in the planning area have mutual aid agreements with the surrounding districts, this means during large fire events such as uncontrolled wildfires they could respond. Large fires are already dangerous, and extreme heat multiplies this fact.

Willard Fire Protection District

Extreme temperatures make responding to fires difficult. This is especially true in instances of extreme heat. Overheating, exhaustion and loss of life are all possible when firefighters are placed under extreme conditions while on duty. Willard Fire Protection District, like all of the jurisdictions in the planning area have mutual aid agreements with the surrounding districts, this means during large fire events such as uncontrolled wildfires they could respond. Large fires are already dangerous, and extreme heat multiplies this fact.

Table 3.4.7 Greene County Population under Age 5 and Over Age 65 – Percentages in 2020

Jurisdiction	Population Under the Age of 5	Population Over the Age of 65
Greene County	5.4%	17.3%
Ash Grove	9.0%	21.5%
Battlefield	5.3%	17.9%
Fair Grove	11.4%	8.9%
Republic	10.0%	13.1%
Rogersville	10.3%	5.5%
Springfield	5.1%	15.9%
Strafford	11.3%	11.8%
Walnut Grove	3.8%	23.6%
Willard	7.0%	10.2%

Source: U.S Census Bureau, 2020

*Note: Rogersville is in multiple counties, the population data is not specific to Greene County.

PROBLEM STATEMENT

Extreme temperatures pose a significant risk to the entire planning area and can cause health complications for vulnerable populations and negatively impact agriculture. Most jurisdictions have a higher percentage of individuals over the age of 65, a population particularly at risk for health issues related to extreme temperatures. Projections indicate that extreme temperatures are likely to worsen in the coming years. Potential mitigation strategies include organizing outreach efforts to support vulnerable elderly populations, such as establishing and promoting accessible heating or cooling centers in the community. Additionally, creating a database, in collaboration with the Health Department, to track individuals at risk could enhance preparedness and response efforts.

3.4.4 NATURAL HAZARD: FLOOD

HAZARD PROFILE

A flood is the partial or complete inundation of normally dry land. Riverine flooding occurs when rivers, streams, drains, or lakes overflow due to excessive rainfall, rapid snowmelt, or ice. Various types of riverine floods include headwater, backwater, interior drainage, and flash flooding. Floodplains are areas adjacent to rivers and stream banks that carry excess floodwater during rapid runoff. A floodplain is defined as a lowland, relatively flat area next to a river or stream. The terms “base flood” and “100-year flood” refer to the floodplain areas with a one percent or greater chance of flooding in any given year. Floodplains are part of a larger region called a basin, which includes all land drained by a river and its tributaries.

Three major types of flooding are described below.

Flash Flooding

Flash flooding occurs when water levels rise rapidly due to intense rainfall over a short period, sometimes combined with rapid snowmelt, ice jams, frozen ground, saturated soil, or impermeable surfaces. Flash floods can occur in Special Flood Hazard Areas (SFHAs) as designated by the National Flood Insurance Program (NFIP), as well as in areas outside of floodplains. The primary causes of flash flooding are slow-moving thunderstorms or thunderstorms repeatedly passing over the same area (training). Flash floods are particularly dangerous because they can reach full peak within minutes, leaving little to no time for protective measures. Flash flood waters can move at high speeds, capable of moving boulders, uprooting trees, destroying buildings, and obliterating bridges. Flash floods often result in higher human and animal casualties than slower river and stream floods. While flash floods are unpredictable, improved monitoring capabilities through weather surveillance radar, along with knowledge of watershed characteristics, modeling techniques, and advanced warning systems, have increased the warning time for such events.

Ice Jam Flooding

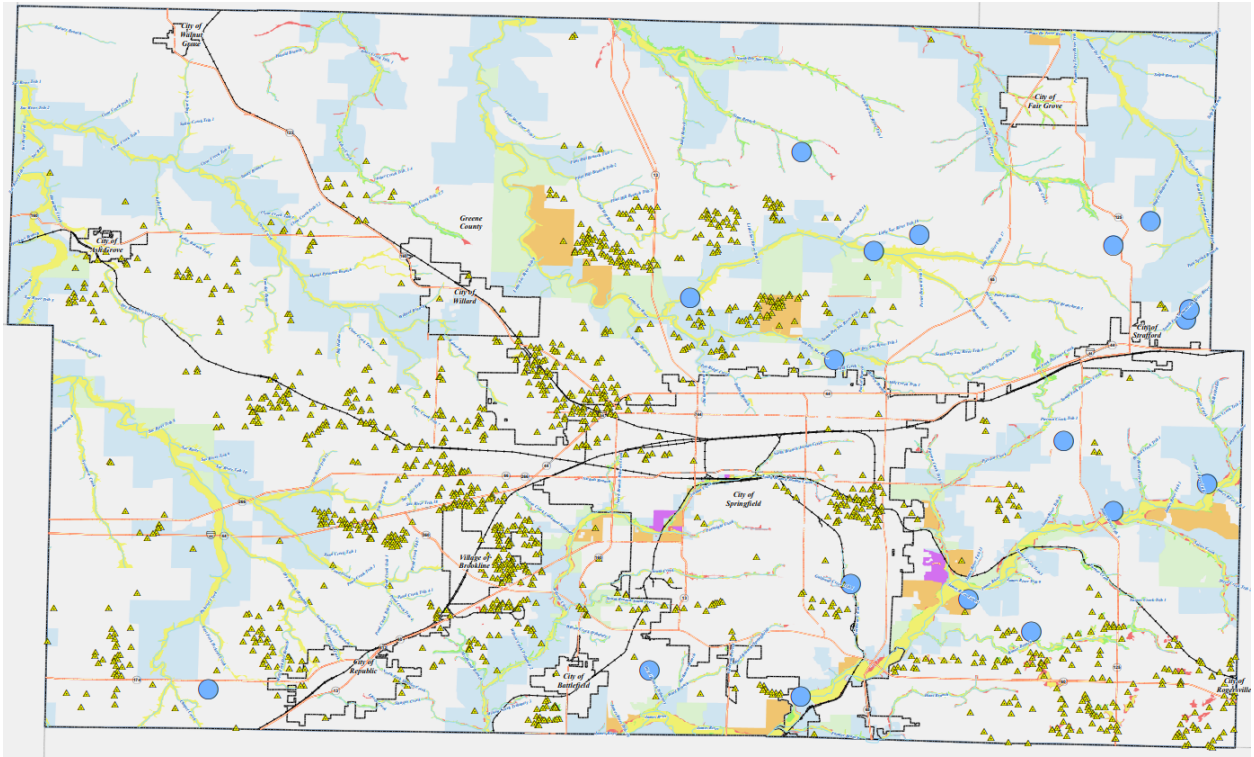
Ice jam flooding occurs when ice in moving waterways breaks up and forms a natural dam in narrower sections of the channel. This blockage can cause flooding within minutes of the dam’s formation.

Sheet Flooding

Sheet flooding occurs when excessive rainfall or snowmelt, combined with saturated ground and inadequate drainage, causes water to flow over the land without being directed by a river, stream, or lake. The water flows into the lowest elevations, often in areas that are not typically floodplains. This type of flooding, called sheet flooding, is becoming more common as development exceeds the capacity of drainage infrastructure to manage stormwater. In some cases, aging storm sewer systems may not be designed to handle the increased runoff, which can result in water backing up into basements, damaging mechanical systems, and creating public health and safety concerns. The combination of rainfall trends, extremes, and the increasing unpredictability of flooding highlight the significant risk of flash flooding in the planning area.

Geographic Location

Riverine flooding is most likely to occur in Special Flood Hazard Areas (SFHA). The map below is a Flood Risk Map from FEMA's Flood Mapping Project. It illustrates the entire county and various areas of interest for mitigation initiatives as well as infrastructure that may be at risk. This plan also contains Flood Insurance Maps in Chapter One Introduction and Planning Process. They can be found under step 3 of the planning process. Those maps highlight the incorporated cities of Greene County and their specific flood zones.



Source: FEMA Flood Map Service

Below is Table 3.4.8, which shows the number of flooding events that have occurred in Greene County from 1996 to 2024. The flooding event data is divided into two categories: overall flooding events and flash flood events. Flash floods are defined as sudden, localized floods that occur when a large amount of rain falls within a short period, usually less than 6 hours.

Flash flooding can occur in Special Flood Hazard Areas (SFHAs) as well as in low-lying areas within the planning region. These floods also occur in locations lacking sufficient drainage to manage the amount of water generated by intense rainfall. Table 3.16 includes the number of flash flood events by location, as recorded in the National Centers for Environmental Information (NCEI) between 1996 and 2024. These figures only represent reported events, so there may be additional flash flooding incidents within the planning area that were not recorded in the NCEI.

Table 3.4.8 Greene County NCEI Flood Events by Location (1996-2024)

Location	Total Number of Events
Greene County (Unincorporated)	
Greene County (Zone) - 6 Flood Events	51
Countywide - 1 Flood Event	
North Portion - 1 Flood Event	
Brookline - 2 Flood Events	
Cody - 5 Flood Events	
Elwood - 2 Flood Events	
Galloway - 5 Flood Events	
Hickory Barren - 5 Flood Events	
Langston - 1 Flood Event	
Mumford - 1 Flood Event	
Nichols - 4 Flood Events	
Phenix - 1 Flood Events	
Palmetto - 1 Flood Event	
Plano - 2 Flood Events	
Pleasant Valley - 2 Flood Events	
Sacville - 1 Flood Event	
Sequiota - 7 Flood Events	
Wildwood Estates - 4 Flood Events	

City of Ash Grove	
Ash Grove - 0 Flood Events	0
City of Battlefield	
Battlefield - 2 Flood Events	2
City of Fair Grove	
Fair Grove - 3 Flood Events	3
City of Republic	
Republic - 5 Flood Events	6
Republic Westport AR - 1 Flood Event	
City of Springfield	
Springfield - 15 Flood Events	19
Springfield Bar H AR - 2 Flood Events	
Springfield ARP - 1 Flood Event	
Springfield Cave - 1 Flood Event	
City of Strafford	
Strafford - 0 Flood Events	0
City of Walnut Grove	
Walnut Grove - 0 Flood Events	0
City of Willard	
Willard - 0 Flood Events	0

Source: NCEI Data (Flash Flooding 1996-2024)

STRENGTH/MAGNITUDE/EXTENT

Missouri has a long history of flooding, as documented in the Missouri State Hazard Mitigation Plan and available NCEI data. Flooding is most common along the state's major rivers and typically results in slow-moving disasters. River crest levels are forecasted several days in advance, allowing many communities to take protective measures such as sandbagging and evacuations. Despite these precautions, floods still cause significant human suffering and substantial losses to both public and private property. In contrast, flash flood events in recent years have led to more deaths and extensive property damage in many areas of Missouri. Greene County has experienced all types of recorded flood-related damage since the year 2000, totaling $20.32 million in property losses.

According to the U.S. Geological Survey, two critical factors influence flooding caused by rainfall: rainfall duration and rainfall intensity (the rate at which it falls). These factors contribute to a flood’s height, water velocity, and other characteristics that determine its magnitude.

NATIONAL FLOOD INSURANCE PROGRAM PARTICIPATION

Table 3.4.9 NFIP Participation in Greene County

Community ID#	Community Name	NFIP Participant (Y/N/Sanctioned)	Current Effective Map Date	Regular-Emergency Program Entry Date
290751	City Of Ash Grove	Yes	12/17/2010	7/16/1980
290863	City Of Battlefield	Yes	12/17/2010	5/27/2014
290591	City Of Fair Grove	Yes	12/17/10(M)	1/30/2004
290782	Greene County	Yes	12/17/2010	6/15/1983
290148	City Of Republic	Yes	12/17/2010	6/4/1980
290658	City Of Rogersville	Yes	9/17/2010	3/30/1981
290149	City Of Springfield	Yes	12/17/2010	7/3/1978
290506	City Of Strafford	Yes	12/17/10(M)	7/30/1999
290946	City Of Walnut Grove	Yes	12/17/2010	2/7/2002
290653	City Of Willard	Yes	12/17/2010	10/10/2003

Source: NFIP Community Status Book (2024)

Table 3.4.10 NFIP Policy and Claim Statistics as of 2024

Community Name	Policies in Force	Insurance in Force	Closed Losses	Total Payments
Ash Grove	8	$1,556,000.00	x	x
Battlefield	1	$350,000.00	x	x
Fair Grove	3	$690,000.00	x	x
Greene County	64	$17,841,000.00	67	$1,046,000.38
Republic	18	$4,443,000.00	19	$37,410.76
Rogersville	1	$350,000.00	x	x
Springfield	68	$23,850,000.00	95	$1,884,197.76
Strafford	x	x	1	$3,696.39
Walnut Grove	x	x	x	x
Willard	6	$807,000.00	x	x

Source: NFIP Community Status Book (2024)

Table 3.4.11 County Floodplain Management

Greene County	
Adoption of minimum NFIP Floodplain Management criteria by local regulation	Yes - Oct 10, 2010
Adoption of latest FIRM	Yes- Oct 10,2010
Implementation and enforce local floodplain management regulations	Yes/ County Ordinance Establishing Floodplain Management Resolutions Article XXI Floodplain Management Ordinance Section 3 Kelly Short Greene County Stormwater Engineer (417) 829-6048
Appoint a designee to implement NFIP commitments/requirements	Yes- Same as above
Describe how substantial improvements/substantial damage provisions are implemented after event	Substantial improvement/damage provisions cited in Article XXI Floodplain Management Ordinance Section 4A-4E
City of Ash Grove	
Adoption of minimum NFIP Floodplain Management criteria by local regulation	Yes - Oct 10, 2010
Adoption of latest FIRM	Yes- Dec 17,2010
Implementation and enforce local floodplain management regulations	Yes- City Ordinance Title IV Chapter 415 Floodplain Management Article V, Section 415.230 Floodplain Management Variance Criteria Chris Boyd Floodplain Administrator (417) 366-5206
Appoint a designee to implement NFIP commitments/requirements	Yes- Same as above
Describe how substantial improvements/substantial damage provisions are implemented after event	Substantial improvement/damage provisions cited in City Ordinance Title IV Chapter 415 Floodplain Management Article V Section 415.240 Condition for approving floodplain management variances

City of Battlefield	
Adoption of minimum NFIP Floodplain Management criteria by local regulation	Yes – May 27, 2014
Adoption of latest FIRM	Yes- May 27, 2014
Implementation and enforce local floodplain management regulations	Yes/ County Ordinance Establishing Floodplain Management Resolutions Article XXI Floodplain Management Ordinance Section 3 cited in city Title IV Land Use Chapter 410 Article I Section 410.010 Tommy VanHorn City Administrator (417) 520-6233
Appoint a designee to implement NFIP commitments/requirements	Yes- Same as above
Describe how substantial improvements/substantial damage provisions are implemented after event	Substantial improvement/damage provisions cited in Article XXI Floodplain Management Ordinance Section 4A-4E Applies cited in City Title IV Land Use Chapter 410 Article I Section 410.030
City of Fair Grove	
Adoption of minimum NFIP Floodplain Management criteria by local regulation	Yes - Oct 10, 2010
Adoption of latest FIRM	Yes- Dec 17, 2010
Implementation and enforce local floodplain management regulations	Yes/ County Ordinance Establishing Floodplain Management Resolutions Article XXI Floodplain Management Ordinance Section 3 and in City Title IV Land Use Chapter 415 Floodplain Management Article V Floodplain Management Variance Procedures Section 415.210 Morgan Neal Floodplain Administrator (417) 866-2741
Appoint a designee to implement NFIP commitments/requirements	Yes- Same as above
Describe how substantial improvements/substantial damage provisions are implemented after event	Substantial improvement/damage provisions cited in Article XXI Floodplain Management Ordinance Section 4A-4E and City Title IV Land Use Chapter 415 Floodplain Management Article V Floodplain Management Variance Procedures Section 412.2410

City of Republic	
Adoption of minimum NFIP Floodplain Management criteria by local regulation	Yes - Oct 10, 2010
Adoption of latest FIRM	Yes- Dec 17, 2010
Implementation and enforce local floodplain management regulations	Yes/ County Ordinance Establishing Floodplain Management Resolutions Article XXI Floodplain Management Ordinance Section 3 and in Municipal Code Title IV Land Use Chapter 420 Flood Damage Prevention Section 420.040 Administration Karen Haynes Floodplain Administrator (417) 732-3115
Appoint a designee to implement NFIP commitments/requirements	Yes- Same as above
Describe how substantial improvements/substantial damage provisions are implemented after event	Substantial improvement/damage provisions cited in Article XXI Floodplain Management Ordinance Section 4A-4E and in Municipal Code Title IV Land Use Chapter 420 Flood Damage Prevention Section 420.050
City of Springfield	
Adoption of minimum NFIP Floodplain Management criteria by local regulation	Yes - Oct 10, 2010
Adoption of latest FIRM	Yes- Dec 17, 2010
Implementation and enforce local floodplain management regulations	Yes/ Springfield Missouri Land Development Code, Article XVII Floodplain Management, Division 3 Administration, Section 36-1721 and section 36.1722 Martin Gugel Director Of Building Development Services (417) 864-1061
Appoint a designee to implement NFIP commitments/requirements	Yes- Same as above
Describe how substantial improvements/substantial damage provisions are implemented after event	Substantial improvement/damage provisions cited in Springfield Missouri Land Development Code, Article XVII Floodplain Management, Division 4

City of Strafford	
Adoption of minimum NFIP Floodplain Management criteria by local regulation	Yes - Oct 10, 2010
Adoption of latest FIRM	Yes- Dec 17, 2010
Implementation and enforce local floodplain management regulations	Yes/ Strafford Title IV Land Development Chapter 415 Floodplain Management Article II General Provisions Section 415.050 Floodplain Administrator Martha Smartt Floodplain Administrator (417) 736-2154
Appoint a designee to implement NFIP commitments/requirements	Yes- Same as above
Describe how substantial improvements/substantial damage provisions are implemented after event	Substantial improvement/damage provisions cited in Strafford Title IV Land Development Chapter 415 Floodplain Management Article IV Provisions for Flood Hazard Reduction Section 415.140-415.170
City of Walnut Grove	
Adoption of minimum NFIP Floodplain Management criteria by local regulation	Yes - Oct 10, 2010
Adoption of latest FIRM	Yes- Dec 17, 2010
Implementation and enforce local floodplain management regulations	Yes/ County Ordinance Establishing Floodplain Management Resolutions Article XXI Floodplain Management Ordinance Section 3 Eric Sutton Floodplain Administrator (417) 788-2596
Appoint a designee to implement NFIP commitments/requirements	Yes- Same as above
Describe how substantial improvements/substantial damage provisions are implemented after event	Substantial improvement/damage provisions cited in Article XXI Floodplain Management Ordinance Section 4A-4E

City of Willard	
Adoption of minimum NFIP Floodplain Management criteria by local regulation	Yes - Oct 10, 2010
Adoption of latest FIRM	Yes- Dec 17, 2010
Implementation and enforce local floodplain management regulations	Yes/ City of Willard Title IV Land Use Chapter 400 Land Development Regulations Article XVII Misc Regulations Section 400.1520 Floodplain Management Subsection C Administration Mike Ruesch City Administrator (417) 742-5310
Appoint a designee to implement NFIP commitments/requirements	Yes- Same as above
Describe how substantial improvements/substantial damage provisions are implemented after event	Substantial improvement/damage provisions cited in City of Willard Title IV Land Use Chapter 400 Land Development Regulations Article XVII Misc Regulations Section 400.1520 Floodplain Management Subsection D Provisions for Flood Hazard Reduction

REPETITIVE LOSS/SEVERE REPETITIVE LOSS PROPERTIES

Repetitive Loss Properties are those properties with at least two flood insurance payments of $1,000 or more in a 10-year period. According to the Flood Insurance Administration, jurisdiction included in the planning area have a combined total of 22 repetitive loss properties. As of October 11, 2024, four properties have been mitigated, leaving 18 unmitigated repetitive loss properties.

Table 3.4.11 Greene County Repetitive Loss Properties

Jurisdiction	# of Properties	Type of Property	# Mitigated	Building Payments	Content Payments	Total Payments	# of Losses
Republic	1	Residential	0	$ 8,821.09	$ 741.80	$9,562.89	3
Rogersville	1	Residential	1	$ 57,360.05	$ -	$57,360.05	2
Springfield	19	Residential, Commercial	3	$1,194,844.08	$510,293.87	$1,705,137.95	50
Willard	1	Residential	0	$13,807.18	$ -	$13,807.18	2

Source: Flood Insurance Administration as of October 11, 2024

Severe Repetitive Loss (SRL) properties are defined as a single family property (consisting of one-to-four residences) that is covered under flood insurance by the NFIP; and has (1) incurred flood-related damage for which four or more separate claims payments have been paid under flood insurance coverage with the amount of each claim payment exceeding $5,000 and with cumulative amounts of such claims payments

exceeding $20,000; or (2) for which at least two separate claims payments have been made with the cumulative amount of such claims exceeding the reported value of the property.

PREVIOUS OCCURRENCES

Below is a table of previous flooding events. It details the amount, in USD, of property and crop damages, as well as the number of injuries and/or deaths that have occurred with each event.

Table 3.4.12 NCEI Data on Flash Flooding 1996-2024

Location	Date	Deaths	Injuries	Property Damage (USD)
Fair Grove	11/6/1996	-	1	-
Springfield	5/30/1997	-	-	-
Springfield	6/26/1997	-	-	-
Springfield	7/9/1997	-	-	-
Countywide	3/19/1998	-	-	-
Springfield	8/13/1998	-	-	-
Countywide	10/5/1998	-	-	-
Countywide	4/25/1999	-	-	-
Countywide	5/4/1999	-	-	-
Countywide	6/20/2000	-	-	-
Southeast Portion	7/3/2000	-	-	5K
Countywide	7/12/2000	-	-	8.43M
North Portion	7/20/2000	-	-	-
South Portion	7/22/2000	-	-	-
South Portion	7/22/2000	-	-	-
Countywide	7/28/2000	-	-	-
Countywide	2/24/2001	-	-	-
Central Portion	6/3/2001	-	-	-
North Portion	6/21/2001	-	-	10K
Central Portion	7/28/2001	-	-	-
Springfield	7/29/2001	-	-	200K
Springfield	7/29/2001	-	-	100K

Northwest Portion	10/10/2001	-	-	10K
Springfield	6/30/2003	-	-	-
Springfield	7/12/2003	-	-	-
Springfield	7/31/2003	-	-	-
Springfield	8/2/2003	-	-	-
Springfield	8/27/2003	-	-	-
Turners	4/30/2004	-	-	-
Willard	11/1/2004	-	-	-
Springfield-Branson Airport	11/24/2004	-	-	-
Turners	1/4/2005	-	-	-
Countywide	1/5/2005	-	-	-
Springfield	1/12/2005	-	-	-
Springfield	8/21/2005	-	-	10K
Springfield	8/22/2005	-	-	-
Springfield	9/15/2005	-	-	-
Springfield	5/3/2006	-	-	-
Springfield	5/10/2006	-	-	-
Springfield	5/29/2006	-	-	-
Springfield	9/17/2006	-	-	-
Springfield	3/20/2007	-	-	-
Springfield	4/24/2007	-	-	-
Springfield	5/10/2007	-	-	-
Fair Grove	5/25/2007	-	-	-
Springfield	6/1/2007	-	-	-
Hickory Barren	6/1/2007	-	-	-
Springfield	6/11/2007	-	-	-
Hickory Barren	6/12/2007	-	-	-
Springfield	6/29/2007	-	-	-
Sacville	6/30/2007	-	-	-

Walnut Grove	8/20/2007	-	-	2M
Springfield	8/24/2007	-	-	-
Springfield	9/6/2007	-	-	-
Springfield	9/8/2007	-	-	-
Phenix	1/7/2008	-	-	100K
Springfield Downtown Airport	2/5/2008	-	-	-
Phenix	2/17/2008	-	-	-
Walnut Grove	3/18/2008	-	-	1M
Walnut Grove	3/31/2008	-	-	-
Walnut Grove	4/10/2008	-	-	-
Springfield-Branson Airport	6/6/2008	-	-	-
Walnut Grove	6/13/2008	-	-	-
Republic	6/20/2008	-	-	-
Springfield Bar H AR	6/21/2008	-	-	-
Republic Westport AR	6/21/2008	-	-	-
Walnut Grove	6/23/2008	-	-	-
Hickory Barren	6/28/2008	-	-	-
Phenix	9/14/2008	-	-	-
Springfield	12/27/2008	-	-	-
Springfield	3/24/2009	-	-	-
Cody	5/1/2009	-	-	-
Bois D Arc	5/23/2009	-	-	-
Springfield	6/16/2009	-	-	-
Langston	6/24/2009	-	-	-
Ebenezer	9/21/2009	-	-	-
Springfield Downtown Airport	9/21/2009	-	-	-
Fair Grove	9/21/2009	-	-	-
Ebenezer	9/21/2009	-	-	-
Brookline	9/21/2009	-	-	-

Sequiota	10/8/2009	-	-	-
Springfield	10/8/2009	-	-	-
Battlefield	10/8/2009	-	-	-
Cody	10/8/2009	-	-	-
Battlefield	5/14/2010	-	-	-
Mentor	5/16/2010	-	-	-
Springfield Downtown Airport	6/19/2010	-	-	-
Springfield Downtown Airport	7/11/2010	-	-	-
Sequiota	7/11/2010	-	-	-
Sequiota	7/11/2010	-	-	-
Springfield	7/11/2010	-	-	-
Nichols	7/12/2010	-	-	-
Springfield	7/16/2010	-	-	-
Springfield	7/16/2010	-	-	-
Galloway	9/1/2010	-	-	-
Strafford	9/1/2010	-	-	-
Cody	9/1/2010	-	-	-
Springfield	9/1/2010	-	-	-
Plano	9/1/2010	-	-	-
Mumford	9/1/2010	-	-	-
Cody	9/1/2010	-	-	-
Battlefield	9/2/2010	-	-	-
Brookline	9/9/2010	-	-	-
Mulroy	9/15/2010	-	-	-
Fair Grove	9/16/2010	-	-	-
Nichols	11/25/2010	-	-	-
Springfield-Branson Airport	11/25/2010	-	-	-
Cherry Valley Estates	11/25/2010	-	-	-
Springfield Bar H AR	4/25/2011	-	-	500K

Battlefield	10/13/2012	-	-	-
Springfield	10/13/2012	-	-	-
Nichols	10/14/2012	-	-	-
Republic	5/30/2013	-	-	-
Springfield	5/30/2013	-	-	-
Nichols	5/30/2013	-	-	-
Mumford	5/31/2013	-	-	-
Mulroy	5/31/2013	-	-	-
Elwood	5/31/2013	-	-	-
Walnut Grove	5/31/2013	-	-	-
Wildwood Estates	6/15/2013	-	-	-
Wildwood Estates	6/15/2013	-	-	-
Wildwood Estates	6/15/2013	-	-	-
Battlefield	6/15/2013	-	-	-
Brookline	6/15/2013	-	-	-
Wildwood Estates	6/15/2013	-	-	1M
Wildwood Estates	6/15/2013	-	-	-
Sequiota	6/16/2013	-	-	-
Sequiota	6/16/2013	-	-	-
Springfield	6/16/2013	-	-	-
Springfield	6/16/2013	-	-	-
Galloway	6/16/2013	-	-	-
Galloway	6/16/2013	-	-	-
Springfield	7/30/2013	-	-	-
Sequiota	7/30/2013	-	-	-
Springfield	7/30/2013	-	-	-
Cody	7/30/2013	-	-	-
Nichols	7/30/2013	-	-	-
Cody	8/5/2013	-	-	-

Galloway	8/5/2013	-	-	-
Hickory Barren	8/10/2013	-	-	-
Phenix	6/5/2014	-	-	25K
Springfield	6/5/2014	-	-	-
Springfield Downtown Airport	6/5/2014	-	-	-
Springfield	9/17/2014	-	-	50K
Springfield	9/17/2014	-	-	-
Springfield	9/17/2014	-	-	-
Springfield	9/17/2014	-	-	10K
Springfield Downtown Airport	9/17/2014	-	-	-
Springfield Bar H AR	5/29/2015	-	-	-
Springfield Downtown Airport	6/18/2015	-	-	50.K
Phenix	6/18/2015	-	-	-
Battlefield	6/18/2015	-	-	-
Langston	6/18/2015	-	-	-
Brookline	6/19/2015	-	-	-
Springfield Bar H AR	6/19/2015	-	-	500K
Springfield	7/2/2015	-	-	-
Ebenezer	7/2/2015	-	-	250K
Springfield Bar H AR	7/2/2015	-	-	-
Battlefield	7/2/2015	-	-	-
Elwood	7/5/2015	-	-	-
Nichols	7/5/2015	-	-	-
Nichols	7/5/2015	-	-	-
Nichols	7/5/2015	-	-	10K
Elwood	7/5/2015	-	-	-
Nichols	7/5/2015	-	-	-
Nichols	7/5/2015	-	-	-
Sequiota	7/9/2015	-	-	-

Springfield	7/23/2015	-	-	-
Springfield	8/5/2015	-	-	-
Bois D' Arc	8/10/2015	-	-	-
Republic	8/10/2015	-	-	-
Springfield	11/17/2015	-	-	-
Battlefield	12/26/2015	-	-	5M
Springfield	12/26/2015	-	-	-
Ebenezer	12/26/2015	1	-	-
Republic Westport AR	12/26/2015	-	-	-
Elwood	12/26/2015	-	-	-
Springfield Airport	12/26/2015	-	-	-
Springfield	3/13/2016	-	-	500K
Springfield	3/13/2016	-	-	-
Brookline	3/13/2016	-	-	-
Elwood	7/25/2016	-	-	-
Fair Grove	7/25/2016	-	-	-
Pleasant Valley	7/25/2016	-	-	-
Willard	8/31/2016	-	-	-
Nichols	9/16/2016	-	-	-
Springfield	4/29/2017	-	-	-
Sequiota	4/29/2017	-	-	-
Nichols	4/29/2017	-	-	-
Cody	4/29/2017	-	-	-
Cherry Valley Estates	4/29/2017	-	-	-
Sequiota	4/29/2017	-	-	-
Springfield	4/29/2017	-	-	-
Ebenezer	4/29/2017	-	-	-
Republic	4/29/2017	-	-	-
Pleasant Valley	4/29/2017	-	-	-

Cody	4/29/2017	-	-	-
Galloway	4/30/2017	-	-	5K
Springfield Bar H AR	5/11/2017	-	-	-
Wildwood Estates	5/27/2017	-	-	-
Springfield	6/1/2017	-	-	-
Springfield	6/1/2017	-	-	-
Springfield	8/10/2018	-	-	-
Fair Grove	9/7/2018	-	-	-
Fair Grove	9/7/2018	-	-	-
Fair Grove	9/7/2018	-	-	-
Fair Grove	3/12/2019	-	-	-
Elwood	5/20/2019	-	-	-
Springfield	5/20/2019	-	-	-
Fair Grove	5/20/2019	-	-	-
Fair Grove	5/20/2019	-	-	-
Springfield Downtown Airport	5/21/2019	-	-	-
Fair Grove	5/21/2019	-	-	-
Elwood	5/23/2019	-	-	-
Springfield Downtown Airport	5/23/2019	-	-	-
Nichols	5/23/2019	-	-	-
Springfield Downtown Airport	5/23/2019	-	-	-
Elwood	5/23/2019	-	-	25K
Phenix	1/10/2020	-	-	-
Phenix	1/10/2020	-	-	-
Fair Grove	1/10/2020	-	-	-
Cody	3/19/2020	-	-	-
Ebenezer	3/19/2020	-	-	-
Bois D’ Arc	3/19/2020	-	-	-
Strafford	3/24/2020	-	-	-

Nichols	5/22/2020	-	-	2K
Nichols	5/27/2020	-	-	-
Fair Grove	1/25/2021	-	-	-
Springfield Bar H AR	6/11/2021	-	-	-
Springfield	7/17/2021	-	-	-
Springfield	7/17/2021	-	-	-
Springfield Downtown Airport	5/5/2022	-	-	-
Brookline	5/5/2022	-	-	-
Ebenezer	5/5/2022	-	-	-
Battlefield	5/5/2022	-	-	-
Springfield	8/5/2022	-	-	-
Springfield	8/5/2022	-	-	-
Springfield	8/5/2022	-	-	-
Springfield	8/5/2022	-	-	-
Springfield	8/5/2022	-	-	-
Springfield	8/5/2022	-	-	3K
Springfield	8/5/2022	-	-	-
Springfield	8/5/2022	-	-	-
Nichols	8/5/2022	-	-	-
Republic Westport AR	8/8/2022	-	-	-
Republic	8/8/2022	-	-	-
Springfield	8/29/2022	-	-	-
Langston	8/29/2022	-	-	-
Sequiota	8/29/2022	-	-	-
Springfield	8/29/2022	-	-	-
Springfield	8/29/2022	-	-	-
Springfield	8/29/2022	-	-	-
Springfield	8/29/2022	-	-	-
Springfield	8/29/2022	-	-	2K

Springfield	8/29/2022	-	-	-
Cody	3/23/2023	-	-	-
Hickory Barren	5/15/2023	-	-	-
Sequiota	7/7/2023	-	-	10K
Sequiota	7/7/2023	-	-	-
Republic	8/9/2023	-	-	-
Nichols	8/9/2023	-	-	-
Sequiota	4/25/2024	-	-	-
Springfield	4/25/2024	-	-	-
Hickory Barren	6/8/2024	-	-	-
Glidewell	6/9/2024	-	-	-
Nichols	6/9/2024	-	-	-
Cave Springs	6/9/2024	-	-	-
Mulroy	7/8/2024	-	-	-
Springfield	7/17/2024	-	-	18K
Springfield	7/17/2024	-	-	-
Nichols	7/17/2024	-	-	-
Totals		**1**	**1**	**20.320M**

PROBABILITY OF FUTURE OCCURRENCE

Missouri regularly experiences flooding events, with an average of 10 reported events each year between 1996 and 2025. These events are expected to continue affecting Greene County, as the frequency of such events has increased in recent years. From 2010 to 2024, the average number of flooding events per year rose to 13. There is a 100% chance over the next five years that Greene County will experience a flash flooding event.

CHANGING FUTURE CONDITIONS

Missouri is anticipated to experience more frequent and intense flooding due to climate change. The Missouri State Hazard Mitigation Plan, released in 2023, indicates an increase in both the frequency and intensity of rainfall, which will likely stress natural hydrological systems and community stormwater infrastructure. Additionally, climate change may lead to more snowfall in the winter, resulting in intensified spring flooding. Flooding caused by high groundwater levels typically recedes more slowly than riverine flooding, which can delay response and recovery efforts. Rivers and streams are also more likely to experience heightened flooding when groundwater levels are elevated.

VULNERABILITY OVERVIEW

Flooding poses significant risks to life and property, often leading to injuries or fatalities. Floodwater can also interact with hazardous materials, causing dangerous situations. For example, bulk propane tanks could be punctured during flooding, requiring evacuation.

Flooding can create public health concerns, necessitating disease and injury surveillance. There may also be a need for community sanitation efforts to evaluate flood-affected food supplies. Private water and sewage systems could be impacted, and vector control (e.g., for mosquitoes) may become necessary.

When roads and bridges are inundated, the water can erode roadbeds and materials around bridge abutments. Erosion may undermine the foundation of roads, and steep slopes saturated with water could trigger mudslides or rockslides onto roadways. This damage results in costly repairs for local road and bridge maintenance departments. Additionally, sewer backups caused by flooding can lead to expensive clean-up efforts for homeowners and businesses while presenting health hazards.

POTENTIAL LOSSES TO EXISTING DEVELOPMENT

Severe flooding can cause significant crop loss and damage to both personal and commercial property. The more rural areas of Greene County are especially vulnerable due to the lack of infrastructure that might help mitigate the effects of flooding. Flooding can damage the foundations of homes and businesses and create hazardous driving conditions as roads erode. Older homes built before floodplains were mapped, or in areas that have since been reclassified as floodplains, are at the highest risk. To address these issues, many communities in Missouri and the U.S., have floodplain buyout programs, some of which are included in this plan.

IMPACT ON PREVIOUS AND FUTURE DEVELOPMENT

With wider access to floodplain maps, fewer residential and commercial structures are being built in areas that are highly prone to flooding, helping to reduce property loss within the planning area. However, as the county continues to develop, low-lying areas near rivers may still be impacted by large flooding events. Regardless of the location of the new construction, increased development leads to more impervious surfaces, which in turn increases water runoff and drainage issues during heavy rainfall.

EMAP CONCEQUENCE ANALYSIS

Table 3.4.13 EMAP Impact Analysis: Flooding

Subject	Detrimental Impacts
Public	Risk of death or injury is elevated from rising creeks, tributaries, and storm water runoff that cross a section of roadway. Floods can also create health concerns from disease and sanitation problems.
Responders	The potential for dangerous life safety issues to responders is high when performing water rescues. Many flooding incidents in Greene County can add hours to necessary response functions and can present a challenge in transportation for all responders.
Continuity of Operations	Multiple critical services and operations are suspended or delayed across the jurisdiction due to elements such as road safety, infrastructure damage, and power outages.
Property, Facilities, and Infrastructure	Numerous neighborhoods and businesses have had damage from flooding in Greene County. There have been multiple instances of significant widespread property damage, including many washed-out roadways. Roads that are not permanently damaged are often impacted and typically experience a dangerous amount of water flowing over them. Critical infrastructures throughout the planning area, including riverbanks, railroads, power lines, and power plants have also been affected by flooding, which can result in widespread minor damage or, occasionally, significant damage to facilities.
Environment	Flooding can negatively affect soil composition and wildlife.
Economic Condition of Jurisdiction	During floods, roads, bridges, houses, and automobiles either become unsafe or are destroyed. Additionally, the government deploys firemen, police, and other emergency apparatus to help the affected. Businesses may also be damaged or completely destroyed and unable to return to normalcy until repairs are completed, which can greatly impact the economic condition throughout Greene County.
Public Confidence in Jurisdiction Governance	Flooding has had little to no impact on public confidence in the governance.

HAZARD SUMMARY BY JURISDICTION

All areas within Greene County experience flooding, however, not all jurisdictions within the county have specific responses to flooding events. While all cities within Greene County and the fire protection districts have addressed flooding in their projects, many schools did not create flood-specific plans, as they would rely on the resources and capabilities of the cities and fire protection districts during a hazardous flood event.

City of Ash Grove

The City of Ash Grove, like other major communities in Greene County, participates in the National Flood Insurance Program (NFIP). Ash Grove officially joined the program in 1980 and has maintained continuous participation since then. Table 3.16 in this section outlines the number of flash flood events by location, as

recorded by the National Centers for Environmental Information (NCEI) between 1996 and 2024. These figures only account for reported events, meaning there may be additional flash flooding incidents in the area that were not documented by the NCEI. Although Ash Grove has reported zero flash flooding events during this period, the city may still be susceptible to other forms of flooding. Flooding remains one of the most common hazards in Greene County.

City of Battlefield

The City of Battlefield, like other major communities in Greene County, participates in the National Flood Insurance Program (NFIP). Battlefield officially joined the program in 2014 and has maintained continuous participation since then. Table 3.16 in this section outlines the number of flash flood events by location, as recorded by the National Centers for Environmental Information (NCEI) between 1996 and 2024. These figures only account for reported events, meaning there may be additional flash flooding incidents in the area that were not documented by the NCEI. Although Battlefield has reported only two flash flooding events during this period, the city may still be susceptible to other forms of flooding. Flooding remains one of the most common hazards in Greene County.

City of Fair Grove

The City of Fair Grove, like other major communities in Greene County, participates in the National Flood Insurance Program (NFIP). Fair Grove officially joined the program in 2004 and has maintained continuous participation since then. Table 3.16 in this section outlines the number of flash flood events by location, as recorded by the National Centers for Environmental Information (NCEI) between 1996 and 2024. These figures only account for reported events, meaning there may be additional flash flooding incidents in the area that were not documented by the NCEI. Although Fair Grove has reported only three flash flooding events during this period, the city may still be susceptible to other forms of flooding. Flooding remains one of the most common hazards in Greene County.

City of Republic

The City of Republic, like other major communities in Greene County, participates in the National Flood Insurance Program (NFIP). Republic officially joined the program in 1980 and has maintained continuous participation since then. Table 3.16 in this section outlines the number of flash flood events by location, as recorded by the National Centers for Environmental Information (NCEI) between 1996 and 2024. These figures only account for reported events, meaning there may be additional flash flooding incidents in the area that were not documented by the NCEI. Although Republic has reported only six flash flooding events during this period, the city may still be susceptible to other forms of flooding. Flooding remains one of the most common hazards in Greene County.

City of Springfield

The City of Springfield, like other major communities in Greene County, participates in the National Flood Insurance Program (NFIP). Springfield officially joined the program in 1978 and has maintained continuous participation since then. Table 3.16 in this section outlines the number of flash flood events by location, as recorded by the National Centers for Environmental Information (NCEI) between 1996 and 2024. These figures only account for reported events, meaning there may be additional flash flooding incidents in the area that were not documented by the NCEI. Springfield has reported 19 flash flooding events during this period, the highest of all the incorporated cities. The city may still be susceptible to other forms of flooding. Flooding remains one of the most common hazards in Greene County.

City of Strafford

The City of Strafford, like other major communities in Greene County, participates in the National Flood Insurance Program (NFIP). Strafford officially joined the program in 1999 and has maintained continuous participation since then. Table 3.16 in this section outlines the number of flash flood events by location, as recorded by the National Centers for Environmental Information (NCEI) between 1996 and 2024. These figures only account for reported events, meaning there may be additional flash flooding incidents in the area that were not documented by the NCEI. Although Strafford has reported zero flash flooding events during this period, the city may still be susceptible to other forms of flooding. Flooding remains one of the most common hazards in Greene County.

City of Walnut Grove

The City of Walnut Grove, like other major communities in Greene County, participates in the National Flood Insurance Program (NFIP). Walnut Grove officially joined the program in 2002 and has maintained continuous participation since then. Table 3.16 in this section outlines the number of flash flood events by location, as recorded by the National Centers for Environmental Information (NCEI) between 1996 and 2024. These figures only account for reported events, meaning there may be additional flash flooding incidents in the area that were not documented by the NCEI. Although Walnut Grove has reported zero flash flooding events during this period, the city may still be susceptible to other forms of flooding. Flooding remains one of the most common hazards in Greene County.

City of Willard

The City of Willard, like other major communities in Greene County, participates in the National Flood Insurance Program (NFIP). Willard officially joined the program in 2003 and has maintained continuous participation since then. Table 3.16 in this section outlines the number of flash flood events by location, as recorded by the National Centers for Environmental Information (NCEI) between 1996 and 2024. These figures only account for reported events, meaning there may be additional flash flooding incidents in the area that were not documented by the NCEI. Although Willard has reported zero flash flooding events during this period, the city may still be susceptible to other forms of flooding. Flooding remains one of the most common hazards in Greene County.

Ash Groves School District

Ash Grove School District is located in the City of Ash Grove, which has reported zero flash floods that have resulted in damage from 1996 to 2024. The Ash Grove School District only has three school buildings. Therefore, if a flash flooding event was to happen, there could be leaks, damage to the structure or difficult road conditions that could all have lasting impacts on the district. This is especially true if water damage results in having to have one of the buildings closed for repairs.

Logan Rogersville School District

The Logan-Rogersville School District has five school buildings that all serve different age populations. Because of this they would experience similar problems to Ash Grove Schools. Flash flooding events could cause dangerous conditions for young drivers in high school, as well as potentially cause serious damage to school buildings.

Springfield School District

The Springfield School District is the largest district in the planning area and serves the largest population of students. Springfield experiences flash flooding the most often in the planning area. The district has a mixture of new and old construction; older construction buildings are at the most risk for things like ceiling leaks or building flooding. Severe flooding inside buildings can cause structural damage as well as health concerns such as mold growth. Flash flooding conditions can also make for hazardous commutes for both school buses and young drivers in high school.

Ozark Technical College

Ozark Technical College, OTC, is a community college in the planning area. Most of the campus is located in Springfield which sees the most flooding in the planning area. Because of this, older buildings could be at risk of flooding inside and leaking ceilings. Flash flooding can also make hazardous commuting conditions as OTC does not have dormitories, and all students commute to and from the school. OTC works with several high schools as well, which could pose extra risks for young drivers.

Battlefield Fire Protection District

Fire districts often respond to accidents on the road during flash flooding events more than they do fire related events. Responding to roadway incidents can be dangerous as response is often on the road. During times of low visibility due to rain, it makes these risks worse. There can be urban fires due to electrical shortages and lightning could start fires if the flash flooding is associated with thunderstorms.

Brookline Fire Protection District

Fire districts often respond to accidents on the road during flash flooding events more than they do fire related events. Responding to roadway incidents can be dangerous as response is often on the road. During times of low visibility due to rain, it makes these risks worse. There can be urban fires due to electrical shortages and lightning could start fires if the flash flooding is associated with thunderstorms.

Willard Fire Protection District

Fire districts often respond to accidents on the road during flash flooding events more than they do fire related events. Responding to roadway incidents can be dangerous as response is often on the road. During times of low visibility due to rain, it makes these risks worse. There can be urban fires due to electrical shortages and lightning could start fires if the flash flooding is associated with thunderstorms.

PROBLEM STATEMENT

Flooding has been, and will continue to be, a significant issue in Greene County. While some areas of the county may be more vulnerable than others, all regions are at risk. Flooding often occurs alongside other hazards, such as severe thunderstorms or tornadoes, which also pose substantial risks to the planning area. Flooding can cause damage to roads, property, and may also lead to public health concerns. Analyzing years of data and studying flood patterns in the planning area reveals that the most effective mitigation strategy is to continue with flood buyout programs in Greene County. Additional mitigation efforts that would benefit the area include stormwater management projects and road retrofitting. These projects are outlined in the Mitigation Strategy section of this plan.

3.4.5 NATURAL HAZARD: LAND SUBSIDENCE/SINKHOLES

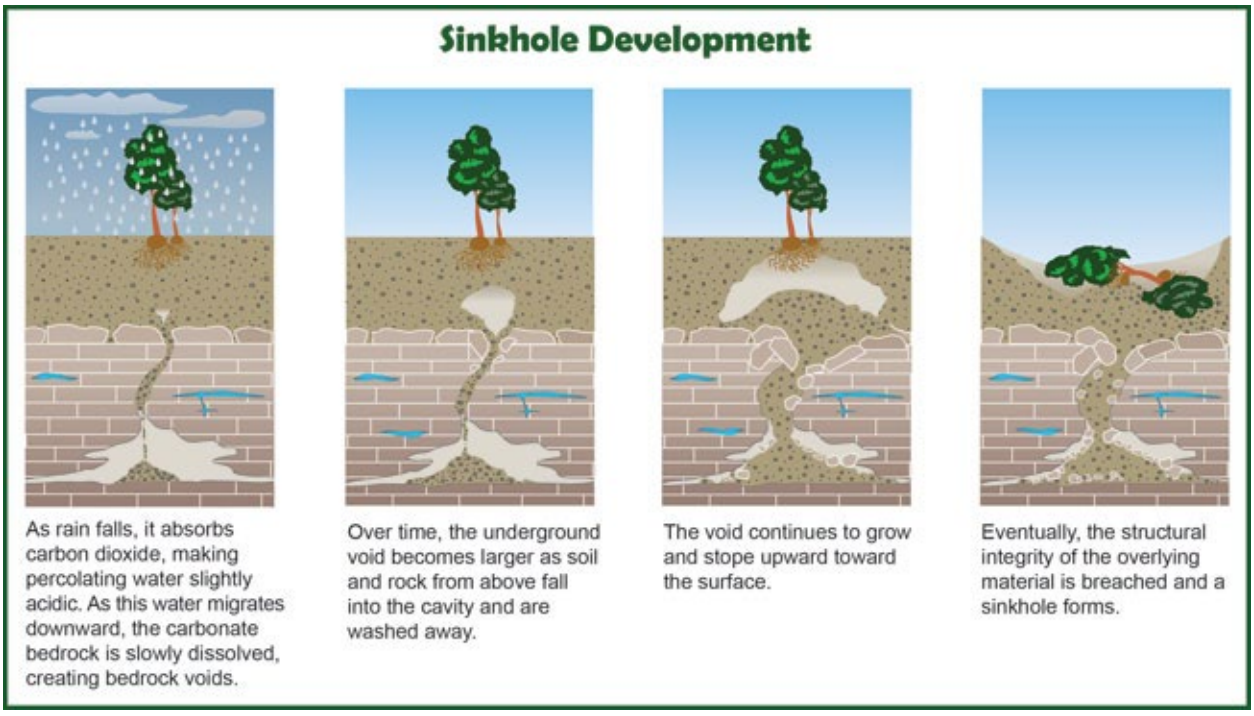
HAZARD PROFILE

Sinkholes commonly occur in areas where the underlying rock is limestone, carbonate rock, salt beds, or other rocks that can naturally dissolve due to groundwater circulation. As the rock dissolves, cavities and caverns form underground. When the land surface above these voids' collapses, it can cause dramatic events, with sinkholes ranging in size from broad, regional subsidence to localized, narrow collapses. While natural processes like erosion of subsurface limestone (karst) can contribute to sinkhole formation, most subsidence is caused by human activities, such as underground coal mining, groundwater or petroleum withdrawal, and the draining of organic soils.

Land subsidence typically occurs slowly over time but can sometimes happen abruptly, as seen in sudden sinkhole formation. Flooding can exacerbate sinkhole formation by increasing the erosion of subsurface rock.

In Missouri, sinkhole problems are most often caused by the erosion of surface materials above openings into bedrock caves, leading to the collapse of these materials into the cave below. This type of collapse is called a "cover collapse." Geologic information can help predict the general areas where such collapses are more likely to occur. Sinkholes vary widely in size, from small depressions measuring a few square yards to large ones covering hundreds of acres. They can also vary in depth, from shallow to hundreds of feet deep.

Figure 3.4.13 Sinkhole Development



Source: Missouri Department of Natural Resources

GEOGRAPHIC LOCATION

Sinkholes are common throughout Greene County and affect the entire planning area. As of 2023, there are more than 2,000 sinkholes within the county. While sinkholes have not caused significant property damage or loss of life to date, they have occasionally caused minor property damage, particularly to roadways when a sinkhole breaches the topsoil. Below is figures 3.4.14 and 3.4.15 and they both illustrate the amount of sinkholes in the area. Map 3.4.15 demonstrates how the number of sinkholes in Greene County compares to surrounding areas. There is a stronger concentration of sinkholes on the western side of the planning area but all incorporated areas other than Fair Grove, are impacted by sinkholes.

Figure 3.4.14 Map of Sinkholes Recorded by Missouri Department of Natural Resources

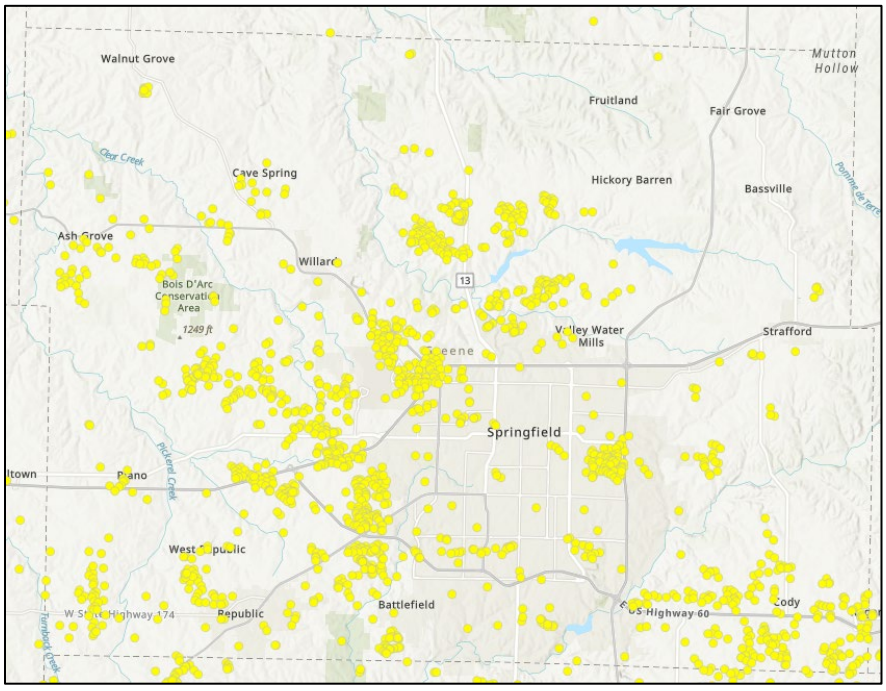
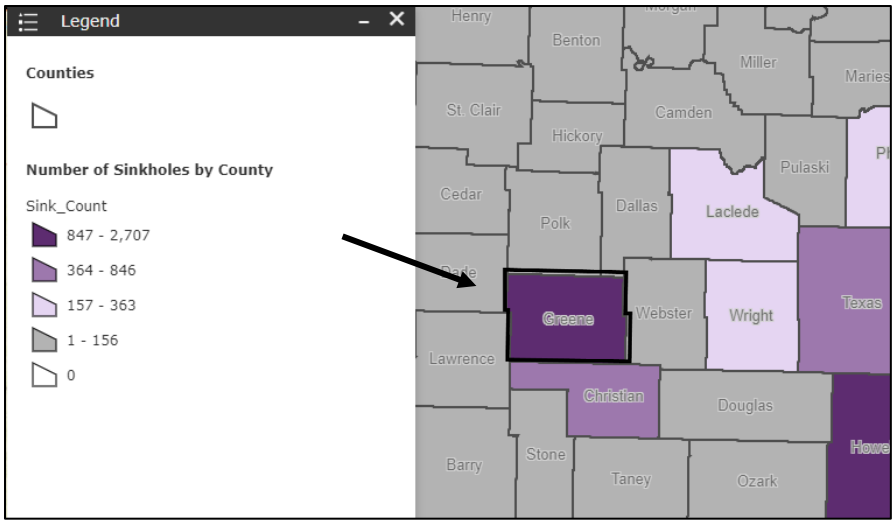


Figure 3.4.15 Number of Sinkholes by County



STRENGTH/MAGNITUDE/EXTENT

Sinkholes vary in size and location, and these variances will determine the impact of the hazard. A sinkhole could result in the loss of a personal vehicle, a building collapse, or damage to infrastructure such as roads, water, or sewer lines. Groundwater contamination is also possible from a sinkhole. Because of the relationship of sinkholes to groundwater, pollutants captured or dumped in sinkholes could affect a community's groundwater system. Large earthquakes could trigger sinkhole collapse. Sinkholes located in floodplains can absorb floodwaters but make detailed flood hazard studies difficult to model.

PREVIOUS OCCURRENCES

May 2024

Two sinkholes opened, one on Galloway Street in Springfield, Missouri, and another the next day at the intersection of Walnut Lawn and Cox Avenue. It took several days for both holes to be filled and the road to be repaired. The area had experienced a large amount of rain over the previous several days, and the area is prone to sudden sinkholes.

September 2023

A sinkhole was repaired on Highway 60 quickly after it was reported.

June 2020

A sinkhole formed next to a family home on South Fairway Avenue in Springfield, Missouri. The sinkhole opened partially under the driveway and partially next to the house.

August 2013

A City of Springfield Utility crew discovered a 50 feet wide and 25 feet deep sinkhole near Walnut Lawn at Cox Avenue while installing water mains.

August 2012

A sinkhole, which likely formed after heavy rain, caused a road to collapse near the Springfield-Branson National Airport. A water main snapped when the concrete collapsed.

June 2009

A sinkhole approximately 70 feet wide and 30 feet deep was located at the bottom of a rain runoff area in Battlefield, which threatened a city sewer lift station and had to be repaired.

March 2009

A sinkhole 15 feet wide and 15 feet deep was found across the street from McBride Elementary School in Springfield. Officials examined the sinkhole and were able to fill it safely.

PROBABILITY OF FUTURE OCCURENCES

Greene County, like much of southwest Missouri, is at a high risk for sinkholes. It is very likely that a sinkhole event will occur in the coming years. There are 7,537 sinkholes recorded and identified within the boundaries of Greene County, as shown in the map below. Despite the large number of sinkholes in the county, incidents where sinkholes cause damage to property or result in loss of life are relatively rare. There is approximately a 50 percent chance that a sinkhole will cause damage within the county over the next several years. The Missouri State Mitigation Plan estimates an 83 percent probability of a future sinkhole event occurring within the state.

CHANGING FUTURE CONDITIONS AND CONSIDERATIONS

According to the Missouri State Hazard Mitigation Plan, direct effects from changing climate conditions such as an increase in droughts could contribute to an increase in sinkholes. These changes raise the likelihood of extreme weather, meaning the torrential rain and flooding conditions, which often lead to the exposure of sinkholes, are likely to become increasingly common. Certain events, such as heavy precipitation following a period of drought, can trigger a sinkhole due to low groundwater levels combined with heavy influx of rain.

VULNERABILITY OVERVIEW

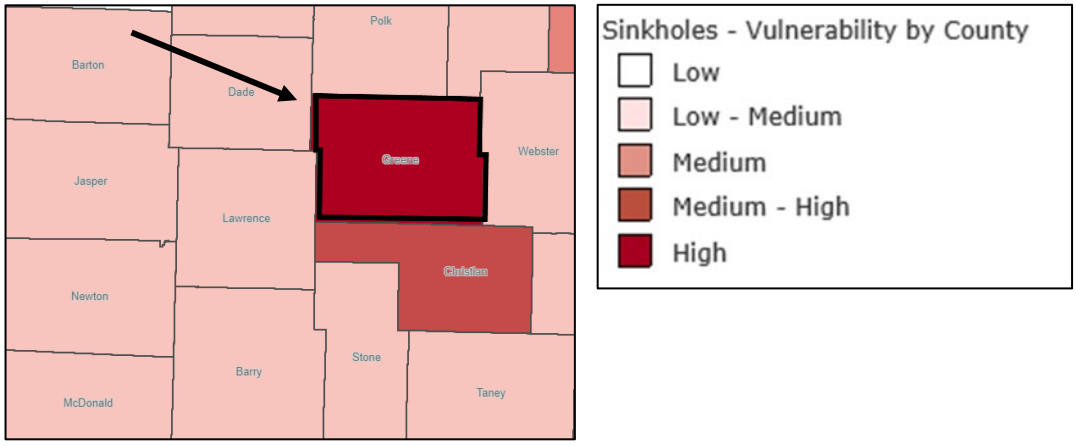
Sinkholes vary in size, location, and characteristics, which influence the potential impact of the hazard. These impacts can range from damage to personal property, such as vehicle loss, to structural damage, including building collapses, or the destruction of infrastructure like roads, water, and sewer lines. Groundwater contamination is also a possible consequence, given the connection between sinkholes and groundwater systems.

Using the Missouri Hazard Mitigation Viewer, the sinkhole vulnerability layer was applied to display the susceptibility of Greene County and surrounding areas to sinkholes and their associated adverse effects. It is important to note that not all sinkholes lead to cave systems, however, Greene County contains approximately 184 - 373 mines and caves. As a result, sinkholes in the planning area may intersect with these subterranean features. A vulnerability rating, ranging from 1 to 5, was assigned to these areas based on natural breaks in the data, as indicated in the map below.

Table 3.4.14 Sinkhole Rating Values

Factor	1 (Low)	2 (Low-Medium)	3 (Medium)	4 (Medium-High)	5 (High)
Sinkholes per County	0	1-200	201-400	401-800	801+
Mines Per County	0-100	101-250	251-500	501-750	751+

Figure 3.4.17 Sinkhole Vulnerability Value – Greene County and Surrounding Area



POTENTIAL LOSSES TO EXISTING DEVELOPMENT

The most common areas to be affected by sinkholes in Greene County are roadways. When sinkholes create instability beneath roadways, they can collapse, disrupting daily commutes and creating unsafe passageways. Often the holes can be repaired quickly. Additionally, when sinkholes open near water mains, personal property, or lift stations at waste centers, the damage can be more extensive, and repair can take longer. The most notable incident occurred in 2012, when a water main burst outside the Springfield-Branson Airport.

IMPACT ON PREVIOUS AND FUTURE DEVELOPMENT

There are two operational coal mines in the State of Missouri, however, there are more than 200 abandoned coal mines and an estimated 2,500 lead and zinc mines within the state. There are nearly 67,000 acres of abandoned mined land in Missouri. Greene County has regulations against building on top of known abandoned mines or known sinkholes. The population of Greene County is expected to continue to grow, and with that growth comes the continuation of the development of the land.

CHANGING FUTURE CONDITIONS AND CONSIDERATIONS

Table 3.4.15 Impact Analysis: Land Subsidence/Sinkholes

Subject	Detrimental Impacts
Public	Land subsidence can be very dangerous and creates many safety concerns for residential or commercial areas.
Responders	There would be little to no impact on responders and response functions in Greene County due to land subsidence.
Continuity of Operations	Land subsidence has little to no impact on service operations.
Property, Facilities, and Infrastructure	Greene County could experience minor isolated instances of property damage, such as damage to building and home foundations. Sinkholes have caused destruction on roadways, which must be filled in to repair roads or continue construction on new roadways. Even though this has occurred in multiple areas in Greene County, little to no impact on facilities has happened due to land subsidence.
Environment	Sinkholes create a direct link to the water supply, and depending on the location of the sinkholes, can directly contaminate drinking water. Contamination in the form of litter or trash, as well as chemicals from roadways, can be washed into an open sinkhole, especially if near a road or busy commercial area.
Economic Condition of Jurisdiction	Sinkholes can cause damage when expanding, of which Greene County has repaired multiple roadways due to damage caused by a sinkhole. Land subsidence has a minor economic impact.
Public Confidence in Jurisdiction Governance	Land subsidence causes little to no loss of public confidence in governance in Greene County.

HAZARD SUMMARY BY JURISDICTION

Greene County

Most of the planning area is affected by sinkholes and land subsidence; however, many jurisdictions within the area rely on mutual support in the event of a sinkhole. Typically, fire protection districts respond, but their primary role is focused on road closures and redirecting traffic unless the incident causes more significant damage. In response, many fire departments have developed projects, such as training programs on public engagement and the acquisition of materials to facilitate quicker road closures. These measures aim to minimize damage to personal property, such as vehicles, and ensure the safety of drivers. Additionally, schools rely on the resources and capabilities of their respective cities to mitigate the effects of a sinkhole, should one occur on a school campus.

City of Ash Grove

As seen in map 3.4.14, Ash Grove has several active sinkholes located in and around its city limits. These geological features pose a potential risk to the community, as they can lead to structural damage and endanger public safety. Fortunately, the majority of land subsidence events in Greene County have not resulted in significant injuries or fatalities.

City of Battlefield

As seen in map 3.4.14, Battlefield has several active sinkholes located in and around its city limits. These geological features pose a potential risk to the community, as they can lead to structural damage and endanger public safety. Fortunately, the majority of land subsidence events in Greene County have not resulted in significant injuries or fatalities.

City of Fair Grove

Currently not at a high risk as there are no active sinkholes in the area. However, given Greene County's naturally occurring limestone and karst topography, they could be at risk in the future.

City of Republic

As seen in map 3.4.14, the City of Republic has numerous active sinkholes located in and around its city limits. These geological features present a potential risk to the community, as they can cause structural damage and pose a threat to public safety. In addition, sinkholes may impact underground utilities and major roadways throughout the city. Fortunately, most land subsidence events in Greene County have not resulted in significant injuries or fatalities.

City of Springfield

As seen in map 3.4.14, the City of Springfield has numerous active sinkholes located in and around its city limits. The largest concentration is found on the western side of the city and just beyond its boundaries. These geological features pose a potential risk to the community, as they can cause structural damage and threaten public safety. Additionally, sinkholes may affect underground utilities and major roadways throughout the city. Fortunately, most land subsidence events in Greene County have not resulted in significant injuries or fatalities.

City of Strafford

Currently not at a high risk as there are very few active sinkholes in the area. However, given Greene County's naturally occurring limestone and karst topography, they could be at risk in the future.

City of Walnut Grove

Currently not at a high risk as there are very few active sinkholes in the area. However, given Greene County's naturally occurring limestone and karst topography, they could be at risk in the future.

City of Willard

Currently not at a high risk as there are very few active sinkholes in the area. However, given Greene County's naturally occurring limestone and karst topography, they could be at risk in the future.

Ash Groves School District

The School Districts in this plan did not include land subsidence or sinkholes as an applicable risk. Many of the schools are not in areas that experience sinkholes but when they are they rely heavily on outside response. Potential hazards of sinkholes nearby could be the closure of playgrounds, road damages, and damage to foundations. These risks are solved by organizations and jurisdictions outside of the school district being affected.

Logan Rogersville School District

The School Districts in this plan did not include land subsidence or sinkholes as an applicable risk. Many of the schools are not in areas that experience sinkholes but when they are they rely heavily on outside response. Potential hazards of sinkholes nearby could be the closure of playgrounds, road damages, and damage to foundations. These risks are solved by organizations and jurisdictions outside of the school district being affected.

Springfield School District

The School Districts in this plan did not include land subsidence or sinkholes as an applicable risk. Many of the schools are not in areas that experience sinkholes but when they are they rely heavily on outside response. Potential hazards of sinkholes nearby could be the closure of playgrounds, road damages, and damage to foundations. These risks are solved by organizations and jurisdictions outside of the school district being affected.

Ozark Technical College

The School Districts in this plan did not include land subsidence or sinkholes as an applicable risk. Many of the schools are not in areas that experience sinkholes but when they are they rely heavily on outside response. Potential hazards of sinkholes nearby could be the closure of playgrounds, road damages, and damage to foundations. These risks are solved by organizations and jurisdictions outside of the school district being affected.

Battlefield Fire Protection District

Battlefield Fire Protection District could expect to respond to sinkholes, especially if they are large and open over city utilities infrastructure or gas pipelines. When sinkholes occur, they can damage underground infrastructure and cause things like water main breaks, fires or explosions if a gas line is damaged.

Brookline Fire Protection District

Brookline Fire Protection District could expect to respond to sinkholes, especially if they are large and open over city utilities infrastructure or gas pipelines. When sinkholes occur, they can damage underground infrastructure and cause things like water main breaks, fires or explosions if a gas line is damaged. Due to the rural nature of the Brookline Fire Protection District, there could also be debris that blocks roads, less maintained roads could become damaged and unpassable which could make responding to fires during that time difficult.

Willard Fire Protection District

Battlefield Fire Protection District could expect to respond to sinkholes, especially if they are large and open over city utilities infrastructure or gas pipelines. When sinkholes occur, they can damage underground infrastructure and cause things like water main breaks, fires or explosions if a gas line is damaged.

PROBLEM STATEMENT

Sinkholes vary in size and location, often causing significant damage and property loss, with the potential for injury or death. The entire planning area is at risk of experiencing sinkhole-related damage. Factors such as population growth and climate change may contribute to an increase in sinkhole occurrences in the coming years. As all areas face equal risk, it is essential that every jurisdiction within the planning area implements mitigation strategies for this hazard. According to the Missouri State Mitigation Plan, Greene County is one of the areas most likely to be impacted by sinkhole damage. Mitigation efforts should focus on increasing public awareness and education, assessing risk, and proactive planning before sinkholes occur. Large-scale projects in other regions have successfully addressed sinkhole risks by relocating homes in known sinkhole-prone areas.

3.4.6 NATURAL HAZARDS: SEVERE THUNDERSTORMS – INCLUDING HIGH WINDS, HAIL, AND LIGHTNING

HAZARD PROFILE

Thunderstorms

A thunderstorm is defined as a storm that produces lightning and thunder, which is caused by unstable atmospheric conditions. Thunderstorms develop when cold air from above sinks and warm, moist air rises, forming storm clouds or "thunderheads." These storms can occur individually or in clusters or lines. The National Weather Service classifies a thunderstorm as "severe" if it includes hail that is one inch or more in diameter, or wind gusts that reach 58 miles per hour or higher. At any given moment, there are about 1,800 thunderstorms occurring around the world. Severe thunderstorms in Missouri are most common in the spring and summer, particularly in the afternoon and evening, but they can occur at any time. Thunderstorms are also associated with hazards such as heavy rain (leading to flooding) and tornadoes, which are discussed in their respective sections of this plan.

High Winds

Severe thunderstorms can produce winds that cause damage comparable to that of a weak tornado. These damaging winds can include downbursts, microbursts, and straight-line winds. Downbursts are localized currents of air that blast down from a thunderstorm, creating an outward burst of damaging wind at or near the ground. Microbursts are smaller downbursts that cover an area of less than 2.5 miles across and often include strong wind shear (a rapid change in wind direction over a short distance) near the surface. Microbursts may or may not include precipitation, but they can produce winds exceeding 150 miles per hour. Damaging straight-line winds are winds that affect a wide area, with speeds that can reach up to 140 miles per hour.

Lightning

All thunderstorms produce lightning, which can strike outside the area where it is raining and has been known to occur more than 10 miles away from the rainfall. Lightning is a massive discharge of electricity traveling through the air, causing vibrations that generate the sound of thunder.

Hail

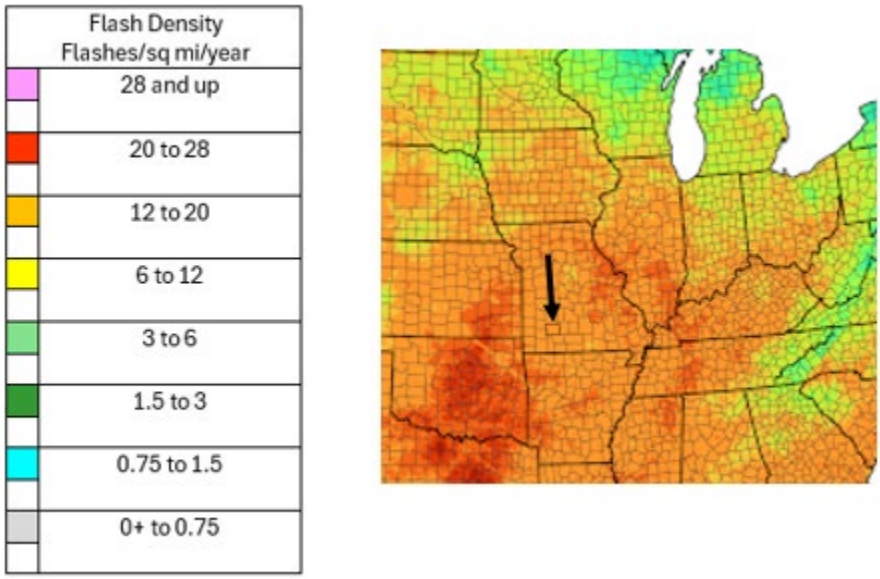
According to the National Oceanic and Atmospheric Administration (NOAA), hail forms when thunderstorm updrafts carry raindrops upward into an extremely cold atmosphere, causing them to freeze. These frozen droplets continue to grow as they meet super-cooled water, which freezes upon contact with the raindrop. If the updrafts can support the weight of the hailstone, the hail continues to grow before falling to the ground. A hailstone's size is determined by the strength of the updraft; for example, pea-sized hail (¼ inch in diameter) requires updrafts of at least 24 miles per hour, while baseball-sized hail (2 ¾ inches in diameter) requires updrafts of 81 miles per hour. The largest hailstone ever recorded in the United States was found in Vivian, South Dakota, on July 23, 2010, measuring eight inches in diameter—nearly the size of a soccer ball. While soccer-ball-sized hail is rare, even smaller, pea-sized hail can cause significant damage.

GEOGRAPHIC LOCATION

Thunderstorms, high winds, hail, and lightning are area-wide hazards that can happen anywhere in Greene County. Although these events occur similarly throughout the planning area, damages are more likely to occur in more densely developed urban areas.

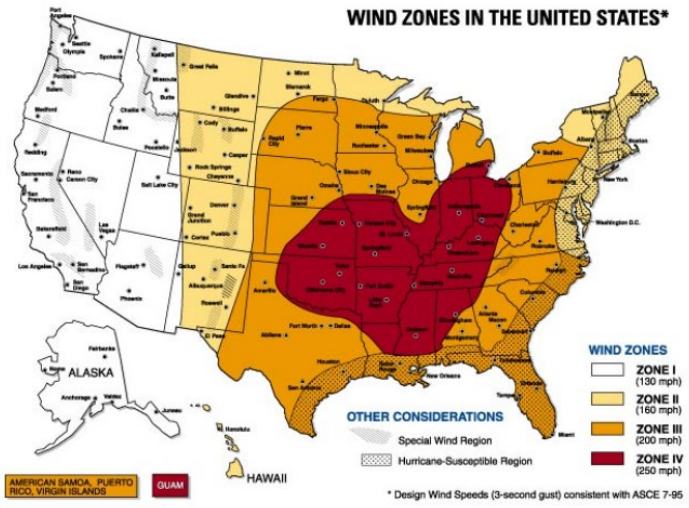
The following is a map of lightning frequency in the Midwest region of the United States. Missouri sees frequent lightning annually. Greene County averages 12-20 lightning flashes per square mile each year.

Figure 3.4.18 Lightning Strikes in Midwest Area of the United States



Source: https://www.vaisala.com/en/products/national-lightning-detection-network-nldn

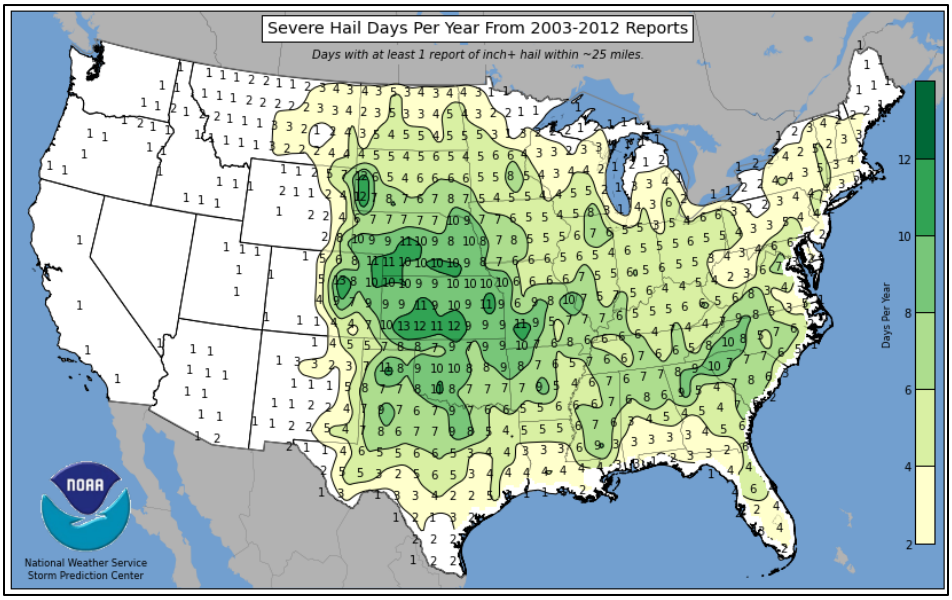
Figure 3.4.19 Wind Zones in the United States



Source: https://www.fema.gov/pdf/library/ism2_s1.pdf

As pictured above in the wind zones map provided by FEMA, Greene County is in Wind Zone IV. This zone is at high risk for strong and potentially damaging winds. During periods of high winds, it is recommended to take shelter as protection.

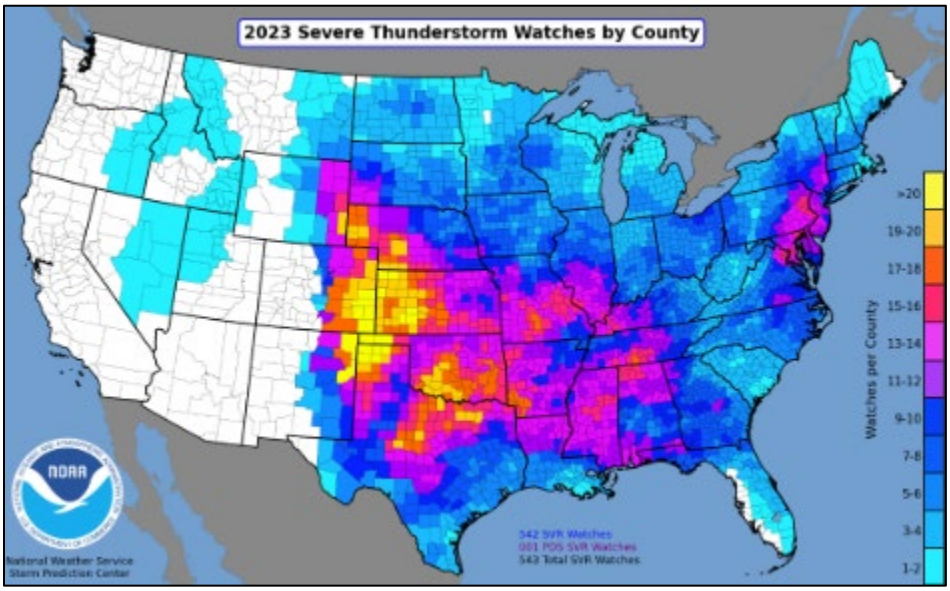
Figure 3.4.20 Hail Events across the United States 2003-2012



Source: https://www.spc.noaa.gov/wcm/

Above is the most recent compilation of severe hail incidents across the United States. During this time, the Greene County area saw 7 - 11 hail events annually. In 2022, there was one day with severe hail, and in 2023, there were seven days with hail, only two of which were reported to have caused damage. It can be assumed that Greene County remains within the 7 - 11 days of hail range over time.

Figure 3.4.21 Thunderstorm Watches by County in the United States



Pictured above is the number of thunderstorm watches issued in 2023. Greene County had between 13 - 14 watches issued. During that time, five thunderstorm events were reported to have done property damage.

STRENGTH/MAGNITUDE/EXTENT

Hail

Based on information provided by the Tornado and Storm Research Organization (TORRO), the table below describes typical damage impacts of the various sizes of hail. In addition to hail diameter, factors including number and density of hailstones, hail fall speed, and surface wind speeds affect severity.

Table 3.4.16 Hail Intensity

Intensity Category	Diameter (Mm)	Diameter (Inches)	Size Description	Typical Damage Impacts
Hard Hail	5 - 9 mm	0.2 - 0.4 in	Pea	No Damage
Potentially Damaging	10 - 15 mm	0.4 - 0.6 in	Mothball	Slight general damage to plants and crops
Significant	16 - 20 mm	0.6 - 0.8 in	Marble, Grape	Significant damage to fruit, crops, and vegetation
Severe	21 - 30 mm	0.8 - 1.2 in	Walnut	Severe damage to fruit and crops, damage to glass and plastic structures, paint and wood scored
Severe	31 - 40 mm	1.2 - 1.6 in	Pigeon's Egg > Squash Ball	Widespread glass damage, vehicle bodywork damage
Destructive	41 - 50 mm	1.6 - 2.0 in	Golf Ball > Pullet's Egg	Wholesale destruction of glass, damage to tiled roofs, significant risk of injuries
Destructive	51 - 60 mm	2.0 - 2.4 in	Hen's Egg	Bodywork of grounded aircraft dented; brick walls pitted
Destructive	61 - 75 mm	2.4 - 3.0 in	Tennis Ball > Cricket Ball	Severe roof damage, risk of serious injuries
Destructive	76 - 90 mm	3.0 - 3.5 in	Large Orange > Softball	Severe damage to aircraft bodywork
Super Hailstorms	91 - 100 mm	3.6 - 3.9 in	Grapefruit	Extensive structural damage. Risk of severe or even fatal injuries to people caught in the open.
Super Hailstorms	>100 mm	4.0 + in	Melon	Extensive structural damage. Risk of severe or even fatal injuries to people caught in the open.

Source: Tornado and Storm Research Organization (TORRO), Department of Geography, Oxford Brookes University

Winds

Straight-line winds are defined as any thunderstorm winds that are not associated with rotation (i.e., not a tornado). These winds, which can exceed 100 miles per hour, are the most common type of severe weather and are responsible for most of the wind damage during thunderstorms. Unlike tornadoes, which have narrow, concentrated tracks, straight-line winds can cause widespread damage across entire counties or multiple areas. These winds can topple or destroy objects such as trees, barns, outbuildings, high-profile vehicles, and power lines/poles. They can also damage roofs, windows, and homes as wind speeds increase.

Lightning

Thunderstorms with lightning, high winds, and hail typically develop quickly, with a duration of less than six hours. Warning times for these events are generally six to twelve hours. Nationwide, lightning kills approximately 20 people each year and injures hundreds more. Lightning strikes can also ignite structural fires, wildfires, and damage electrical systems and equipment.

PREVIOUS OCCURENCES

Table 3.4.17 NOAA NCEI Reported Hail Events with Hail Size 1” or Larger 2013-2023

Location	Date	Size Of Hail	Injuries	Deaths	Property Damage
Springfield	3/17/2013	1.0 in	0	0	$0
Unincorporated Greene County	6/15/2013	1 – 2 in	0	0	$0
Republic	6/28/2013	1.0 in	0	0	$0
Unincorporated Greene County	7/3/2013	1.0 in	0	0	$0
Unincorporated Greene County	7/4/2013	1.0 in	0	0	$0
Unincorporated Greene County	8/5/2013	1.0 in	0	0	$0
Unincorporated Greene County	3/27/2014	1.0 in	0	0	$0
Battlefield/Springfield/ Unincorporated Greene County	4/24/2014	1.0 - 1.25 in	0	0	$0
Ash Grove/Unincorporated Greene County	6/6/2014	1.0 - 2.5 in	0	0	$0
Unincorporated Greene County	3/24/2015	1.0 in	0	0	$0
Springfield/Unincorporated Greene County	3/25/2015	1.0 - 1.75 in	0	0	$0

Unincorporated Greene County	4/1/2015	1.0 in	0	0	$0
Republic	4/21/2015	1.0 in	0	0	$0
Battlefield	3/13/2016	1.0 in	0	0	$0
Fair Grove	4/26/2016	1.0 in	0	0	$0
Battlefield/Fair Grove	3/1/2016	1.0 in	0	0	$0
Walnut Grove/Fair Grove/ Strafford/Springfield/Unincorporated Greene County	3/9/2017	1.0 - 1.5 in	0	0	$0
Unincorporated Greene County	4/4/2017	1.5 in	0	0	$0
Fair Grove/Unincorporated Greene County	5/10/2017	1.0 in	0	0	$0
Republic	5/19/2017	1.25 in	0	0	$0
Willard/Springfield/Walnut Grove/ Strafford/Unincorporated Greene County	5/27/2017	1.0 in - 1.75 in	0	0	$0
Unincorporated Greene County	6/1/2017	1.0 in	0	0	$0
Unincorporated Greene County	5/16/2018	1.0 in	0	0	$0
Strafford	5/19/2018	1.0 in	0	0	$0
Battlefield/Springfield/ Unincorporated Greene County	6/14/2018	1.0 - 1.75 in	0	0	$5,000
Fair Grove	7/20/2018	1.0 in	0	0	$0
Springfield	8/10/2018	1.0 - 1.75 in	0	0	$2,000
Springfield	8/30/2018	1.0 in	0	0	$0
Republic/Willard/Pleasant View/ Strafford/Unincorporated Greene County	2/6/2019	1.00 - 1.75 in	0	0	$0

Springfield/Unincorporated Greene County	1/10/2020	1.00 - 1.75 in	0	0	$1,000,000
Republic/Battlefield/ Unincorporated Greene County	3/27/2020	1.00 - 1.75 in	0	0	$0
Battlefield/Springfield/ Unincorporated Greene County	5/4/2020	2.25 in	0	0	$2,000,000
Springfield	5/24/2020	1.00 in	0	0	$0
Unincorporated Greene County	5/9/2021	1.00 in	0	0	$0
Willard/Springfield	4/11/2022	1.00 - 1.25 in	0	0	$0
Unincorporated Greene County	4/5/2023	1.00 in	0	0	$0
Republic/Springfield/ Unincorporated Greene County	4/15/2023	1.00 - 2.00 in	0	0	$4,000,000
Republic/Walnut Grove/ Unincorporated Greene County	5/9/2023	1.00 - 1.75 in	0	0	$80,000
Unincorporated Greene County	7/7/2023	1.00 in	0	0	$0
Fair Grove	7/17/2023	1.00 in	0	0	$0
Source: National Centers of Environmental Information		**TOTAL**	**0**	**0**	**$7.087M**

*Note: The events listed are only events that were reported to National Centers for Environmental Information (NCEI).

Table 3.4.18 NOAA NCEI Reported Thunderstorm Wind Events 2013-2023

Location	Date	Kts (Knots)	Mph (Miles Per Hour)	Injuries	Deaths	Property Damage
Battlefield/ Springfield	5/20/2013	50-52 kts	58 - 60 mph	0	0	$1,000
Battlefield/ Springfield	6/15/2013	52 kts	60 mph	0	0	$0
Republic/ Battlefield/ Springfield	6/28/2013	49-61 kts	56 - 70 mph	0	0	$500,000
Unincorporated Greene County	7/3/2013	43 kts	49 mph	0	0	$1,000

Willard/Unincorporated Greene County	8/3/2013	52 kts	60 mph	0	0	$0
Springfield	4/3/2014	52 kts	60 mph	0	0	$0
Springfield	5/26/2014	52 kts	60 mph	0	0	$1,000
Battlefield/Springfield	6/5/2014	52 kts	60 mph	0	0	$2,000
Walnut Grove	7/7/2014	52 kts	60 mph	0	0	$1,000
Ash Grove/Battlefield/ Republic/Springfield	7/7/2014	51 - 52 kts	59 - 60 mph	0	0	$61,000
Ash Grove/Battlefield/ Republic/Springfield/ Unincorporated Greene County	7/8/2014	51 - 52 kts	59 - 60 mph	1	0	$51,000
Springfield	9/1/2014	52 kts	60 mph	0	0	$40,000
Ash Grove/Fair Grove/ Unincorporated Greene County	10/2/2014	52 kts	60 mph	0	0	$1,000
Unincorporated Greene County	4/21/2015	52 kts	60 mph	0	0	$0
Republic/Springfield/ Willard	5/17/2015	52-56 kts	60 - 64 mph	0	0	$32,000
Ash Grove/Willard/ Unincorporated Greene County	5/29/2015	52 kts	60 mph	0	0	$15,000
Unincorporated Greene County	6/13/2015	52 kts	60 mph	0	0	$5,000
Willard/Fair Grove/ Unincorporated Greene County	7/14/2015	52 kts	60 mph	0	0	$1,000
Fair Grove	7/15/2015	52 kts	60 mph	0	0	$5,000
Springfield/ Greene County	7/24/2015	52 kts	60 mph	0	0	$5,000
Ash Grove/Walnut Grove	8/10/2015	52 kts	60 mph	0	0	$0
Springfield	8/23/2015	52 kts	60 mph	0	0	$5,000
Republic/Battlefield	4/27/2016	52 - 61 kts	60 - 70 mph	0	0	$210,000

Battlefield/Unincorporated Greene County	6/23/2016	52 - 56 kts	60 - 64 mph	0	0	$3,000
Springfield	6/30/2016	52 kts	60 mph	0	0	$0
Republic	7/8/2016	52 kts	60 mph	0	0	$0
Walnut Grove/ Unincorporated Greene County	8/25/2016	52 kts	60 mph	0	0	$1,000
Ash Grove	10/19/2016	52 kts	60 mph	0	0	$2,000
Fair Grove	3/1/2017	52 kts	60 mph	0	0	$0
Springfield/ Unincorporated Greene County	3/6/2017	52 - 56 kts	60 - 64 mph	0	0	$65,000
Springfield	3/9/2017	52 kts	60 mph	0	0	$1,000
Willard/Unincorporated Greene County	4/4/2017	52 kts	60 mph	0	0	$5,000
Springfield	4/26/2017	52 kts	60 mph	0	0	$0
Battlefield/ Unincorporated Greene County	5/19/2017	52 kts	60 mph	0	0	$0
Fair Grove/Republic/ Battlefield	5/27/2017	52 - 60 kts	60 - 69 mph	0	0	$0
Springfield/ Unincorporated Greene County	6/1/2017	52 kts	60 mph	0	0	$1,000
Springfield	6/17/2017	52 kts	60 mph	0	0	$0
Springfield	6/22/2017	61 kts	70 mph	0	0	$25,000
Battlefield/Springfield/ Unincorporated Greene County	6/23/2017	51 - 52 kts	59 - 60 mph	0	0	$1,000
Springfield	6/30/2017	52 - 61 kts	60 - 70 mph	0	0	$10,000
Ash Grove	8/5/2017	52 kts	60 mph	0	0	$1,000
Springfield/ Unincorporated Greene County	10/21/2017	52 kts	60 mph	0	0	$6,000
Fair Grove	10/22/2017	53 kts	60 mph	0	0	$0

Willard/Springfield	12/4/2017	52 - 70 kts	60 - 80 mph	0	0	$14,000
Unincorporated Greene County	5/3/2018	52 kts	60 mph	0	0	$5,000
Unincorporated Greene County	5/25/2018	52 kts	60 mph	0	0	$0
Battlefield	6/14/2018	52 kts	60 mph	0	0	$4,000
Springfield/Republic/ Unincorporated Greene County	6/26/2018	52 - 58 kts	60 - 66 mph	0	0	$4,000
Battlefield/Republic/ Springfield/Unincorporated Greene County	7/19/2018	52 - 61 kts	60 - 70 mph	0	0	$50,000
Ash Grove	8/9/2018	52 kts	60 mph	0	0	$0
Battlefield/Springfield/ Willard/Unincorporated Greene County	8/10/2018	52 kts	60 mph	0	0	$46,000
Republic	8/19/2018	52 kts	60 mph	0	0	$1,000
Willard	9/20/2018	52 kts	60 mph	0	0	$0
Battlefield/Republic/Fair Grove/Springfield/ Unincorporated Greene County	12/1/2018	52 - 72 kts	60 - 82 mph	0	0	$234,000
Republic/Springfield	2/6/2019	52 kts	60 mph	0	0	$12,000
Walnut Grove/ Unincorporated Greene County	4/1/2019	52 - 56 kts	60 - 64 mph	0	0	$56,000
Willard	4/30/2019	61 kts	70 mph	0	0	$40,000
Springfield	5/18/2019	52 kts	60 mph	0	0	$0
Unincorporated Greene County	5/19/2019	52 kts	60 mph	0	0	$0
Republic/Fair Grove/ Unincorporated Greene County	5/20/2019	52 - 56 kts	60 - 64 mph	0	0	$12,000
Fair Grove/Springfield/ Strafford/Unincorporated Greene County	5/21/2019	52 kts	60 mph	0	0	$0
Springfield	5/23/2019	52 kts	60 mph	0	0	$0

Unincorporated Greene County	6/4/2019	54 kts	62 mph	0	0	$0
Unincorporated Greene County	8/20/2019	50 kts	58 mph	0	0	$0
Unincorporated Greene County	8/26/2019	52 kts	60 mph	0	0	$0
Springfield	10/20/2019	52 kts	60 mph	0	0	$0
Battlefield/Springfield	10/21/2019	52 - 74 kts	60 - 85 mph	0	0	$72,000
Ash Grove	4/28/2020	56 kts	64 mph	0	0	$175,000
Strafford	5/3/2020	52 kts	60 mph	0	0	$0
Springfield	6/4/2020	70 kts	81 mph	0	0	$350,000
Springfield/Walnut Grove	8/29/2020	50 - 52 kts	58 - 60 mph	0	0	$0
Springfield	11/14/202	50 - 60 kts	58 - 69 mph	0	0	$9,000
Springfield	5/9/2021	50 - 51 kts	58 - 59 mph	0	0	$15,000
Springfield/ Unincorporated Greene County	6/11/2021	52 kts	60 mph	0	0	$0
Unincorporated Greene County	7/17/2021	52 kts	60 mph	0	0	$0
Springfield	7/31/2021	52 kts	60 mph	0	0	$0
Springfield/Strafford/ Unincorporated Greene County	12/10/2021	52 - 61 kts	60 - 70 mph	0	0	$36,000
Unincorporated Greene County	5/19/2022	52 kts	60 mph	0	0	$0
Springfield/ Unincorporated Greene County	5/21/2022	50 kts	58 mph	0	0	$0
Springfield	8/5/2022	52 kts	60 mph	0	0	$0
Republic/Unincorporated Greene County	8/8/2022	52 - 56 kts	60 - 64 mph	0	0	$30,000
Springfield	8/20/2022	51 kts	59 mph	0	0	$0

Springfield/ Unincorporated Greene County	8/29/2022	50 - 52 kts	58 - 60 mph	0	0	$25,000
Unincorporated Greene County	4/20/2023	52 - 54 kts	60 - 62 mph	0	0	$0
Unincorporated Greene County	5/9/2023	52 - 68 kts	60 - 76 mph	0	0	$0
Springfield	5/10/2023	52 kts	60 mph	0	0	$0
Battlefield	6/5/2023	52 kts	60 mph	0	0	$0
Unincorporated Greene County	7/7/2023	61 kts	70 mph	0	0	$250,000
Republic/Springfield/ Unincorporated Greene County	7/14/2023	50 - 52 kts	58 - 60 mph	0	0	$20,000
Springfield/ Unincorporated Greene County	7/30/2023	61 kts	70 mph	0	0	$2,500,000
Springfield	9/4/2023	50 kts	58 mph	0	0	$40,000
Ash Grove/Republic/ Springfield/ Unincorporated Greene County	9/23/2023	50 - 52 kts	58 - 60 mph	0	0	$145,000
Source: National Center for Environmental Information			**TOTALS**	**1**	**0**	**5.271 M**

*Note: The events listed are only events that were reported to the National Centers for Environmental Information (NCEI).

Below is a table detailing lightning strikes between 2013 and 2023. The NCEI only has reported data regarding injuries, deaths, and property damage. On average, annually, the United States experiences 20 - 25 million lightning flashes. Greene County experiences much more lightning than is listed below.

Table 3.4.19 NOAA NCEI Reported Lightning Events with Injury or Property Damage

Location	Date	Injuries	Deaths	Property Damage
Unincorporated Greene County	2/25/2013	0	0	$300,000
Fair Grove	4/23/2013	0	0	$50,000
Fair Grove	5/31/2013	0	0	$0
Springfield	7/3/2013	2	0	$50,000
Springfield	3/25/2015	0	0	$2,000
Republic	5/10/2015	0	0	$300,000
Unincorporated Greene County	3/30/2016	0	0	$5,000
Springfield	3/21/2017	0	0	$30,000
	TOTALS	**2**	**0**	**$737,000**

Source: National Center for Environmental Information
*Note: The events listed are only events that were reported to the National Centers for Environmental Information (NCEI).

Crop Insurance Claims

Severe storms that include high winds, hail, and lightning can also cause damage to crops and farmland. Over the last five years, there have been very few insurance claims that have been paid out because of hail, winds, and lightning. Most of the insurance payouts were due to excess moisture because of heavy rainfall, with a few from heat and drought.

PROBABILITY OF FUTURE OCCURRENCES

Severe thunderstorm events occur annually in Missouri, with Greene County experiencing an average of 9.8 severe thunderstorms with high winds each year from 2013 to 2023. Thunderstorms with hail are less frequent, averaging four per year in the same period. Although lightning strikes are common, only five instances in the past decade have resulted in damage to property or loss of life. Using this information and the data above, Greene County has a 100 percent chance to experience severe thunderstorms with high winds and hail. Lightning strikes that would cause damage however have only a 50% chance each year.

CHANGING FUTURE CONDITIONS AND CONSIDERATIONS

As global temperatures continue to rise, atmospheric conditions may shift, leading to more frequent and severe thunderstorms and tornadoes in Missouri. The Missouri Hazard Mitigation Plan cites NASA's Earth Observatory, which suggests that climate change could increase storm energy by warming the surface and adding more moisture to the air through evaporation. This increase in moisture, known as Convective Available Potential Energy (CAPE), provides a favorable environment for more intense summer storms. While an increase in CAPE suggests heightened storm intensity, NASA also notes that warming in the Arctic could reduce wind shear in mid-latitude regions, potentially making storms less likely.

As Greene County’s population grows, the potential for more significant impacts to housing, infrastructure, and public safety also increases. Climate change is expected to exacerbate extreme weather events, including severe thunderstorms, in the coming years.

VULNERABILITY OVERVIEW

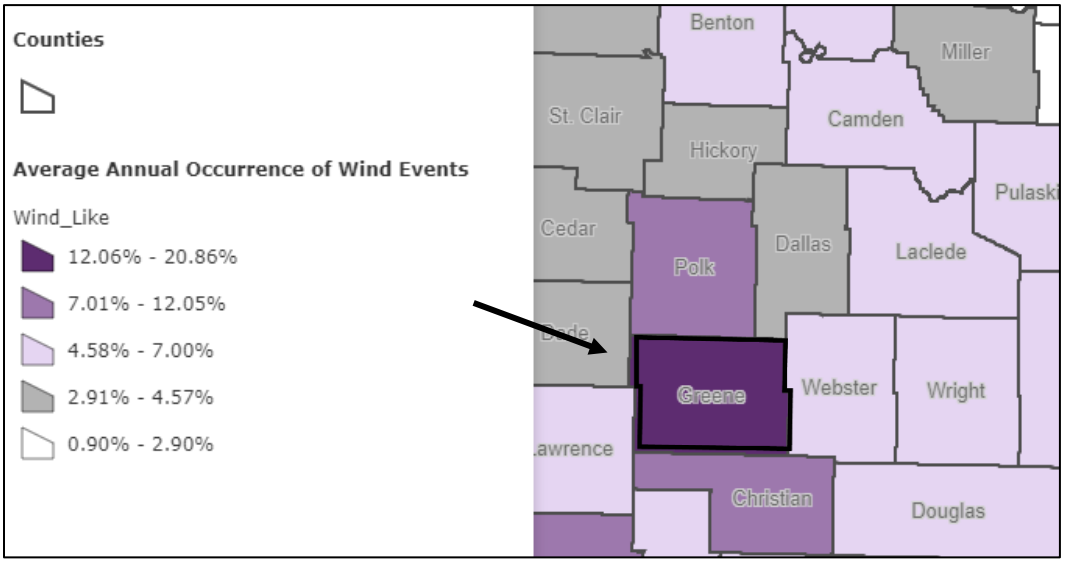
Severe thunderstorm-related losses are often linked to hazards such as hail, downburst winds, lightning, and heavy rain. Losses from hail and high winds are usually localized and covered by insurance, without leading to presidential disaster declarations. However, in some cases, the impacts are widespread and require assistance beyond state capabilities. Severe thunderstorms can also cause substantial damage to crops, predominantly through hail and flooding. Hailstorms lead to significant damage to property, crops, and the environment. Each year, hail causes over $1.3 billion in property and crop damage in the U.S. Even small hailstones can destroy plants within minutes, while vehicles, roofs, and landscaping are also vulnerable to damage. In some cases, hailstorms can result in injuries or fatalities.

Assets in Greene County which are vulnerable to severe thunderstorms include people, crops, vehicles, and built structures. While these storms result in high annual losses, private property and crop insurance typically cover a significant portion of the damage, reducing the overall impact on the jurisdiction.

Lightning strikes primarily cause damage to electronic equipment within buildings, though they can also lead to structural damage if a fire is ignited. Additionally, lightning can damage crops and start fires in fields or forested areas. Communications equipment, including warning systems, can also be disabled by lightning strikes.

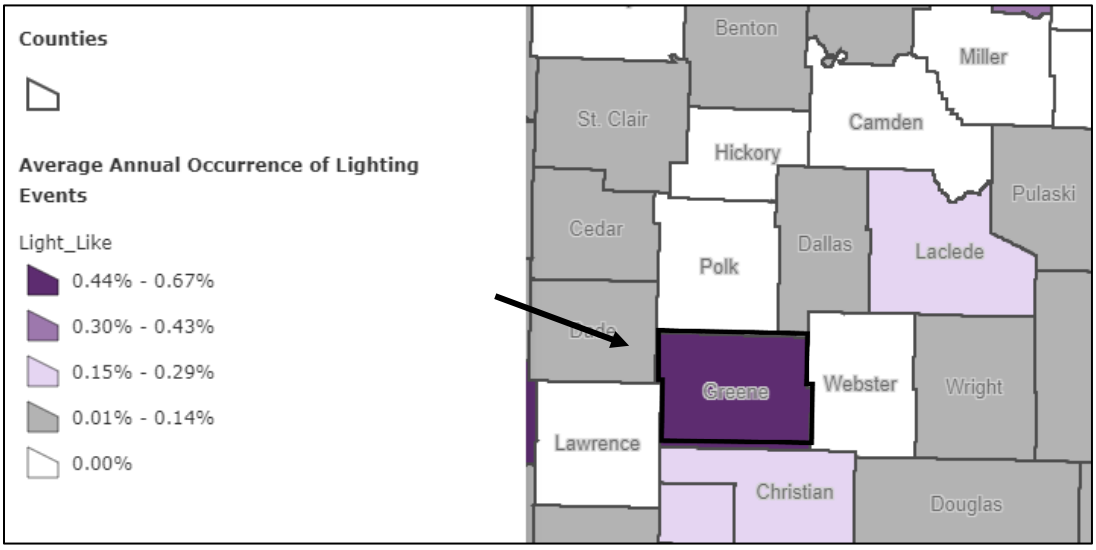
Below are several figures that demonstrate the frequency of severe thunderstorms as well as the damage they may cause due to wind, lightning and hail. Greene County, experiences severe thunderstorms each year, but the frequency for each element may differ. The figures below also demonstrate the amount of annual losses the county experiences. Greene County has the most loss annually due to high winds and hail, but there have been a few historical losses to lightning. Greene County is marked with a bolded outline and an arrow on each map for clarity.

Figure 3.4.22 Average Annual Occurrence of Wind Events



Source: https://topwood.maps.arcgis.com/apps/webappviewer/index.html?id=da60949594ca46c89d5d8322e3990ac7

Figure 3.4.23 Average Annual Occurrence of Lightning Events



Source: https://topwood.maps.arcgis.com/apps/webappviewer/index.html?id=da60949594ca46c89d5d8322e3990ac7

Figure 3.4.24 Average Annual Hail Events

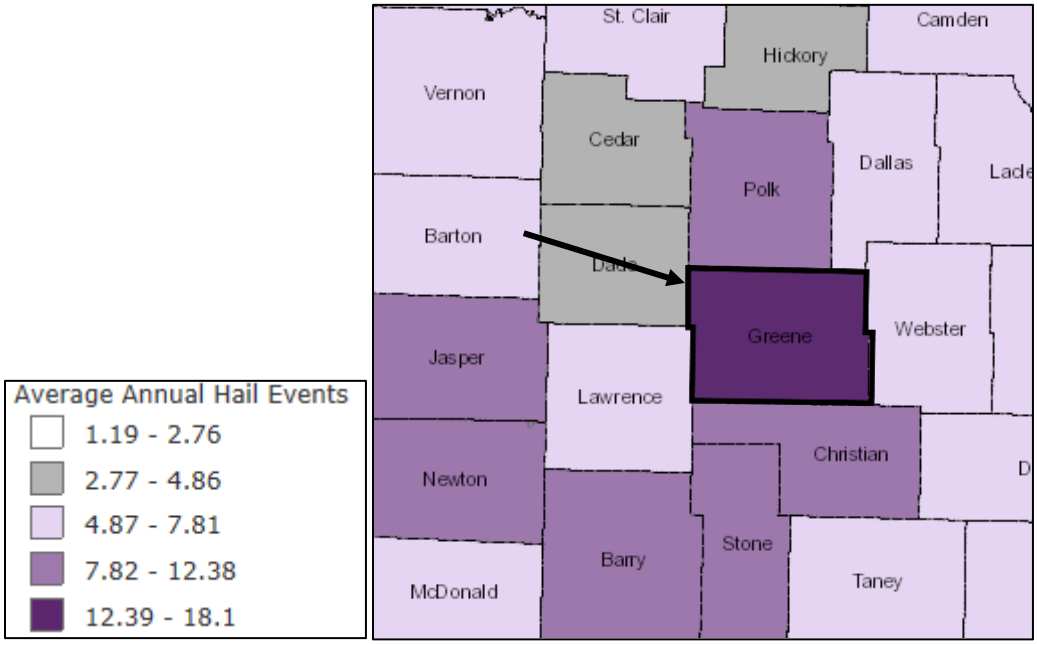


Figure 3.4.25 Overall Vulnerability to Severe Thunderstorms

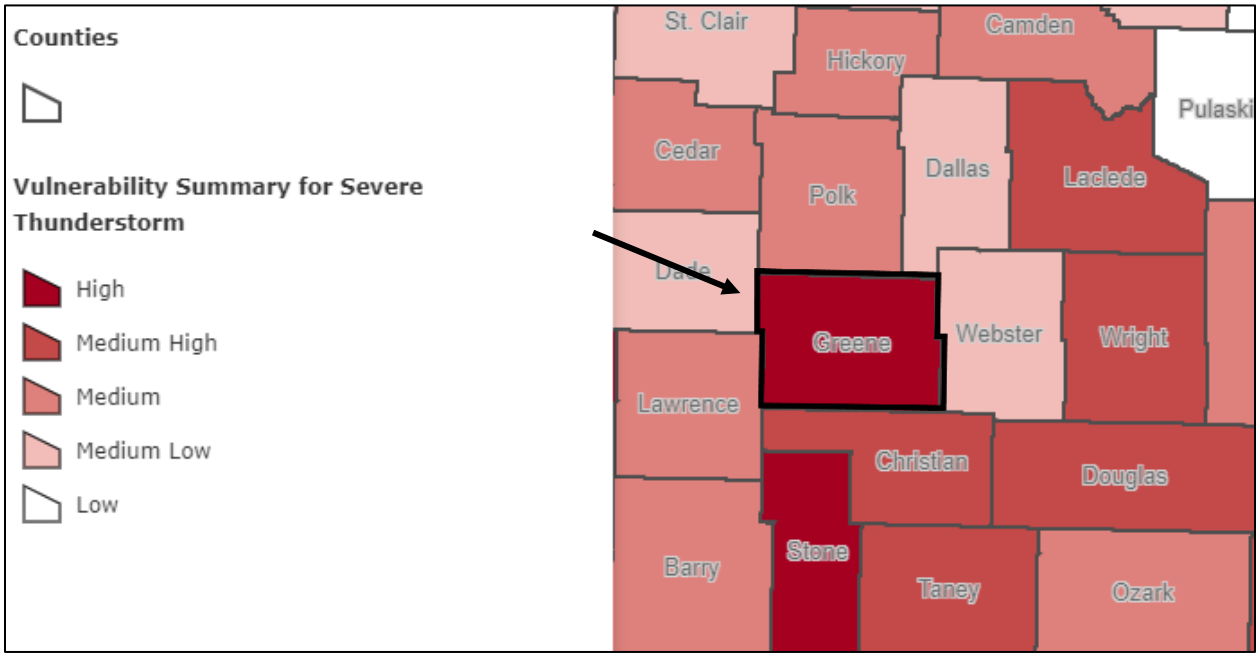
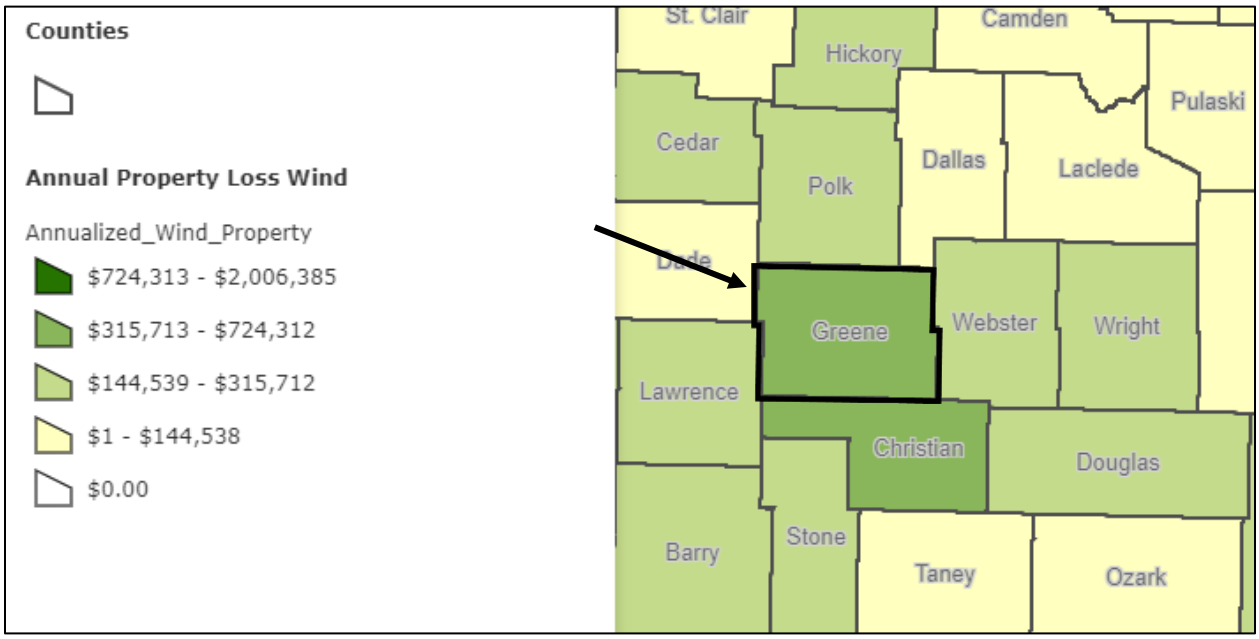
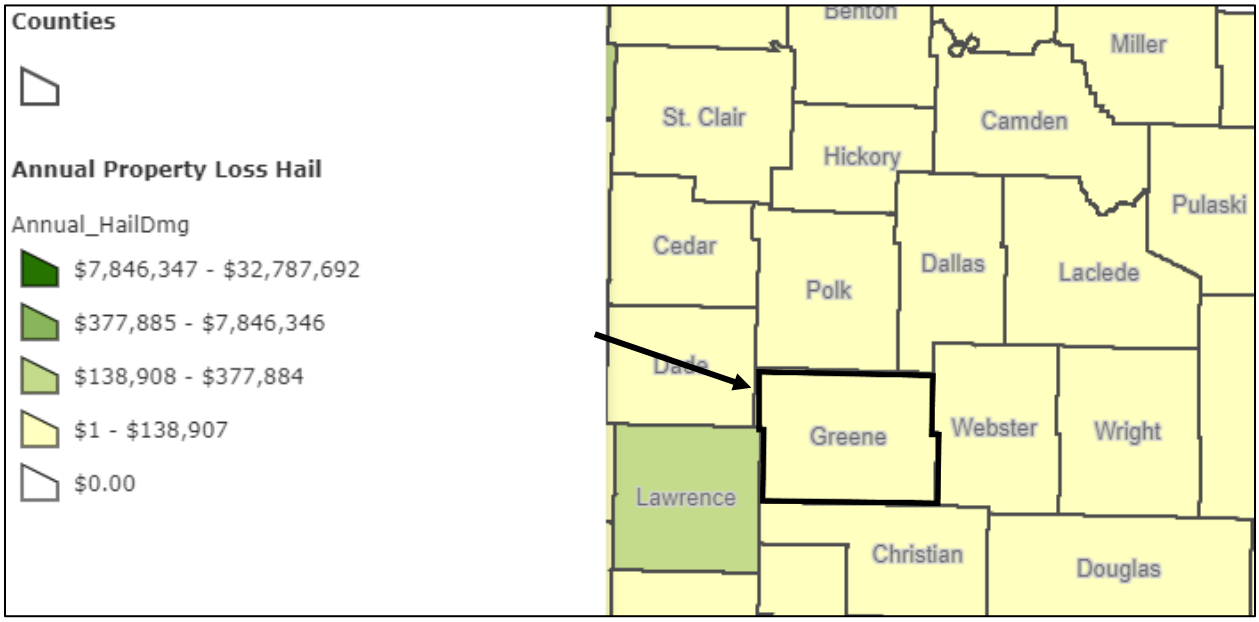


Figure 3.4.26 Annualized Property Loss – Wind



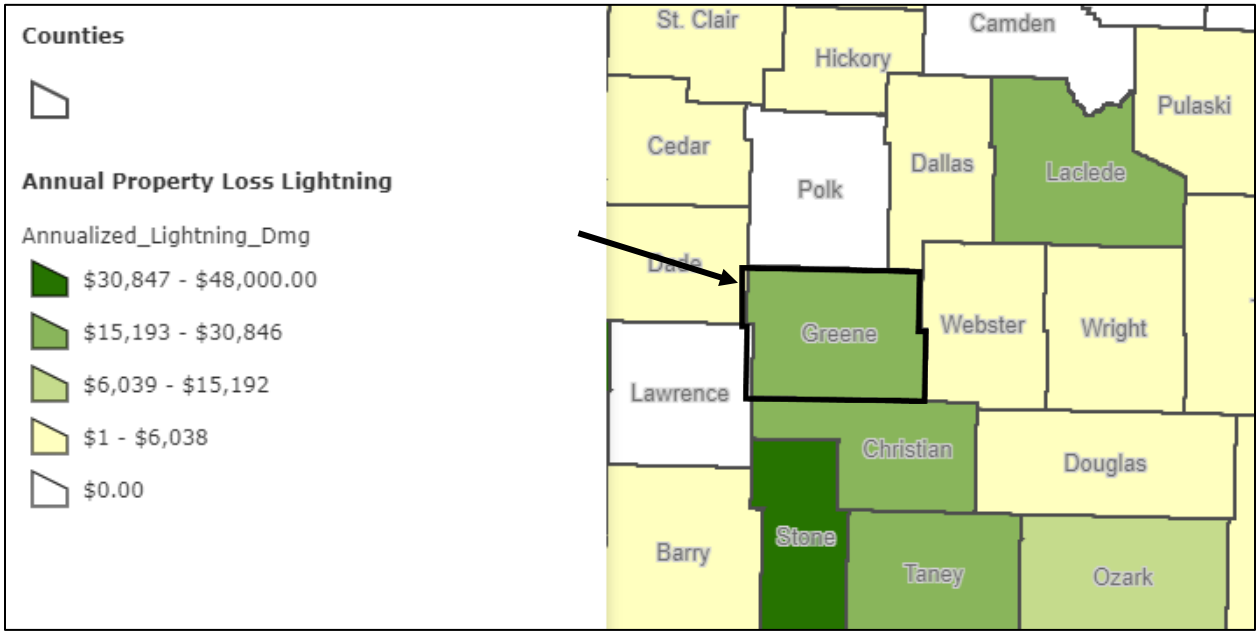
Source: https://topwood.maps.arcgis.com/apps/webappviewer/index.html?id=da60949594ca46c89d5d8322e3990ac7

Figure 3.4.27 Annualized Property Loss – Hail



Source: https://topwood.maps.arcgis.com/apps/webappviewer/index.html?id=da60949594ca46c89d5d8322e3990ac7

Figure 3.4.28 Annualized Property Loss – Lightning



Source: https://topwood.maps.arcgis.com/apps/webappviewer/index.html?id=da60949594ca46c89d5d8322e3990ac7

IMPACT ON PREVIOUS AND FUTURE DEVELOPMENT

Greene County has seen consistent population growth over the last 10 years. Over the next 10 years, the population will continue to grow, and businesses will continue to develop across the area. Additional development results in the exposure of more households and businesses to damages from severe thunderstorms, high winds, lightning, and hail.

EMAP Consequence Analysis

Table 3.4.19 EMAP Impact Analysis: Severe Thunderstorms

Subject	Detrimental Impacts
Public	Damaging winds can cause injury or even death, Greene County has experienced few of these consequences. Damaging winds can create unsafe situations, such as downed power lines and debris falling from trees. There is little to no impact on public safety in Greene County due to hail, however, there is a significant safety concern during lightning. Injuries and a minimal number of deaths have occurred.
Responders	Safety and functionality of responders can be impacted by road conditions (fallen trees or power lines) or from power failure. However, damaging winds have not caused these types of conditions to interfere with the safety and functionality of responders in Greene County. There is little to no impact on the safety and functionality in Greene County due to hail. If lightning is still present at the time of response, there is potential for safety issues. There should be no impact to response functions.
Continuity of Operations	Severe thunderstorms have caused little to no impact on service operations.
Property, Facilities, and Infrastructure	Damaging winds cause significant property damage. Trees and utility poles have been blown over onto cars or even houses. Roofs have also been damaged by these strong winds. These damages are typically minor isolated instances but tend to happen frequently in Greene County. Damaging winds cause the most problems by taking down utility services and power to the community, which can impact all other critical infrastructure sectors. Facility damages occur frequently and typically cause significant damage. As discussed in the damaging wind vulnerability, school buildings, stores, and other entities have had significant damage from damaging winds. Hail causes minor isolated instances of property damage in Greene County and has had little to no impact on critical infrastructure and facility damage.
Environment	Damaging winds have not affected the environment in terms of the floodplains or waste but have downed numerous trees. Hail and lightning have caused little to no impact on the environment.
Economic Condition of Jurisdiction	The economy is impacted by damaging wind when power is no longer available. This can cause problems for businesses and their operations and causes an economic impact on utility services. Lightning and hail have caused little to no impact on Greene County’s economy.
Public Confidence in Jurisdiction Governance	Severe thunderstorms have little to no impact on the public confidence in governance.

HAZARD SUMMARY BY JURISDICTION

Severe thunderstorm events are widespread hazards that can impact entire areas. However, certain demographics may result in higher losses in one jurisdiction compared to another. Within Greene County, there are 13,710 homes which were built in 1939 or earlier. These older homes are more vulnerable to damage from high winds, hail, and lightning compared to newer construction. For example, the City of Ash Grove has over 200 buildings built before 1939, while in Walnut Grove, 18 percent of housing units were built during the same time period. These factors put these jurisdictions at higher risk for damage during severe thunderstorms.

All fire protection districts have developed projects addressing the hazards associated with severe thunderstorms, including fires caused by lightning and debris management following high wind events. While the schools within the planning area generally rely on the resources of cities and fire departments, some have also created their own projects to address these hazards, particularly in the event of a storm occurring during school hours. Cities within the planning area have also addressed this hazard through initiatives like tornado siren replacements and new construction projects designed to withstand severe weather.

PROBLEM STATEMENT

Severe thunderstorms pose several risks to Greene County, including damage and injury from high winds, hail, and lightning. The entire planning area is subject to frequent severe thunderstorms year-round. In the past, these storms have caused millions of dollars in damage. According to the National Centers for Environmental Information (NCEI) Storm Events Database, more than 280 storm events were recorded between 2013 and 2023. NASA and meteorologists predict that severe thunderstorms could become more frequent nationwide in the future. Possible mitigation strategies include reviewing local ordinances and building codes to improve resilience against high winds, as well as implementing construction techniques like structural bracing, straps, clips, and anchor bolts to better withstand severe weather.

3.4.7 NATURAL HAZARD: SEVERE WINTER WEATHER

HAZARD PROFILE

A major winter storm can last for several days and is often accompanied by high winds, freezing rain or sleet, heavy snowfall, and cold temperatures. The National Weather Service (NWS) describes several types of winter storm events, as outlined below:

- **Blizzards:** A blizzard is a dangerous winter storm characterized by blowing snow and wind, which results in very low visibility. Although heavy snowfalls and severe cold often accompany blizzards, they are not always required. Strong winds can also pick up snow that has already fallen, creating a ground blizzard.
- **Ice Storms:** Ice storms result in the accumulation of at least ¼ inch of ice on exposed surfaces. They create hazardous driving and walking conditions, and tree branches and power lines can easily snap under the weight of the ice.
- **Snow Squalls:** Brief, intense snow showers accompanied by strong, gusty winds is a snow squall. Snow accumulation can be significant during these events.
- **Blowing Snow:** Wind-driven snow that reduces visibility and causes significant drifting is considered blowing snow and may include snow that is falling or loose snow already on the ground.
- **Sleet:** Sleet occurs when snowflakes partially melt as they fall through a shallow layer of warm air. These slushy drops refreeze as they pass through a deeper layer of freezing air, reaching the ground as frozen raindrops that bounce on impact.
- **Freezing Rain:** Freezing rain happens when snowflakes descend into a warmer layer of air and melt completely. As these liquid water drops pass through a thin layer of freezing air just above the surface, they do not have enough time to refreeze before hitting the ground. These supercooled droplets instantly freeze upon contact with anything at or below 0°C (32°F), creating a glaze of ice on the ground, trees, power lines, or other objects. A significant accumulation of freezing rain lasting several hours or more is called an ice storm.

GEOGRAPHIC LOCATION

The entire planning area of Greene County is vulnerable to heavy snow, ice, extreme cold temperatures, and freezing rain. Based on the most recent winter forecasts for 2023-2024, Greene County was placed in the “equal chances” range for temperatures, with a prediction for slightly above-normal precipitation.

Figure 3.4.29 NOAA Winter Temperature Outlook 2023-2024

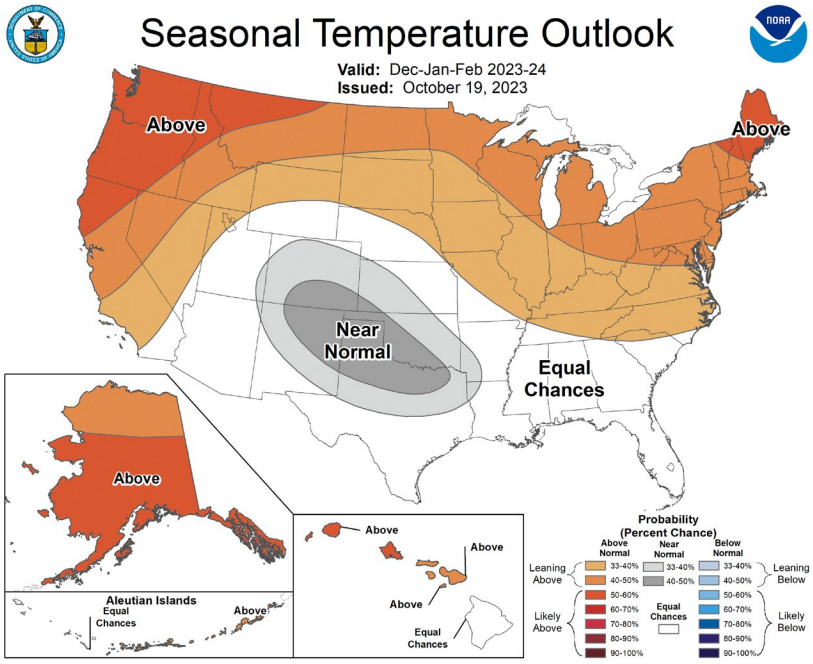
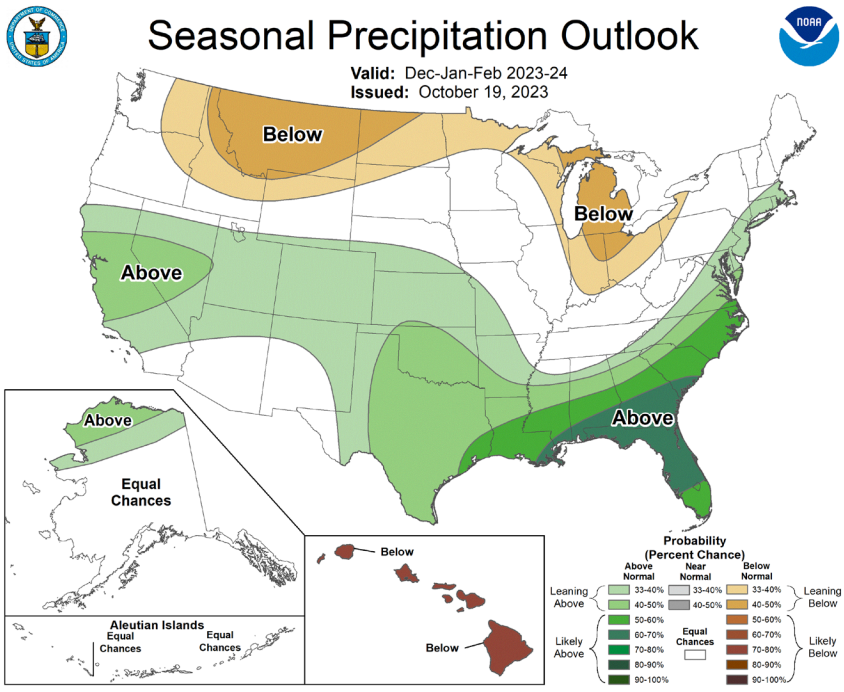


Figure 3.4.30 NOAA Winter Precipitation Outlook 2023-2024



STRENGTH/MAGNITUDE/EXTENT

Severe winter storms include heavy snowfall, ice, and strong winds which can push the windchill well below zero degrees in the planning area.

For severe weather conditions, the National Weather Service issues some or all the following products, as conditions warrant, across the State of Missouri and may collaborate with local partners to determine when an alert should be issued for a local area.

- **Winter Weather Advisory**: Winter weather conditions are expected to cause significant inconveniences and may be hazardous. If caution is exercised, these situations should not become life threatening. Often the greatest hazard is to motorists.
- **Winter Storm Watch**: Severe winter conditions, such as heavy snow and/or ice are possible within the next day or two.
- **Winter Storm Warning**: Severe winter conditions have begun or are about to begin.
- **Blizzard Warning**: Snow and strong winds will combine to produce blinding snow (near zero visibility), deep drifts, and life-threatening windchill.
- **Ice Storm Warning**: Dangerous accumulations of ice of over one quarter inch are expected on exposed surfaces. Travel is impacted, and widespread downed trees and power lines often result.
- **Wind Chill Advisory**: Combination of low temperatures and strong winds will result in windchill readings of -20 degrees Fahrenheit or lower.
- **Wind Chill Warning**: Windchill temperatures of -35 degrees Fahrenheit or lower are expected. This is a life-threatening situation.

PREVIOUS OCCURENCES

Below are occurrences of severe winter weather reported to the National Centers of Environmental Information (NCEI) between the years 2013 – 2023. Greene County has experienced many ice storms and severe winter weather events outside of the presented decade below.

Table 3.4.20 Winter Storm Events in Greene County

Type Of Event	Date	Number Of Injuries	Property Damages	Crop Damages
Winter Storm	2/21/2013	0	$0	$0
Winter Storm	12/5/2013	0	$0	$0
Winter Storm	12/20/2013	0	$0	$0
Winter Storm	1/5/2014	0	$0	$0
Winter Storm	3/2/2014	0	$0	$0
Winter Storm	2/15/2015	0	$0	$0
Winter Storm	2/20/2015	0	$0	$0
Winter Storm	2/28/2015	0	$0	$0
Winter Weather	1/19/2016	0	$500,000	$0
Winter Weather	12/16/2016	0	$100,000	$0
Ice Storm	1/13/2017	0	$50,000	$0

Winter Weather	2/10/2018	0	$0	$0
Frost/Freeze	4/6/2018	0	$0	$0
Winter Weather	2/15/2019	0	$0	$0
Ice Storm	2/27/2019	0	$0	$0
Winter Weather	1/11/2020	0	$0	$0
Winter Weather	1/17/2020	0	$0	$0
Heavy Snow	2/5/2020	0	$0	$0
Winter Weather	12/31/2020	0	$0	$0
Winter Storm	1/1/2021	0	$50,000	$0
Winter Weather	1/27/2021	0	$0	$0
Winter Weather	2/8/2021	0	$0	$0
Winter Weather	2/10/2021	0	$0	$0
Winter Storm	2/14/2021	0	$0	$0
Winter Weather	2/17/2021	0	$0	$0
Frost/Freeze	4/20/2021	0	$0	$0
Winter Weather	1/6/2022	0	$0	$0
Winter Weather	1/15/2022	0	$0	$0
Winter Storm	2/2/2022	0	$0	$0
Winter Storm	2/23/2022	0	$0	$0
Winter Weather	3/11/2022	0	$0	$0
Winter Storm	12/22/2022	0	$0	$0
Winter Weather	12/22/2022	0	$0	$0
Winter Weather	1/12/2023	0	$0	$0
Winter Storm	1/24/2023	0	$0	$0
Winter Storm	1/29/2023	0	$0	$0
Winter Weather	1/31/2023	0	$0	$0
	TOTALS	**0**	**$700,000**	**$0**

Source: National Center of Environmental Information (NCEI) Storm Data
*Note: The above data is only that of which was reported to the NCEI during this time period.

January 2007

The worst natural disaster to ever impact Greene County, including the city of Springfield, occurred in January 2007 due to major ice accumulations. The heaviest ice accumulation took place on the night of Friday, January 12th, with two additional episodes of ice accumulation occurring on January 13th and 14th. Power outages and catastrophic tree damage were the primary impacts of this historic event. Power outages persisted for more than three weeks in many areas. Several indirect fatalities were documented because of the extreme weather conditions. Carbon monoxide poisoning occurred in several homes where gas generators were used in garages, causing dangerous levels of carbon monoxide to seep into the homes. Damages, including debris removal, were estimated at $121.69 million.

Table 3.4.21 Disaster Declarations for Winter Storms – Greene County

Disaster Number	Incident Period	Type Of Disaster	Individual Assistance	Public Assistance
EM-3303	Jan 26, 2009 - Jan 28, 2009	Severe Winter Storms	$0	$0
DR-1748	Feb 10, 2008 - Feb 14, 2008	Severe Winter Storms	$0	$10,068,998.77
EM-3281	Dec 08, 2007 - Dec 15, 2007	Severe Winter Storms	$0	$0
DR-1676	Jan 12, 2007 - Jan 22, 2007	Severe Winter Storms and Flooding	$0	$106,468,427.80
DR-1403	Jan 29, 2002-Feb 13, 2002	Ice Storm	$0	$43,824,367.31

Source: FEMA Disaster Declarations

Winter storms, cold, frost, and freeze take a toll on crop production in the planning area. The table below shows the USDA's Risk Management Agency payments for insured crop losses in the planning area because of cold conditions and snow between the years 2013 – 2023.

Table 3.4.22 Winter Weather Related Crop Loss 2013 – 2023

Crop Year	Crop Name	Cause of Loss Description	Insurance Paid ($)
2018	Wheat	Cold Wet Weather	$17,271
2018	Corn	Cold Winter	$9,884.50
2018	Soybeans	Cold Wet Weather	$52,229

PROBABILITY OF FUTURE OCCURRENCES

Between 2013 and 2023, there have been an average of 3.7 winter weather events each year, and it is reasonable to expect these events to continue annually. However, only five of these events have historically been federally declared disasters. Most winter storms in Greene County cause disruptions to daily commutes and result in limited power outages across the county. Using this data, there is a 100 percent chance that any given year over the next five year cycle a severe winter weather event will take place. It is highly likely Greene County will continue to experience these types of events.

CHANGING FUTURE CONDITIONS AND CONSIDERATIONS

According to the Missouri State Hazard Mitigation Plan, as temperatures and precipitation increase during the winter months, the likelihood of freezing rain will also rise. Additional winter precipitation, in any form, will contribute to soil saturation and heighten the risk and/or severity of spring flooding. A greater portion of winter precipitation may fall as rain rather than snow. The plan also notes that shorter winter seasons and fewer days of extreme cold could have both positive and negative indirect effects. Warmer winter temperatures may alter the distribution of native plant and animal species and reduce lake ice cover, which could raise water temperatures and impact aquatic ecosystems.

VULNERABILITY OVERVIEW

Heavy snow can bring a community to a standstill by hindering transportation (especially in whiteout conditions), weighing down utility lines, and causing structural collapses in buildings not designed to support heavy snow loads. Repair and snow removal costs can be substantial. Ice buildup can also damage utility lines, communication towers, and make transportation hazardous. If precipitation falls as freezing rain rather than snow, roadways can become dangerously slippery. Buildings with overhanging tree limbs are more vulnerable to damage when limbs fall during winter storms. Businesses may experience income loss due to closures during power outages. In general, winter storms cause increased wear and tear on roadways, although the cost of such damage is difficult to quantify.

Overhead power lines and infrastructure are especially vulnerable to damage from winter storms. Ice accumulation on power lines can cause significant damage due to the added weight, and falling trees and limbs can further damage lines and equipment. Potential losses may include the cost of repairing or replacing damaged infrastructure and lost economic opportunities for businesses.

Secondary effects from power loss may include burst water pipes in homes without electricity during winter storms. Public safety hazards also arise from downed power lines, which pose an electrocution risk. Specific estimates of loss due to these hazards are complex and vary widely. However, FEMA has recently determined that the standard cost of utility service loss is $148 per person per day for electricity, $105 per person per day for potable water, and $49 per person per day for wastewater. The total economic impact of the complete loss of utilities is $302 per person per day.

Below two figures, 3.4.31 and 3.4.32 illustrate the predicted frequency of severe winter weather as well as the vulnerability of the planning area to these events. The planning area has high vulnerability to severe winter weather. This is determined by the amount of at-risk populations within the community as well as response and recovery capabilities. Greene County has been emphasized on the maps below for clarity.

Figure 3.4.31 Predicted Occurrence of Severe Winter Weather Events

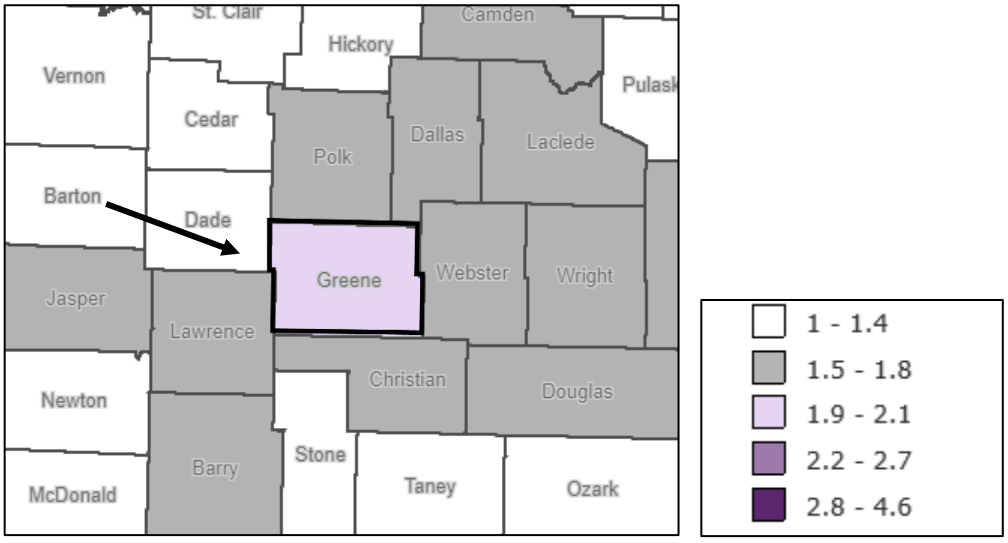
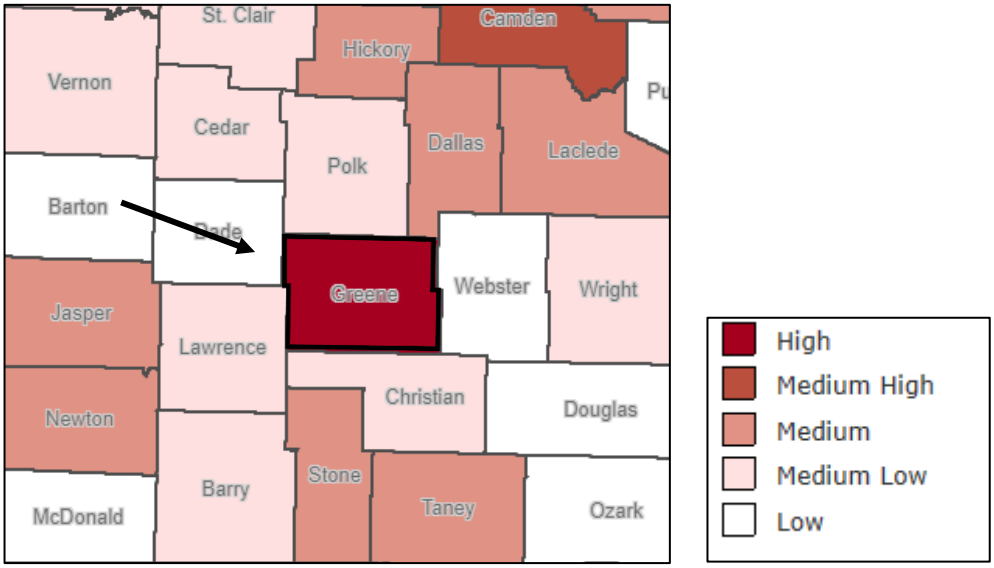


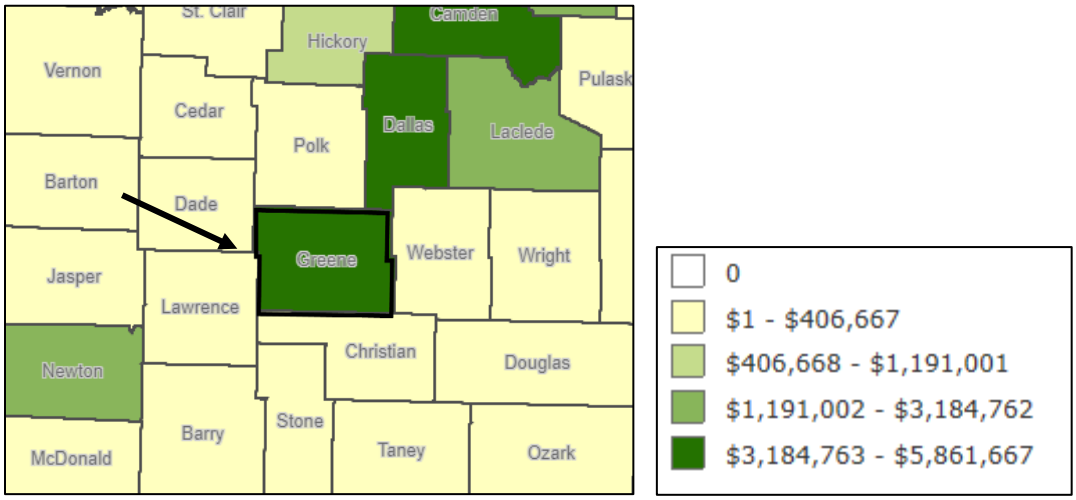
Figure 3.4.32 Vulnerability Rating of Severe Winter Weather – Greene County



POTENTIAL LOSSES TO EXISTING DEVELOPMENT

The Ice Storm that took place in January 2007 caused an estimated 121.69 million dollars in damage, including debris removal. Greene County has received an estimated $160,361,793 in public assistance from presidential disaster declarations. Severe winter weather has had a history of causing large amounts of damage. Below illustrates the average amount of loss, in USD, that severe winter weather has caused in the planning area. Greene County has been highlighted with a border and an arrow for clarity.

Figure 3.4.33 Annualized Property Loss – Severe Winter Weather



PREVIOUS AND FUTURE DEVELOPMENT

Greene County has seen consistent population growth over the last 10 years. Over the next 10 years, the population will continue to grow, and businesses will continue to develop across the area. Additional development of buildings results in the exposure of more households and businesses to damage from severe winter weather, including both ice and snow. All structures and populations are at risk of experiencing damage from winter storms, including government buildings and schools.

EMAP CONSEQUENCES ANALYSIS

Table 3.4.23 Impact Analysis: Severe Winter Weather

Subject	Detrimental Impacts
Public	Indirect fatalities, illnesses, and injuries occur, including carbon monoxide poisoning (from generators) and health hazards such as frostbite and hypothermia. Roads create extremely dangerous driving hazards that cause serious accidents.
Responders	Potential life safety issues are present to responders. Response functions will also be severely impacted. This is not only from transportation hazards, but also from overwhelming calls.
Continuity of Operations	Delivery of services and level of impact will heavily depend on the transportation and communication infrastructure status. Ice on roads will create delays for almost all functions, and even suspension of some services.
Property, Facilities, and Infrastructure	Ice and snow cause multiple widespread property damages. There have been over 100 million dollars in damages since 1996. Houses and vehicles are damaged from the weather as well as the debris from fallen tree limbs, power lines, and other debris. Widespread power outages, downed telephone and cable lines, as well as communication towers create damage to transportation, energy and other communication sectors. Structure damages to facilities can be minor or significant depending on the incident.
Environment	In the 2007 Ice Storm, there was catastrophic tree damage. Although this severity is not typical, there are usually multiple instances of significant damage.
Economic Condition of Jurisdiction	The damage and cost of debris removal is very extensive. Businesses may have to shut down for weeks during the incident, and then once it is over, there may be a need for restoration.
Public Confidence in Jurisdiction Governance	The community relies on the government to begin responding to the event as soon as it begins (clearing roads, setting up shelters, etc.). If these types of tasks are not done well, there may be pushback from the community.

HAZARD SUMMARY BY JURISDICTION

Greene County

Severe winter weather is a county-wide risk that could potentially affect every jurisdiction in the planning area. Buildings with large amounts of assets could see more damage than others. Jurisdictions that have larger amounts of mobile home parks, like Springfield, can also see more damage from severe winter storms. Buildings that have residential occupancy may also be more at risk for seeing larger amounts of damage.

City of Ash Grove

Considering its smaller size, Ash Grove may have limited resources to respond to sudden and severe weather events such as winter storms, hail, severe thunderstorms, and lightning, especially when multiple hazards occur simultaneously. The city also contains a number of historic buildings, which are particularly vulnerable to these hazards, as documented throughout this section. While Ash Grove has a smaller population at risk, it still includes structures, such as historic buildings and mobile homes, that are more susceptible to damage. Severe winter weather can also result in frozen water pipes, power outages, and loss of essential utilities.

City of Battlefield

Considering its smaller size, Battlefield may have limited resources to respond to sudden and severe weather events such as winter storms, hail, severe thunderstorms, and lightning, especially when multiple hazards occur simultaneously. The city also contains a number of historic buildings, which are particularly vulnerable to these hazards, as documented throughout this section. While Battlefield has a smaller population at risk, it still includes structures, such as historic buildings and mobile homes, that are more susceptible to damage. Severe winter weather can also result in frozen water pipes, power outages, and loss of essential utilities.

City of Fair Grove

The City of Fair Grove is one of the cities in Greene County and generally has more resources available to respond to sudden and severe weather events such as winter storms, hail, severe thunderstorms, and lightning. However, the city could still face challenges when multiple hazards occur simultaneously. Fair Grove also has a number of historic buildings that are particularly vulnerable to these types of events. Potential damages could include ruptured utility pipes, downed power lines, debris trapping residents inside their homes, and hazardous road conditions. These impacts would be especially severe for unhoused populations who lack access to adequate shelter.

City of Republic

The City of Republic is one of the larger cities in Greene County and generally has more resources available to respond to sudden and severe weather events such as winter storms, hail, severe thunderstorms, and lightning. However, the city could still face challenges when multiple hazards occur simultaneously. Republic also has a number of historic buildings that are particularly vulnerable to these types of events. Potential damages could include ruptured utility pipes, downed power lines, debris trapping residents inside their homes, and hazardous road conditions. These impacts would be especially severe for unhoused populations who lack access to adequate shelter.

City of Springfield

The City of Springfield, as the largest city in Greene County, has more extensive resources and infrastructure in place to respond to sudden and severe weather events such as winter storms, hail, severe thunderstorms, and lightning. However, even with these resources, Springfield may still face significant challenges when multiple hazards occur simultaneously. The city is home to a substantial number of historic buildings, many of which are especially vulnerable to damage from such events. Potential impacts include ruptured utility pipes, downed power lines, debris blocking access to homes, and dangerous road conditions. These effects could be particularly severe for unhoused individuals, who may not have access to safe or adequate shelter during extreme weather.

City of Strafford

The City of Strafford is one of the larger cities in Greene County and generally has more resources available to respond to sudden and severe weather events such as winter storms, hail, severe thunderstorms, and lightning. However, the city could still face challenges when multiple hazards occur simultaneously. Strafford also has a number of historic buildings that are particularly vulnerable to these types of events. Potential damage could include ruptured utility pipes, downed power lines, debris trapping residents inside their homes, and hazardous road conditions. These impacts would be especially severe for unhoused populations who lack access to adequate shelter.

City of Walnut Grove

Considering its smaller size, Walnut Grove may have limited resources to respond to sudden and severe weather events such as winter storms, hail, severe thunderstorms, and lightning, especially when multiple hazards occur simultaneously. The city also contains a number of historic buildings, which are particularly

vulnerable to these hazards, as documented throughout this section. While Walnut Grove has a smaller population at risk, it still includes structures, such as historic buildings and mobile homes, that are more susceptible to damage. Severe winter weather can also result in frozen water pipes, power outages, and loss of essential utilities.

City of Willard

The City of Willard is one of the larger cities in Greene County and generally has more resources available to respond to sudden and severe weather events such as winter storms, hail, severe thunderstorms, and lightning. However, the city could still face challenges when multiple hazards occur simultaneously. Willard also has a number of historic buildings that are particularly vulnerable to these types of events. Potential damage could include ruptured utility pipes, downed power lines, debris trapping residents inside their homes, and hazardous road conditions. These impacts would be especially severe for unhoused populations who lack access to adequate shelter.

Ash Groves School District

Ash Grove School District consists of three school buildings all serving different age ranges. Severe Winter weather can lead to district closures, hazardous commutes, and personal injury to students and staff that do not have proper winter weather clothing. Ash Grove Schools could also be impacted by frozen pipes, and ruptured pipes if the severe winter weather was to persist. Those kinds of damage could cause lasting closures in the district.

Logan Rogersville School District

Logan Rogersville School District consists of five school buildings all serving different age ranges. Severe Winter weather can lead to district closures, hazardous commutes, and personal injury to students and staff that do not have proper winter weather clothing. Logan Rogersville Schools could also be impacted by frozen pipes, and ruptured pipes if the severe winter weather was to persist. Those kinds of damage could cause lasting closures in the district.

Springfield School District

The Springfield School District is the largest school district in the planning area and serves the largest population of students. They would experience the same risks as other districts, but they would impact a larger population. If a pipe was to freeze in an older building it could cause a large indoor flood and structural damage. Other hazards could include hazardous commutes for young drivers and buses as well as district closing due to weather conditions.

Ozark Technical College

Ozark Technical College, OTC, is a community college in the planning area. They do not have any dormitories, which means all students commute to and from classes each day. Because of this severe winter weather can cause serious disruptions through unsafe road and walking conditions. OTC also could experience damages from falling limbs due to ice, frozen pipes and power loss.

Battlefield Fire Protection District

During severe winter weather, fire protection districts most respond to road hazards and debris that cause roads to be closed or citizens to be stuck in their homes. There is instances where broken power lines could start fires. Any of these hazards can pose a danger to firefighters. Roadside response is particularly dangerous when road conditions are unfavorable.

Brookline Fire Protection District

During severe winter weather, fire protection districts most respond to road hazards and debris that cause roads to be closed or citizens to be stuck in their homes. There is instances where broken power lines could

start fires. Any of these hazards can pose a danger to firefighters. Roadside response is particularly dangerous when road conditions are unfavorable.

Willard Fire Protection District

During severe winter weather, fire protection districts most respond to road hazards and debris that cause roads to be closed or citizens to be stuck in their homes. There is instances where broken power lines could start fires. Any of these hazards can pose a danger to firefighters. Roadside response is particularly dangerous when road conditions are unfavorable.

PROBLEM STATEMENT

Severe winter storms can cause extensive damage throughout the entire planning area. Historically, these storms have demonstrated the potential for widespread destruction. They can down power lines, trees, and communication cables and towers. Power outages increase the risk of fire as residents turn to alternative fuel sources for heat. Additionally, power outages pose significant health risks if individuals lack means to stay warm. Severe winter weather can also result in significant agricultural and crop losses. These storms are a major hazard for Greene County, with the potential to have a profound impact on the entire planning community. Several mitigation strategies can help address the effects of severe winter weather, including the purchase of generators, establishment of shelters, burial of power lines to prevent outages, and public education efforts.

3.4.7 NATURAL HAZARDS: TORNADOES

HAZARD PROFILE

A tornado is defined by the National Weather Service (NWS) as a violently rotating column of air that touches the ground, usually attached to the base of a thunderstorm. Tornadoes are among the most violent storms, with winds reaching speeds of up to 300 miles per hour. They form in the most powerful thunderstorms and are essentially vortex storms, driven by two components of wind: rotational winds that can reach up to 500 miles per hour and an uplifting current of great strength. The combined dynamic force of these currents can create vacuum-like effects that can quickly destroy structures.

While tornadoes have been documented in all 50 states, the central United States experiences the most. The region’s unique geography facilitates the development of thunderstorms that spawn tornadoes. The jet stream, a high-velocity air current, plays a critical role in determining which areas of the central U.S. are prone to tornado formation. The jet stream generally separates the cold air from the north and the warm air from the south. During winter, it flows west to east from Texas to the Carolina coast. As the sun moves northward in the spring, so does the jet stream, which, by the summer solstice, moves from Canada across Lake Superior to Maine. When the jet stream shifts north in the spring and south again in the fall, it crosses Missouri, fueling the large thunderstorms that produce tornadoes.

The cumulonimbus clouds associated with tornadoes can reach heights of up to 55,000 feet above ground level. These clouds typically form when warm, moist Gulf air is heated by solar radiation. This warm air interacts with the cooler, dry air brought by the jet stream. Initially, the cool air prevents the warm air from rising, but eventually, the warm air forces its way through the cool air, which in turn moves downward past the rising warm air. This movement, combined with the Earth's surface deflection, causes the air masses to begin rotating. This rotational movement creates a vortex, or funnel. If the funnel cloud does not touch the ground, it remains a funnel cloud. However, if it makes contact with the surface, it becomes a tornado.

A typical tornado is a funnel-shaped cloud that is anchored to a cumulonimbus cloud, which is also in contact with the Earth’s surface. On average, tornadoes last about 30 minutes and travel a distance of 15 miles. The width of the tornado and its path of destruction is typically about 300 yards, but tornadoes can stay on the ground for over 300 miles and can be up to a mile wide. According to the National Weather Service, between 1950 and 1996, the mean path length of tornadoes in Missouri was 2.27 miles, with an average path area of 0.14 square miles.

Tornadoes typically travel at an average forward speed of 30 miles per hour, but their speed can vary from nearly stationary to as fast as 70 miles per hour. While tornadoes generally move from southwest to northeast, they have been known to travel in any direction. Tornadoes are most likely to occur in the afternoon and evening but can happen at any time of day or night.

GEOGRAPHIC LOCATION

Tornadoes can take place at any point within the planning area of Greene County, though they are more common in flatter areas, for example Springfield at its higher elevation is affected less than the northeastern part of the county. Missouri as a state is a part of the Tornado Belt, signifying that inclement weather that lends itself to developing tornadoes is more common.

STRENGTH/MAGNITUDE/EXTENT

Tornadoes are the most violent of all atmospheric storms and are capable of causing immense destruction. Wind speeds can exceed 250 miles per hour, and damaged paths can be over a mile wide and up to 50 miles long. Tornadoes have been known to lift and move objects weighing more than 300 tons at a distance of 30 feet, toss homes more than 300 feet from their foundations, and siphon millions of tons of water from lakes and rivers. They can also generate large amounts of flying debris, or "missiles," which often become airborne shrapnel that causes further damage. When wind speeds are particularly high, these missiles can strike buildings with enough force to penetrate windows, roofs, and walls. However, the more subtle, less apparent damage is far more common.

Tornado magnitude is classified according to the EF-Scale (Enhanced Fujita Scale), which ranks tornadoes based on wind speed and the resulting damage. This scale is an updated version of the original Fujita Scale (F-Scale), and it was implemented in the U.S. on February 2, 2007. The table below outlines the different levels of the EF-Scale.

Table 3.4.24 Enhanced F-Scale for Tornado Damage

Fujita Scale			Derived EF Scale		Operational EF Scale	
F Number	Fastest ¼ mile (MPH)	3 Second Gust (MPH)	EF Number	3 Second Gust (MPH)	EF Number	3 Second Gust (MPH)
0	40-72	45-78	0	65-85	0	65-85
1	73-112	79-117	1	86-109	1	86-110
2	113-157	118-161	2	110-137	2	111-135
3	158-207	162-209	3	138-167	3	136-165
4	208-260	210-261	4	168-199	4	166-200
5	261-318	262-317	5	200-234	5	Over 200

Source: National Weather Service, www.spc.noaa.gov/faq/tornado/ef-scale.html

National Oceanic and Atmospheric Administration (NOAA) states the following about the Enhanced Fujita Scale. The EF Scale (Enhanced F-Scale) is still a set of wind estimates, not measurements, based on damage.

Table 3.4.25 Enhanced Fujita Scale with Potential Damage

Scale	Wind Speed	Relative Frequency	Potential Damage
EF-0	65-85 mph	53.5%	**Light:** Peels surface off some roofs; some damage to gutters or siding; branches broken off trees; shallow-rooted trees pushed over. Confirmed tornadoes with no reported damage (i.e., those that remain in open fields) are always rated EF-0.
EF-1	86-110 mph	31.6%	**Moderate:** Roofs severely stripped; mobile homes overturned or badly damaged; loss of exterior doors; windows and other glass broken.

EF-2	111-135 mph	10.7%	**Considerable:** Roofs torn off well-constructed houses; foundations of frame homes shifted; mobile homes completely destroyed; large trees snapped or uprooted; light object missiles generated; cars lifted off ground.
EF-3	136-165 mph	3.4%	**Severe:** Entire stores of well-constructed houses destroyed; severe damage to large buildings such as shopping malls; trains overturned; trees debarked; heavy cars lifted off the ground and thrown; structures with weak foundations partially blown away.
EF-4	166-200 mph	.70%	**Devastating:** Well-constructed houses and whole frame houses completely levelled; cars thrown and small missiles generated.
EF-5	>200 mph	<.1%	**Explosive:** Strong-frame houses are leveled off their foundations and swept away; automobile-sized missiles are hurled through the air, flying over 300 ft.; steel-reinforced concrete structures are severely damaged; high-rise buildings exhibit significant structural deformation. Incredible phenomena will occur.

Source: NOAA Storm Prediction Center, http://www.spc.noaa.gov/efscale/ef-scale.html

Enhanced weather forecasting has provided the ability to predict severe weather likely to produce tornadoes days in advance. Tornado watches can be delivered to those in the path of these storms several hours in advance. Lead time for actual tornado warnings is about 30 minutes. Tornadoes have been known to change paths very rapidly, thus limiting the time in which to take shelter. Tornadoes may not be visible on the ground if they occur after sundown or due to blowing dust or driving rain and hail.

PREVIOUS OCCURENCES

There are limitations to the use of NCEI tornado data that must be noted. For example, one tornado may contain multiple segments as it moves geographically. A tornado that crosses a county line or state line is considered a separate segment for the purposes of reporting to the NCEI, as well as a tornado that lifts off the ground for less than 5 minutes or 2.5 miles is considered a separate segment. If the tornado lifts off the ground for greater than 5 minutes or 2.5 miles, it is considered a separate tornado. Tornadoes reported in Storm Data and the Storm Events Database are in segments.

Table 3.4.26 NCEI Reported Tornado Events 1950-2023

Location	Date	EF Rating	Deaths	Injuries	Property Damages
Greene County	8/8/1950	F1	0	0	$250
Greene County	7/23/1955	F1	0	0	$250
Greene County	2/24/1956	F0	0	0	$250
Greene County	3/12/1961	F1	0	1	$2,500
Greene County	3/22/1966	F1	0	0	$2,500
Greene County	4/23/1967	F1	0	0	$25,000
Greene County	7/28/1967	F1	0	0	$2,500

Greene County	12/14/1971	F2	1	22	$2,500,000
Greene County	9/10/1975	F2	0	5	$2,500,000
Greene County	12/24/1982	F2	0	1	$2,500,000
Greene County	4/29/1983	F2	0	3	$2,500,000
Greene County	4/29/1983	F3	1	19	$25,000,000
Greene County	4/30/1983	F1	0	0	$0
Greene County	10/18/1984	F1	0	0	$2,500
Greene County	11/15/1988	F1	0	0	$25,000,000
Greene County	5/22/1989	F2	0	0	$250,000
Greene County	5/20/1990	F2	0	0	$0
Greene County	11/29/1991	F4	2	64	$25,000,000
Walnut Grove	4/26/1994	F1	0	0	$50,000
Springfield	5/27/1995	F1	0	0	$300,000
Springfield	6/26/2001	F0	0	0	$0
Springfield	10/10/2001	F1	0	5	$250,000
Battlefield	5/4/2003	F3	1	12	$14,700,000
Battlefield	3/12/2006	F2	0	4	$650,000
Ash Grove	5/3/2006	F0	0	0	$0
Springfield	10/17/2007	EF1	0	0	$150,000
Republic	1/7/2008	EF2	0	0	$2,000,000
Greene County	1/7/2008	EF3	1	0	$1,000,000
Greene County	1/7/2008	EF2	0	0	$1,000,000
Springfield	1/8/2008	EF1	0	0	$50,000
Springfield	6/19/2008	EF1	0	0	$150,000
Battlefield	2/10/2009	EF1	0	0	$350,000
Republic	5/8/2009	EF1	0	0	$1,000,000
Springfield	5/8/2009	EF1	0	0	$200,000

Ebenezer	5/8/2009	EF0	0	0	$100,000
Greene County	6/18/2011	EF1	0	0	$0
Ebenezer	6/18/2011	EF0	0	0	$30,000
Willard	10/13/2012	EF0	0	0	$25,000
Springfield	7/21/2013	EF0	0	0	$100,000
Ash Grove	10/13/2014	EF0	0	0	$0
Battlefield	4/27/2016	EF0	0	0	$100,000
Greene County	5/19/2017	EF0	0	0	$100,000
Greene County	5/3/2018	EFO	0	0	$100,000
Republic	12/1/2018	EF1	0	0	$175,000
Greene County	4/30/2019	EF1	0	0	$25,000
Greene County	4/30/2019	EF1	0	0	$300,000
Greene County	4/30/2019	EF2	0	1	$3,900,000
Greene County	5/21/2019	EF0	0	0	$41,000
Battlefield	10/21/2019	EF0	0	0	$18,000
Greene County	10/21/2019	EF0	0	0	$15,000
Springfield	1/10/2020	EF0	0	0	$400,000
Fair Grove	5/15/2023	EF0	0	0	$100,000
Source: NOAA NCEI Storm Data		**TOTALS**	**6**	**137**	**$112,664,750**

July 2013

A National Weather Service storm survey indicated that an EF-0 tornado touched down near the intersection of East Cairo Street and South Pickwick Avenue. The tornado traveled east along East Cairo Street and lifted at the intersection of East Cairo Street and Glenstone Ave. The tornado caused several large tree branches to be blown down, damage to roofs to several houses, and several power lines to be blown down. Several windows to homes and businesses were broken or blown out. At least two businesses had roof and window damage. Winds were estimated to be around 60 mph with a path width of 50 yards and was about half a mile length.

April 2016

A National Weather Service storm survey revealed that an EF-0 tornado damaged a few homes on the southwest side of Springfield in the town of Battlefield. There was damage to roofs, gutters, and awnings. The tornado was a brief touchdown.

May 2017

Multiple rounds of severe thunderstorms over a two-day period produced numerous weak tornadoes and wind damage reports across the Missouri Ozarks. An EF-0 tornado uprooted numerous trees along the path. Some trees fell on homes. Estimated maximum winds were up to 85 mph.

December 2018

An EF-1 tornado developed approximately three miles west of Republic and tracked northeast and dissipated within the city limits of Republic. Two large barns were destroyed, and numerous trees were uprooted. Several homes sustained minor roof damage.

April 2019

A National Weather Service storm survey confirmed an EF-1 tornado tracked from two miles northwest of Willard, Missouri to two miles north of Willard. The tornado was on the ground for approximately two minutes along its 1.8-mile total track with maximum wind speeds estimated at 100 mph. Cyclonic tree fall pattern was observed within an intermittent path of uprooted and damaged trees. A few outbuildings were damaged from just east of Highway 123 and continued along Farm Road 64 to east of Highway Z. There was a noticeable break along the southern (right) flank of this tornadic path which separated a path of up to 70 mph straight line wind damage along and south of Farm Road 68 that continued into the northern parts of Willard.

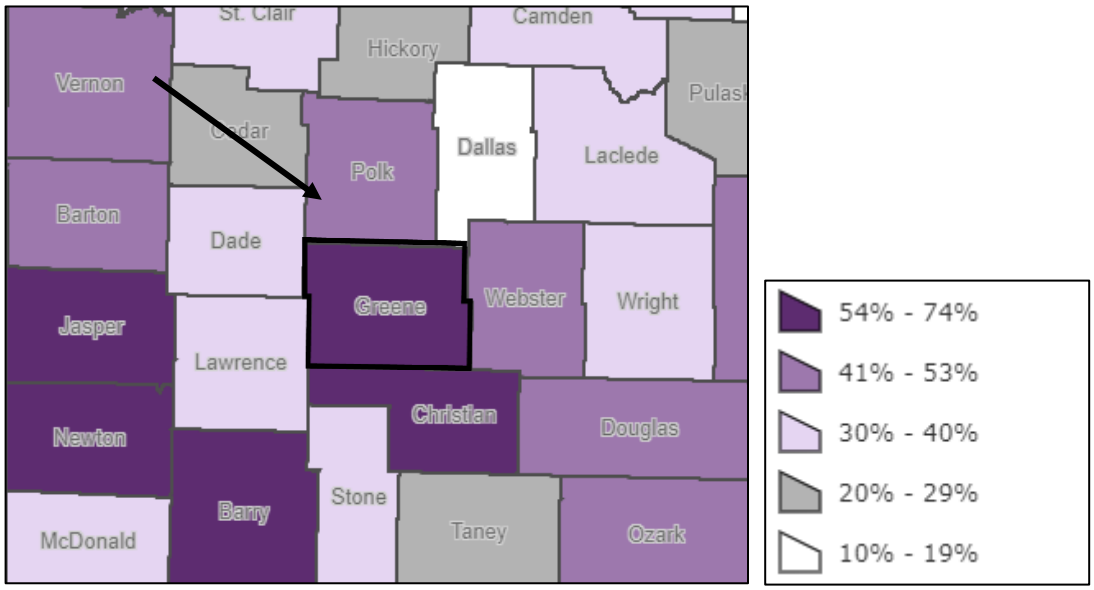
January 2020

A National Weather Service storm survey determined that an EF-1 tornado touched down east of Highway 65 on East Mill Street, just east of Springfield. The tornado tracked to the northeast crossing East Division Street. As the tornado approached Interstate 44, damage was sustained to an automobile service building. The service building lost a couple of overhead doors, and two box trucks were overturned. Damage to the roof was also sustained. As the tornado crossed Interstate 44 into Strafford, there was damage to several homes. The damage included a significant loss of roof covering material, damage to gutters, and inward collapse of garage doors. Numerous trees were snapped or uprooted along the path. The tornado lifted just before Highway 125 near East Farm Road 84. The tornado produced EF-1 damage with maximum winds up to 98 mph and a max width of 75 yards. The tornado was on the ground for 11 minutes along a 7-mile path.

May 2023

A National Weather Service storm survey determined that an intermittent EF-0 tornado touched down near Fair Grove, Missouri and tracked to the northwest about a mile and a half. The maximum wind speed was 77 mph with a maximum path width of 75 yards. At the start point of the tornado, a home sustained minor damage to its siding; otherwise, sporadic and sparse tree damage was noted along the tornado’s path. Just before lifting, several outbuildings suffered significant damage.

Figure 3.4.34 Average Annual Occurrence for Tornadoes



In the last 10 years, there have been no insurance claim payouts reported to the USDA because of tornado damage.

PROBABILITY OF FUTURE OCCURENCES

Based on tornado data reported between 1950 and 2023, there have been 52 tornadoes documented by the National Center for Environmental Information (NCEI). It is estimated that there is a 71 percent chance of a tornado occurring in the planning area over the next five years. Many of the tornadoes that affect the region are relatively small and cause limited damage. These tornadoes most commonly result in disruptive debris and roof damage, though their severity can vary.

CHANGING FUTURE CONDITIONS

According to the Missouri State Hazard Mitigation Plan, scientists are uncertain about how the frequency and severity of tornadoes will change in the future. However, research published in 2015 suggests that increasing heat and moisture content in the atmosphere, driven by a warming world, may be contributing to more frequent and severe tornado outbreaks in the U.S. The research concluded that the number of days with large tornado outbreaks has been increasing since the 1950s, and densely concentrated tornado outbreaks are on the rise. Notably, the study indicates that while the area of tornado activity itself is not expanding, regions already prone to tornadoes are experiencing a greater concentration of tornadoes.

VULNERABILITY OVERVIEW

Tornadoes are extremely dangerous storms that can injure or kill people. Tornadoes that touch down typically cause thousands, or even millions of dollars of damage. Over the years, Greene County has experienced several tornadoes of varying degrees of damage. There have been four tornadoes at an EF 3 or greater within the planning area. These storms have caused considerably more losses. Greene County is located within the region of the U.S. with high frequency of dangerous and destructive tornadoes referred to as “Tornado Alley”. However, the National Weather Service states the following regarding the term “Tornado Alley:”, “The U.S. tornado threat shifts from the Southeast in the cooler months of the year, toward the southern and central Plains in May and June, and the northern Plains and Midwest during early summer. Tornadoes can occur and have been reported in all fifty states.”

All the planning area is at risk for experiencing effects from a tornado touch down. More vulnerable populations are ones who live in mobile homes. In Greene County, we have a relatively low percentage of people living in mobile homes, roughly 1 percent. However, there are still thousands of people at severe risk in the event of a tornado.

Figure 3.4.35 Percentage of Mobile Homes – 2023

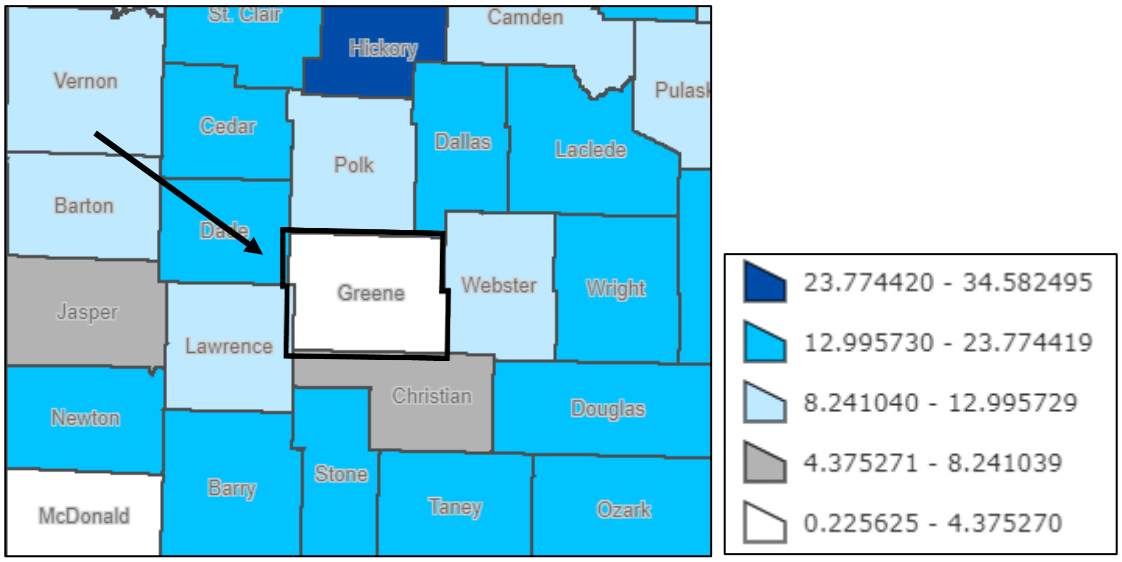
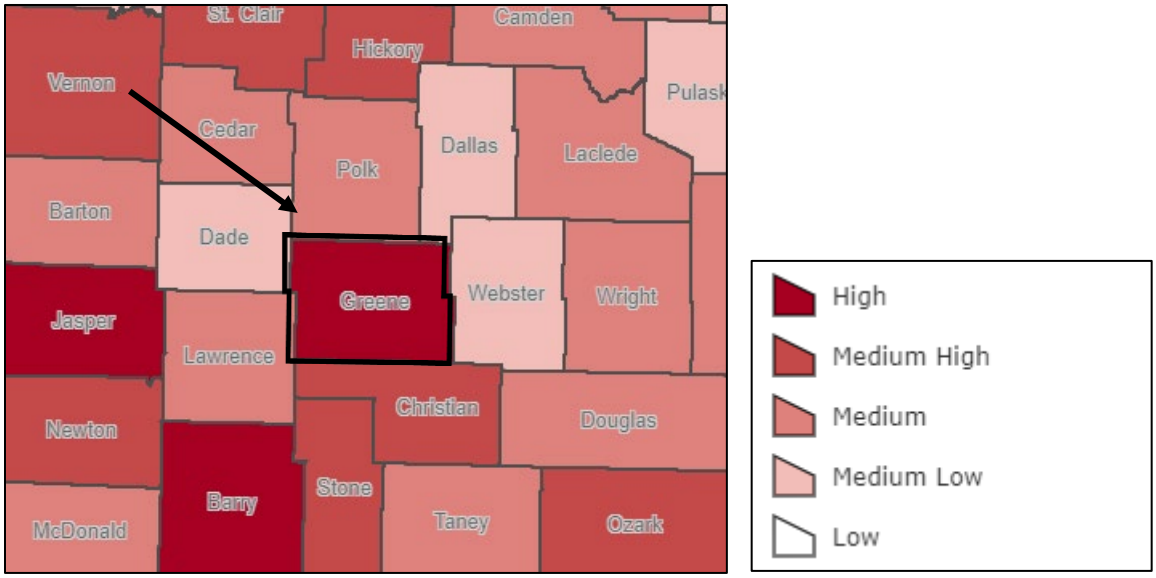


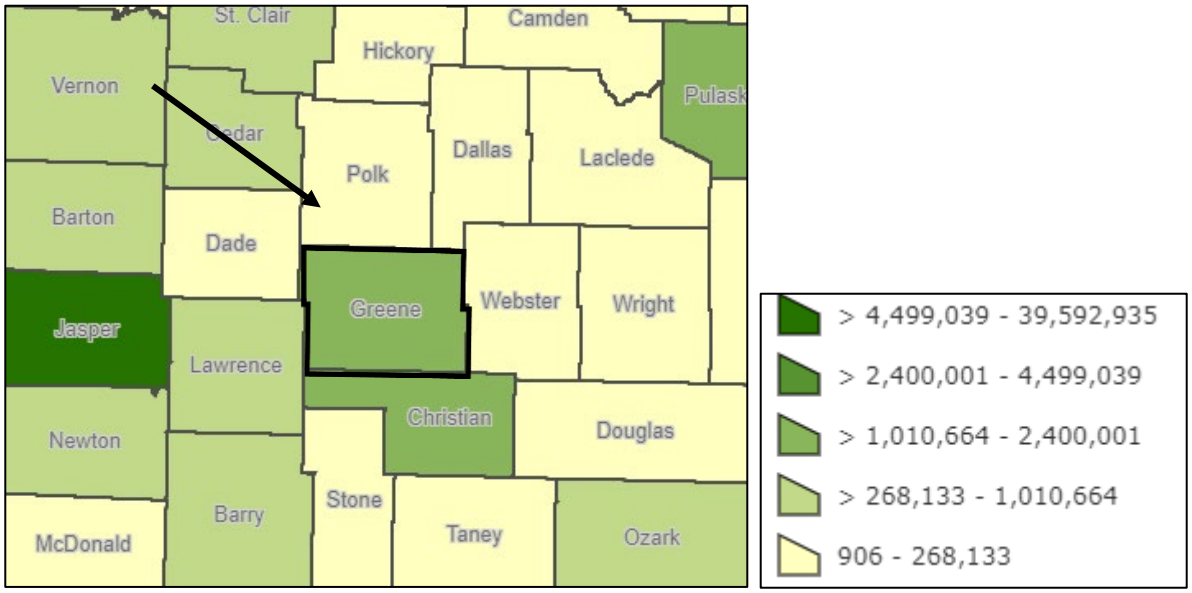
Figure 3.4.36 Vulnerability to Tornadoes – Greene County



POTENTIAL LOSSES TO EXISTING DEVELOPMENT

Tornadoes can cause significant damage to infrastructure, including residential properties, commercial buildings, agricultural assets, power lines, and vegetation. The extent of tornado damage is typically severe, often requiring weeks or even months of recovery and cleanup. One of the primary challenges following a tornado event is the removal of debris, which can be widely dispersed over large areas. Debris fields can extend for several miles, obstructing roadways and complicating transportation logistics for both cleanup operations and emergency response.

Figure 3.4.37 Annualized Property Loss



PREVIOUS AND FUTURE DEVELOPMENT

Greene County's population is expected to keep growing, which will lead to an increase in the number of homes and businesses being built. As development expands, so does the risk of significant damage from tornadoes. Research suggests that tornado activity will likely increase as the climate changes. With this growth, it is crucial to recognize the heightened vulnerability of mobile home parks to tornadoes and other severe wind events.

EMAP CONSEQUENCE ANALYISIS

Table 3.4.27 EMAP Impact Analysis: Tornadoes

Subject	Detrimental Impacts
Public	Tornadoes in Greene County have caused injuries and death. There is widespread safety concerns associated with tornado incidents, and many times storms will produce more than one tornado, creating even more safety concerns.
Responders	Responders face potentially life-threatening safety issues, and response functions can be impacted depending on weather conditions and debris amount and make-up.
Continuity of Operations	Delivery of services can be hampered across the jurisdiction due to infrastructure damages and overwhelming demand.
Property, Facilities, and Infrastructure	Tornadoes have caused widespread, significant damage within Greene County. Many homes have been heavily damaged or completely destroyed due to multiple tornadoes that have passed through the county. Infrastructure is damaged through downed power lines, poles, and communication towers. Transportation can also be affected by debris and downed trees that block roads. Facilities in Greene County have had widespread significant damage. Fair Grove High School, Glendale High School, Harry Copper Supply industrial building, and other businesses experienced severe damage.
Environment	Minor isolated instances of environmental damage are found in a tornado incident in the form of fallen or damaged trees.
Economic Condition of Jurisdiction	The economic impact on Greene County can be major with widespread loss. Businesses may be destroyed or forced to make repairs before being operational again. This creates loss for the economy and for individuals.
Public Confidence in Jurisdiction Governance	There may be minor isolated instances of loss in public confidence if response and recovery operations are not executed quickly and effectively.

HAZARD SUMMARY BY JURISDICTION

Greene County

The entire planning area is at risk of tornadoes, though certain areas may be more vulnerable due to housing conditions and other factors. Ash Grove, for example, has many older homes that are at higher risk from high winds and tornadoes. Walnut Grove also has a significant number of older homes. Jurisdictions with building codes may be less vulnerable, but not all areas have adopted them.

Historically, some jurisdictions have been more prone to tornadoes than others. The City of Battlefield and the City of Republic have experienced larger tornadoes that caused significant damage. Jurisdictions that have been affected by repeated tornadoes are more vulnerable to future damage compared to those that do not frequently experience tornadoes.

City of Ash Grove

Between 1950 and 2023, Ash Grove experienced two reported tornadoes, according to the National Centers for Environmental Information (NCEI). Both tornadoes were classified as EF0. While Ash Grove is not among the most tornado-prone areas, strong winds from EF0 tornadoes or severe storms that often accompany them can still cause extensive damage. This is particularly concerning for towns like Ash Grove, which have a high number of historic homes and a significant portion of the population aged 65 and older

or under the age of five. Potential damages include flying debris, downed power lines, broken windows, damaged vehicles, injuries, and even fatalities.

City of Battlefield

Between 1950 and 2023, Battlefield experienced five reported tornadoes, according to the National Centers for Environmental Information (NCEI). These tornadoes ranged in strength from EF0 to EF3. The stronger tornadoes that have impacted Battlefield have resulted in significant financial losses, extensive property damage, and injuries. The city also experiences several severe storms each year, many of which have the potential to produce damaging conditions. Potential impacts include flying debris, downed power lines, broken windows, damaged vehicles, injuries, and even fatalities.

City of Fair Grove

Between 1950 and 2023, Fair Grove experienced one reported tornado, according to the National Centers for Environmental Information (NCEI). This tornado was classified as an EF0. Although Fair Grove is not considered one of the more tornado-prone areas, strong winds from EF0 tornadoes or the severe storms that often accompany them can still cause significant damage. This is especially concerning for communities like Fair Grove, which have a large number of historic homes and a considerable portion of the population aged 65 and older or under five years old. Potential impacts include flying debris, downed power lines, broken windows, damaged vehicles, injuries, and even fatalities.

City of Republic

Between 1950 and 2023, Republic experienced three reported tornadoes, according to the National Centers for Environmental Information (NCEI). These tornadoes ranged in strength from EF1 to EF2. The stronger tornadoes that have impacted Republic have resulted in significant financial losses, extensive property damage, and injuries. The city also experiences several severe storms each year, many of which have the potential to produce damaging conditions. Potential impacts include flying debris, downed power lines, broken windows, damaged vehicles, injuries, and even fatalities.

City of Springfield

Between 1950 and 2023, Springfield experienced nine reported tornadoes, according to the National Centers for Environmental Information (NCEI). These tornadoes were classified as EF0 to EF1. Although Springfield often experiences smaller tornadoes, the strong winds from EF0 tornadoes or the severe storms that often accompany them can still cause significant damage. Springfield has faced substantial financial losses following each storm. Other potential impacts include flying debris, downed power lines, broken windows, damaged vehicles, injuries, and even fatalities.

City of Strafford

Strafford has not experienced any tornadoes within the data range from the National Centers for Environmental Information (NCEI). However, the city still faces the effects of strong storms that bring tornadoes into the county. Potential impacts include financial losses following each storm, flying debris, downed power lines, broken windows, damaged vehicles, injuries, and even fatalities.

City of Walnut Grove

Between 1950 and 2023, Walnut Grove experienced one reported tornado, according to the National Centers for Environmental Information (NCEI). This tornado was classified as an EF1. Although Walnut Grove is not considered one of the more tornado-prone areas, strong winds from EF1 tornadoes or the severe storms that often accompany them can still cause significant damage. This is especially concerning for communities like Walnut Grove, which have a large number of historic homes and a considerable portion of the population aged 65 and older or under five years old. Potential impacts include flying debris, downed power lines, broken windows, damaged vehicles, injuries, and even fatalities.

City of Willard

Between 1950 and 2023, Willard experienced one reported tornado, according to the National Centers for Environmental Information (NCEI). This tornado was classified as an EF0. Although Willard is not considered one of the more tornado-prone areas, strong winds from EF0 tornadoes or the severe storms that often accompany them can still cause significant damage. This is especially concerning for communities like Willard, which have a large number of historic homes and a considerable portion of the population aged 65 and older or under five years old. Potential impacts include flying debris, downed power lines, broken windows, damaged vehicles, injuries, and even fatalities.

Ash Groves School District

The City of Ash Grove has experienced two reported tornadoes, but they are considered to be at risk like the rest of the planning area to experience them. Risks from tornadoes in the context of the school district include structural damage, unsafe road conditions for young drivers, debris that cover the school property and injury from things like fallen objects and broken windows. Tornadoes that happen during the school day can also add to factors such as emotional distress in students and power outages that could impact children with disabilities, such as insulin being improperly cooled.

Logan Rogersville School District

Risks from tornadoes in the context of the school district include structural damage, unsafe road conditions for young drivers, debris that cover the school property and injury from things like fallen objects and broken windows. Tornadoes that happen during the school day can also add to factors such as emotional distress in students and power outages that could impact children with disabilities, such as insulin being improperly cooled.

Springfield School District

The Springfield School District is the largest district in the planning area and serves the largest population of students. Tornadoes can cause problems both during and outside of school hours. Large power outages can prevent schools from operating; debris can cause damage to structures and the aftermath of a storm can create unsafe road conditions. Tornadoes that happen during school hours can cause mental tolls on students and staff as well as parents they may not be able to contact their students.

Ozark Technical College

Risks from tornadoes in the context of the school district include structural damage, unsafe road conditions for young drivers, debris that cover the school property and injury from things like fallen objects and broken windows. Tornadoes that happen during the school day can also add to factors such as emotional distress in students. Lasting power outages can prevent classes from meeting and impact the education of students.

Battlefield Fire Protection District

Fire departments play a large role in recovery after a tornado, often they are the first responders in the event of an emergency. Tornadoes impact Fire Protection Districts are impacted with an increase of calls and debris that may block roads and trap citizens. Power outages can impact fire stations and their response times, as well as the strong winds of tornadoes could damage fire stations and trucks.

Brookline Fire Protection District

Fire departments play a large role in recovery after a tornado, often they are the first responders in the event of an emergency. Tornadoes impact Fire Protection Districts are impacted with an increase of calls and debris that may block roads and trap citizens. Power outages can impact fire stations and their response times, as well as the strong winds of tornadoes could damage fire stations and trucks.

Willard Fire Protection District

Fire departments play a large role in recovery after a tornado, often they are the first responders in the event of an emergency. Tornadoes impact Fire Protection Districts are impacted with an increase of calls and debris that may block roads and trap citizens. Power outages can impact fire stations and their response times, as well as the strong winds of tornadoes could damage fire stations and trucks.

PROBLEM STATEMENT

When a severe storm becomes tornadic, it poses a significant risk to the entire planning area, potentially causing serious damage. Tornadoes can produce high winds that result in roof damage, power outages, uprooted homes and trees, and other destruction. These storms can cause catastrophic property damage and pose a threat to both human and animal life. Tornadoes are already frequent in Greene County, and with the effects of climate change, they may become even more common in the planning area. As Greene County's population continues to grow, more properties and people will be at risk of tornado-related damage. The planning area community must remain vigilant in preparing for and mitigating the impacts of tornadic storms.

3.4.8 NATURAL HAZARD: WILDFIRE

HAZARD PROFILE

Wildfires are defined by the United States Department of Agriculture (USDA) as unplanned fires occurring in wildland areas, such as forests, rangelands, or grasslands. While these extreme events are more prevalent in the Western United States, where they typically occur in the summer and fall, Missouri experiences a significant number of fires during the spring. Wildfire season is determined by the occurrence of the first major fire and the containment of the last significant fire, meaning the timing of the season can vary each year. Since the 1970s, the duration of Missouri's wildfire season has extended from an average of five months to seven months annually.

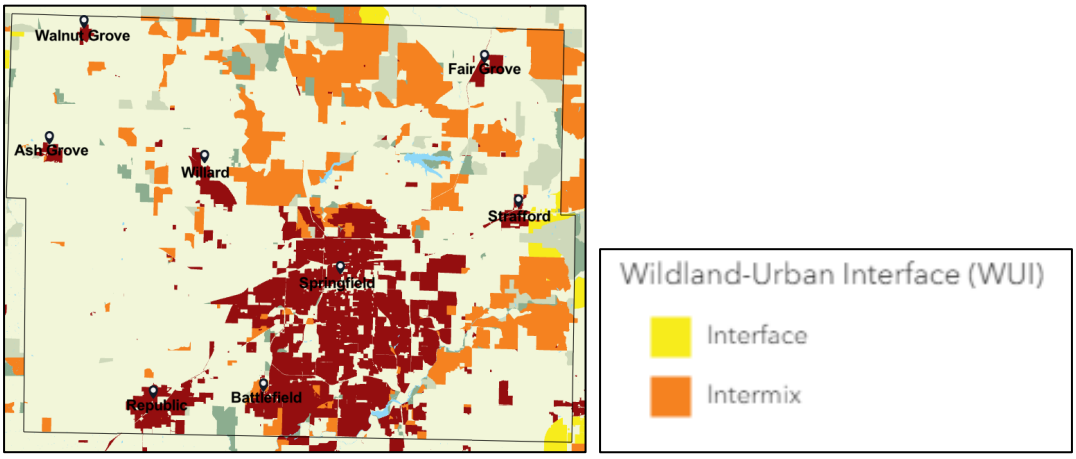
The Missouri Department of Conservation (MDC) Forestry Division is tasked with protecting privately-owned forests, state forests, and grasslands from wildfires. To achieve this, the state is divided into eight forestry regions for fire suppression efforts. The MDC collaborates with volunteer fire departments and federal agencies to support fire suppression activities. Currently, over 900 rural fire departments in Missouri have mutual aid agreements with the MDC, enabling them to receive assistance with wildfire protection when necessary.

The majority of wildfires in Missouri occur during the spring, between February and May, and the intensity and duration of these fires are heavily influenced by weather conditions. Spring in Missouri is typically marked by low humidity and high winds, creating conditions that significantly increase the risk of fires. In addition, recent drought conditions in many areas exacerbate wildfire risks, as reduced moisture availability can limit firefighting resources. Many rural residents engage in controlled burning during the spring to manage garden areas, brush piles, and land. Some landowners also conduct forest burns to promote grass growth, control ticks, and reduce brush accumulation. These activities contribute to the heightened wildfire risk during the spring months. Fall also presents a high-risk period for wildfires, with a notable number of fires occurring between mid-October and late November, depending on prevailing weather conditions.

GEOGRAPHIC LOCATION

Greene County has a wide range of diversity in the levels of development within the planning area. Areas that have less urban development are at a higher risk of wildfire events. Below is a map of Greene County that highlights the Urban areas as well as areas where structures and human development intermingle with wildland vegetation, which is defined as wildland-urban interface. Areas in red are fully urban areas, areas in orange are at the highest risk of experiencing wildfire due to their proximity to vegetation and those in yellow are at risk but less than. Communities in the planning area that are most at risk are highlighted orange and yellow. Those areas inlcude Willard, Turners (unincorporated Greene County), Fair Grove, and Strafford.

Figure 3.4.38 Wildland Urban Interface (WUI)



STRENGTH/MAGNITUDE/EXTENT

Wildfires in Missouri pose significant environmental risks, including the destruction of vegetation and, on occasion, wildlife. Firefighting personnel are also at risk of injury or fatality, and structural damage or destruction can occur. The loss of plant life can exacerbate soil erosion and increase the likelihood of landslides, especially in areas with steep terrain. While Missouri wildfires are generally smaller and less intense than those in the Western United States, they can still impact local recreation and tourism, particularly in areas near the fires.

The majority of wildfires in Missouri are the result of human activity, rather than natural causes such as lightning. These fires are predominantly surface fires, consuming dead vegetation, such as fallen leaves and dried grasses. Occasionally, they may escalate into "torch" or "crown" fires, particularly in dense evergreen stands, such as eastern red cedar and shortleaf pine. However, Missouri lacks the extensive evergreen forests characteristic of the Western U.S., which are typically responsible for the large-scale firestorms often depicted in media coverage.

Although rare, crown fires can occur in Missouri's native hardwood forests, particularly during extended drought periods, combined with extreme heat, low humidity, and high winds. Additionally, recent weather events, such as tornadoes, high winds, wet snow, and ice storms, have led to the accumulation of large quantities of woody debris on the forest floor. This accumulation contributes to more intense and prolonged fires and complicates firefighting efforts, increasing both the difficulty and danger for responders.

While the dramatic fire behavior that often garners media attention is uncommon in Missouri, wildfires in the state can still cause significant damage. They can destroy homes and other structures, and their impact on communities can be severe despite the relatively lower intensity of fires compared to those in other regions.

PREVIOUS OCCURENCES

Table 3.4.28 Wildfires in Greene County 2018 – 2023 with Greater than 2 Acres Burned

Discovered Date	Station	Cause	Acres Burned
1/6/2018	Fair Grove Fire Protection District	Unknown	2.092
1/25/2018	Ebenezer Fire Protection District	Debris	3.822
1/25/2018	Fair Grove Fire Protection District	Unknown	2.044
1/25/2018	Ebenezer Fire Protection District	Debris	3.442
1/26/2018	Ebenezer Fire Protection District	Debris	2.501
1/27/2018	001 Station 1	Debris	61.652
1/31/2018	Ebenezer Fire Protection District	Debris	7.3
2/2/2018	Ebenezer Fire Protection District	Debris	3.2
2/3/2018	Ebenezer Fire Protection District	Debris	2.379
2/3/2018	Ebenezer Fire Protection District	Debris	2.825
2/26/2018	Ebenezer Fire Protection District	Debris	4.405
3/9/2018	Ebenezer Fire Protection District	Debris	23.195

3/13/2018	Walnut Grove Fire Port, Dist.	Unknown	4.021
3/14/2018	Fair Grove Fire Protection District	Debris	7.23
4/5/2018	Ebenezer Fire Protection District	Debris	4.581
4/5/2018	Ebenezer Fire Protection District	Debris	2.383
4/12/2018	Ebenezer Fire Protection District	Debris	4.82
4/21/2018	Ebenezer Fire Protection District	Debris	10.872
4/21/2018	Fair Grove Fire Protection District	Debris	7.575
6/18/2018	Ebenezer Fire Protection District	Debris	2.011
8/13/2018	Ebenezer Fire Protection District	Debris	50.697
8/13/2018	MDC Forestry	Debris	33.843
8/13/2018	Fair Grove Fire Protection District	Unknown	38.795
2/3/2019	Ebenezer Fire Protection District	Unknown	4.739
2/4/2019	Fair Grove Fire Protection District	Unknown	4.932
3/22/2019	Ebenezer Fire Protection District	Debris	7.652
12/21/2019	Fair Grove Fire Protection District	Unknown	2.746
12/23/2019	Dadeville Rural Fire Protection District	Miscellaneous	36.251
12/24/2019	Ebenezer Fire Protection District	Debris	12.372
1/5/2020	Walnut Grove Fire Port, Dist.	Debris	53.883
1/5/2020	Fair Grove Fire Protection District	Unknown	3.432
2/2/2020	Ebenezer Fire Protection District	Not Reported	12.941
2/22/2020	Ebenezer Fire Protection District	Miscellaneous	35.96
2/27/2020	Walnut Grove Fire Port, Dist.	Miscellaneous	3.254
3/8/2020	Ebenezer Fire Protection District	Campfire	19.777
3/8/2020	Fair Grove Fire Protection District	Fireworks	2.22
9/27/2020	Ebenezer Fire Protection District	Miscellaneous	2.171
10/13/2020	Fair Grove Fire Protection District	Debris	2.295
11/18/2020	Ebenezer Fire Protection District	Debris	2.611
12/19/2020	Ebenezer Fire Protection District	Miscellaneous	9.492
12/20/2020	Ebenezer Fire Protection District	Miscellaneous	2.132

2/23/2021	Ebenezer Fire Protection District	Debris	2.588
3/3/2021	Fair Grove Fire Protection District	Not Reported	2.014
3/3/2021	Fair Grove Fire Protection District	Not Reported	2.176
3/4/2021	Ebenezer Fire Protection District	Miscellaneous	4.297
3/4/2021	Ebenezer Fire Protection District	Debris	28.582
4/2/2021	Fair Grove Fire Protection District	Miscellaneous	28.924
4/9/2021	Fair Grove Fire Protection District	Debris	3.118
4/11/2021	Fair Grove Fire Protection District	Debris	49.147
4/11/2021	Ebenezer Fire Protection District	Unknown	13.426
11/20/2021	Ebenezer Fire Protection District	Campfire	9.502
1/31/2022	Dunnegan Rural Fire Department	Unknown	33.304
2/14/2022	Ebenezer Fire Protection District	Unknown	3.09
2/15/2022	Fair Grove Fire Protection District	Unknown	16.342
2/28/2022	Walnut Grove Fire Prot, Dist.	Unknown	17.15
3/1/2022	Ebenezer Fire Protection District	Miscellaneous	30.687
3/1/2022	Ebenezer Fire Protection District	Unknown	4.558
3/2/2022	Ebenezer Fire Protection District	Debris	18.328
3/2/2022	Walnut Grove Fire Prot, Dist.	Unknown	11.964
3/3/2022	Ebenezer Fire Protection District	Debris	60.703
3/3/2022	Fair Grove Fire Protection District	Miscellaneous	35.06
3/16/2022	Ebenezer Fire Protection District	Unknown	36.272
3/16/2022	Morrisville Fire Protection District	Unknown	3.595
3/16/2022	Fair Grove Fire Protection District	Unknown	16.383
3/16/2022	Dadeville Rural Fire Protection District	Unknown	13.831
3/16/2022	Ebenezer Fire Protection District	Unknown	18.03
3/17/2022	Morrisville Fire Protection District	Miscellaneous	2.4
3/26/2022	Fair Grove Fire Protection District	Unknown	148.001
3/26/2022	Ebenezer Fire Protection District	Unknown	131.158
3/28/2022	Fair Grove Fire Protection District	Unknown	12.281

3/28/2022	Ebenezer Fire Protection District	Unknown	39.574
4/3/2022	Dadeville Rural Fire Protection District	Unknown	4.524
7/23/2022	Ebenezer Fire Protection District	Unknown	4.481
7/25/2022	Fair Grove Fire Protection District	Unknown	2.246
9/25/2022	Ebenezer Fire Protection District	Smoking	3.917
10/1/2022	Ebenezer Fire Protection District	Unknown	8.479
10/4/2022	Halltown Fire Department	Debris	13.824
10/6/2022	Fair Grove Fire Protection District	Unknown	21.199
10/13/2022	Fair Grove Fire Protection District	Unknown	7.688
10/19/2022	Ebenezer Fire Protection District	Miscellaneous	2.51
10/21/2022	Walnut Grove Fire Prot, Dist.	Debris	13.812
11/2/2022	Ebenezer Fire Protection District	Miscellaneous	2.537
11/2/2022	MDC Forestry	Debris	80.819
12/5/2022	Fair Grove Fire Protection District	Unknown	17.687
1/1/2023	Ebenezer Fire Protection District	Debris	388.49
1/2/2023	Dadeville Rural Fire Protection District	Miscellaneous	18.314
3/14/2023	Bois D' Arc Fire Protection District	Miscellaneous	36.281
3/14/2023	Bois D' Arc Fire Protection District	Miscellaneous	5.993
4/3/2023	Fair Grove Fire Protection District	Debris	8.934
4/8/2023	001 Station 1	Debris	12.988
5/8/2023	Ebenezer Fire Protection District	Miscellaneous	6.858
6/27/2023	Ebenezer Fire Protection District	Not Reported	214.599
7/10/2023	Dadeville Rural Fire Protection District	Equipment	6.187
7/25/2023	Bois D' Arc Fire Protection District	Equipment	3.911
11/18/2023	Fair Grove Fire Protection District	Unknown	4.438

Source: https://mdc12.mdc.mo.gov/Applications/MDCFireReporting/

POSSIBILITY OF FUTURE OCCURENCES

According to the Missouri State Hazard Mitigation Plan, wildfires are highly likely to occur in nearly every area of the state, including Greene County. On average, over 3,000 wildfires are reported annually. Specifically, between 2018 and 2023, Greene County experienced 95 wildfire incidents, averaging 19 events per year. Using this data, Greene County has a 100 percent chance that any given year there will be a wildfire event within the planning area. It is highly likely these events will continue and could be intensified depending on annual droughts and wind.

CHANGING FUTURE CONDITIONS AND CONSIDERATIONS

According to the Missouri State Hazard Mitigation Plan, changes in rainfall and rising temperatures are unlikely to significantly reduce forest cover in Missouri, although the composition of the tree species may change. More frequent droughts could reduce forest productivity, while changing future conditions are likely to increase the damage from insects and diseases. Higher temperatures will also reduce the number of days suitable for prescribed burning. The reduction in prescribed burns will allow for the growth of understory vegetation, which can provide fuel for destructive wildfires. Additionally, droughts are expected to become more frequent and intense during the summer months under projected future scenarios. Droughts can result in dead or dying vegetation and landscaping material near structures, creating fuel for wildfires in both urban and rural areas.

VULNERABILITY OVERVIEW

Missouri, according to the state plan, ranks seventh in the northeast region of the U.S. in forest land area, with over 14 million acres. The U.S Fire Administration states that there are factors contributing to wildfire vulnerability. In order for communities to be successful, they need to plan for the following:

- **Exposure Vulnerability -** What are the fuel conditions in the area? A program to reduce the flammability of building materials used in construction and reduce fuel on public and private lands, as well as in the home ignition zone.
- **Sensitivity of the Exposed Community -** What are the residents' vulnerabilities? A plan needs to determine the risk factors of the population, such as poverty, age, education, language, and special needs.
- **Adaptive Capacity -** Can residents prepare for, respond to, and recover from a wildfire based on their available resources?

Below are figures detailing the likelihood of wildfires causing damage and how many acres are burned annually each year. Greene County experiences frequent wildfires but an average of 23 acres are burned each time. There have been a few instances where large burns have exceeded 100 acres in one burn.

Figure 3.4.39 Likelihood of Occurrence (Percent)

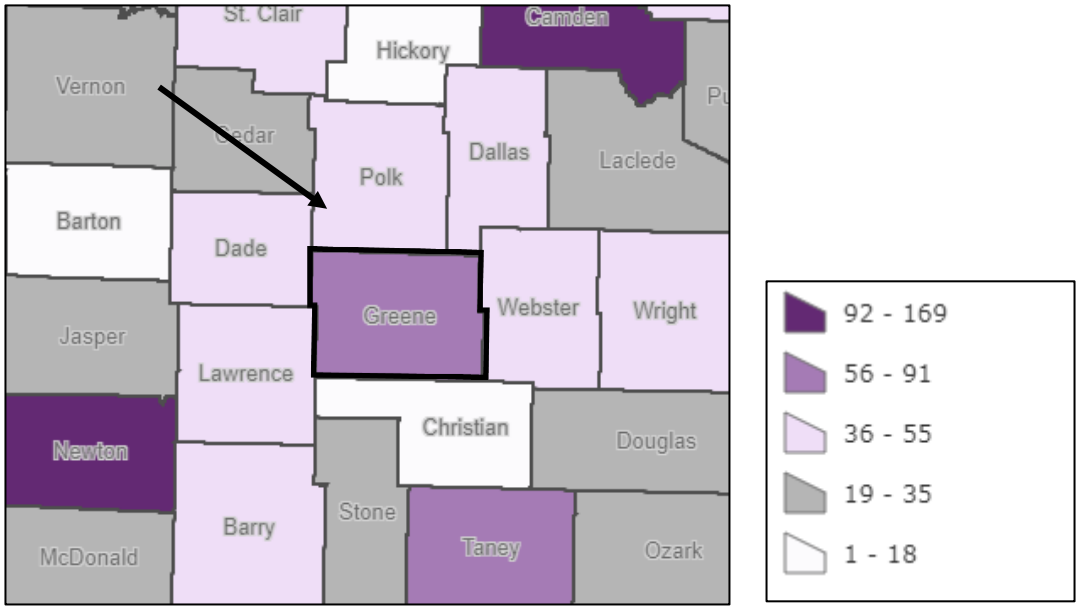
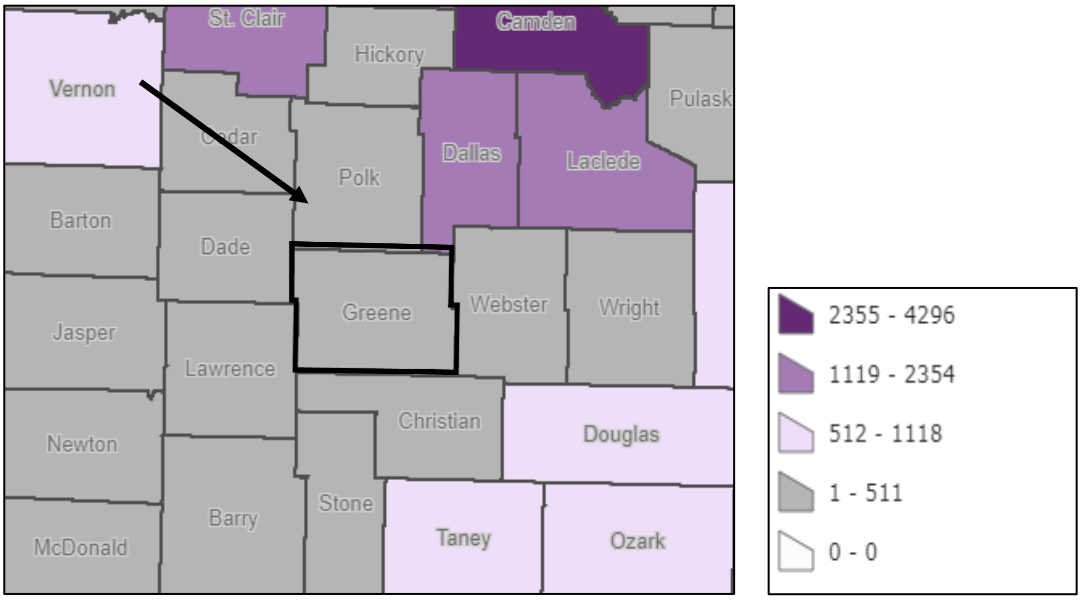


Figure 3.4.40 Average Annual Land Burned (In Acres)



POTENTIAL LOSSES TO EXISTING DEVELOPMENT

Though wildfires can be common in Greene County, there is no historical loss information that could be obtained. The following charts were used from Missouri State Emergency Management Agency's Hazard Mitigation Viewer. Below are several figures that detail the number of structures that are in at-risk areas for wildfire events as well as the vulnerability of the planning area and annualized value of the structures in the area. Greene County has been highlighted for clarity.

Figure 3.4.41 Total Number of Structures – WUI Interface/Intermix Area

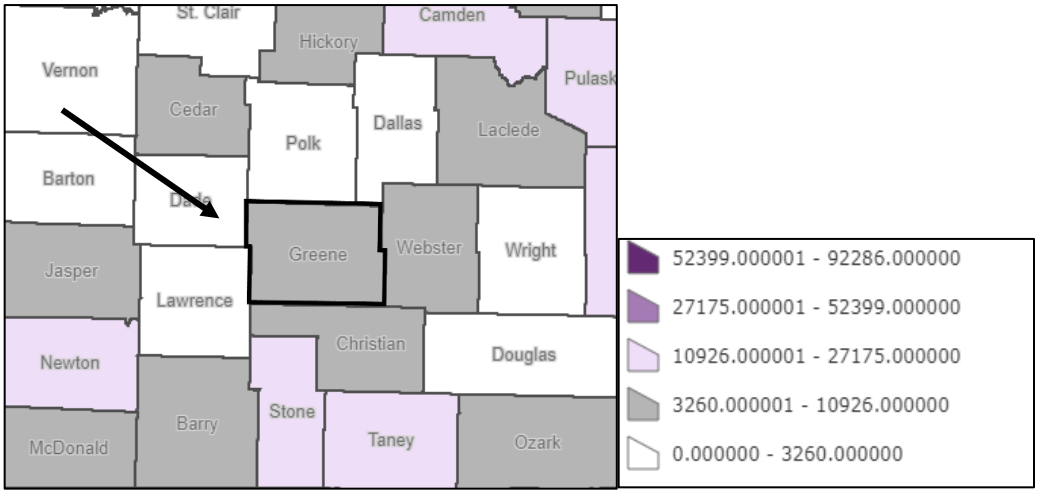


Figure 3.4.42 Value of Structures – WUI Interface/Intermix Area

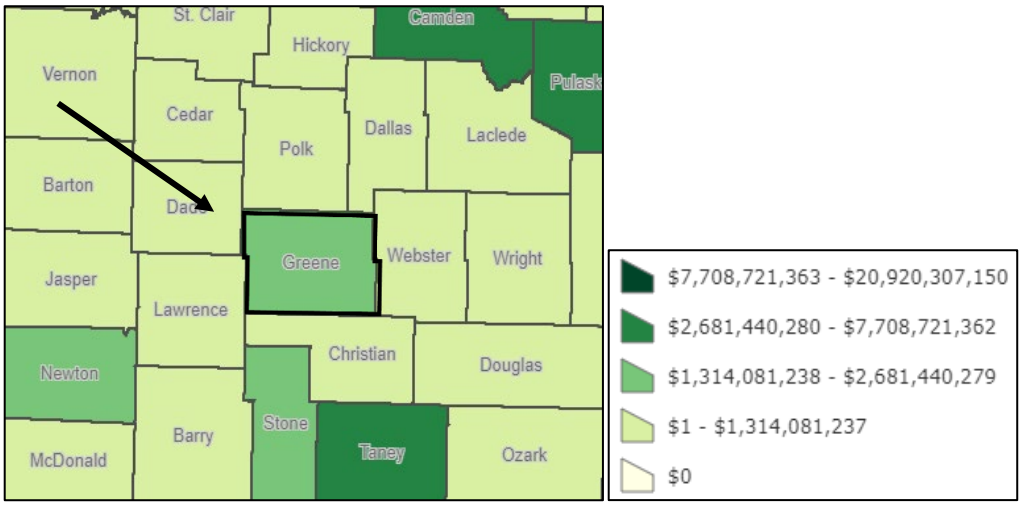
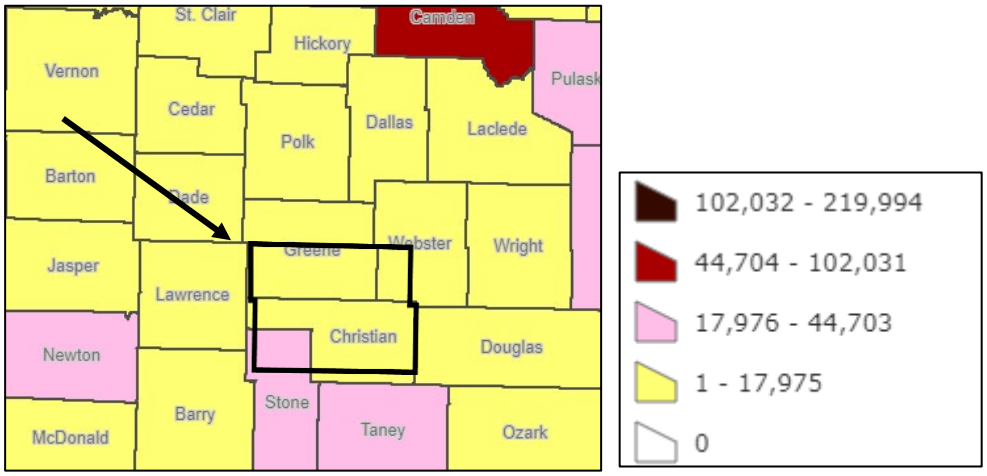


Figure 3.4.43 Population Risk – WUI Interface/Intermix Area



IMPACT OF PREVIOUS AND FUTURE DEVELOPMENT

As the population of Greene County continues to increase, the chance of development occurring in the Wildland Urban Interface (WUI) areas is possible. There are currently no plans in place but could be developed in the future. Building in those areas could increase the amount of damage that occurs if and when a wildfire takes place. Development in those areas can also increase the risk of injury or death in the county's population.

EMAP CONSEQUENCE ANALYSIS

Table 3.4.29 EMAP Impact Analysis: Wildfires

Subject	Detrimental Impacts
Public	Wildfires create multiple isolated instances of safety concerns. Death or injury can occur from wildfire; however, this has not been a consequence to Greene County.
Responders	There would be little to no impact on responders and response function in Greene County due to wildfires. Death or injury can occur from wildfires; however, this has not historically happened in Greene County
Continuity of Operations	Wildfires have had little to no impact on service operations in Greene County.
Property, Facilities, and Infrastructure	Greene County has experienced minor isolated incidents of property damage due to wildfires. Wildfires can cause minor impact to key infrastructure, such as transportation or power, again, depending on the burn path of the fire. Greene County has experienced little to no impact on facilities due to wildfire.
Environment	Wildfires in Greene County can cause multiple instances of damage to the environment depending on what is burned. Wildlife is also affected by wildfires.
Economic Condition of Jurisdiction	Wildfires have caused Greene County little to no impact on the economy.
Public Confidence in Jurisdiction Governance	Wildfires cause little to no loss of public confidence in governance in Greene County.

HAZARD SUMMARY BY JURISDICTION

Wildfires pose a risk to the entire planning area. Jurisdictions in Wildland-Urban Interface (WUI) areas are more vulnerable to wildfires than others. The Walnut Grove, Ebenezer, and Fair Grove Fire Protection Districts typically respond to the highest number of wildfire calls, as shown in the "Previous Occurrences" section of this profile. Properties in these fire districts are more susceptible to wildfire damage compared to other jurisdictions within the planning area. All Fire Protection Districts are significantly impacted by wildfire events, as reflected in the Mitigation Strategy section of this plan. While wildfires do affect cities and school districts in the planning area, these entities rely heavily on their local fire protection districts, responding collaboratively to events based on the decisions of the fire protection districts.

City of Ash Grove

Ash Grove is largely surrounded by unincorporated areas, which have a higher risk of wildfires that could potentially impact the city. This risk can manifest in reduced air quality, loss of structures, homes, and businesses. Additionally, Ash Grove could experience a shortage of responders if a wildfire occurs outside of the area their fire district is responsible for.

City of Battlefield

The City of Battlefield is located near Springfield, and as both cities continue to grow, the amount of wildland surrounding them has changed considerably. While Battlefield is still at risk of being impacted by wildfires, the primary concerns now revolve around issues such as reduced air quality and a potential shortage of responders in the area.

City of Fair Grove

The Walnut Grove, Ebenezer, and Fair Grove Fire Protection Districts typically respond to the highest number of wildfire calls, as shown in the "Previous Occurrences" section of this profile. Properties in these fire districts are more susceptible to wildfire damage compared to other jurisdictions within the planning area. All Fire Protection Districts are significantly impacted by wildfire events, as reflected in the Mitigation Strategy section of this plan. Structure loss, damage to homes, agricultural losses and live stock endangerment can all be caused by uncontrolled fire.

City of Republic

The City of Republic is the second-largest city in the county and has seen the surrounding wildland areas change as it has grown. Republic is still at risk of wildfires, and the potential impacts could include agricultural losses outside the city, air quality concerns, loss of structures and homes, as well as a reduced number of responders.

City of Springfield

The City of Springfield is the largest city in the county and faces the least amount of direct risk from wildfires. While the risk of structural loss is minimal, agricultural areas could still be affected. Additionally, concerns such as reduced air quality and a potential shortage of available responders should be considered.

City of Strafford

Strafford is largely surrounded by unincorporated areas, which have a higher risk of wildfires that could potentially impact the city. This risk can manifest in reduced air quality, loss of structures, homes, and businesses. Additionally, Strafford could experience a shortage of responders if a wildfire occurs outside of the area their fire district is responsible for.

Ash Groves School District

As mentioned above the City of Ash Grove is at a high risk of wildfire. However, during the process of this plan the district determined that wildfire is not a hazard that directly applies to them. Impacts such as structural fire due to a spreading wildfire would be a hazard that the City of Ash Grove and the fire protection districts in the area would be responsible for. Some concerns could be emotional distress of students and loss of personal items.

Logan Rogersville School District

During the process of this plan the district determined that wildfire is not a hazard that directly applies to them. Impacts such as structural fire due to a spreading wildfire would be a hazard that the City of Logan Rogersville and the fire protection districts in the area would be responsible for. Some concerns could be emotional distress of students and loss of personal items.

Springfield School District

The Springfield School District is the largest district in the area but is also at the least amount of risk. Due to this the district determined that wildfire is not a risk that directly applies to them. A wildfire would have to become a large destructive urban fire before it impacted many of the schools within the district. If a fire reached this level, the schools would not have a say in what response followed it. If there was to be a fire

of this size the district would consider the emotional distress of students and staff as well as the loss of personal items.

Ozark Technical College

During the process of this plan OTC determined that wildfire is not a hazard that directly applies to them. Impacts such as structural fire due to a spreading wildfire would be a hazard that the cities there are campuses in and the fire protection districts in the area would be responsible for. Some concerns could be emotional distress of students and loss of personal items.

Battlefield Fire Protection District

The Battlefield Fire Protection District often responds to many wildfire calls, many of them are not within battlefield but through mutual aid agreements, they respond. Potential hazards could include personal injury from fire or over heating in improper equipment. Issues within the jurisdiction could include a shortage of responders if there was a large incident out of the jurisdiction. This could increase wait times or lead to a greater loss of personal items.

Brookline Fire Protection District

The Brookline Fire Protection District does not cover a large residential area, because of this most of their responses are to local wildfire or mutual aid agreement response. Local response times could be delayed if there is a large outside incident as well as personal injury to firefighters is always a risk in wildfires.

Willard Fire Protection District

Willard is largely surrounded by unincorporated areas, which have a higher risk of wildfires that could potentially impact the city. This risk can manifest in reduced air quality, loss of structures, homes, and businesses. Additionally, Willard could experience a shortage of responders if a wildfire occurs outside of the area their fire district is responsible for. Personal injury to fire fighters should also be considered in wildfire situations.

PROBLEM STATEMENT

Wildfires can cause severe damage if not controlled promptly. They spread rapidly and can be difficult to manage. Wildfires can damage crops, properties, and wildlife, and threaten human lives. The causes of wildfires range from human activity to lightning strikes. Many wildfires go unnoticed by the public, but they can occur frequently in Greene County. Development in WUI areas could potentially increase the extent of damage from wildfires in the county. Wildfire is a countywide hazard that could impact numerous areas and cause significant damage. Wildfires can be extremely devastating to the environment. Mitigation actions focus on improving response times and providing better equipment for firefighting. Several jurisdictions are working to equip their personnel with better personal protective equipment (PPE) and new fire trucks.

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3.4.9 HUMAN-CAUSED HAZARD: TERRORISM - BIOLOGICAL

HAZARD PROFILE

This hazard profile focuses on one of five events classified as terrorism or targeted violence in this plan. Projects related to any of these five hazards may specify which terrorist event are being referenced, while others may use the terms "Targeted Violence" or "Terrorism" for more general projects. Each hazard has an individual profile to help better understand the hazards that affect Greene County.

Biological Terrorism

Biological terrorism, or bioterrorism, is the intentional release of agents, such as viruses, bacteria, or other germs, to cause illness or death in people, animals, and plants. These agents are typically found in nature but may be altered to increase the severity of the attack, such as making the agent resistant to treatment. Biological agents can be spread through air, water, or food. Some, like smallpox, can be transmitted from person to person, while others, like anthrax, cannot.

Agricultural Terrorism

Agricultural terrorism, or agro-terrorism, is the intentional introduction of animal or plant diseases to generate fear, cause economic losses, and/or undermine social stability. The objective of agro-terrorism is not to kill animals or plants, but to create widespread public panic. According to the Congressional Research Service, this type of terrorism targets agriculture to destabilize economies and cause widespread fear.

Table 3.4.30 Biological Agents

Agent	Populations/Species Most Likely Affected
Anthrax	Wild and domestic lower vertebrates such as cattle, sheep, goats, camels, antelopes, and other herbivores, are more likely to be affected. Humans may also become infected if exposed to infected animals. Anthrax outbreaks occur annually in livestock and wild game animals, including cattle and deer.
Botulism	Humans are most likely to be exposed to botulism through inadequate in-home canning practices, which can lead to infection.
Brucellosis	Sheep, goats, cattle, deer, elk, pigs, dogs and humans can be affected by brucellosis.
Plague	Fleas, small rodents, and humans are commonly affected by or involved in the transmission of diseases such as plague.
Smallpox	Humans are the only natural hosts for smallpox.
Tularemia	Tularemia is found in rodents, rabbits, and hares, and humans can also be affected.

Source: Greene County Multi-Jurisdictional Hazard Mitigation Plan 2015-2020

Transmission

Like many man-made hazards, biological agents can be transmitted either intentionally or unintentionally. The modes of transmission described below distinguish between these two types. Intentional transmission refers to the deliberate release of a biological agent with malicious intent or as a weapon. Unintentional transmission, on the other hand, occurs through accidental or unknown contact with infected humans, animals, or objects.

Table 3.4.31 Transmission of Biological Agents

Agent	Transmission
Anthrax	Anthrax may be deliberately spread by contaminating items that humans encounter.
Botulism	Food supplies may be contaminated, spreading the agent to a large population across a wide region.
Plague	An aerosol attack could disperse the agent, causing infected individuals to develop pneumonic plague. The disease can spread to anyone who is in close contact with the infected. Due to the delay between exposure and symptoms, the agent may cover a wide geographical area as people travel.
Smallpox	After September 11th, 2011, the U.S. government has become increasingly concerned that smallpox will be used as a biological agent, as citizens have not been regularly vaccinated for smallpox since 1980.
Tularemia	The mechanisms for intentionally spreading tularemia would occur by using natural carriers of the disease, such as rabbits, rodents, or ticks.

Source: Greene County Multi-Jurisdictional Hazard Mitigation Plan 2015-2020

GEOGRAPHIC LOCATION

All areas of Greene County are susceptible to biological hazards, both directly and indirectly. According to the 2022 Agricultural Census, Missouri reported over four million cattle and calves, with Greene County accounting for 62,493 of these animals. The majority of these cattle are used in beef production, which represents the largest segment of agricultural sales in the county. Based on the 2022 census, Greene County ranks 23rd out of 114 counties in Missouri for cattle-related sales. Furthermore, the county has experienced a 122 percent increase in total farm-related income since 2017.

STRENGTH/MAGNITUDE/EXTENT

Biological weapons pose significant risks to both human health and the agricultural ecosystem in Greene County. These weapons can cause severe health consequences for humans, as well as damage to agricultural industries, wildlife, and their habitats. A bioterrorism attack targeting livestock could devastate the agricultural economy, leading to considerable financial loss. Additionally, such an attack could have adverse effects on wildlife species, particularly rare or endangered native species, as diseases introduced to domesticated animals or humans could spill over into wildlife populations.

Agro-Terrorism

Agro-terrorism is particularly concerning due to the vulnerability of the agricultural industry. Farms are often located in remote, unsecured areas, making them prime targets for malicious actors. Agricultural diseases are relatively easy to acquire, handle, and distribute. Moreover, many farmers and veterinarians lack familiarity with foreign animal diseases, as most have been eradicated domestically. This lack of preparedness, combined with the low cost of executing such an attack, makes agro-terrorism an attractive option for terrorists seeking to disrupt the economy and induce public panic.

Economic Impact

The agriculture industry plays a critical role in the U.S. economy, but it is vulnerable to biological threats, particularly diseases affecting crops and livestock. A significant disease outbreak could lead to a rapid increase in demand for produce and animal products, while the supply would sharply decrease, potentially resulting in shortages and even famine.

PREVIOUS OCCURRENCES

Greene County and the surrounding area have not experienced a terrorist attack to date. However, given Greene County's prominent role in the cattle and beef production industry, the potential for an agro-terrorism attack remains a concern.

PROBABILITY OF FUTURE OCCURRENCE

The likelihood of a biological event occurring in Greene County within the next ten years is relatively low, according to the Enhanced Priority Risk Index (EPRI).

CHANGING FUTURE CONDITIONS AND CONSIDERATIONS

While climate change may not directly influence the likelihood of biological events, it could affect the community's ability to recover from a biological attack. Increased flooding and droughts may already be placing stress on the agricultural sector, and an attack on an industry already dealing with such challenges could exacerbate the damage.

VULNERABILITY OVERVIEW

The risk of a biological weapons attack is higher than ever due to their relatively low cost and ease of production. Unlike other weapons of mass destruction, biological agents can be derived from natural diseases, which are widespread and easily accessible. With rapid international transport and increasing human and animal resistance to antibiotics, biological terrorism can spread quickly and without warning. The effects could lead to significant losses in Greene County’s agricultural sector, as well as putting large portions of the population at risk.

POTENTIAL LOSSES TO EXISTING DEVELOPMENT

The most significant loss Greene County could face from a bioterrorism attack would be agricultural. Diseases transmitted through livestock, such as anthrax, could severely impact the cattle industry, which is a major contributor to the local economy. A supply-demand imbalance for crops, produce, and meat could further strain the economy as supplies dwindle.

IMPACT OF PREVIOUS AND FUTURE DEVELOPMENT

As Greene County’s population continues to grow, particularly in Springfield, the risk of a biological attack could increase. Springfield’s expanding tourism industry, fueled in part by attractions like Bass Pro Shops, along with its proximity to Branson, a major tourist destination, could raise the potential for bioterrorism incidents. Increased traffic and tourism bring with them a higher risk of exposure to biological hazards.

EMAP CONSEQUENCE ANALYSIS

Table 3.4.32 EMAP Impact Analysis: Biological

Subject	Detrimental Impacts
Public	A biological attack could lead to a wide range of safety and health consequences, including a significant number of illnesses and possibly death.
Responders	Responders could become overwhelmed during a biological incident, and there could also be fire safety concerns. Response functions would be significantly impacted.
Continuity of Operations	Minor service operations, such as those related to food or water, may be interrupted, with many others likely to be delayed.
Property, Facilities, and Infrastructure	A biological attack would result in minor, isolated property and facility damage at the site of the detonation or release. Multiple critical infrastructure sectors would be impacted, and hospitals and emergency services would be overwhelmed.
Environment	The environment would experience widespread significant damage from a biological incident.
Economic Condition of Jurisdiction	A biological incident would be catastrophic for the economy. The agricultural sector would be in ruins, and non-contaminated food and water would be scarce for very long distances.
Public Confidence in Jurisdiction Governance	Lack of food and water after a biological attack could result in major widespread loss of public confidence in governance.

HAZARD SUMMARY BY JURISDICTION

Bioterrorism could potentially affect the entire planning area, with Greene County's agricultural sector being the most vulnerable target. Greene County ranks 23rd out of 114 counties in Missouri for contributions to the cattle and beef industry. Jurisdictions with significant crop production and cattle farming face a higher risk than others. However, the overall risk of Greene County experiencing a bioterrorism attack remains low.

PROBLEM STATEMENT

Biological terrorism has been a concern for many years, with the fear of such attacks heightened significantly following the events of September 11th, 2001. Bioterrorism could impact various aspects of Greene County, including public health and agriculture. While the likelihood of a biological attack remains low, the risk still exists. Mitigation efforts should involve comprehensive planning at the local, state, and federal level, addressing response strategies, preparedness for multiple events, first responder safety, and public health, among other considerations. Public education on the risks and preparedness measures is crucial.

3.4.10 HUMAN-CAUSED HAZARD: TERRORISM - CHEMICAL

HAZARD PROFILE

This hazard profile focuses on one of five events classified as terrorism or targeted violence in this plan. Projects related to any of these five hazards may specify which terrorist event they are referencing, while others may use the terms "Targeted Violence" or "Terrorism" for more general projects. Each hazard has its own profile to provide a better understanding of the hazards that affect Greene County.

The chemical industry is central to the modern global economy, converting raw materials such as oil, natural gas, water, metals, and minerals into more than 70,000 different products. With a market value nearing $3 trillion, the industry is dominated by companies in the European Union and the United States, which are among the world's largest producers.

Chemical Hazards

Chemical hazards refer to any chemical substance that poses a significant risk to human health, safety, or the environment when improperly transported, used, or stored. These hazards can arise from accidental or intentional releases.

Forms of Exposure

- **Inhalation:** Absorption of chemicals through the respiratory tract is one of the most common and easiest routes for chemicals to enter the body.
- **Ingestion:** Absorption through the digestive system typically occurs from eating or smoking with contaminated hands or in a contaminated environment. Aerosols may also be ingested, depending on the size of their particles or droplets.
- **Skin or Eye Contact:** Absorption through the skin or eyes is a primary cause of widespread occupational diseases, such as dermatitis. The eyes, being highly sensitive, are vulnerable to absorbing toxic vapors, which can lead to permanent damage.
- **Injection:** Chemicals can be introduced through the skin, especially when sharp objects, such as hypodermic needles, are improperly used.

Intentional Release

While most chemical hazards result from accidental releases, the potential for intentional release should also be considered in emergency response planning. Some chemicals are toxic, colorless, and odorless, making it easier to covertly expose the public through methods like releasing them from a moving vehicle. The Federal Emergency Management Agency (FEMA) notes that, although delivering chemical hazards in lethal doses outdoors is difficult due to rapid dissipation, the widespread availability of toxic chemicals remains an ongoing threat. A more sophisticated and coordinated release, such as using explosives laced with toxic agents or introducing chemicals into the public water supply, could lead to a major public health crisis and cause public panic.

Clandestine Laboratories

Clandestine laboratories, particularly those producing methamphetamine, are a growing concern in the region. These labs range from highly sophisticated operations to makeshift, mobile setups located in private residences, hotels, trailers, abandoned properties, rural areas, and even vehicles. In recent years, the use of synthetic opioids, such as fentanyl, has surged in Missouri, with most of the fentanyl in the U.S. being sourced from other countries.

According to the latest data from the Missouri Department of Health and Senior Services, Greene County saw 135 drug overdose deaths in 2022, marking an 11 percent increase from the previous year. The primary cause of these fatalities was synthetic opioids (73 percent), with fentanyl accounting for 64 percent of the deaths. Methamphetamines were the second leading cause, responsible for 61 percent of the deaths.

Additionally, 78 percent of those who died from drug overdoses had a history of substance abuse. Since 2010, opioid-related deaths in Missouri have surpassed motor vehicle crash fatalities annually. In 2018, the state had 80 opioid prescriptions for every 100 citizens.

The following map shows the number of clandestine methamphetamine labs and dumping incidents reported in Greene County as of 2019. Since 2014, the number of such incidents has steadily declined, with 26 reported in 2014, 22 in 2015, 10 in 2016, and four in 2018. According to the United States Drug Enforcement Administration, there was not any reported clandestine laboratories within the boundaries of Greene County from 2019-2024. Drug use is still a large concern in Greene County, but less methamphetamines are being produced in the planning area.

Figure 3.4.45 Number of Missouri Methamphetamine Incidents – 2019

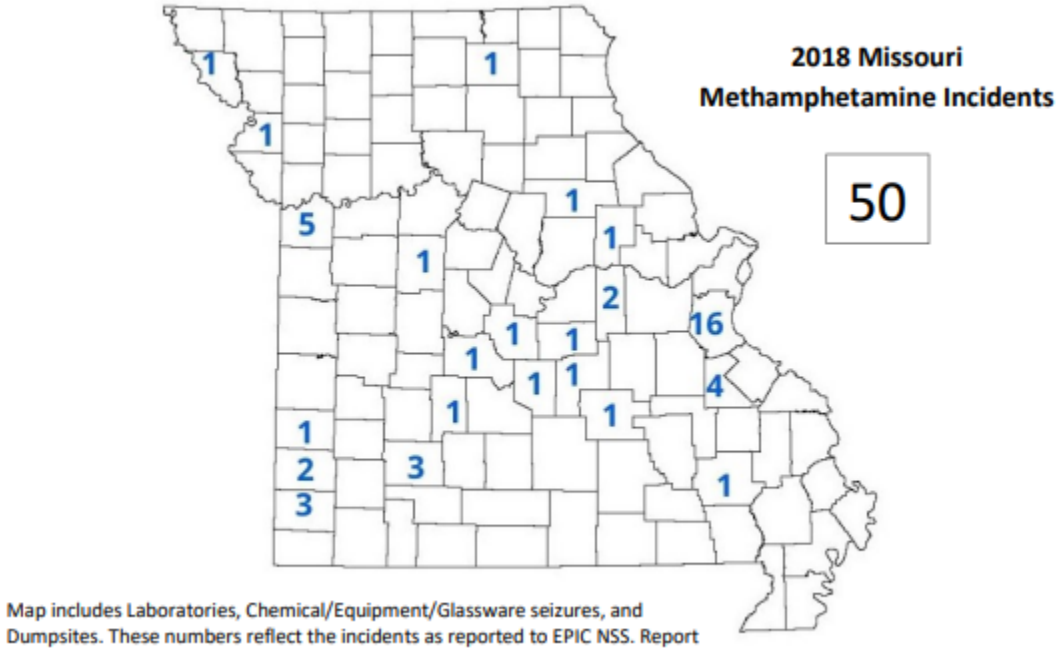
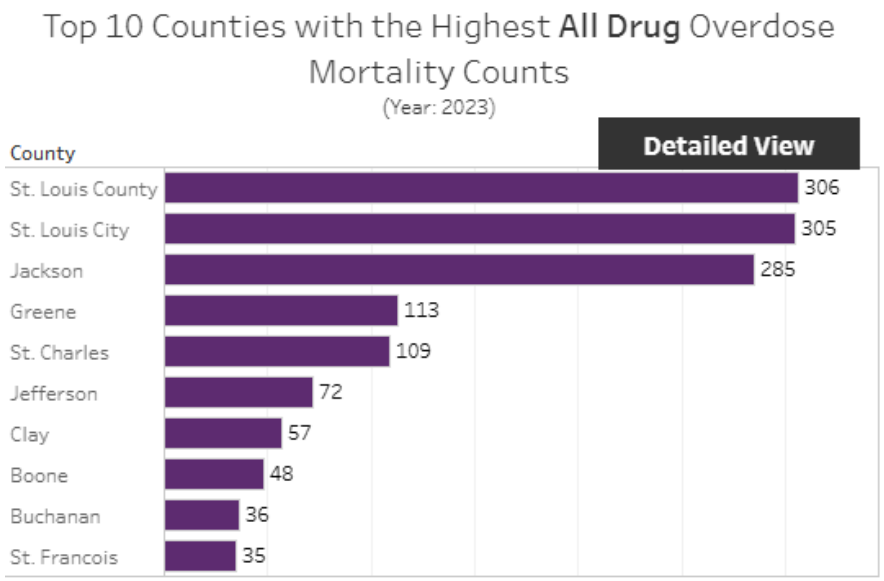


Figure 3.4.46 Top 10 Counties with the Highest Drug Mortality Counts



Source: https://health.mo.gov/data/opioids/

Unlike the decline in methamphetamine-related incidents, opioid overdoses have continued to increase since 2017, placing significant strain on the healthcare system in Greene County. The county has the fourth-highest number of inpatient drug overdose visits in Missouri. Although inpatient visits have slightly decreased since 2018, emergency room visits continue to rise.

GEOGRAPHIC LOCATION

While chemical hazards pose a risk across all of Greene County, urban areas such as Springfield are at a slightly higher risk due to their larger population.

STRENGTH/MAGNITUDE/EXTENT

Chemical hazards pose risks to both human health and the environment. Depending on the nature of the chemical involved, there is a potential for injury and property damage in isolated instances.

Health Problems

- **Acute Toxicity:** Exposure to certain chemicals can cause severe symptoms rapidly. Acute effects typically result from short-term exposure and may be short-lived. Examples of such chemicals include hydrogen cyanide and ammonia.
- **Carcinogenicity:** Carcinogens are chemicals that cause malignant (cancerous) tumors.
- **Reproductive Toxins:** Chemicals can harm both male and female reproductive systems and may also affect a developing fetus, leading to teratogenic effects (harm to the fetus). These toxins can cause a range of issues, including mental disorders, loss of sexual drive, impotence, infertility, sterility, cell mutations, and birth defects.

Physical Hazards

Physical hazards include chemicals that are combustible, explosive, flammable, reactive with air or water, or hazardous in other ways. These chemicals include substances like paint, cleaning compounds, inks, and dyes, as well as more dangerous chemicals such as organic peroxides and oxidizers.

Clandestine Laboratories

Clandestine laboratories present multiple health risks, including explosions, caustic fumes, and exposure to deadly gases. People who live or work near these labs, or who encounter their materials, face significant health risks. The byproducts of methamphetamine production are often disposed of recklessly to avoid detection, creating serious human health and environmental hazards. Common disposal practices include dumping chemicals into bathtubs, sinks, toilets, on the ground, along roadsides, and into waterways.

PREVIOUS OCCURRENCES

Table 3.4.33 Greene County Methamphetamine Laboratory Incidents 2004 - 2024

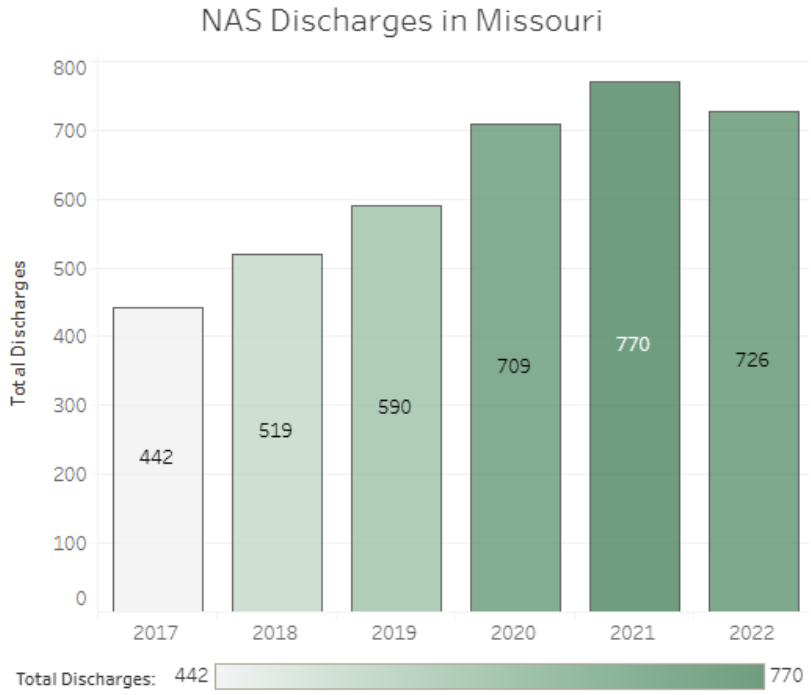
YEAR	INCIDENTS
2004	189
2005	145
2006	36
2007	32
2008	69
2009	78
2010	87
2011	124
2012	96
2013	67
2014	26
2015	22
2016	10
2017	4
2018	3
2019	3

Source: https://www.dea.gov/clan-lab

Note that the table above contains data from 2004-2019, this is due to the fact no Methamphetamine Laboratories were reported in Greene County during 2020-2024

PROBABILITY OF FUTURE OCCURRENCE

As shown below, there has been a steady increase in Neonatal Abstinence Syndrome (NAS) cases caused by opioids, and it is likely that this trend will continue over the next planning period. This increase aligns with known cases of opioid use among pregnant women. However, as illustrated in the map of clandestine laboratories, there has been a significant decrease in the number of labs located and reported. Considering these factors, it is reasonable to assume that while the misuse of chemicals, such as drugs, will continue to impact the county, large-scale chemical attacks remain unlikely.



Source: https://health.mo.gov/data/opioids/nas.php

CHANGING FUTURE CONSIDERATIONS

Climate change will not have a direct impact on chemical incidents in Greene County.

VULNERABILITY OVERVIEW

Most incidents involving hazardous chemicals occur at the interfaces between transport, storage, processing, use, and disposal, where these systems are most vulnerable to failure, error, or manipulation. Factors affecting the vulnerability of responders and the public include the nature of the hazard, level of exposure, availability and quality of shelter, access to personal protective equipment (PPE), ease of access to and from the site, and the preparedness and training of employees, responders, and possibly the public to handle a chemical release.

People most at risk of illness from chemical hazards are those who live or work around hazardous chemicals, such as those living near meth labs. Common symptoms of toxic exposure to chemicals used in methamphetamine production include headaches, nausea, fatigue, lethargy, and dizziness. Severe exposure can cause difficulty breathing, chest pain, loss of physical coordination, skin irritation, chemical burns on the skin, eyes, nose, and mouth, and may even be fatal in some cases. Long-term exposure can lead to cancer, liver damage, brain and kidney damage, as well as miscarriage and birth defects.

Toxic chemicals commonly used in methamphetamine production include:

- Hydrochloric Acid
- Methylamine
- Mercuric Chloride
- Anhydrous Ammonia
- Freon
- Methanol
- Red Phosphorus

POTENTIAL LOSSES TO EXISTING DEVELOPMENT

Chemical incidents are typically localized to the site of the incident, though evacuation may be necessary, and property damage can occur. For example, a meth lab explosion, which is highly flammable and prone to explosions, could cause extensive damage, potentially impacting surrounding properties as well.

IMPACT OF PREVIOUS AND FUTURE DEVELOPMENT

As the county's population increases, the risk of exposure to toxic chemicals also rises. Additionally, the growing population may increase the likelihood of drug production, further amplifying the risk.

EMAP CONSEQUENCE ANALYSIS

Table 3.4.34 EMAP Impact Analysis: Chemical

Subject	Detrimental Impacts
Public	Chemical incidents in Greene County could cause significant safety concerns. While there have been injuries reported, no deaths have occurred in Greene County.
Responders	Responders would face some safety concerns in a chemical incident, and there could be minor impacts to response functions.
Continuity of Operations	Greene County has not experienced any disruption in delivery services due to a chemical incident.
Property, Facilities, and Infrastructure	Chemical incidents in Greene County have resulted in significant property damage, but there has been no damage to the infrastructure. However, incidents involving railways, roadways, airports, or other transportation sectors could potentially impact these critical areas.
Environment	One major chemical-related pollution event occurred in Greene County in the 1970s when trichloroethylene (TCE) was found in wells and drinking water due to mismanagement by a local company. This led to a long-term cleanup process that spanned several decades.
Economic Condition of Jurisdiction	Greene County has experienced minor economic impacts from chemical incidents.
Public Confidence in Jurisdiction Governance	Greene County has experienced a small impact on the public confidence in governance due to a chemical incident. In 2019, the Director of the Division of Environmental Quality for the Missouri Department of Natural Resources visited Greene County to apologize for the state’s handling of the TCE contamination.

HAZARD SUMMARY BY JURISDICTION

Greene County experiences high traffic volumes, particularly along I-44, making it highly likely that a chemical event could occur along major roadways. Due to the presence of numerous companies in the area that store large quantities of hazardous materials, spills or accidents are a real possibility. Areas with significant highways and interstates, such as Springfield and Republic, are at a higher risk of being affected by chemical events, such as spills. While the county faces a low risk for chemical-related terrorist attacks, areas with higher population densities may be more vulnerable. Local schools focus on creating secure environments to minimize the risk and impact of potential terrorism events.

PROBLEM STATEMENT

Chemical events can occur either accidentally or intentionally and can be extremely dangerous to those in the vicinity. If chemicals lead to explosions, the impact on public health and property can be catastrophic. Chemicals pose health and physical hazards, and their risks will continue to be a concern in Greene County and across the United States. Mitigation strategies for chemical incidents should include preparedness actions from local emergency management offices and comprehensive planning. These plans should address various aspects of disaster response. Additional solutions include public education, awareness campaigns, and the procurement of personal protective equipment (PPE) for responders and citizens.

3.4.11 HUMAN-CAUSED HAZARD: TERRORISM - EXPLOSIVES

HAZARD PROFILE

This hazard profile focuses on one of five events categorized as terrorism or targeted violence in this plan. Projects referring to any of these five hazards may specifically identify the terrorist event they address or refer to it more generally as “Targeted Violence” or “Terrorism” in broader projects. Each hazard has a distinct profile to help better understand the risks they pose to Greene County.

An explosion is the sudden, rapid expansion of material, accompanied by the production of heat and large pressure changes, typically caused by chemically or energetically unstable substances. Explosive charges measure the amount of explosive material involved. Explosions can be either intentional (e.g., IEDs) or unintentional.

Explosives are generally classified into two categories: high explosives and low explosives.

- **High Explosives**: These are materials that decompose or detonate almost instantaneously when initiated by shock or impact.
- **Low Explosives:** These substances are primarily solid combustible materials that decompose rapidly but typically do not explode. However, under certain conditions, they can detonate, acting similarly to high explosives. While low explosives burn rapidly, high explosives detonate.

Composition of Explosives

Explosives can be further classified based on their composition:

- **Mixture:** This type of explosive is composed of distinct substances that are carefully prepared and mechanically combined in specific proportions (e.g., black powder).
- **Compound:** A compound explosive consists of homogeneous substances with molecules containing oxygen, carbon, and hydrogen necessary for combustion (e.g., nitroglycerin).

The most important factor in rating an explosive is its detonation velocity, which is the speed at which the detonation wave travels through the material. When the detonation occurs faster than the speed of sound, it is considered a high explosive. In contrast, a slower reaction, such as burning, is called deflagration (e.g., low explosives).

All commercial explosives are considered high explosives, except for black powder.

Improvised Explosive Devices (IEDs)

An improvised explosive device (IED) is a bomb created using unconventional techniques and materials. While IEDs may include conventional military explosives (e.g., an artillery round with a detonating mechanism), they are primarily designed to destroy or incapacitate personnel and vehicles.

Table 3.4.35 Types of IEDs

Name	Description
Improvised Explosive Device (IED)	A device that is placed or fabricated in an improvised manner, incorporating destructive, lethal, noxious, pyrotechnic, or incendiary chemicals, and is designed to destroy, incapacitate, harass, or distract.
Improvised Nuclear Device (IND)	A device incorporating radioactive materials, designed to disperse radioactive material or generate a nuclear yield.
Improvised Chemical Device (ICD)	A device incorporating toxic chemical materials, designed to disperse these substances.
Improvised Biological Device (IBD)	A device incorporating biological materials, designed to disperse vector-borne pathogens.
Improvised Radioactive Device/Radiological Dispersion Device (RDD); Dirty Bomb	A device incorporating radioactive materials, designed to disperse them, causing death, fear, and behavior modification.
Improvised Incendiary Device	A device that uses exothermic chemical reactions to rapidly spread fire (e.g. Molotov cocktail).

Source: The Dictionary of Military and Associated Terms and CBRNE World

Table 3.4.36 IED Delivery Methods

Delivery Mechanism	Description
Car Bomb/Vehicle-Borne (VBIED)	Vehicles may be laden with explosives, set to detonate by remote control or by the passenger/driver. VBIEDS can carry thousands of pounds of explosives.
Boat-Borne	Boats laden with explosives can be used against ships and areas connected to water.
Collar Bombs	IEDS strapped to the necks of individuals.
Homicide Bombers	An individual may wear and detonate explosives to kill others, including themselves.
Platter Charges	Rectangular or circular pieces of flat metal with explosives pressed into one of the sides of the platter.
Improvised Rocket Assisted Munitions (IRAM)	Propane tanks packed with explosives and powered by 107mm rockets.

Source: Greene County Multi-Jurisdictional Hazard Mitigation Plan 2015-2020

Electromagnetic Pulse (EMP) Bomb

An Electromagnetic Pulse (EMP) bomb is designed to release a powerful electromagnetic field that disrupts or destroys electrical circuitry. Given our increasing reliance on technology for everyday tasks, an EMP attack would have devastating effects. It would disable most machines that rely on electricity, rendering generators useless, preventing cars from running, and halting phone communications. Emergency response would be significantly impaired, businesses would suffer millions of dollars in losses due to halted productivity, and food in both residential and commercial facilities would spoil. Additionally, electronic networks vital for government and military operations would be destroyed. These are just a few examples of how an EMP could disrupt military operations or create major challenges for cities.

GEOGRAPHIC LOCATION

Explosives can be detonated anywhere in Greene County; however, larger cities within the planning area, such as Springfield, are at a higher risk due to their increased population density. Additionally, fire and school districts could become potential targets during times of heightened public tension.

STRENGTH/MAGNITUDE/EXTENT

The magnitude of an explosive event in Greene County depends on the type of explosive used and its location. Explosions can cause extensive property damage, injuries, or even fatalities.

Explosive materials are categorized by the speed at which they detonate. High explosives are materials where the chemical reaction moves faster than the speed of sound, while low explosives burn more slowly and do not typically propagate detonation. Explosives can also be categorized by their sensitivity. Some explosives are relatively insensitive, while others, like secondary or tertiary explosives, are more sensitive.

High Explosives

High explosives detonate when triggered by the shock of a suitable primary explosive. Unlike low explosives, they do not burn but can be ignited by a flame or heated to high temperatures, causing detonation. High explosives can detonate at rates ranging from 1,000 to 9,000 meters per second. They are divided into two classes based on sensitivity:

- **Primary High Explosives**: Extremely sensitive to shock, friction, and heat, causing rapid detonation or burning.
- **Secondary High Explosives:** Relatively insensitive to shock, friction, and heat, but can still detonate if exposed to certain conditions. These explosives are often used in blasting caps to enhance their power.

PREVIOUS OCCURRENCES

October 1970: Two union truck drivers, on strike, shot a semi-truck carrying dynamite approximately nine miles west of Springfield. The bullet caused an explosion, creating a 40-foot crater on I-44 and damaging windows throughout Springfield.

June 2003: An Ozark Empire Fairgrounds employee died in an explosion after attempting to illuminate electrical breakers with a lighter near a gas leak.

June 2008: A homemade bomb was thrown at a Springfield residence. Fire investigators found a Molotov cocktail outside the home, which had the potential to start a large fire.

February 2015: Bomb technicians investigated a potential hand grenade at a gas station on Kearney Street. The threat was assessed and resolved following proper protocols.

November 2018: A propane heater explosion in Shady Acres Mobile Home Park caused a man to sustain burns, and the home was destroyed.

February 2019: Two contract workers were injured in an explosion and fire at the Southwest Wastewater Treatment Plant in Springfield, caused by a low-order explosion and flash fire.

May 2019: Deputies discovered commercial-grade explosives during an investigation of stolen property on West Farm Road 194. The explosives were deemed capable of causing serious harm.

July 2023: A gas line accident near Lake Springfield caused a fire that affected utility workers, surrounding homes, and several utility trucks. Approximately 1,700 people lost power, which was restored the following day.

PROBABILITY OF FUTURE OCCURRENCES

Over the past two decades, there have been six reported explosive incidents in Greene County, four of which caused injuries or property damage. The estimated probability of another explosive incident occurring within the Greene County planning area is approximately 30 percent. Of the six incidents, four were related to targeted violence, suggesting that future incidents could be either accidental or the result of deliberate actions.

CHANGING FUTURE CONDITIONS AND CONSIDERATIONS

As climate change causes higher temperatures, transportation trucks carrying hazardous or explosive materials may face an increased risk of unintentional detonation. However, the impact of climate change on the transportation of explosive chemicals in Greene County is expected to be low.

POTENTIAL LOSSES TO EXISTING DEVELOPMENT

Explosions can cause significant destruction to property, and the extent of the impact depends on the nature of the incident. Potential losses could include repair or replacement costs for damaged facilities, lost business opportunities, loss of life, and injuries. Secondary effects may include public safety hazards, such as panic and further infrastructure failure.

IMPACT OF PREVIOUS AND FUTURE DEVELOPMENT

Areas with dense populations and large public venues are prime targets for explosive attacks. As Greene County experiences an increase in large events, such as concerts and festivals, and attracts tourists to popular destinations like Wonders of Wildlife and Bass Pro, the risk of a mass casualty event at these sites could rise.

EMAP CONSEQUENCE ANALYSIS

Table 3.4.37 EMAP Impact Analysis: Explosives

Subject	Detrimental Impacts
Public	An explosive has the potential to cause multiple injuries and fatalities. To date, there has been only one recorded fatality due to an explosion in Greene County. Explosives also pose safety concerns.
Responders	The functionality and safety of responders in Greene County have not been significantly impacted by explosions. However, there is potential for life-threatening issues if structural integrity is compromised or if an undetonated explosive device is present. Such situations would also greatly impact response functions.
Continuity of Operations	Explosives in Greene County have caused little to no impact of the delivery of services.
Property, Facilities, and Infrastructure	Greene County has experienced limited property damage from explosives. While an explosion could potentially cause widespread property damage, this has not occurred within the county. Explosives in Greene County have caused minimal or no damage to infrastructure and facilities. However, depending on the detonation's location, there remains a risk that critical facilities and infrastructure could be impacted.
Environment	Explosives in Greene County have caused little to no impact on the environment.
Economic Condition of Jurisdiction	Explosives in Greene County have caused little to no impact of the economy.
Public Confidence in Jurisdiction Governance	Explosives in Greene County have caused little to no impact on public confidence in governance, provided the situation is handled appropriately.

HAZARD SUMMARY BY JURISDICTION

All areas of Greene County are at risk of experiencing an explosion event or attack. However, areas with denser populations, such as the City of Springfield, face a higher level of risk. Throughout the year, all jurisdictions in the county host large events, including Fourth of July festivals, Christmas parades, Halloween events, and various other events. These gatherings can potentially be targets for explosive attacks.

PROBLEM STATEMENT

Explosive attacks or events can occur without warning at any location, posing significant risk. Explosions can cause severe property damage and result in injury or loss of life to people in the vicinity. The magnitude of an explosion depends on its location and the type of explosive used. While Greene County has not yet experienced a major explosion, the nation has witnessed several devastating events. Explosions often target densely populated areas and large public gatherings. Mitigation solutions for explosive events include enhanced first responder and hospital training, public awareness efforts, and comprehensive emergency planning.

3.4.12 HUMAN-CAUSED HAZARD: TERRORISM - NUCLEAR

HAZARD PROFILE

This hazard profile focuses on one of five events categorized as terrorism or targeted violence in this plan. Projects referring to any of these five hazards may specifically identify the terrorist event they address or refer to it more generally as “Targeted Violence” or “Terrorism” in broader projects. Each hazard has a distinct profile to better understand the risks posed to Greene County.

Depleted uranium, radiation, X-rays, nuclear power, and nuclear waste are examples of nuclear materials. The science behind nuclear energy and weapons is complex, and the damage sustained would be devastating.

Atoms

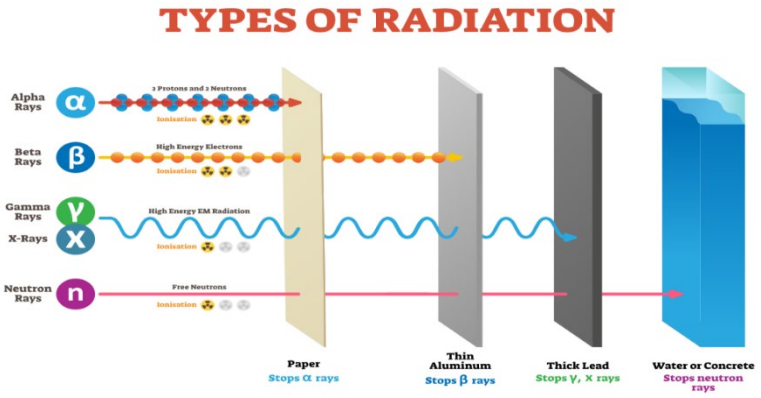
Everything is made up of atoms. Atoms combine to form molecules (e.g., water or H_2O, is a molecule consisting of two hydrogen atoms and one oxygen atom). Each atom has three subatomic particles: protons, neutrons, and electrons. The number and arrangement of these particles determine how atoms differ from each other on the periodic table. Since the proportions of these particles can vary, atoms can exist in different forms, known as isotopes. Some isotopes are stable, meaning their composition remains unchanged over time, while others are unstable and undergo changes in composition. This process is called radioactive decay.

During radioactive decay, an atom loses energy by emitting ionizing particles and radiation, transforming it into a new atom. The original atom is called a parent nuclide, and when it decays, it becomes a daughter nuclide. The decay process can involve alpha decay, beta decay, or spontaneous fission. Alpha and beta decay cause an atom to lose subatomic particles, while spontaneous fission involves the atom splitting into smaller parts, releasing energy and often emitting gamma rays.

Types of Rays

After undergoing radioactive decay, an atom can emit different types of rays. The image below shows four types of rays and their strengths. From top to bottom:

- Alpha rays can be stopped by a sheet of paper.
- Beta rays can be stopped by an aluminum plate.
- Gamma rays and x-rays are very strong and can only be stopped by dense materials like lead.
- Neutron particles/rays can be stopped by a thick wall of water.



For more information on the types of rays, refer to the Radiological Hazard section of this plan.

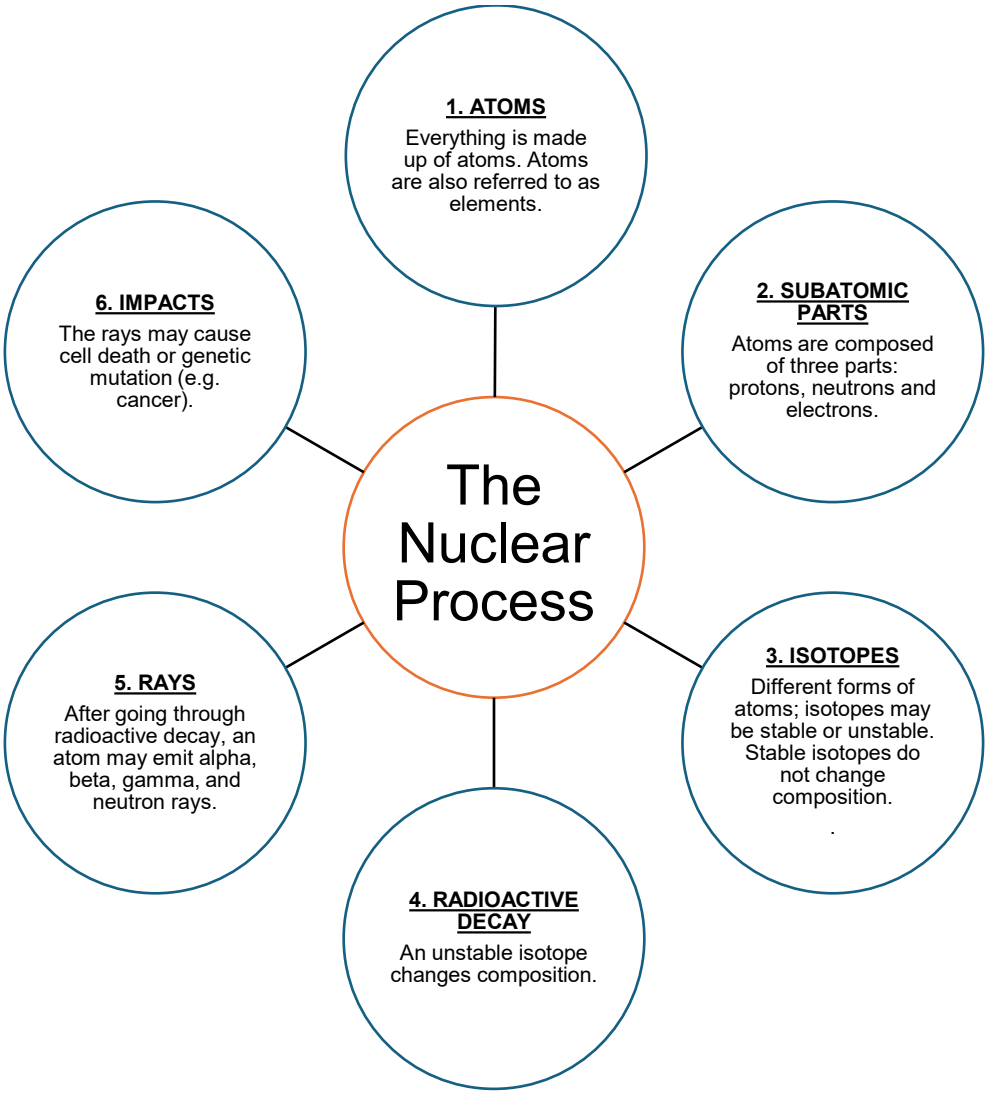
Fusion

Fusion occurs when two light nuclei combine to form a heavier nucleus. Fusion reactions are used in thermonuclear weapons and nuclear reactors (e.g., two hydrogen isotopes fuse to create a helium isotope). Fusion is challenging because atomic nuclei repel each other, requiring an immense force to bring them together and produce a large burst of energy. The Sun uses fusion to generate heat, and an early fusion-induced supernova explosion scattered elements like lead, gold, and silver across the Earth.

Fission

Fission occurs when a heavy nucleus splits into two smaller nuclei. It is similar to bowling: a large isotope (the bowling ball) strikes smaller elements (the pins), breaking them apart. When comparing the mass of the atoms before and after the process, the final mass is less than the initial mass. The missing mass is converted into energy, known as the mass defect. This phenomenon can be explained by Einstein's famous equation, $E=mc^2$, where the missing mass is multiplied by the speed of light squared to calculate the energy produced during fission.

Figure 3.4.47 The Nuclear Process



GEOGRAPHIC LOCATION

If a nuclear device were detonated, predicting the areas affected would be challenging. Radioactive fallout depends on unpredictable weather conditions. No area in the United States, including Greene County, is completely free from the risk of exposure to deadly radiation after such an event.

STRENGTH/MAGNITUDE/EXTENT

Nuclear detonation would result in significant damage and numerous casualties. The impact could potentially affect the entire population within the affected area. Areas near the explosion would experience direct effects (blast, heat, and initial radiation), while regions further away would suffer from the indirect effects, primarily radioactive fallout. Some areas might experience non-lethal levels of radiation, while others could be exposed to lethal doses. While a nuclear attack is unlikely, a transportation incident involving nuclear waste in Greene County is a more probable scenario. If nuclear waste were spilled on any of the local roadways or railroads, it would constitute a serious incident.

Weapons

A nuclear weapon is an explosive device that derives its destructive power from nuclear reactions, either fission or fusion. Nuclear weapons are categorized based on the type of nuclear energy they use:

- Fission reactions produce weapons commonly known as atomic bombs or A-bombs.
- Fusion reactions produce weapons called thermonuclear weapons or hydrogen bombs. These derive their energy from the fusion of hydrogen isotopes (deuterium and tritium). While fission weapons have a limited energy output, fusion weapons can release an unlimited amount of energy. The United States, Russia, the United Kingdom, China, France, and India are the only countries that have conducted thermonuclear weapon tests.

Modes of Transportation

Developing and maintaining the delivery system for nuclear weapons is one of the most resource-intensive aspects of nuclear weapons programs. Since the 1940s, approximately 57 percent of the U.S. financial resources dedicated to nuclear weapons have been spent on deployment. The preferred method of transporting a nuclear weapon is via missile. These missiles can be short-range, allowing the warhead to be delivered beyond the horizon. While short-range missiles provide faster delivery, intercontinental ballistic missiles (ICBMs) and submarine-launched ballistic missiles (SLBMs) offer global delivery with a high probability of success.

Transportation of Nuclear Waste

The Missouri State Mitigation Plan (2023) identifies Missouri as a key crossroads for the rail and truck transport of nuclear waste, particularly on the way to the Yucca Mountain testing site in Nevada. One of the most frequently used interstates, I-44, runs through Greene County. Additionally, the U.S. Department of Energy ships radioactive waste by truck to repositories in Texas and Utah, passing through Missouri, including Springfield, on I-44.

Mutually Assured Destruction (MAD)

Mutually Assured Destruction (MAD) was once an effective deterrent against nuclear weapons use, particularly during the Cold War era. The concept, introduced during the Johnson administration, has lost prominence over time. The Bush administration withdrew from the Anti-Ballistic Missile Treaty based on the assumption that smaller, more precise nuclear devices could reduce civilian casualties.

PREVIOUS OCCURRENCES

There have been no nuclear attacks or events in Greene County. While the likelihood of such an event remains low, changes in global politics and emerging threats may alter the risk. While more heavily populated areas may be at a higher risk for a nuclear event, Greene County could still be impacted by fallout or radiation exposure from fleeing populations.

PROBABILITY OF FUTURE OCCURRENCE

The probability of a nuclear event occurring in Greene County is extremely low, with the State of Missouri estimating less than a one percent chance of such an event. However, Greene County is still listed as a potential area that could be affected by terrorism-related nuclear events.

VULNERABILITY OVERVIEW

A strategic nuclear attack on the U.S. could have catastrophic and far-reaching consequences. While the likelihood of such an event remains low, the existence of nuclear weapons means there is always a risk. Conventional warfare is a more likely scenario based on current information. Nuclear incidents or transportation accidents involving nuclear materials would likely offer no warning, and cleanup efforts for transportation incidents could take days or weeks.

According to the Missouri State Hazard Mitigation Plan, direct effects of a nuclear incident include intense heat, blast energy, and high-intensity nuclear radiation. These effects are typically limited to the immediate area of detonation (up to 22 miles), depending on the weapon's size, burst altitude, and atmospheric conditions. The indirect effects are much more severe. Nuclear detonation causes intense heat, blast, and overpressure, leading to severe injuries and fatalities in the surrounding area, as well as radiation poisoning at distant locations. Ground-level detonation can create a radioactive mushroom cloud, with particles that can travel hundreds of miles before falling as fallout. While many U.S. areas would likely avoid fallout or face only non-lethal radiation levels, the unpredictability of weather means that no region is completely safe from exposure to lethal radiation following a nuclear attack. Non-lethal radiation exposures can cause long-term health effects, contamination of food and water supplies, and long-lasting damage to the environment.

POTENTIAL LOSSES TO EXISTING DEVELOPMENT

The potential losses from a large nuclear event include extensive damage to infrastructure and critical facilities, as well as the loss of human and animal life. The extent of damage would largely depend on the scale of the incident. A transportation spill involving nuclear waste would cause less damage than a full-scale nuclear detonation.

IMPACT OF PREVIOUS AND FUTURE DEVELOPMENT

As noted in the Missouri State Hazard Mitigation Plan, global relationships between nations evolve constantly, shifting from adversarial to friendly, often influenced by factors like energy shortages, water availability, and changing weather patterns. These geopolitical changes could affect the likelihood of nuclear threats.

EMAP CONSEQUENCE ANALYSIS

Table 3.4.38 EMAP Impact Analysis: Nuclear

Subject	Detrimental Impacts
Public	There are no reported nuclear incidents in Greene County, and as a result, no recorded injuries or deaths. A nuclear spill would present significant safety concerns, while a nuclear attack would likely prove catastrophic.
Responders	Responders would face some safety concerns in a nuclear incident but would be protected if they have the proper personal protective equipment.
Continuity of Operations	The delivery of services would be catastrophic in a large-scale incident. However, Greene County has not yet experienced an impact on service delivery.
Property, Facilities, and Infrastructure	There are no records of property damage due to a nuclear incident in Greene County. A nuclear spill on the highway would result in minor, isolated damage, while a large-scale nuclear attack would be catastrophic, resulting in extensive damage to infrastructure and facilities. Greene County has not experienced damage to facilities or infrastructure from nuclear incidents.
Environment	The environment would be destroyed in the event of an attack; however, Greene County has no records of environmental damage from a nuclear incident.
Economic Condition of Jurisdiction	A large-scale nuclear incident would cause catastrophic damage to the economy. However, Greene County has experienced no impact on its economy from nuclear incidents.
Public Confidence in Jurisdiction Governance	The public confidence in governance would be severely impacted in large-scale incidents. However, Greene County has experienced no impact on the public confidence in governance from nuclear incidents.

HAZARD SUMMARY BY JURISDICTION

The entire planning area is at low risk for a nuclear event. However, cities such as Springfield, Republic, Ash Grove, and Springfield Public Schools have proactively addressed this hazard, despite its low probability. Other school districts would rely heavily on support from their cities and fire protection districts. Additionally, Greene County's 9-1-1 Emergency Communications Call Center has developed plans to address the potential impacts of a nuclear incident.

PROBLEM STATEMENT

Nuclear incidents or attacks have the potential to cause devastating damage and significant health effects to both humans and animals. These incidents can be triggered by a nuclear weapon or a nuclear waste accident. Although no such incidents have occurred in Greene County, the existence of nuclear weapons and materials means that the hazard remains a concern for the planning area. Nuclear events are difficult to mitigate, with one of the most effective strategies being thorough planning and training. While relocating critical facilities farther from railroads could reduce risk, implementing such a change would be challenging.

3.4.13 HUMAN-CAUSED: TERRORISM - RADIOLOGICAL

HAZARD DESCRIPTION

This hazard profile focuses on one of the five events categorized as terrorism or targeted violence in this plan. Projects related to any of these hazards may specifically address the terrorist event in question or refer to it more broadly as “Targeted Violence” or “Terrorism”. Each hazard has its own distinct profile to help better understand the risks it poses to Greene County.

Radiological materials are commonly used, and many people unknowingly encounter items made of radioactive material. Laboratories, medical centers, food irradiation plants, and industrial companies routinely use these materials. While low-level exposure to radioactive materials may not be harmful, exposure to higher levels of radiation can be dangerous to humans, animals, and the environment.

Types of Radiation

Radioactive material is classified by the type of radiation it emits. There are four main types: alpha, beta, gamma, and x-ray radiation.

Neutron radiation is also encountered in nuclear power plants, high-altitude flights, and some industrial sources. For more information, refer to the Nuclear Hazards Profile and Vulnerability section.

Alpha Radiation

Alpha radiation consists of heavy, short-range particles, essentially an ejected helium nucleus. Most alpha radiation cannot penetrate human skin. However, alpha-emitting materials can be harmful if inhaled, swallowed, or absorbed through open wounds. Instruments cannot detect alpha radiation through even a thin layer of water, dust, paper, or other materials, as alpha particles are not penetrating. While alpha radiation travels only a short distance (a few inches) in the air, it is not considered an external hazard. Examples of alpha radiation include radium, radon, uranium, and thorium.

Beta Radiation

Beta radiation consists of light, short-range particles, essentially an ejected electron. Beta particles can travel several feet in the air and have moderate penetrating power. Beta radiation can penetrate human skin to the "germinal layer," where new skin cells are formed. If high levels of beta-emitting contaminants remain on the skin for extended periods, they can cause skin injuries. Beta-emitting contaminants may also be harmful if deposited internally. Examples of beta radiation include hydrogen-3 (tritium), carbon-14, sulfur-35, and strontium-90.

Gamma Radiation

Gamma radiation is highly penetrating electromagnetic radiation. Gamma rays can travel many feet in the air and several inches through human tissue. They can penetrate most materials and are often referred to as "penetrating" radiation. Examples of gamma radiation include iodine-131, cesium-137, cobalt-60, radium-226, and technetium-99m.

X-Ray Radiation

X-rays are similar to gamma rays in that they are both penetrating radiations. Sealed radioactive sources and machines emitting gamma and x-ray radiation generally present an external hazard to humans. Both gamma and x-rays are forms of electromagnetic radiation, like visible light, radio waves, and ultraviolet light. The primary difference between gamma rays and x-rays is their energy levels, with gamma rays having the highest energy.

GEOGRAPHIC LOCATION

Radiation is commonly used in universities and laboratories for scientific research, in medical and veterinary hospitals and clinics for diagnosis and treatment, and in nuclear pharmacies for the manufacturing and distribution of radiopharmaceuticals. Blood banks also use radiation to sterilize blood, while companies that offer sterilization services, facility decontamination, and waste processing routinely handle radioactive materials.

The nearest significant sources of nuclear radiation to Greene County are in St. Louis, Missouri, Lawrence, Kansas, and Jonesboro, Arkansas.

STRENGTH/MAGNITUDE/EXTENT

The potential damage caused by radiation exposure depends on several factors:

- Type of radiation
- Dose (amount) of radiation
- Method of exposure (skin contact, inhalation, ingestion, or radiation passing through the body)
- Concentration of radiation in the body and its duration of retention
- The body's sensitivity to radiation

High levels of radiation exposure over a short period can cause skin burns and lead to Acute Radiation Syndrome (ARS), which includes symptoms such as headaches and diarrhea.

Intentional Release

An intentional release refers to a radiological attack, where radioactive material is deliberately dispersed to cause harm. A Radiological Dispersal Device (RDD), commonly known as a dirty bomb, uses conventional explosives to spread radioactive material over a targeted area. Unlike a nuclear bomb, which creates widespread radioactive fallout, a dirty bomb would only disperse radioactive particles within a few city blocks or miles. In contrast, a nuclear bomb would release radioactive material over tens to hundreds of square miles. Another form of intentional radioactive exposure includes using small amounts of radioactive material to poison a small group of people.

Unintentional Release

An unintentional release could occur from spills, improper disposal of hazardous waste, or mishandling radioactive materials without proper knowledge of their dangers.

Naturally Occurring Radiological Hazards

Naturally Occurring Radioactive Material (NORM) is found in virtually all rocks, minerals, and soils. According to the Health Physics Society, these materials naturally contain small amounts of uranium, thorium, and radioactive potassium isotopes. Plants and animals are also naturally radioactive due to the presence of radioactive isotopes like potassium, carbon (C-14), and hydrogen (tritium or H-3), which are formed by interactions with cosmic rays in the atmosphere.

Commonly Encountered Radionuclides

The Environmental Protection Agency (EPA) identifies 12 commonly encountered radioactive nuclides, or radionuclides. A radionuclide is an atom with an unstable nucleus that emits excess energy. This energy can be released as radiation either within the nucleus or to an atomic electron. As the radionuclide undergoes radioactive decay, it emits radiation in the form of alpha particles, beta particles, gamma rays, or X-rays.

Table 3.4.39 Commonly Encountered Radionuclides and Their Uses

Name	Type	Uses
Americium-241	Alpha, Gamma	Smoke detectors, diagnostic devices, gauges
Cesium-137	Beta, Gamma	Density gauges, leveling gauges
Cobalt-60	Beta, Gamma	Leveling devices, radiotherapy, sterilization of spices and foods
Iodine-129 & 131	Beta, Gamma	Tracks metabolism of drug compounds, helps diagnose and treat thyroid issues
Plutonium	Alpha, Beta, Gamma	Nuclear weapons, power sources
Radium	Alpha, Gamma	Radiography devices, tips of lightning rods
Radon	Alpha	Radon has very little practical use
Strontium-90	Beta	Radioactive tracer in medical and agricultural studies, portable power supplies
Technetium-99	Beta, Gamma	Found in radioactive waste from defense facilities, nuclear reactors, hospitals, and research establishments
Tritium	Beta	Trigger mechanisms in thermonuclear weapons, produced commercially in reactors, self-luminescent devices
Thorium	Alpha, Gamma	Ceramic glazes, lantern mantles for brightness, aerospace industry metals
Uranium	Alpha, Gamma	Depleted uranium for tank shielding, missile and bullet parts, nuclear propulsion, nuclear weapons

Source: Commonly Encountered Radionuclides, EPA

The previously listed radionuclides are important for understanding how hazardous material interacts with communities on a regular basis. These materials could be released intentionally or unintentionally.

PREVIOUS OCCURRENCES

In 2008, Greene County, Missouri, experienced an accidental radiation exposure incident. A construction worker operating a motor grader inadvertently struck a soil compression gauge, which utilizes both alpha and gamma radiation to assess soil depth and composition. The impact caused the gauge's alpha source to break and displaced the gamma source from its protective cast-iron casing. The gamma source is typically confined within the cast-iron box to shield workers from unsafe radiation levels. In response, the construction worker manually reinserted the gamma source back into the box. The entire device was then secured within a larger cast-iron box and transported to a designated safe facility. Throughout this process, the worker's exposure to radiation was monitored and remained within a safe range. Additionally, the emissions from the device were measured during transport and found not to pose any risk to the public.

PROBABILITY OF FUTURE OCCURRENCES

The likelihood of a nuclear attack occurring remains extremely low. While small-scale exposure incidents, such as the 2008 event, may recur, they are expected to be rare. The State of Missouri has assessed the probability of a significant nuclear event at less than one percent. Despite the low risk, the community has chosen to recognize this hazard as a potential concern for the planning area.

CHANGING FUTURE CONDITIONS AND CONSIDERATIONS

Climate change is not expected to influence the occurrence or impact of radiological events in Greene County.

VULNERABILITY OVERVIEW

Radiation exposure poses potential health risks to the entire population, with the severity depending on the amount and type of exposure. Children and fetuses are particularly vulnerable due to their rapidly dividing cells, which are more susceptible to radiation-induced damage. Several sites in the area, such as hospitals with x-ray equipment and construction sites with radiation gauges, house radioactive materials. As a result, some members of the community may encounter varying levels of radiation.

While the likelihood of a large-scale release of radioactive material, such as from a dirty bomb, is minimal, such an event would have devastating consequences for Greene County. Even a small-scale radiological incident, like a dirty bomb, could cause significant property damage and health impacts if detonated in a densely populated area.

The public's fear of radiation stems from its invisible and intangible nature, making it a particularly challenging hazard to address.

POTENTIAL LOSSES TO EXISTING DEVELOPMENT

The primary potential losses resulting from a radiological incident include harm to humans, animals, and critical infrastructure. The severity of the impact would depend on the type and scale of the incident. Potential losses could also involve the costs of repairing or replacing damaged facilities, economic losses due to business interruptions, and human fatalities or injuries. While radiological incidents are rare, specific estimates of losses from past occurrences are not available.

IMPACT OF PREVIOUS AND FUTURE DEVELOPMENT

Population growth could influence the number of people potentially affected by a radiological event. As Springfield continues to grow, it may become more vulnerable to such incidents. Although the probability of a radiological attack remains low, a growing population could increase the potential risk in the future.

EMAP CONSEQUENCE ANALYSIS

Table 3.4.40 EMAP Impact Analysis: Radiological

Subject	Detrimental Impacts
Public	The only recorded radiological incident resulted in no injuries or deaths; however, an attack could cause catastrophic damage.
Responders	Responders face some safety concerns but are protected if they have the proper personal protective equipment.
Continuity of Operations	In a large-scale incident, the delivery of services could be catastrophic. However, Greene County has not experienced an impact on the delivery of services in previous incidents.
Property, Facilities, and Infrastructure	The only radiological incident in Greene County caused no damage to property, facilities, or infrastructure. A large-scale attack, however, could result in catastrophic damage to property, facilities and infrastructure.
Environment	The environment would be destroyed in the event of a large-scale radiological attack. However, historical incidents have shown no lasting damage to the environment.
Economic Condition of Jurisdiction	The economy would experience catastrophic impacts in the event of a large-scale incident. Greene County has, to date, not seen any economic impact from a radiologic incident.
Public Confidence in Jurisdiction Governance	Public confidence in governance could be severely impacted in a large-scale incident. Greene County has not experienced any loss of public confidence in governance due to a radiological event.

HAZARD SUMMARY BY JURISDICTION

Radiation exposure poses a potential risk to the entire planning area in the event of either an intentional release or targeted attack. Such actions would be aimed at specific locations. Within the planning area, the City of Springfield faces a heightened risk due to its high population density in concentrated areas. An unintentional release could occur from incidents such as spills or the improper disposal of hazardous waste. For example, spills along the I-44 corridor would put areas such as Strafford, including the Strafford School District, and the City of Springfield at risk. Additionally, jurisdictions along railroad tracks within the planning area could be vulnerable to such incidents. The map below illustrates the locations of railroads in the planning area.



PROBLEM STATEMENT

Radiation is a substance that may be encountered in day-to-day activities within the planning area. While routine exposure to low levels of radiation is generally not harmful, high doses can cause significant harm to both human and animal health. Although the likelihood of a major radiation incident in Greene County is low, it remains a potential threat. A radiation attack in the planning area, while improbable, could have catastrophic consequences. The severity of radiation exposure depends on several factors, including the type, location, and amount of radiation involved.

Mitigation strategies for radiological events are limited. Potential measures could include minimizing exposure to large groups of people. Notably, no jurisdiction within the planning area has developed a specific project to address radiological hazards.

3.4.13 HUMAN-CAUSED HAZARD: TERRORISM - TARGETED VIOLENCE

HAZARD PROFILE

Targeted violence refers to deliberate acts of harm or murder directed at specific individuals or groups, typically in response to actions or perceived wrongs committed by the victims. According to the U.S. Secret Service, targeted violence incidents often involve perpetrators and their intended targets being identifiable prior to the attack. This type of violence can take various forms, including:

Types of Targeted Violence

- **Schools:** Over the past decade, there have been numerous incidents where students at various educational levels, from elementary schools to universities, have planned and carried out violent acts resulting in harm or fatalities.
- **Bombings:** Attacks by terrorist organizations, such as bombings of U.S. embassies, are common examples of targeted violence.
- **Hijacking of Airlines:** As detailed under technological hazards, hijacking is another form of targeted violence.

One of the key challenges with this human-caused hazard is its unpredictability. Typically, there is little to no warning or indication of when or where such an incident may occur. Targeted violence can happen in public spaces, private residences, workplaces, schools, religious institutions, or government buildings. While public spaces such as schools, workplaces, and government facilities are often targeted, the potential for attacks exists anywhere. Efforts to prevent and mitigate targeted violence face significant challenges. Legal and societal debates surrounding issues such as gun rights, privacy concerns, and civil liberties often hinder these efforts. Striking a balance between protecting individual freedoms, preserving privacy, ensuring academic and workplace freedoms, and maintaining a safe environment is a complex and ongoing task.

Targeted violence can stem from a variety of motivations. Some perpetrators may act in support of a cause or violent ideology, while others may be driven by personal grievances. In some cases, the attacker may view the act itself as the primary objective. The following outlines some of the most common reasons for targeted violence.

- Related to an intimate relationship
- Retaliation for specific actions
- Refused advances or obsession with the target in response to academic stress or failure
- Sexual violence involving acquaintances or strangers
- Psychotic actions
- Workplace dismissal or sanction
- Need to kill or specific victimology
- Desire to draw attention to oneself or an issue
- Bias-related motives

Sabotage

Sabotage involves intentional actions aimed at damaging, destroying, or incapacitating individuals, organizations, or assets. It can be motivated by political objectives, military strategy, or personal grievances in the workplace.

According to the FBI, former employees often engage in sabotage as an act of retaliation against their employers. These individuals may use their prior access to company systems to destroy data, steal sensitive customer information, make unauthorized financial transactions, or exfiltrate trade secrets. The financial losses from such acts can be substantial, with some incidents resulting in damage exceeding $3 million.

Public offices, government centers, and depots are particularly vulnerable to sabotage due to their prominence and access to sensitive information. In the workplace, sabotage can manifest in various forms, but organizations often avoid publicizing these incidents to prevent negative publicity or the potential of copycat actions. Employee saboteurs may target a company's property, reputation, or operational capacity. Common forms of workplace sabotage include equipment destruction, including computer viruses, food or chemical poisoning, deliberately slow work performance, theft, and mistreating customers. Some acts of sabotage, such as computer viruses, are more difficult to detect, while more overt actions, like arson, are easier for security personnel or law enforcement to address. The severity of sabotage incidents can vary significantly, depending on the method used and the extent of the damage caused.

GEOGRAPHIC LOCATION

The entire planning area is susceptible to targeted violence, though high-traffic locations such as schools, universities, religious institutions, malls, and theaters are more frequently targeted. Greene County is home to over 17 colleges and universities, including Missouri State University with 22,000 students, Ozarks Technical Community College (OTC) with 15,000 students, and Drury University with 5,000 students. Additionally, the county has one of the largest K-12 student populations in the state, with approximately 92 public schools and over 19 private and alternative schools. Major religious sites in the area include Temple Israel (synagogue) in Rogersville and the Islamic Center of Springfield (mosque).

STRENGTH/MAGNITUDE/EXTENT

The impact of targeted violence can vary depending on the type of attack and the method used. The causes of violence are multifaceted and occur across multiple levels, making them difficult to attribute to any single factor. To capture this complexity, the ecological or social-ecological model is often employed. This model categorizes factors influencing violence across four levels:

- **First Level:** Focuses on biological and personal factors that affect individual behavior and increase the likelihood of becoming a victim or perpetrator of violence. These factors include demographic characteristics (such as age, education, and income), genetics, brain injuries, personality disorders, substance abuse, and a history of experiencing, witnessing, or engaging in violent behavior.
- **Second Level:** Addresses close relationships, particularly those with family and friends, and how they may influence violent behavior.
- **Third Level:** Examines the community context, including environments such as schools, workplaces, and neighborhoods, and how they may impact the likelihood of violence.
- **Fourth Level:** Looks at broad societal factors that create an environment where violence may be encouraged or inhibited. These include the responsiveness of the criminal justice system, social and cultural norms regarding gender roles and parent-child relationships, income inequality, the strength of the social welfare system, the social acceptability of violence, the availability of weapons, exposure to violence in the mass media, and political instability.

Mass Shooting

Over the past five years, mass shootings have increasingly become a significant concern across the nation. A mass shooting is typically defined as an act of violence involving a firearm, in which four or more victims are killed. In contrast, a targeted violence shooting event refers to any act of violence in which a perpetrator specifically targets an individual or group with a firearm, regardless of the number of casualties. Several factors may contribute to a mass shooter's decision to carry out such an attack, including:

- Low capacity for coping with rejection or criticism
- Interpreting criticism as bullying or an attack
- Belief they are the victim and should protect themselves
- Perception that murder is justifiable homicide or self-defense
- Support for justice through the death penalty
- Belief that they are judge, jury, or executioner
- Racial or political beliefs that differ from those of the target

PREVIOUS OCCURRENCES

Greene County has experienced very few mass shootings or targeted violence incidents. A mass shooting is defined as an event in which four or more victims, excluding the perpetrator, are injured or killed at a single location. While mass shootings are a form of targeted violence, they are the only type that has impacted Greene County to date. However, targeted violence is on the rise nationwide, a trend that will be further discussed below.

Table 3.4.41 Mass Shootings in Greene County 2014 - 2024

Location	Date	Injuries	Deaths
Springfield	November 15, 2014	0	4
Springfield	November 1, 2018	2	3
Springfield	December 23, 2018	6	1
Springfield	March 15, 2020	2	5
Springfield	February 11, 2022	4	0

Below is a graphic created by the Gun Violence Archive, an online platform that collects data daily from over 7,500 law enforcement and commercial sources daily. Founded in 2013, it is a not-for-profit organization dedicated to providing free online public access to this information.

Figure 3.4.48 Data on Gun Violence 2015-2024

GVA - *10 Year Review*	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Deaths: Willful, Malicious, Accidental	13,777	15,375	15,907	15,071	15,667	19,850	21,383	20,514	19,135	16,725
Injuries: Willful, Malicious, Accidental	26,907	30,597	31,353	28,175	30,196	39,526	40,626	38,599	36,562	31,646
Mass Shooting	332	383	347	335	414	611	689	644	659	503
Mass Murder	21	25	20	19	31	21	28	36	40	30
Children [age 0-11] Killed	202	231	234	198	211	303	313	314	301	250
Children [age 0-11] Injured	477	434	487	464	485	701	745	679	644	547
Teens [age 12-17] Killed	626	727	823	736	795	1,105	1,278	1,392	1,407	1,171
Teens [age 12-17] Injured	2,074	2,429	2,439	2,142	2,340	3,067	3,403	3,821	3,896	3,239
OIS - Officer Killed	40	68	49	55	69	59	68	72	53	75
OIS - Officer Injured	275	297	286	270	295	346	370	341	369	322
OIS - Suspect Killed	1,007	1,152	1,232	1,273	1,290	1,299	1,326	1,397	1,444	1,445
OIS - Suspect Injured	742	779	890	883	795	927	890	866	811	806
Defensive Gun Use	1,400	1,992	2,118	1,881	1,633	1,551	1,367	1,286	1,286	1,220
Unintentional Shooting	1,995	2,236	2,070	1,693	1,906	2,328	2,022	1,648	1,611	1,436
Murder-Suicides	532	548	612	624	634	570	593	673	682	667
Suicide Data provided by CDC Suicide by Firearm	22,018	22,938	23,854	24,432	23,941	24,292	26,328	27,038	27,310	Pending

September 11, 2001

The 9/11 attacks remain one of the worst instances of targeted violence in U.S. history. On that day, nineteen al-Qaeda terrorists hijacked four airplanes. Two of the planes crashed into the North and South Towers of the World Trade Center, while a third struck the Pentagon. The fourth plane crashed into a field after passengers and crew attempted to regain control upon learning about the other hijackings. The attacks resulted in nearly 3,000 deaths.

September 21, 2010

On September 21, 2010, a power substation was deliberately destroyed, causing a power outage in the Willard, Ash Grove, and Bois D'Arc areas. As a result, over 2,900 people lost power, and traffic lights at the I-44 and West Bypass interchange were also impacted.

PROBABILITY OF FUTURE OCCURRENCES

Over the past decade, there have been six targeted violence events in the area resulting in death or injury to four or more individuals. Based on this data, the probability of another such event occurring in the planning area is approximately 50 percent.

CHANGES IN FUTURE CONDITIONS AND CONSIDERATIONS

While climate change is not expected to directly impact the occurrence of targeted violence, it may contribute to rising global tensions. As discussed in the Explosives section, these tensions could be exacerbated by factors such as the scarcity of clean, accessible water.

VULNERABILITY OVERVIEW

Targeted violent attacks are often unpredictable, with little to no warning. Although perpetrators sometimes share their intentions through social media or inform others beforehand, such cases are rare. Security efforts to identify at-risk individuals can help spot potential threats, but they offer limited insight into the timing and location of an attack. Greene County, the fourth most populous county in Missouri, also has one of the largest student populations in the state. In situations where violence, such as riots, occurs, it is often difficult for law enforcement to effectively control the situation. While police may be present from the outset in some cases, in others, their arrival may be delayed, allowing the situation to escalate.

POTENTIAL LOSSES TO EXISTING DEVELOPMENT

Acts of targeted violence can result in significant losses, both in terms of life and financial impact. In the case of mass shootings, some of the cost factors include:

- Loss of life
- Injured workers
- Hospital trauma resources
- Labor costs
- Property loss

After a mass casualty event or attack, post event factors may include:

- Psychological impacts
- Resiliency of faculty
- Insurance premiums
- Uninsured losses
- Investigation costs
- Funeral costs
- Health care costs
- Credit impacts
- Counseling costs

IMPACT OF PREVIOUS OR FUTURE DEVELOPMENT

As noted previously, Greene County is home to one of the largest school districts in the United States. As the county's population continues to grow, so does the number of students. While school shootings are not a new concern, they have become an increasingly significant threat across the nation. Many schools conduct active shooter drills, yet they remain vulnerable to targeted attacks. Additionally, Greene County is home to several prominent universities, which also face similar risks. As both the population and visibility of Greene County increase, so does the likelihood of experiencing an attack.

EMAP CONSEQUENCE ANALYSIS

Table 3.4.42 EMAP Impact Analysis: Targeted Violence

Subject	Detrimental Impacts
Public	Targeted violence can result in both injuries and fatalities. The severity of these outcomes depends on the specific circumstances of the event. Historically, targeted violence tends to lead to a high number of injuries and relatively few fatalities.
Responders	Responders may face life safety risks depending on the nature of the situation. Response capabilities could be affected by factors such as the number of attackers, the size of the affected population, and the type and quantity of weapons involved.
Continuity of Operations	Targeted violence is unlikely to significantly impact the continuity of essential services or operations.
Property, Facilities, and Infrastructure	Property damage from targeted violence may occur in isolated instances, depending on the location and nature of the attack. Similarly, there could be occasional damage to facilities and infrastructure.
Environment	The environment would likely experience little to no impact from targeted violence.
Economic Condition of Jurisdiction	Targeted violence would likely have minimal to no effect on the local economy.
Public Confidence in Jurisdiction Governance	While targeted violence would have limited direct effects on public confidence in governance, trust in local authorities could erode if the public perceives a delayed or inadequate response in preventing or managing the situation.

HAZARD SUMMARY BY JURISDICTION

Historically, all targeted violence incidents resulting in the death or injury of more than four people have occurred in Springfield. While the rest of the county and planning area could be at risk, larger cities such as Springfield and Republic are at the highest risk. Both the City of Springfield and the City of Republic have addressed targeted violence in their Mitigation Strategies. School districts also mentioned targeted violence in their plans but, for the most part, rely on the responses of their respective cities and fire protection departments when necessary.

PROBLEM STATEMENT

Targeted threats can come in many forms including mass shootings, hijackings, bombings, and more. Depending on the nature of the attack and its location, targeted threats can lead to significant property damage and loss of human life. Additionally, targeted violence can cause public panic. These threats are unpredictable and often come with little to no warning. While no major events have occurred in Greene County, similar incidents are happening across the nation and remain a potential threat to the planning area. Mitigation strategies include training for staff who work in schools or large workplaces, implementing secure school entrances, and conducting exercises for both staff and students. Many school districts have created projects aimed at mitigating targeted violence, which can be found in the Mitigation Strategy Section of this mitigation plan.

3.4.14 HUMAN-CAUSED HAZARD: CYBER

HAZARD PROFILE

Cybersecurity involves protecting infrastructure by preventing, detecting, and responding to cyber incidents. Unlike physical threats, which often prompt immediate action, cyber incidents can be more difficult to identify and may go undetected for extended periods. The spectrum of cyber risks is vast, with threats ranging from basic to highly sophisticated, each having varying levels of impact on individuals, communities, organizations, and even at the national level. The following table outlines different types of cyber threats and associated risks. As technological capabilities advance, cyber threats evolve rapidly—attack tactics and methods are constantly improving and adapting. Common methods through which computers and networks are accessed include:

- Removable media, such as flash drives
- Brute force attacks, using trial and error to decode encrypted data
- Web or email-based attacks
- Unauthorized use of your organization's system privileges
- Loss or theft of devices containing confidential information

CLASSIFICATIONS

Malware

Malware, or malicious software, is a program designed to infiltrate a system and compromise the confidentiality, integrity, or availability of data. It has become one of the most significant external threats to systems, often operating covertly to affect data, applications, or operating systems. Malware can cause widespread damage and disruption, and removing it typically requires substantial effort from organizations. Spyware, a common form of malware, is used to track and collect personal activities and information for financial fraud purposes.

Ransomware

Ransomware is a form of malware that prevents or restricts users from accessing their systems or data. The attacker demands a ransom, often paid through online methods such as virtual currencies, in exchange for restoring access. Ransomware has become one of the most prevalent forms of cyberattacks, rapidly and evolving and often difficult to detect before significant damage occurs.

Distributed Denial of Service (DDoS) Attacks

A Distributed Denial of Service (DDoS) attack overwhelms an online service by generating excessive traffic from multiple locations and sources. This causes slowdowns and makes websites or services inaccessible. DDoS attacks are often used in conjunction with other cyberattacks to create a distraction while additional malicious actions are carried out.

Spam and Phishing

Spam refers to unwanted, unsolicited, or undesirable messages and emails. Phishing, a type of social engineering, is an attempt to steal sensitive information by posing as a trustworthy individual or organization. Cyber attackers often masquerade as official representatives and send fraudulent messages, directing the victim to fake websites and requesting confidential information. These attacks may appear legitimate, but the information provided is sent directly to the cyber criminals.

Corporate Account Takeover (CATO)

Corporate Account Takeover (CATO) occurs when cybercriminals impersonate a business and execute unauthorized wire or ACH transactions. The stolen funds are then transferred to accounts controlled by the attacker. Institutions with weak computer security and minimal control over online banking systems are especially vulnerable to this form of cybercrime, which can result in substantial financial losses for affected businesses and organizations.

Automated Teller Machine (ATM) Cash Out

Automated Teller Machine (ATM) Cash Out is a form of fraud involving large, simultaneous cash withdrawals from multiple ATMs or multiple large withdrawals from a single ATM. This type of cyberattack manipulates ATM functions to dispense more funds than the maximum allowed, often using stolen ATM or debit card information. Smaller to medium-sized financial institutions are the primary targets of this type of attack.

Cyber Terrorism

Cyber Terrorism refers to the use of the internet to carry out violent acts that cause or threaten to cause loss of life or significant harm, in order to achieve political or ideological objectives. This could involve targeting government officials for information or stealing sensitive data to identify targets for mass casualty events.

Computer as a Target

Crimes involving computers as a target require specialized technical knowledge and are typically committed by criminals with expertise in technology. As technology evolves, so do these crimes. While such crimes have existed as long as computers themselves, society and institutions are still trying to keep pace with the rapidly changing landscape of cybercrime. These crimes occur daily on the internet, affecting individuals, businesses, and governments alike.

Crimes that primarily target computer networks or devices include:

- Computer viruses
- Denial-of-service attacks
- Malware

Computer as a Tool

When an individual is the primary target of cybercrime, the computer is used more as a tool than as the target itself. These crimes typically require less technical expertise and tend to exploit human vulnerabilities. The damage caused is often psychological and intangible, which can make legal action more difficult. Many of these crimes have existed for centuries in the offline world—scams, theft, and similar offenses long preceded the development of high-tech tools. In essence, the same criminals now have access to technology that expands their potential pool of victims, making their actions harder to trace and apprehend.

Crimes that use computer networks or devices to enhance other ends include:

- Fraud and Identity Theft
- Information Warfare
- Phishing Scams
- Spam

Security Practices

Between 2004 and 2011, much of the data loss was attributed to poor security practices, insider threats, and the loss of physical devices such as computers, CDs, and flash drives. After 2011, the trend shifted toward more sophisticated data breaches, with companies and government agencies being targeted by highly skilled hackers who were seeking specific information. A recent trend involves encrypting data to make it inaccessible, followed by a ransom demand for decryption. Many of the most significant breaches began with the theft of employee account credentials, which granted hackers access to company networks. This allowed them to steal valuable information, primarily credit card details, and personal identification data such as Social Security numbers, addresses, and email addresses.

GEOGRAPHIC LOCATION

Cyberattacks have no geographic boundaries, but the types of attacks can vary based on location. Rural areas with fewer residents may be more susceptible to scams targeting individuals, such as phishing and spam. In contrast, densely populated areas with large businesses or government offices may be prime targets for cybercriminals attempting to steal sensitive corporate or governmental data.

STRENGTH/MAGNITUDE/EXTENT

The severity of a cyberattack depends on the type of data targeted and the speed with which the system can be restored. Detecting a cyberattack can be challenging, and the longer the attack remains undetected, the greater the impact. Most cyberattacks offer little to no warning and can persist for weeks, months, or even years. Cybercrimes targeting businesses can be catastrophic, leading to the following consequences:

- Loss of intellectual property and sensitive data
- Opportunity costs
- Damage to the brand image and company reputation
- Penalties and compensatory payments to customers
- Cost of countermeasures
- Loss of trade
- Distortion of trade
- Job loss

Table 3.4.43 Cyber Risks and Dangers

Risks	Dangers
Organized cybercrime, state-sponsored hackers, cyber espionage	Viruses that erase entire systems
Breaches in transportation, power, and other critical services	Systems being broken into and files altered
Data breaches and increased loss of networks in organizations	Your computer being used to attack other devices
Vulnerability of individually owned internet-connected devices	Theft of confidential information

PREVIOUS OCCURRENCES

Globally, it is estimated that a cyberattack occurs every 14 seconds, meaning thousands of individuals and businesses fall victim to various cybercrimes daily. While not all incidents affecting individuals are reported, it is likely that smaller-scale cyber events occur regularly in Greene County, though they are not included in the list below. For the purposes of this plan, the Mitigation Planner has compiled information on significant cyberattacks targeting businesses and large-scale operations within the planning area.

February 2009

In February 2009, the City of Springfield was hit by a computer virus that compromised the operating systems of over 1,000 machines. The recovery effort lasted two months, during which the entire Information Systems staff, with assistance from other city departments and City Utilities, worked to resolve the issue. All affected computers were re-imaged, and internet access was disrupted for several days.

February 2012

In February 2012, the City of Springfield's website was hacked via an SQL injection attack. More than 2,000 Social Security numbers (SSNs) were extracted from a database containing HR records and posted online. As a result, the website was temporarily taken offline, and all online applications were rewritten to address vulnerability and prevent future breaches. The FBI was involved in tracking the perpetrator, leading to their successful prosecution and a plea agreement to reimburse the city for the recovery costs.

December 2014

On December 25, 2014, a "hacktivist" launched a Distributed Denial of Service (DDoS) attack, overwhelming the CivicPlus hosting company's internet connection and causing the City of Springfield's website to become unavailable. CivicPlus successfully thwarted the attack and quickly restored the website. The hacktivist claimed responsibility on Twitter, stating that the attack was in retaliation for the city's treatment of a pit bull.

July 2018

In July 2018, the City of Springfield experienced a significant outage affecting main servers. The servers responsible for authenticating employee usernames and passwords went down, disrupting daily work processes. While the outage did not impact 911 or other emergency response systems, field police officers were required to submit handwritten reports.

April 2022

In April 2022, Ozarks Technical Community College (OTC) reported a cyber fraud incident in which a group impersonated an existing vendor that OTC regularly did business with. The scammers made several unauthorized payments before fraud was discovered, resulting in a loss of $900,000.

June 2024

In June 2024, multiple Springfield car dealerships were impacted by a nationwide cyberattack affecting over 15,000 dealerships. The attack targeted management systems responsible for processing sales, managing inventory, accounting, and other critical services.

PROBABILITY OF FUTURE OCCURRENCES

It is nearly certain that there will be future cyber-related incidents in Greene County. The most probable targets will be individuals, particularly older or younger people who may be more vulnerable to cybercrimes. Although large-scale attacks on businesses or government agencies are less frequent, attempted cyberattacks continue to occur daily.

CHANGING FUTURE CONDITIONS AND CONSIDERATIONS

Climate change does not directly impact the occurrence or nature of cybercrimes. However, indirectly, climate change can cause global political tensions, which, in turn, may influence the frequency of cyber-related crimes.

VULNERABILITY OVERVIEW

The majority of the planning area is vulnerable to cybercrime, particularly where technology, such as computers, is used for personal or business purposes. Children are especially vulnerable, as they may not be fully aware of the risks associated with using the internet. Large businesses, government facilities, educational institutions, and other major organizations are also at heightened risk of cybercrimes. According to the FBI, the following steps can help reduce vulnerability to cybercrime:

- Keep firewalls enabled
- Install or update antivirus software
- Install or update antispyware technology
- Keep the operating system up to date
- Be cautious when downloading files or software
- Turn off computers when not in use

POTENTIAL LOSSES TO EXISTING DEVELOPMENT

Cybercrimes can result in significant data loss for businesses or government facilities, especially if the attack goes undetected for an extended period. Many cyberattacks remain unnoticed for long durations, which can lead to critical facility shutdowns throughout the planning area. While cybercrimes typically do not result in substantial financial losses, they often result in theft or compromise of sensitive data and information. In some instances, targeted attacks on banks or individual accounts can cause significant financial losses.

IMPACT OF PREVIOUS AND FUTURE DEVELOPMENT

As technology continues to advance, the risk of cybercrimes increases across the planning area. A growing amount of personal and business information is being stored electronically, making it vulnerable to cyberattacks. As the City of Springfield continues to grow, government buildings and other critical infrastructure become more susceptible to targeted cyberattacks.

EMAP CONSEQUENCE ANALYSIS

Table 3.4.44 EMAP Impact Analysis: Cyber

Subject	Detrimental Impacts
Public	A cyber incident would have few safety concerns but could severely affect the security of sensitive data such as bank account information, medical records, and the availability of prescriptions, especially if the system were destroyed.
Responders	While there are no potential life safety issues for responders, the impact on response functions could be critical.
Continuity of Operations	Cyber incidents can severely disrupt or even suspend critical services across the jurisdiction.
Property, Facilities, and Infrastructure	A cyber incident could cause minor, isolated instances of property damage if electronic systems malfunction. However, major critical infrastructure sectors across the jurisdiction could be impacted due to their reliance on information technology. In some cases, facilities may also experience minor damage if system failures occur.
Environment	Cyber incidents would have little to no impact on Greene County's environment.
Economic Condition of Jurisdiction	A cyber incident could have a significant economic impact, particularly if it targets sensitive financial information, such as bank accounts, payment systems, or company data.
Public Confidence in Jurisdiction Governance	A cyberattack could severely undermine public confidence in governance, especially in the event of widespread loss or compromise of personal and corporate information.

HAZARD SUMMARY BY JURISDICTION

The entire planning area is susceptible to cybercrime incidents. Larger businesses and government facilities, especially those located within the City of Springfield, are more vulnerable due to the concentration of critical infrastructure and operations. As the largest city in the region, Springfield faces a higher risk of experiencing cyberattacks, but all areas and citizens within the planning area are at risk.

PROBLEM STATEMENT

Cybercrime is rapidly increasing nationwide, with potentially severe consequences. These crimes often lead to the theft of sensitive information and data, causing significant harm to businesses, government agencies, and individuals. The financial impact of cybercrimes can be substantial, affecting both the targeted organizations and the broader community. Cyberattacks can occur at any time, often with little to no warning, and may remain undetected for weeks or even years. Therefore, it is essential for individuals and organizations to take proactive measures to safeguard against these risks. Key protective measures include regularly updating software, implementing two-factor authentication, establishing strong firewalls, and using complex passwords. Several jurisdictions within the planning area have identified projects focused on mitigating the risks of cybercrimes, which are detailed in the Mitigation Strategy section of this plan.

3.4.14 HUMAN-CAUSED HAZARD: CIVIL UNREST

HAZARD PROFILE

Civil unrest, previously referred to as civil disorder, involves disturbances caused by groups of individuals, often requiring law enforcement intervention to maintain public safety. Examples of civil unrest include protests, riots, sit-ins, or uncontrolled crowds. Even individuals not directly involved in these events can experience significant disruptions, such as difficulty accessing work, engaging in recreational activities, or obtaining basic necessities like groceries.

The potential for civil unrest has grown as more citizens face economic hardships, with many businesses downsizing or closing. This creates an environment where disgruntled workers may retaliate against their employers, as seen in incidents like the hostage-taking of Caterpillar executives by laid-off workers in France. Dr. Michael Carlie, a professor at Missouri State University, notes, "The rise in property crimes and crimes driven by financial stress is a key concern. Loss of employment often leads to family stress, resulting in higher instances of spousal abuse, child abuse, substance abuse, and even self-harm or suicide."

To mitigate the risks of civil unrest in Greene County, it is essential to focus on two primary areas: crowd management and addressing radical groups.

Crowd Management

Crowd management refers to the systematic planning, organization, and supervision of gatherings. This process often begins during the event planning stage, where organizers coordinate with local authorities (e.g., police), ensure adequate resources (such as restroom facilities), and make sure emergency exits are clearly marked and accessible.

In contrast, crowd control is a reactive measure used when a crowd becomes uncontrollable, and public safety is at risk. The goal of effective crowd control is to mitigate dangerous behavior, but inadequate methods can lead to injuries and fatalities. Crowds often push forward when the back of the crowd is unaware of the congestion at the front, which can cause people to fall and escalate the situation. In some cases, the force exerted by the crowd can be so powerful that it bends steel railings, exerting forces exceeding 1,000 pounds (4500 N).

Radical Groups

Radical groups are characterized by their strong, often extreme, convictions and their advocacy for political, economic, and social reforms. These groups typically pursue change through direct and uncompromising actions. Radical groups exist across the political spectrum, with extreme followers advocating for significant, sometimes drastic reforms.

These groups often engage in public demonstrations, which can occur at community events or through media outlets like editorials, commercials, and direct mail campaigns. The primary concern with radical group demonstrations is the potential for conflict with opposing groups, which can escalate the situation into larger-scale civil unrest.

GEOGRAPHIC LOCATION

Civil unrest can occur anywhere in Greene County. While it is most likely to happen in places such as government buildings, businesses, or public streets, it is often preceded by heightened social or political tensions. Government facilities, landmarks, prisons, and universities are also common locations where civil unrest may emerge.

STRENGTH/MAGNITUDE/EXTENT

Civil unrest can result in significant violence and property damage. In previous incidents, police vehicles and buildings have been destroyed, and individuals have been assaulted. The severity of civil unrest depends on factors such as the size of the event and the crowd involved. Two types of large gatherings are typically associated with disturbances: a crowd and a mob. Crowds can be categorized as casual, agitated, or mob-like, with escalating tensions often increasing the risk of violence.

- **Casual Crowd:** A casual crowd is composed of individuals or small groups who share no common goal or purpose, with each person or group having their own agenda. This type of crowd forms when people happen to occupy the same space without any specific collective reason for doing so.
- **Sighting Crowd:** A sighting crowd is similar to a casual crowd, but people gather for a specific event or to witness something of interest. Examples include individuals flocking to a sports event, a group of people gathered at a fire or accident, or attendees at a concert. The common purpose of a sighting crowd is driven by curiosity or the desire to experience a particular event.
- **Agitated Crowd:** An agitated crowd is marked by strong emotional responses, which can spread quickly among individuals. As more people become emotionally charged, a sense of unity may develop, amplifying the crowd's intensity. This type of crowd is often characterized by shouting, screaming, and verbal confrontations, as emotions run high, and reactions become more visceral.
- **Mob-like Crowd:** A mob-like crowd incorporates all the characteristics of the previous crowd types, with the addition of aggressive, physical, and sometimes violent actions. In these conditions, individuals may behave in ways they normally would not, engaging in extreme acts of violence and property damage. Mob-like crowds are often chaotic and unpredictable, with a mix of people whose behavior can quickly escalate.

A mob is a large, disorderly crowd characterized by strong emotional responses, loud behavior, and lawlessness. Mobs often escalate in violence and intensity, leading to dangerous situations. Mobs can be classified into four distinct categories:

- **Aggressive Mob:** This type of mob is driven by violence, often engaging in attacks, riots, and terror. The targets of aggression may include individuals, property, or both. Aggressive mobs are distinct from aggressive crowds due to their lawless nature. Examples include inmate riots, political protest riots, or mobs reacting violently after a political loss.
- **Escape Mob**: An escape mob forms when people are fleeing from a danger, such as a fire, flood, or other catastrophic event. These mobs are often marked by panic and unreasoning terror, making them difficult to control.
- **Acquisitive Mob:** An acquisitive mob is motivated by the desire to take something, often leading to looting. These mobs exploit the absence of control, such as during a riot, to seize property.
- **Expressive Mob:** An expressive mob gathers to express emotions related to a specific event, such as a sporting victory, a religious activity, or a celebration. The mob acts as an outlet for collective emotion, with members often experiencing a release of pent-up energy.

PREVIOUS OCCURRENCES

Greene County has experienced several instances of civil unrest. While there have been peaceful demonstrations, these events have been excluded from this report as they did not result in injuries, fatalities, or arrests, and were not the focus of mitigation strategies within the jurisdiction. The following are notable incidents of civil unrest:

Easter of 1906

A rumor circulated claiming that a white woman had been raped, leading a mob of 6,000 individuals to storm the local jail and kidnap three Black men. The men were taken to the town square and hanged. As new rumors spread that Black neighborhoods would be destroyed, many residents fled the area. State militia arrived to restore order, and a grand jury indicted more than a dozen individuals for the hangings. The initial rape claim was later proven to be false, and although one person went to trial, the jury could not reach a verdict.

April 2001

Joe Hurley, a 51-year-old man from Urbana, drove his truck in front of the U.S. Federal Courthouse in Springfield, Missouri, with three dummies representing federal agencies: the FBI, ATF, and DOJ. The dummies were soaked in gasoline, and Hurley had several containers of water and a fire extinguisher in his truck. Police discovered an empty mortar shell, a crate labeled "Explosives" containing newspapers, and other items. Hurley, a former informant for federal and state agencies, felt his concerns regarding the Oklahoma City bombing were being ignored. He was disabled after being shot with beanbag rounds and taken into custody for a mental evaluation. He was later released, and no charges were filed.

May 2019

Following Missouri's decision to ban abortions, protests broke out in downtown Springfield's square, as demonstrators gathered to voice their opposition. Tensions escalated as protestors began yelling and shoving police officers, resulting in one arrest.

June 2019

A pro-choice demonstration in Springfield's square turned confrontational when individuals began touching and pulling on police officers. Officers were forced to take citizens to the ground, resulting in one arrest, although the individual was later released.

June 2020

A planned march in Springfield against police brutality drew a crowd of 2,500 people. A counter-protestor, a street preacher, was arrested for disturbing the peace and inciting conflict with the marchers.

PROBABILITY OF FUTURE OCCURRENCES

Over the past several years, there have been a limited number of incidents involving civil unrest. It is estimated that there is a 30 percent chance of another event occurring in the planning area during the next planning period. While the likelihood of a mass casualty event due to civil unrest is low, minor injuries or arrests are still possible.

CHANGING FUTURE CONSIDERATIONS

Climate change is not expected to directly affect civil unrest. However, many incidents of civil unrest are related to political and social changes, and protests related to climate change have occurred worldwide, potentially influencing future demonstrations in the region.

VULNERABILITY OVERVIEW

Protests are a common occurrence in Greene County, with the potential to escalate into civil unrest. These events can draw large crowds and, in some cases, lead to violent actions or property damage. Civil unrest often builds over time, providing law enforcement with the opportunity to intervene before a situation intensifies. Factors such as social instability, economic stress, and political conflict can increase the likelihood of unrest, especially when related to issues like unemployment or social inequality.

Civil unrest can cause significant property damage, as witnessed in past riots across the United States, where police vehicles, buildings, and other properties were targeted. Protests can also lead to road closures, including major interstates and highways, and in some instances, even death or injury. International protests tend to see higher injury and fatality rates than those in the U.S. However, civil unrest can happen at any time, typically spurred by increased tension surrounding political or social events, such as elections or court trials.

POTENTIAL LOSSES TO EXISTING DEVELOPMENT

Civil unrest has the potential to cause significant property damage if not controlled swiftly. Downtown Springfield, particularly around the Square, is a common location for such events, as there are busy streets in Springfield to attract larger crowds. Critical facilities, such as government buildings, may be targeted during times of unrest. While Greene County does not have a large history of widespread damage from civil unrest, these events can still pose a risk to existing infrastructure.

PREVIOUS AND FUTURE DEVELOPMENT

As the population of Greene County grows, so does the potential for larger protests. With recent political and legal changes, the frequency of protests in the area may increase. It is important for authorities to remain prepared for the possibility of civil unrest and the potential impact on the community.

EMAP CONSEQUENCE ANALYSIS

Table 3.4.45 EMAP Impact Analysis: Civil Unrest

Subject	Detrimental Impacts
Public	Civil unrest could result in a high number of injuries, with minimal deaths, and may also raise multiple safety concerns.
Responders	Civil unrest creates potential for life safety issues and response functions may be greatly impacted or delayed due to safety concerns.
Continuity of Operations	Civil unrest can result in interruptions or delays in service operations, depending on the size and duration of unrest.
Property, Facilities, and Infrastructure	Civil unrest could cause widespread minor damage or multiple instances of severe destruction, such as fires and property damage, as seen in incidents like the Ferguson, Missouri riots. It can also result in damage to critical infrastructure across the entire planning area and cause widespread damage to facilities.
Environment	Civil unrest in Greene County may cause minor isolated damage to the environment.
Economic Condition of Jurisdiction	Theft and damage can cause economic conditions to be greatly impacted throughout the jurisdiction due to civil unrest.
Public Confidence in Jurisdiction Governance	Civil unrest can significantly undermine public confidence in governance across the jurisdiction.

HAZARD SUMMARY BY JURISDICTION

The City of Springfield faces a higher risk of civil unrest due to its large population. Protests frequently occur in Downtown Springfield, particularly near the significant government plaza. These demonstrations are often prompted by events such as court cases, elections, and other political issues. Additionally, large college campuses, such as Missouri State University, are common locations for protests and demonstrations.

PROBLEM STATEMENT

Civil unrest can result in significant property damage if not addressed promptly. While Greene County does not have a history of large-scale destructive unrest, Springfield sees numerous protests throughout the year. Globally, civil unrest has led to injuries, fatalities, and widespread property damage. Given the dynamic nature of politics and the public's right to protest, the planning area remains vulnerable to such incidents. Mitigation strategies include increasing police presence, providing additional training for first responders, enhancing school security, deploying more officers at schools, and equipping law enforcement with riot gear. Several local school districts have initiated projects to bolster security, which can also serve as a preventive measure against civil unrest or targeted violence.

3.4.14 HUMAN-CAUSED HAZARD: WASTE

HAZARD PROFILE

Each year, more than 40 million tons of hazardous waste are produced in the United States. This waste may come from large industrial facilities, such as chemical manufacturers, or smaller businesses, like dry cleaners. In a city with a population of 100,000, the following amounts of hazardous substances are estimated to be discharged into city drains every month:

- 23.5 tons of toilet bowl cleaner
- 13.5 tons of liquid household cleaner
- 3.5 tons of motor oil

These substances eventually make their way into local water systems. Since waste can easily infiltrate and damage the environment, the Environmental Protection Agency (EPA) works closely with local agencies to ensure that hazardous materials are properly treated and disposed of. Hazardous waste poses a serious risk of irreversible environmental damage.

The EPA defines waste as any unwanted substance or material. For waste to be classified as hazardous, it must first be considered solid waste. Solid waste includes any discarded material that is abandoned, disposed of, burned, incinerated, recycled, or deemed "waste-like." It can be solid, liquid, semi-solid, or even a container of gaseous material. There are three common sources of hazardous waste:

- **Agriculture**: Pesticides and herbicides; fluoride wastes (by-products of phosphate fertilizer production); and soluble nitrates from manure, which can dissolve into groundwater, potentially contaminating drinking wells and posing health risks.
- **Medical:** "Sharps" or needles, scalpels and glassware; outdated and unused drugs; chemical waste from testing laboratories; and radioactive isotopes.
- **Household:** Toxic paints; flammable solvents; caustic cleaners; toxic batteries; pesticides; unused drugs; and mercury from broken fever thermometers.

Categories of Waste

There are three official categories of known hazardous waste:

- The F-List (Non-Specific Source Wastes): Wastes from common manufacturing and industrial processes, such as solvents used in cleaning or degreasing operations. These wastes are considered non-specific sources because they arise from a variety of industries.
- The K-List (Source-Specific Wastes): Wastes from specific industries, such as petroleum refining or pesticide manufacturing. Examples include sludge and wastewater from treatment and production processes.
- The P-List and U-List (Discarded Commercial Chemical Products): These lists include specific commercial chemical products in their unused form. For example, some pesticides and pharmaceutical products become hazardous waste when discarded.

Properties of Waste

Waste that is not specifically listed in the above-referenced categories may still be considered hazardous if it exhibits one of the following four characteristics:

- **Ignitability:** Wastes that can ignite under specific conditions, are spontaneously combustible, or have a flash point of less than 60°C(140°F).
- **Corrosivity:** Wastes that are acidic or basic and can corrode metal containers such as storage tanks, drums, or barrels (e.g., battery acid).
- **Reactivity:** Wastes that are unstable under “normal” conditions and may cause explosions, release toxic fumes, gases or vapors when heated, compressed, or mixed with water (e.g., lithium-sulfur batteries and explosives).
- **Toxicity:** Wastes that are harmful or fatal when ingested or absorbed (e.g., mercury or lead). When land-disposed, these wastes may contaminate and pollute groundwater.

Mixed Waste

In addition to solid waste being classified as hazardous, it may also be classified as mixed waste, meaning it contains radioactive components. The treatment of mixed waste is complex, and most commercially generated mixed waste is classified as low-level mixed waste, indicating it contains both low levels of radioactivity and low levels of hazardous substances. The United States Department of Energy identifies three types of mixed waste:

- Low-Level Mixed Waste (LLMW): Waste generated from research, development, and production of nuclear weapons.
- High-Level Mixed Waste (HLW): Waste generated from the reprocessing of spent nuclear fuel and irradiated targets from reactors. This type of waste often includes highly corrosive components, organics or heavy metals regulated by the RCRA.
- Mixed-Transuranic (MTRU): Waste containing radioactive elements heavier than uranium along with a hazardous waste component.

Table 3.4.46 Classification of Waste Disposal Sites

Class	Description
1	Sites that are causing or presenting an imminent danger of causing irreversible or irreparable damage to the public health or environment – immediate action required.
2	Sites that are a significant threat to the environment – action required.
3	Sites that do not present a significant threat to the public health or environment – action may be deferred.
4	Sites that have been properly closed – require continued management.
5	Sites that have been properly closed with no evidence of present or potential adverse impact – no further action required. (Any site listed as Class 5 will be removed from the registry according to state law.)

GEOGRAPHIC LOCATION

There are multiple waste sites throughout Greene County including: Ash Grove, Springfield, Strafford, and Willard. Please see the critical facility appendix for specific locations.

STRENGTH/MAGNITUDE/EXTENT

Missouri homes, businesses, and industries generate millions of tons of solid waste annually. While landfill disposal remains an option, establishing new disposal facilities is challenging due to public scrutiny and high costs associated with siting, building, and operating. The department continually explores alternatives to landfill disposal that are both environmentally protective and cost effective for consumers. Solid waste management efforts, including permitting, monitoring, and enforcement, play a critical role in preventing illegal dumping and mitigating long-term social, economic, and environmental challenges.

Environmental Impact

Groundwater and soil are the primary pathways through which the general public comes into contact with hazardous waste. According to the Groundwater Foundation, contamination occurs when man-made products, such as gasoline, oil, road salts, seep into groundwater, rendering it unsafe for human use. Major sources of contaminants include storage tanks, septic systems, hazardous waste sites, landfills, and the use of road salts, fertilizers, pesticides, and other chemicals. Soil contamination occurs when man-made substances alter the natural soil environment, posing health risks directly at residences, parks, or schools, or indirectly through water contamination. Once water or soil is contaminated, it increases the risk of harmful effects on both human and animal habitats.

Health Impact

Exposure to hazardous waste can lead to both acute and chronic health effects. Acute effects are immediate, occurring within 24 hours of exposure, such as skin burns or disfigurement from substances like battery acid. Chronic effects develop gradually over time due to repeated exposure. For example, carbon monoxide leaks can lead to headaches and concentration difficulties, while prolonged exposure to cleaning products may trigger allergic reactions. Chronic health effects from hazardous waste exposure can include liver and kidney damage, central nervous system damage, cancer, and birth defects.

PREVIOUS OCCURRENCES

Two landfills within the Greene County planning area have experienced significant waste-related events, each outlined below:

1962-1968 Fullbright Landfill

The landfill, owned and operated by the City of Springfield, accepted commercial waste with few limitations during this period. As a result, the site became heavily contaminated with volatile organic compounds (VOCs), other organic chemicals, heavy metals, and cyanide. In 1967, a waste hauler died after disposing of acidic waste into a vat containing cyanide, further exacerbating the site’s contamination.

1978 Fullbright Landfill

In 1978, a geology student discovered high concentrations of copper, chromium, and manganese in surface soils near the stream bank of the Fullbright Landfill. The Environmental Protection Agency (EPA) was notified, and by June of 1980, following a report by a Springfield journalist, the agency became aware of the contamination at the site.

October 1981 – September 1983 Fullbright Landfill

In October 1981, the Fullbright Landfill was added to the Interim National Priorities List (NPL) after limited field sampling and testing revealed hazardous substances in surface water and groundwater near the site. The landfill was proposed for inclusion on the NPL on December 30, 1982, and was officially added to the final NPL on September 8, 1983.

September 2022 Noble Hill Landfill

A fire broke out overnight at the Noble Hill Landfill. The Ebenezer Fire Department responded, and the fire was controlled within an hour. The cause of the fire remains unknown, but landfill fires are not uncommon due to the variety of waste stored in landfills.

PROBABILITY OF FUTURE OCCURENCES

Waste-related incidents are often discovered years after they occur, as secondary pollution of waterways and soil tends to be the primary concern. Given current waste management regulations, the likelihood of a large event occurring in the planning area is low. However, the lingering effects of decisions made in the 1960s continue to be felt. In the past decade, only one significant event has been reported, leading to an estimated 10 percent chance of a major incident occurring within the next ten years.

CHANGING FUTURE CONDITIONS AND CONSIDERATIONS

Climate change may have secondary effects on waste disposal within the planning area. Changes in precipitation levels and the possibility of severe flooding could lead to hazardous waste reaching local waterways or watersheds, which are used as drinking water sources for Greene County communities. While water processing systems have become more efficient, the additional stress from harsh chemicals could result in trace elements being detected during water testing.

VULNERABILITY OVERVIEW

A hazardous waste incident in Greene County could have serious health and environmental consequences. Depending on the scale of the incident, property damage could also occur, though typically in small amounts. Hazardous waste events often occur without warning, and clean-up efforts can take days or even longer, depending on the severity of the incident.

In Springfield, two licensed infectious waste transport facilities, Stericycle Inc. and Sunbelt Environmental Services, operate within the area. Additionally, many other licensed waste transporters may pass through Greene County as they travel to their destinations.

Table 3.4.47 Waste Disposal Sites in Greene County

Site Name	Site Location	Classification	Agency Involved	Site Description
HCI Chemtech	Springfield	Class 2	EPA	A chemical distribution facility has operated at the site since 1975.
Solid State Circuits	Republic	Class 4	DNR	Solid State Circuits Site (SSC) has .5 acres in downtown Republic.
Sac River Landfill	Springfield	Class 4	EPA	An inactive landfill adjacent to the Fulbright Landfill; industrial waste, containing hazardous materials and heavy metals, was deposited during the operation of the landfill.
Fulbright Landfill	Springfield	Class 4	EPA	Located in the South Dry Sac River flood plain, north of Springfield.

Former Manufactured Gas Plants

Industrial gas plants generate coal tar as a byproduct when gas is manufactured from coal. Coal tar consists of thousands of different chemicals, including potentially carcinogenic polycyclic aromatic hydrocarbons and volatile organic compounds, with cyanide and other metals also present on site. One former manufactured gas plant site located in Greene County: the Springfield Gas & Electric Company.

Smelter Sites

Smelting is a process used to extract metals from their ores by applying heat and a chemical reducing agent, which alters the oxidation state of the metal ore. This process removes the oxygen from the ore, leaving behind the metal. For the past 150 years, Missouri has been one of the largest producers of lead and zinc metals. These ores were mined, milled by crushing and separation, and then sent to smelters to be processed into raw materials. The most common contaminants found at smelter sites include lead, zinc, cadmium, barium, nickel, and chromium. Contamination often occurs when dust escapes from furnace smokestacks during production. Slogdill & Wilson Furnace in Brookline, Missouri, is the only smelter site listed in Greene County by the Missouri Department of Natural Resources.

Wood Treatment Inventory

Wood preserving is a process used to extend the life of wood products, especially those used in construction, railroads, and utilities. This treatment provides long-term protection from weather, fungi, insects, and marine borers. However, improper management of wood preservation chemicals has caused significant contamination of soil and groundwater at various locations. There are two wood treatment sites in Greene County: the Kerr-McGee Chemical Corporation and the Robert E. Lee Lumber Site, both located in Springfield. The Kerr-McGee Chemical Corporation site is now a Superfund site being cleaned by the Multistate Environmental Response Trust.

Brownfields

Like many communities, Springfield has properties that are abandoned or underused, known as Brownfields. These properties can be found in both rural and urban areas, ranging from former lumberyards to old, abandoned feed mills and are scattered throughout Greene County. Brownfields are a concern because they may contain hazardous substances, pollutants, or contaminants. Environmental testing is conducted to determine whether an environmental threat exists.

One of Greene County's greatest success stories is Jordan Valley Park in Springfield. Before the park was developed, the site was a 300-acre former industrial area in downtown Springfield. Today, instead of vacant factories and used-car dealerships, the site hosts a 12-acre public park, an ice rink, an arts center, an exposition center, and a minor league baseball stadium.

POTENTIAL LOSSES TO EXISTING DEVELOPMENT

According to the Missouri State Hazard Mitigation Plan, determining the exact costs related to water quality improvement and protection efforts is challenging, but some estimates can be made. While the department tracks its own program costs, data from municipal, private, and industrial treatment facilities, as well as information on the implementation of Best Management Practices (BMPs), are often not readily available. Calculating the economic benefits of water protection efforts in monetary terms is even more difficult. Below is an overview of the funding allocated by the department for various aspects of water pollution control and prevention:

- USGS Ambient Water Quality Monitoring Network: The network costs approximately $1.2 million annually. Additionally, the annual costs for permit issuance averaged around $2.96 million for fiscal years 2014 and 2015. On average, about $7.6 million is spent each year on other aspects of water pollution control and administrative support.
- Non-Point Source (NPS): In state fiscal years (SFY) 2014 and 2015, $3.9 million and $3.8 million, respectively, were spent for NPS projects. Around $200,000 is awarded annually for planning these projects.
- Soil and Water Conservation Program (SWCP): An average of $24.1 million per year is allocated directly to landowners to address agricultural NPS pollution and conserve water resources in agricultural areas. From FFYs 2014 to 2015, $48.3 million was spent on SWCP conservation practices aimed at reducing soil runoff from farmland.
- Missouri’s Clean Water State Revolving Fund (CWSRF): This fund provides low-interest loans to eligible recipients for designing and constructing publicly owned wastewater systems and other qualifying projects, including but not limited to stormwater infrastructure, non-point source projects, and water conservation or reuse initiatives.

IMPACT OF PREVIOUS AND FUTURE DEVELOPMENT

As population continues to grow in Greene County, the amount of waste produced also increases. According to the Missouri State Hazard Mitigation Plan, ongoing suburban development across the state has significant impacts on streams. The shortening and culverting of streams results in the loss of natural waterways and riparian areas. The increase in impervious surface area within the surrounding watershed creates unnatural hydrograph patterns. This leads to lower baseflows and higher peak stormflows. The altered channels and increased peak flows can increase erosion, while runoff from impervious surfaces carries elevated levels of sediment and various chemicals from urban environments. Additionally, elevated nutrient levels or bacterial contamination are likely if individual or community domestic sewage systems are not properly maintained.

EMAP CONSEQUENCE ANALYISIS

Table 3.4.48 EMAP Impact Analysis: Waste

Subject	Detrimental Impacts
Public	A waste incident creates many safety concerns for the public, including injuries and illnesses, and death is possible if exposed to hazardous waste.
Responders	First responders will have proper equipment and training to handle a waste incident. However, the necessary safety measures may create a delay of some response functions.
Continuity of Operations	Waste incidents would have little to no impact on the delivery of services in Greene County.
Property, Facilities, and Infrastructure	In the event of a hazardous waste incident, Greene County would experience minor, isolated instances of property damage. However, these incidents would have little to no impact on facilities or infrastructure.
Environment	Hazardous waste is very harmful to the environment, particularly through water contamination, which is a common consequence of such incidents.
Economic Condition of Jurisdiction	Waste incidents would have little to no impact on the economy.
Public Confidence in Jurisdiction Governance	Waste incidents could have a minor effect of loss in public confidence, particularly if the situation is mishandled or the government is found at fault.

HAZARD SUMMARY BY JURISDICTION

There are numerous waste facilities within the planning area, with many located in Springfield. Due to its higher population density, Springfield could be significantly impacted in the event of a major waste incident. Additionally, jurisdictions along I-44 may also be at risk if a waste spill occurs during transportation.

PROBLEM STATEMENT

Hazardous waste incidents can severely affect the environment, with significant consequences for both air and water quality. These incidents also pose a threat to public health. Waste-related incidents often occur with little to no warning, making clean-up efforts challenging. While Greene County has not yet experienced a large-scale waste-related disaster, it remains a potential threat. Mitigation strategies for waste management are complex but may include expediting disaster waste removal, evaluating the effectiveness of the local recycling programs, and exploring opportunities for source reduction.

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3.4.15 TECHNOLOGICAL HAZARD: PLANE CRASH

HAZARD PROFILE

Airplane Crashes

An airplane crash is defined as an accident in which an aircraft strikes land or water, resulting in significant damage or destruction. These crashes can occur due to factors such as hijackings, technological malfunctions, adverse weather conditions, or human error. The aftermath of an airplane crash is typically catastrophic.

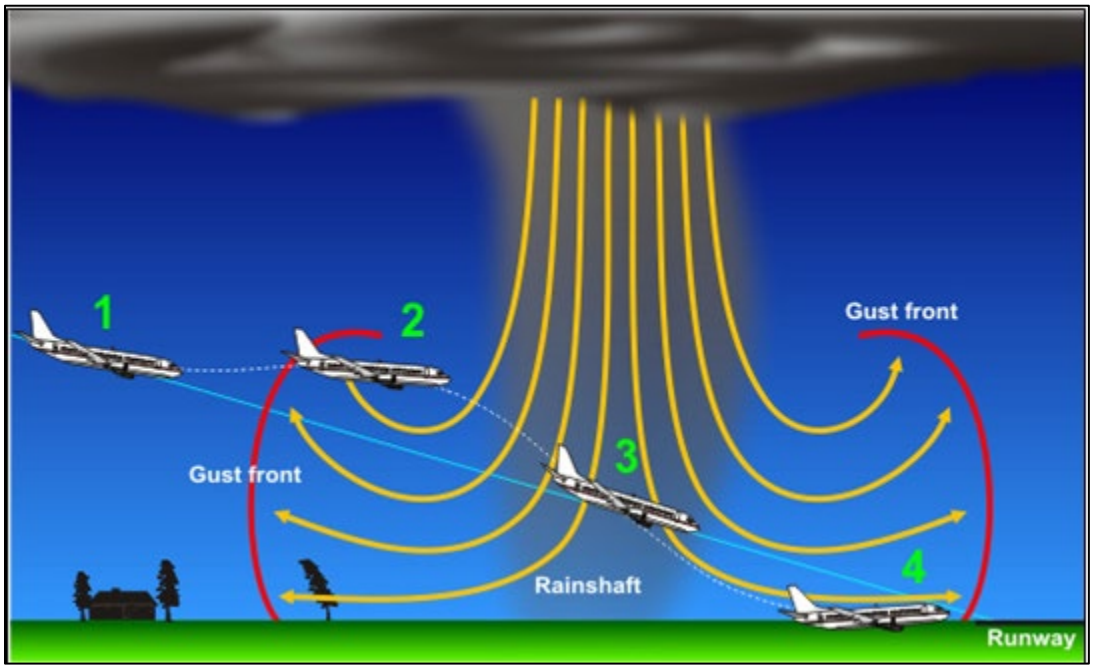
Wind Hazards

When an aircraft descends toward an airport, it follows an imaginary line known as the "glide slope" (represented by the solid light blue line in the illustration below) to align with the runway. If the plane enters a microburst during this descent, it encounters a headwind, which increases the wind speed over the aircraft. The stronger wind creates an additional lift, causing the plane to rise above the glide slope. In response, the pilot decreases the throttle to reduce the aircraft's speed, resulting in the plane descending back toward the correct path.

As the aircraft passes through the microburst and moves to the other side, the wind direction shifts, becoming a tailwind from behind the plane. This reduces the wind over the wings, decreasing the lift and causing the plane to sink below the glide slope. Despite the pilot's efforts to increase throttle and regain lift, the tailwind may be too strong for a proper recovery, leaving little room to recover from the rapid descent. This can lead to the aircraft crashing before reaching the runway.

Since the identification of this phenomenon in the 1980s, pilots have been trained to recognize and respond to microbursts, taking corrective action to prevent such accidents. Additionally, many airports are now equipped with systems to detect microbursts and provide warnings to approaching aircraft.

Figure 3.4.49 Wind Hazard when a Plane is Landing



Hijacking

September 11, 2001

The September 11, 2001, terrorist attacks claimed the lives of over 3,000 Americans and marked a pivotal moment in global anti-terrorism efforts. On that day, 19 militants associated with the Islamic extremist group al-Qaeda hijacked four airliners and carried out coordinated suicide attacks on key targets in the United States. Two planes were flown into the Twin Towers of the World Trade Center in New York City, a third crashed into the Pentagon near Washington, D.C., and the fourth plane went down in a field in Pennsylvania.

Known as 9/11, these attacks caused massive loss of life and destruction, profoundly altering U.S. and global security strategies. The events of that day prompted sweeping national security reforms and defined the presidency of George W. Bush. Over 3,000 people lost their lives in New York City and Washington, D.C., including more than 400 police officers and firefighters. The attacks reinforced the devastating consequences of hijacking and its threat to both lives and infrastructure.

Springfield-Branson National Airport (SGF)

Greene County is home to the Springfield-Branson National Airport (SGF), a small hub airport that serves as a key transportation link for the region. SGF currently operates with four major airlines: American, Allegiant, Delta, and United. The airport offers 13 non-stop destinations for travelers.

SGF is equipped with a full-time fire department, with every firefighter holding Firefighter 1 or Firefighter 2 certifications and being a certified EMT. The airport is also protected by the Airport Police Department (APD), which maintains 24/7 coverage with 10 full-time commissioned officers. Established as a criminal justice agency in 2002, the APD is recognized by the Missouri Department of Public Safety as an independent law enforcement entity.

GEOGRAPHIC LOCATION

All of Greene County is vulnerable to the risks associated with an airplane crash, as such incidents can occur anywhere. However, the nature of the crash determines which areas face a greater risk. In the event of a hijacking, regions with high population density or areas of governmental significance are at the highest risk. On the other hand, if a crash results from technological malfunctions or human error, areas surrounding the Springfield-Branson National Airport are more likely to be at greater risk.

STRENGTH/MAGNITUDE/EXTENT

Plane crashes are typically catastrophic events. The immediate impact of a crash can result in significant injury and loss of life for those onboard. Depending on the crash location, the aircraft can also cause damage and harm to the surrounding area. In addition to the immediate consequences, survivors often face long-term psychological effects, including survivors' guilt and Post-Traumatic Stress Disorder (PTSD). The magnitude of an airplane crash can profoundly affect the community, especially when it involves a large commercial flight. Such incidents can result in numerous fatalities, extensive property damage, a decline in public confidence, and a range of other lasting repercussions. A commercial airplane crash would have devastating consequences for all involved.

PREVIOUS OCCURENCES

Table 3.4.49 Incidents and Accidents in Greene County

Date	Location	Severity	Cause
3/21/2004	Springfield	1 minor	Pilot Error
6/3/2004	Strafford	None	Mechanical
10/26/2004	Springfield	2 Fatal, 1 Serious	Pilot Error
8/1/2005	Willard	None	Pilot Error
1/3/2011	Walnut Grove	1 Fatal	Pilot Error
12/25/2011	Rogersville	1 serious, 1 Minor	Pilot Error
9/15/2012	Willard	5 Fatal	Spatial Disorientation/Pilot Error
10/6/2012	Springfield	1 Fatal, 2 Serious	Pilot Error
12/12/2014	Springfield	2 serious, 2 minor	Pilot Error
3/19/2015	Springfield	None	Environmental
12/30/2015	Republic	1 serious, 1 Minor	Pilot Error
6/24/2016	Springfield	None	Pilot Error

Federal Aviation Association, 2024

Close Calls and Incursions

There have been several close calls involving malfunctions and human error in relation to airplane maneuvers. One notable incident occurred in January 2014, when a Southwest Airlines jet, bound for Branson Airport and carrying 124 passengers, mistakenly landed at the wrong airport. "The plane stopped about 500 feet from the end of a runway at M. Graham Clark Downtown Airport, but fortunately, no one was injured," said Chris Berndt, Fire Chief and Emergency Management Director for the Western Taney County Fire District. The airport's runway, measuring 3,738 feet, was about half the length of Branson Airport's runway, which stretches to 7,140 feet. This required the pilots to act quickly and apply the brakes forcefully upon landing. Had they not done so, the plane could have overshot the runway, potentially tumbling down an embankment and into U.S. Highway 65.

According to the Federal Aviation Administration (FAA), the United States is currently experiencing one of the safest periods in aviation history. However, the FAA also acknowledges that there is still room for improvement, particularly when it comes to preventing runway incursions. An incursion is defined as any occurrence at an aerodrome where an aircraft, vehicle, or person is incorrectly present on a surface designated for the landing and takeoff of aircraft.

There are four categories of runway incursions:

- Category A is a serious incident in which a collision was narrowly avoided.
- Category B is an incident in which separation decreases and there is a significant potential for collision, which may result in a time critical corrective/evasive response to avoid a collision.
- Category C is an incident characterized by ample time and/or distance to avoid a collision.
- Category D is an incident that meets the definition of runway incursion such as incorrect presence of a single vehicle/person/aircraft on the protected area of a surface designated for the landing and take-off of aircraft but with no immediate safety consequences.

There has notably been a decrease in Category A and B incursions since 2022 as seen in the figures below.

Figure 3.4.50 Incidents per 1 Million Airport Operations

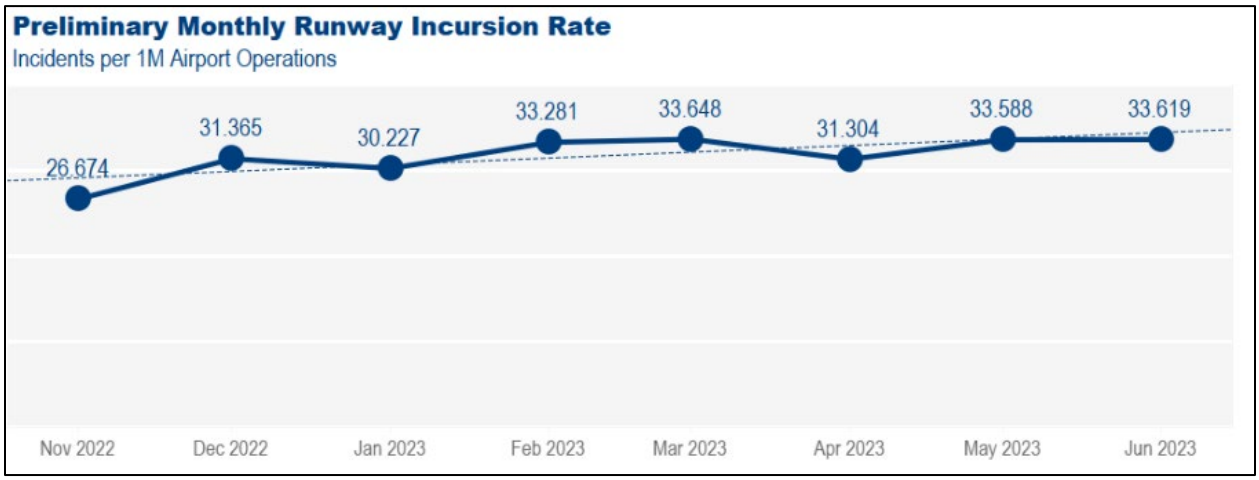
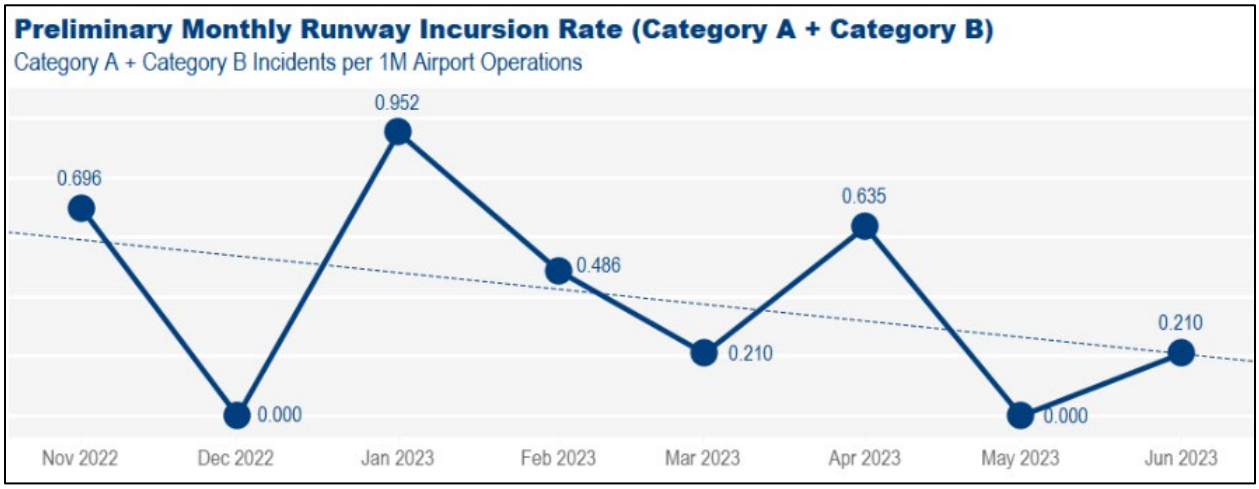


Figure 3.4.51 Category A + Category B Incidents per 1 Million Airport Operations



PROBABILITY OF FUTURE OCCURENCES

There have been 12 reported airplane crash incidents in Greene County over the last 20 years. None of which have been commercial and are often only the pilots on the plane. However, it is still important to note that a crashing plane or aircraft of any capacity can have catastrophic effects on the area it lands. It is predicted there is a 60 percent chance that another aircraft failure event could happen in the Greene County area.

CHANGING FUTURE CONDITIONS AND CONSIDERATIONS

As outlined in previous hazard profiles, the climate in Greene County, along with many other regions, is projected to undergo significant changes. The area may experience an increase in rainfall and flooding, as well as more frequent severe storms, including hail, high winds, and lightning. These weather hazards can have a direct impact on air travel. Shifting climate patterns could make landing and takeoff more challenging for pilots, as they would have to navigate through increasingly unpredictable and severe conditions.

VULNERABILITY OVERVIEW

Airports, including Springfield-Branson National Airport, implement stringent plans and protocols to ensure the safety and security of their passengers. However, despite these measures, a major accident could still occur at any time. Airports and airplanes are potential targets for terrorism due to the large number of people gathered in confined spaces. While Springfield-Branson National Airport is the busiest and only commercial airport in Greene County, it is not the only airport within the county. The table below provides a comprehensive list of both public and private airports, including heliports, located throughout Greene County.

Table 3.4.50 Airports in Greene County

Airport Name	Location	Usage
Eads Ridge Airport	Fair Grove	Private
Medcalf Field Airport	Republic	Private
Childress Airstrip Airport	Springfield	Private
Downtown Airport	Springfield	Public
Flying Bar H Ranch Airport	Springfield	Public
Gardner Airport	Springfield	Private
KTTS Heliport	Springfield	Private
KY-3 Heliport	Springfield	Private
Lester E. Cox Medical Center North Heliport	Springfield	Private
Lester E. Cox Medical Center South Heliport	Springfield	Private
Springfield Community Hospital Heliport	Springfield	Private
Springfield-Branson National Airport	Springfield	Public
Mercy Regional Health Center Heliport	Springfield	Private
Vans Heliport	Springfield	Private
Cuinche Airport	Strafford	Private
Bird Field Airport	Willard	Private
Hogue Farm Airport	Willard	Private
Textor Airport	Willard	Private

Source: Missouri Public Use Airports, 2023

POTENTIAL LOSSES TO EXISTING DEVELOPMENT

According to the Missouri State Hazard Mitigation Plan, determining the exact risk to Greene County is challenging due to the lack of studies conducted to date. However, the plan indicates that counties within or surrounding metropolitan areas such as St. Louis, Springfield, and Kansas City are at a higher risk due to their population density and transportation hubs. The influx of tourists to the Springfield area, particularly to attractions like the Bass Pro Shops, further increases the risk. Airplane crashes can result in both significant economic and human losses.

IMPACT OF PREVIOUS AND FUTURE DEVELOPMENT

As tourism and population growth continues in the Greene County area, the potential for accidents may increase. Along with population growth comes community development. If expansion occurs near Springfield-Branson National Airport, the risk of damage from an airplane crash in that area will also rise. Many airplane accidents and crashes tend to occur near airports. As Springfield-Branson National Airport grows and attracts more airlines, the increase in air traffic could further elevate the risk of an incident.

EMAP CONSEQUENCE ANALYSIS

Table 3.4.51 EMAP Impact Analysis: Airplane Crash

Subject	Detrimental Impacts
Public	Airplane incidents are often fatal to everyone that was in the aircraft. There are also safety concerns for anyone that is in the immediate area of the crash.
Responders	There would be little to no impact on responders and response functions in Greene County due to an airplane crash.
Continuity of Operations	Airplane incidents have little to no impact on service operations in Greene County.
Property, Facilities, and Infrastructure	Airplane crashes have little to no property, facility and infrastructure damage in Greene County.
Environment	Airplane incidents often result in damage to wildlife and plants in the crash site. Additionally fuel that spills from a crashed plane can pollute natural water sources, of which there are many in Greene County.
Economic Condition of Jurisdiction	Airplane incidents have little to no impact on the economy in Greene County.
Public Confidence in Jurisdiction Governance	Airplane incidents cause little to no loss of public confidence in governance in Greene County.

HAZARD SUMMARY BY JURISDICTION

A plane crash could occur in any jurisdiction within the planning area. However, jurisdictions closer to Springfield-Branson National Airport, such as Republic, Springfield, and Unincorporated Greene County, are at a higher risk of experiencing an incident. While Greene County has not previously experienced a large airplane crash, the presence of important facilities and the county's growing population increase the likelihood of a plane crash occurring in the area.

PROBLEM STATEMENT

There are numerous reasons why airplanes can crash, including hijacking, human error, and mechanical malfunctions. Airplane crashes, particularly large ones, can be catastrophic. Greene County is home to many private airports and one large public airport, which experiences heavy traffic seven days a week. Airplane crashes are unpredictable and can occur anywhere within the county. The primary concerns in the event of an airplane crash are the loss of human life and the destruction of property. One potential solution to mitigate the impact is to limit development around the airport. Reducing the number of buildings and properties near the airport could help minimize the destruction caused by a crash.

3.4.16 TECHNOLOGICAL HAZARDS: CAVE/MINE COLLAPSE

HAZARD PROFILE

A cave-in refers to the collapse of a geologic formation, underground structure, or mine. Geologic structures that are prone to spontaneous cave-ins include many limestone formations, as well as lava tubes and various other subsurface rock formations. Limestone is found both on the surface and subsurface in nearly 99 percent of Missouri, including Greene County.

In the context of mining, the term "roof fall" is used to describe various types of collapses, from the fall of a single shale flake to collapses that form sinkholes reaching the surface. However, roof falls in mining are not always accidental. In longwall mining and retreat mining, miners systematically remove support from large sections of the mine roof, allowing it to settle just beyond the work area. The goal in these mining methods is not to prevent roof falls or the resulting surface subsidence, but rather to control them.

Caves

Greene County is home to over 360 documented caves. The collapse of an underground geologic formation can be deadly, potentially causing falling rocks, trapping people inside, and posing significant risks to people or structures above ground. Erosion of the cave ceiling’s supporting walls increases the load of overlying rock. Eventually, the weight becomes too much for the ceiling to support, leading to a collapse.

Mines

Abandoned mines are common throughout Missouri, including surface pits and underground mines. Many older mines were abandoned without proper reclamation or closure, as they operated before the establishment of modern permitting and closure requirements. Today, these abandoned mine sites—whether pits, voids, open audits, or shafts—pose serious public safety hazards. Although abandoned mines might appear inviting to explore, they are unsafe. Embankments or high walls may be unstable, and piles of waste material, known as "tailings" or "slime," can collapse, potentially burying those who attempt to climb on them.

Quarries

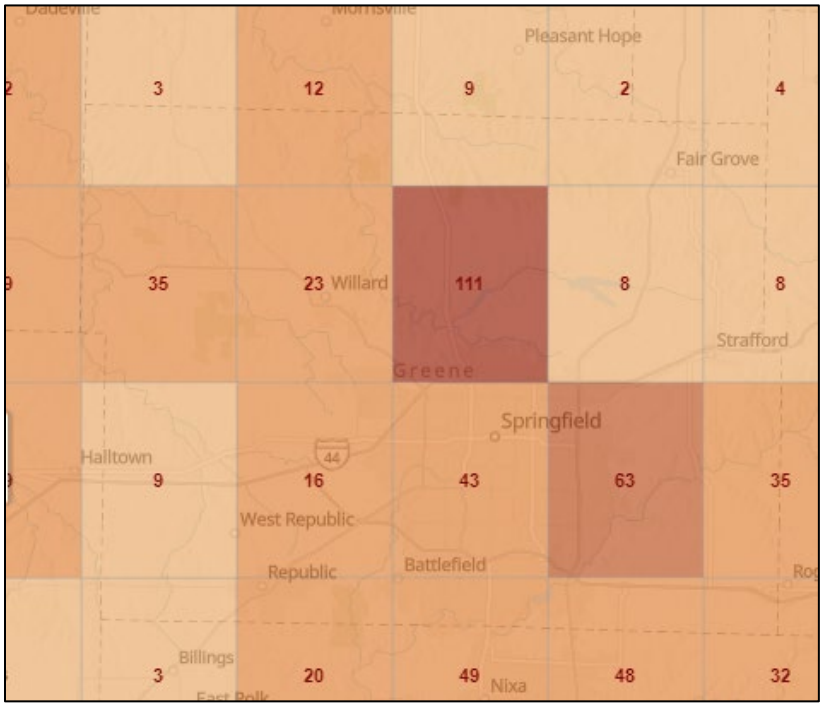
Abandoned quarries or surface mines may seem like attractive swimming holes, but they can be deceptive. From the surface, it’s impossible to determine the mine's depth or if there are hidden shallow ledges. Abandoned underground mines may have poor air quality, as they lack the ventilation systems found in active mines that provide fresh air to workers. These abandoned sites can contain dangerous levels of carbon monoxide or methane, making them hazardous to enter.

GEOGRAPHIC LOCATION

Greene County is home to over 360 documented caves scattered throughout the region. The Springfield Underground, a 2.4 million square foot underground facility, is located 100 feet below Springfield, Missouri. Many of these caves are situated on private property. Greene County also has several public show caves, including Fantastic Caverns, Smallin Civil War Cave, Riverbluff Cave, and Crystal Cave.

The county has several operating mines, including five limestone and zinc mines within Springfield’s jurisdiction. Lead and zinc mining were prevalent in the Springfield area from the 1870s to the 1920s. After mining operations ceased, many of these mines were filled in and abandoned. The exact number of abandoned mines remains unknown.

Figure 3.4.51 Cave Density in Greene County



STRENGTH/MAGNITUDE/EXTENT

According to the Missouri Department of Labor, historically, two Missouri miners are killed each year, and approximately 100 are injured while working in caves and mines annually. Caves or mine collapses can cause significant damage to the surface if they are large enough, or they can occur entirely underground. Geological and mining factors can influence the magnitude and extent of a cave or mine collapse.

PREVIOUS OCCURRENCES

There has been no recorded cave or mine collapses within the Greene County planning area. However, incidents of land subsidence and sinkholes, which are discussed in a separate section, have occurred. Greene County is home to many limestone caves and several mines, with the largest being the Springfield Underground.

PROBABILITY OF FUTURE EVENTS

While it is unlikely that Greene County will experience a cave or mine collapse, the large number of caves in the area makes it a possibility. The Missouri State Hazard Mitigation Plan considers cave and mine collapses alongside sinkholes, predicting a combined probability of 83 percent for incidents related to either event.

VULNERABILITY OVERVIEW

Thanks to increasing regulations and improved safety procedures, the risk of a cave-in due to human error or accidents is low, particularly in the popular show caves in Greene County. The probability of an earthquake affecting the area is also low, though it remains a potential factor. As evidenced by recent subsidence caused by a mine shaft in Springfield, there is still a present risk of mine shafts collapsing or subsiding beneath unaware individuals and buildings.

Figure 3.4.52 Number of Mines

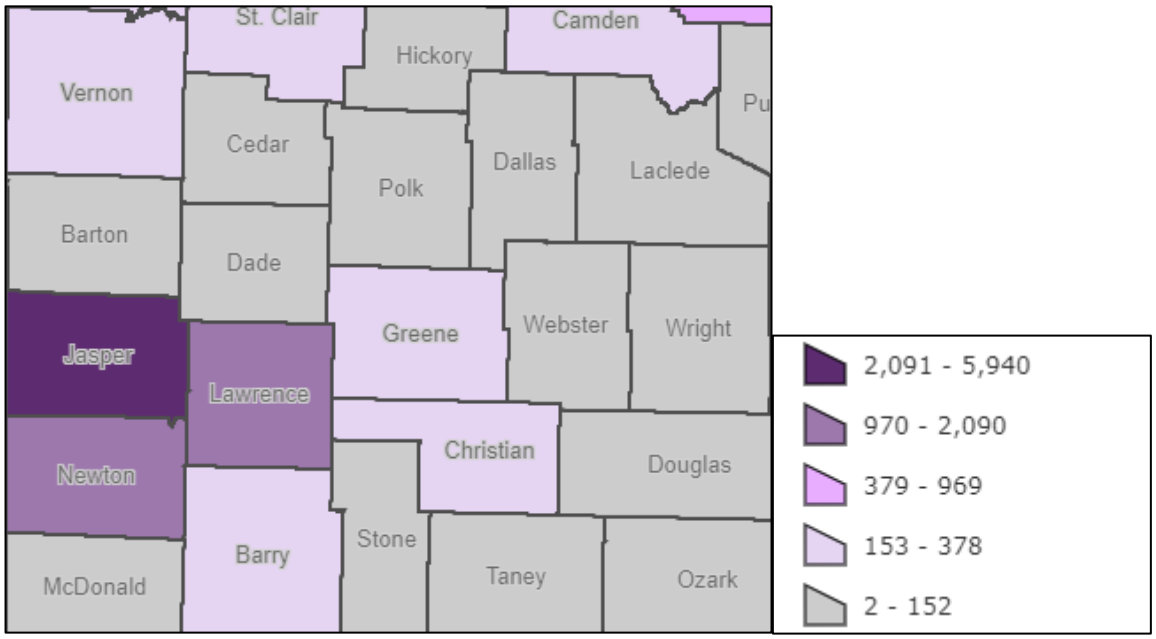
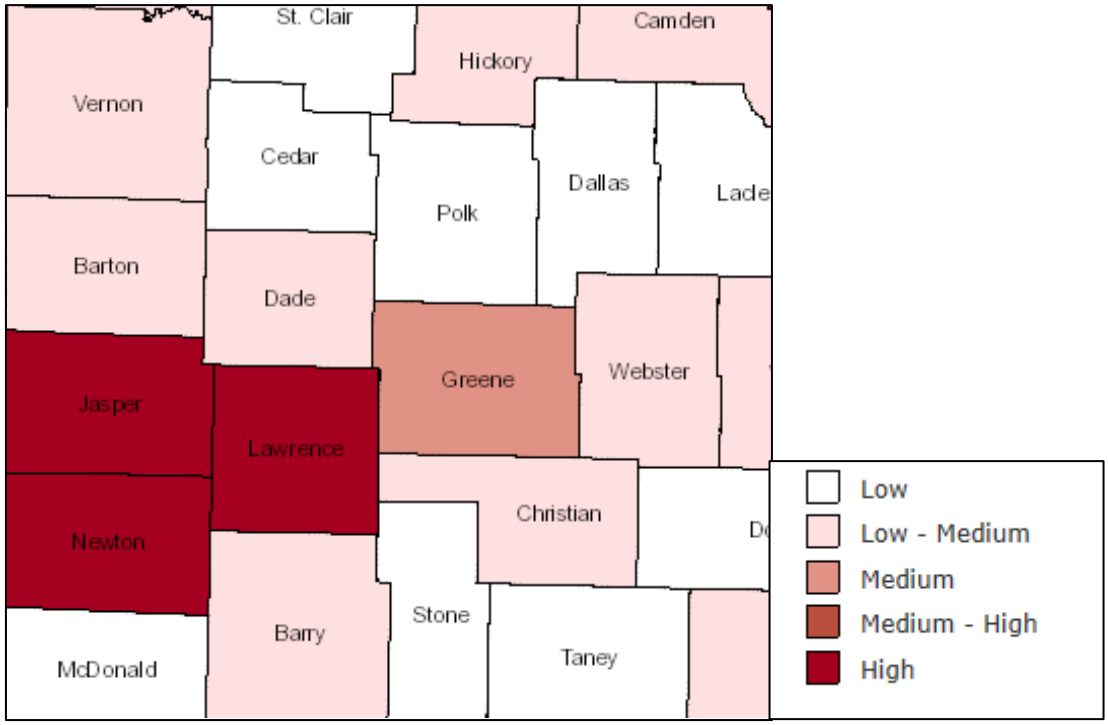


Figure 3.4.53 Vulnerability of Mine Collapse



POTENTIAL LOSSES TO EXISTING DEVELOPMENT

Fantastic Caverns hosts over 100,000 visitors each year, with the other show caves attracting thousands more. While these show caves are carefully maintained, the large number of people exposed to the potential dangers posed by earthquakes, erosion, and vandalism presents a serious public safety concern.

Springfield Underground, a massive underground storage facility in Springfield, houses warehousing, laboratories, food storage, records storage, and data centers. A collapse in the Springfield Underground could result in the deaths or entrapment of hundreds of workers, contaminate millions of pounds of food, and destroy critical data and records.

Many undocumented mines are scattered throughout Greene County, and numerous public spaces and private homes have unknowingly been built over abandoned shafts. Both public and private properties remain vulnerable to the risk of a mine shaft collapse below.

IMPACT OF PREVIOUS AND FUTURE DEVELOPMENT

Greene County will continue to experience growth across the planning area. Development has already taken place in areas above abandoned shafts, and as development continues, it is highly likely that more construction will occur above mines and caves. Attractions like Fantastic Caverns draw many visitors to the area, and as tourism grows in Greene County, the risk of the population increases if a cave or mine collapse were to occur.

EMAP CONSEQUENCE ANALYISIS

Table 3.4.52 EMAP Impact Analysis: Cave/Mine Collapse

Subject	Detrimental Impacts
Public	Greene County has never experienced a cave/mine collapse. The most likely type of collapse would be an old mine shaft. These are abandoned and would not create much of a safety impact if there was a collapse.
Responders	If responders are called to the scene of a collapse, there are life safety issues if they must enter an unsafe structure. There may be another collapse.
Continuity of Operations	A cave or mine collapse would have little to no impact on service operations.
Property, Facilities, and Infrastructure	The collapse of an abandoned mine or cave could create substantial damage to the foundation of homes and small buildings. It would also create little to no facility or infrastructure damage.
Environment	A cave or mine collapse could create isolated instances of environmental damage if the collapse occurs in a used water source.
Economic Condition of Jurisdiction	A collapse would have little to no impact on the economy.
Public Confidence in Jurisdiction Governance	The collapse of a cave or mine would cause little to no loss in public confidence in governance.

HAZARD SUMMARY BY JURISDICTION

There are numerous caves and mines scattered throughout the planning area. While many have been identified, a significant number remain undocumented. The entire planning area is at risk of experiencing a cave or mine collapse. Although the area has not experienced a major collapse, such an event remains a possibility for the future.

PROBLEM STATEMENT

Cave and mine collapses can be extremely dangerous, causing significant damage to both property and human life. Many caves and mines can go unnoticed for long periods of time, often only becoming apparent when they collapse. As development continues across the planning area, it is crucial for communities to stay informed about the risks of cave and mine collapses and learn how to mitigate these hazards. Cave collapses can cause extensive environmental damage as well. Mitigation strategies include avoiding development in or near large caves and fostering public education on the issue.

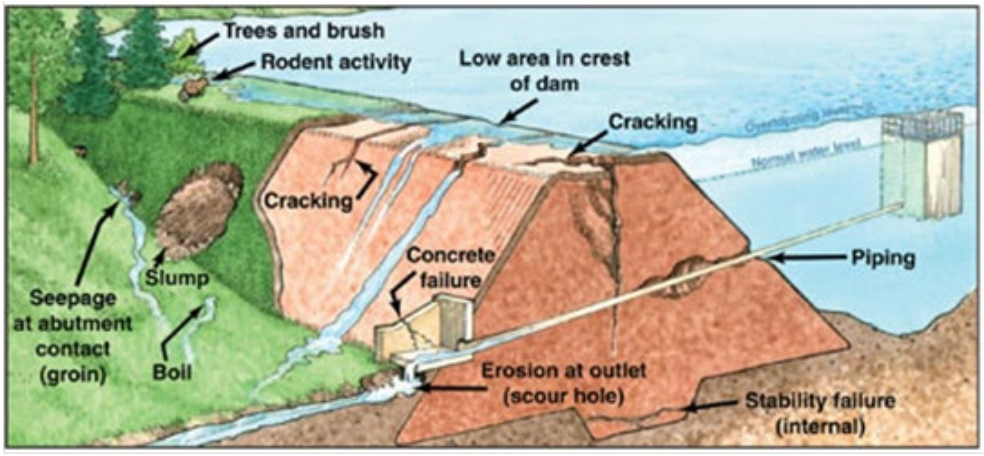
3.4.11 TECHNOLOGICAL HAZARD: DAM FAILURE

HAZARD PROFILE

A dam is defined as a barrier constructed across a watercourse for the purpose of storage, control, or diversion of water. Dams are typically constructed of earth, rock, concrete, or mine tailings. Dam failure is the uncontrolled release of impounded water resulting in downstream flooding, affecting both life and property. Dam failure can be caused by any of the following:

Causes of Dam Failures

- Overtopping: Caused by water spilling over the top of a dam. Overtopping of a dam is often a precursor of dam failure. National statistics show that overtopping due to inadequate spillway design, debris blockage of spillways, or settlement of the dam crest account for approximately 34percent of all U.S. dam failures.
- Foundation Defects: foundation defects including settlement and slope stability cause about 30 percent of all dam failures.
- Cracking: mostly caused by movements like the natural settling of a dam.
- Inadequate maintenance and upkeep
- Piping: when seepage through a dam is not properly filtered and soil particles continue to progress form sinkholes in the dam. Another 20 percent of U.S dam failures have been caused by piping. Seepage often occurs around hydraulic structures, such as pipes and spillways; through animal burrows; around roots of woody vegetation; and through cracks in dams, dam appurtenances and dam foundations.



Types of Dams as Defined by Missouri Department of Natural Resources

- Dams less than 25 feet in height are generally not accounted for and detailed information is not available. These dams are unregulated in Missouri.
- Dams greater than 25 feet in height but less than 35 feet in height are accounted for and information such as dam height is collected for the National Inventory of Dams. These dams are unregulated in Missouri.
- Non-agricultural and non-federal dams 35 feet or greater in height are regulated in Missouri and require a permit for construction and operation. Permitted dams can be found in the National Inventory of Dams.

Table 3.4.53 National Inventory of Dams (NID) Dam Hazard Classifications and Definitions

Hazard Class	Definition
Low Hazard	Dams assigned the low hazard potential classification are those where failure or mis-operation results in no probable loss of human life and low economic and/or environmental losses. Losses are principally limited to the owner's property.
Significant Hazard	Dams assigned to the significant hazard potential classification are those dams where failure or mis-operation results in no probable loss of human life but can cause economic loss, environmental damage, disruption of lifeline facilities, or can impact other concerns. Significant hazard potential classification dams are often located in predominantly rural or agricultural areas but could be in areas with population and significant infrastructure.
High Hazard	Dams assigned the high hazard potential classification are those where failure or mis-operation will probably cause loss of human life.

Source: FEMA Federal Guidelines for Dam Safety

Table 3.4.54 Hazard Class Identification

Hazard Class	Definition
Class I	The area downstream from the dam that would be affected by inundation contains 10 or more permanent dwellings or any public building. Inspection of these dams must occur every two years.
Class II	The area downstream from the dam that would be affected by inundation contains one to nine permanent dwellings, or one or more campgrounds with permanent water, sewer and electrical services or one or more industrial buildings. Inspection of these dams must occur once every three years.
Class III	The area downstream from the dam that would be affected by inundation does not contain any of the structures identified for Class 1 or Class 2 dams. Inspection of these dams must occur once every five years.

Source: Missouri Department of Natural Resources

GEOGRAPHIC LOCATION

Table 3.4.55 Dams Located Within the Planning Area

Dam Name	Year Completed	Length (ft)	Height (ft)	Surface Area (Acres)	Drainage Area (Acres)	State Regulated	Hazard Potential	Hazard Class	Identification Number
Rainbow Lake Dam	1974	500	42	13	227	Yes	High	2	MO20394
Hardeke Lake Dam	1964	-	22	8	190	No	High	1	MO30148
D&R Pipeline Construct Co. Lake Dam	1975	-	25	7	560	No	High	1	MO20396
Hillard Estates Lake Dam	1977	-	27	4	50	No	High	1	MO20473
Fellows Lake Dam	1955	1500	100	812	12858	Yes	High	1	MO20036
McDaniel Lake Dam	1929	700	48	300	25000	Yes	Significant	3	MO20038
Mueller Lake Dam	1971	300	25	2	173	No	Low	3	MO20416
Salisbury Lake Dam	1963	-	25	8	1000	No	Low	3	MO20079
Valley Water Mills Dam	1890	-	21	17	3200	No	High	1	MO20035
Ford Lake Dam	1978	-	25	9	99	No	High	2	MO20479

Barnard Lake Dam	1963	-	22	2	830	No	Low	3	MO20360
Lake James Dam	-	-	30	6	210	No	Low	3	MO20474
McClean, Lee & Hammons, John Q Lake #3	1962	-	15	9	635	No	High	1	MO20397
Stonegate Dam	1999	250	45	2	30	Yes	Significant	3	MO20808
Leo Journagan Lake Dam	1975	1100	20	8	284	No	Low	3	MO20395
Hagewood Lake Dam	1970	-	25	3	80	No	High	2	MO31697
Allen Dale Subdivision Dam	-	-	18	8	660	No	Low	3	MO20791
Lake Springfield Dam	1956	1950	45	360	193920	Yes	High	1	MO20023

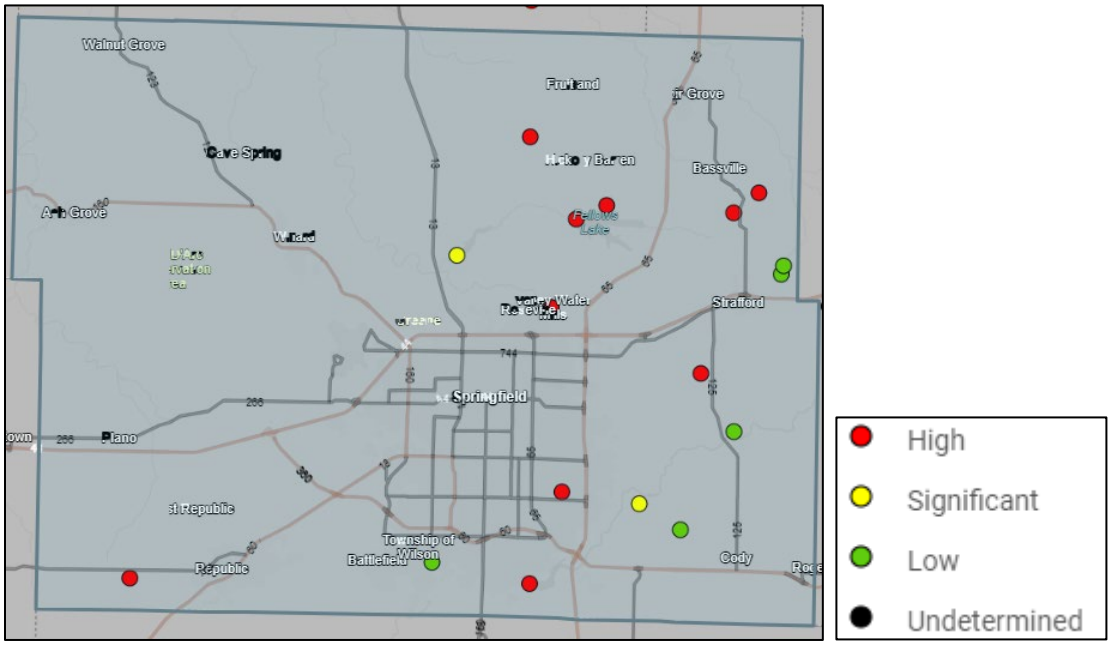
Source: https://modnr.maps.arcgis.com/apps/webappviewer/index.html?id=3ac3a61da4af4834811503a24a3cb935

Table 3.4.56 High Hazard Dams in Greene County

Name	Emergency Action Plan	Dam Height (ft)	Normal Storage (Acre ft)	Last Inspection Date	River	Nearest Downstream City	Distance to Nearest City (Miles)	Dam Owner
Fellows Lake Dam	Yes	102	36368	5/19/2021	Little Sac River	Springfield	5	City of Springfield
Lake Springfield	Yes	45	20077	11/9/2022	James River	Battlefield	3	Springfield City Utilities
Rainbow Lake Dam	Yes	42	240	1/28/2022	Dry Sac River	Aldrich	-	Paul Olive
Hillard Estates Lake Dam	Not Required	27	48	11/19/1980	Little Pomme De Terre River	Fair Grove	-	John Norman
Hagewood Lake Dam	Not Required	25	40	-	Pickerel Creek	Republic	-	R. B. Hagewood
D&R Pipeline Construction Company Lake Dam	Not Required	25	94	5/15/1979	Little Sac River	Springfield	8	D&R Pipeline Construction Company
Ford Lake Dam	Not Required	25	120	-	Pearson Creek	Springfield	-	Edel Ford Tractor Company
Hardeke Lake Dam	Not Required	22	94	7/17/1980	Pomme De Terre	Fair Grove	5	Carl Hardeke Jr.
Valley Water Mills Dam	Not Required	21	191	6/6/1979	South Dry Sac River	Springfield	1	Springfield City Utilities
Mclean, Lee & Hammons, John Q Lake #3	Not Required	15	72	5/15/1979	James River	Springfield	-	L. Mclean & J. Q. Hammons

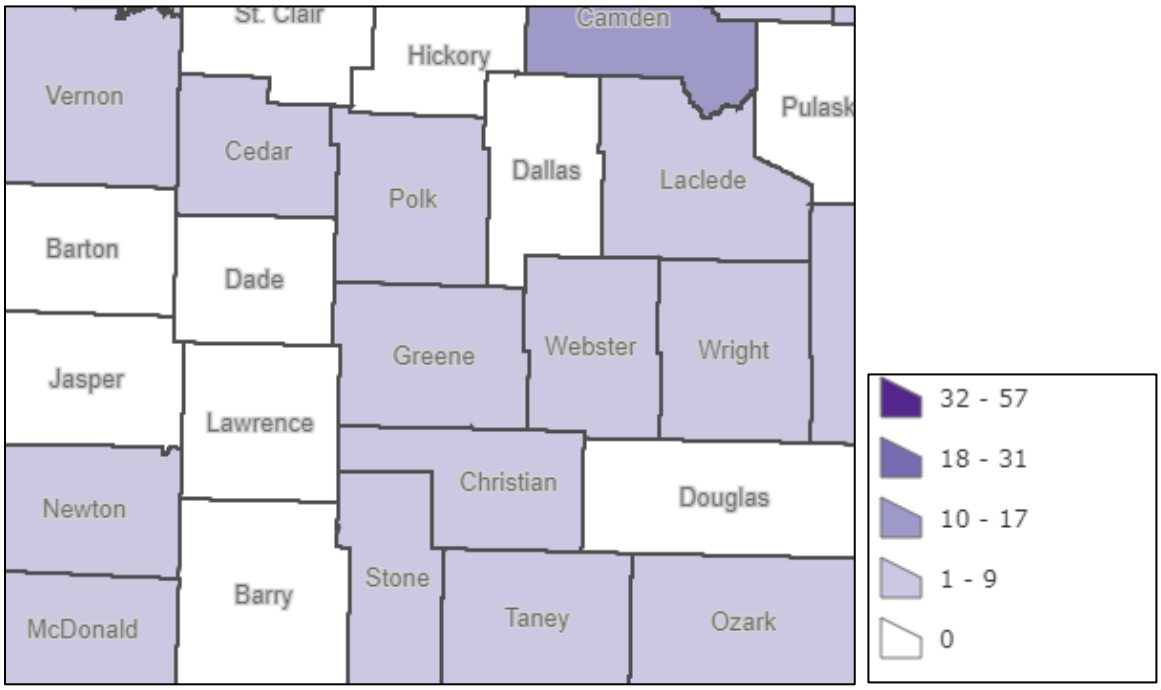
Source: National Inventory of Dams

Figure 3.4.55 Dam Locations in Greene County



Source: National Inventory of Dams

Figure 3.4.56 Number of State Regulated Dams in Greene County



According to the National Inventory of Dams, 29 percent of Greene County's dams are state regulated, and 0 percent are federally regulated. There are 17 dams in total and 30 percent of the high hazard dams have an Emergency Action Plan (EAP).

STRENGTH/MAGNITUDE/EXTENT

The strength, magnitude, and extent of a dam failure can be similar to flood events (see individual flooding section). The severity of a dam failure depends on the volume of water behind the dam, as well as the potential speed of onset, depth, and velocity. Due to these factors, dam failures can result in flooding beyond the areas mapped as flood hazards. Missouri ranks third in the nation, behind Texas and Kansas, with 5,400 dams. There have been 92 dam failure-related events in the state, though only 24 resulted in an uncontrolled release of the reservoir.

Flooding can occur from overtopping when excess water exceeds the capacity of the dam's spillway and reservoir. Complete structural collapse can also occur due to an earthquake or severe tremors. When a dam fails, the release of pent-up water can have catastrophic effects on downstream life and property. Homes, bridges, and roads may be demolished within minutes.

While true dam failures are rare, small incidents leading to localized flooding do occur. However, when dams do fail completely, the consequences are devastating, resulting not only in loss of life but also significant capital investment loss, income loss, and extensive property damage. Moreover, the loss of a reservoir, which often serves as a drinking water source, can create severe hardship for the affected community. It can also disrupt the ecological balance of the area.

If a failure were to occur in non-regulated dams, agriculture could be impacted in the immediate vicinity, though loss of life and property damage would likely be minimal. However, failure of regulated dams, especially those supplying drinking water, would be catastrophic. For instance, the Fellows Lake Dam, the largest in the Greene County planning area, contains 11,850,500,000 gallons of water at full capacity, according to the National Inventory of Dams. An uncontrolled release from this reservoir could result in widespread loss of life, extensive property damage, and the shutdown of critical facilities.

In Missouri, the legislature enacted Chapter 236 RSMo to ensure dams are safely constructed, operated, and maintained. Dams that are 35 feet or higher are regulated by the state and must be surveyed every two to five years. The Department of Natural Resources oversees a Water Resources Program within the Division of Geology and Land Survey. As of 2004, the program no longer conducts dam inspections for permit renewals, leaving the responsibility to the owners to provide inspection documentation. New dam construction is inspected prior to being granted an initial permit. Dams below the 35-foot threshold are not required to be inspected by the state, though it has long encouraged owners to conduct their own inspections. Despite this, many of these smaller dams continue to deteriorate. Within the Greene County planning area, there are 17 dams, with an average age of 60 years. Two of the five lakes created by these dams provide potable drinking water, and one lake is used for cooling water at a power facility.

PREVIOUS OCCURENCES

The first known dam failure occurred in 1848, and since then, various programs, such as the National Performance of Dams Program, have tracked dam failures. In the United States, dam failures have resulted in thousands of injuries and fatalities, along with billions of dollars in property damage. Between 1848 and 2017, nearly 2,000 dams failed. The most catastrophic dam failure in U.S. history occurred in May 1889, when the South Fork Dam in Johnstown, Pennsylvania, failed, killing more than 2,200 people and causing $17 million in damages. Other notable incidents include the failure of the Teton Dam in Colorado in 1976, which killed 14 people and caused over $1 billion in damages, and the collapse of the Kelly-Barnes Dam in Georgia, which resulted in 39 deaths and $30 million in property damage.

In Missouri, there have been 92 recorded dam failure incidents, with 24 of these involving an uncontrolled release of the reservoir, meaning water was unintentionally discharged. As of now, Greene County has not experienced a dam failure event.

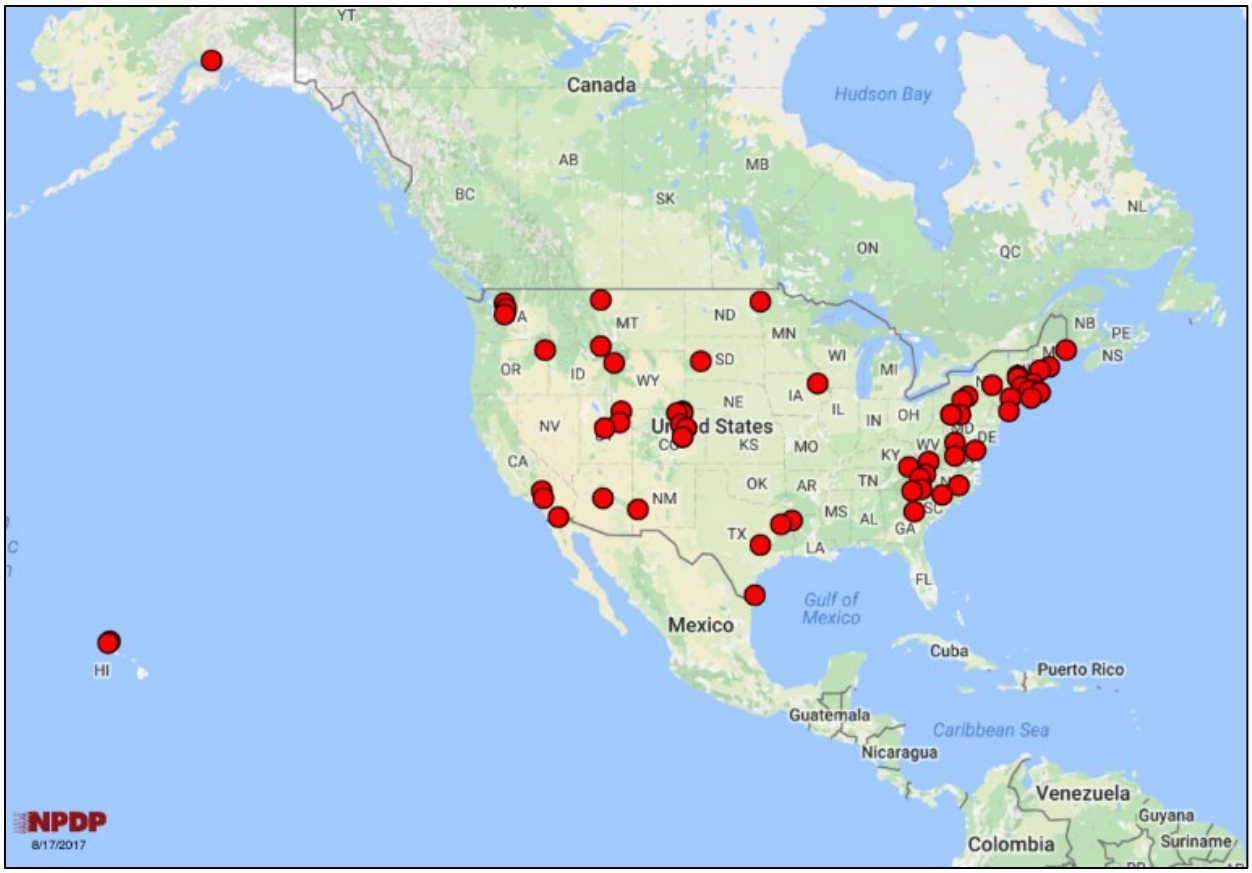
Table 3.4.57 Dam Failures in Missouri Resulting in Uncontrolled Release of Reservoir

Name of Dam	Year	Incident Type	Type of Dam	Injuries/Fatalities	EAP
Christiansen Lake Dam	1999	Embankment Erosion	Earth	0	No
Lake Venita Dam	1997	Seepage, Piping	Earth	0	No
Freddies Lake Dam	1997	Inflow Flood - Hydraulic Event	Earth	0	No
Bockelman Lake Dam	1993	Inflow Flood - Hydraulic Event	Earth	0	No
Stevens Lake Dam	1993	Inflow Flood - Hydraulic Event	Earth	0	No
Norman Swinney's Dam	1993	Inadequate Compaction	-	0	No
West Fork of Big Creek C1 Dam	1993	Inflow Flood - Hydraulic Event	Earth	0	No
Unnamed (MOS00015)	1992	Erosion	Other	0	No
ISP Minerals Dam	1992	Not Known	-	0	No
Lake Wapapello Dam	1992	Not Known	-	0	No
Hester Lake Dam	1991	Piping	Earth	0	No
Hester Lake Dam	1990	Not Known	Earth	Not Available	No
Blue Springs No Name Dam	1990	Inflow Flood - Hydraulic Event	-	0	No
St Joe State Park Sediment Impoundment	1990	Inflow Flood - Hydraulic Event	-	0	No
Marschke Lake Dam	1988	Not Known	Earth	0	No
Richardet Dam	1985	Seepage, Embankment Slide	Earth	0	No

Clarence Cannon Cofferdam & Main Embankment	1981	Inflow Flood - Hydraulic Event	Earth	Not Available	No
Pinkston Dam	1978	Piping	-	0	No
National Lead Tailings Pond Dam	1977	Inflow Flood - Hydraulic Event	Earth Tailings	0	No
Dresser No.4 Dam	1975	Piping	Earth, Rockfill, Other	0	No
Howell County Dam	1969	Inflow Flood - Hydraulic Event	-	0	No
Braddock Lake Dam	1963	Inflow Flood - Hydraulic Event	-	0	No
Colley Lake Dam	1963	Inadequate Spillway	Earth	0	No
Lee Lake	1938	Not Known	Earth	0	No

Source: https://npdp.stanford.edu/

Figure 3.4.57 Dam Failures Involving Fatalities in the US and Their Locations



Source: National Performance of Dams Program

PROBABILITY OF FUTURE OCCURRENCE

The average age of dams within Greene County is 60 years. The three largest dams within the planning area have an Emergency Action Plan (EAP) in place, which is designed to help mitigate the impacts of a potential dam failure. Despite the aging infrastructure, it is unlikely that a dam failure will occur within the next 10 years. Over the past 42 years in Missouri, there have been only 19 recorded dam failure incidents, resulting in an estimated probability of 45 percent for another event in the near future.

CHANGING FUTURE CONDITIONS AND CONSIDERATIONS

The Missouri State Hazard Mitigation Plan has conducted studies to assess the relationship between climate change and dam safety. These studies suggest that, as precipitation events become more extreme and frequent, the risk of flooding will increase, putting additional stress on dams and raising the likelihood of failure. Since many dam failures are linked to flooding, the incidence of failures could rise as flooding events become more intense.

Future climate conditions will affect dam safety, particularly in terms of changes to design floods and the freeboard necessary to accommodate increased flood levels. These studies indicate that both the design flood levels, and corresponding outflow volumes will increase, which may compromise the safety of existing dams. The total probability of hydrological failure for dams is expected to rise due to climate change, with an anticipated increase in floodwater depth and extent in future dam break scenarios.

VULNERABILITY OVERVIEW

The National Inventory of Dams (NID) uses a downstream hazard classification system to assess vulnerability in the event of a dam failure. According to the NID, of the 17 dams in Greene County, 10 are classified as high hazard (58.8 percent), 2 as significant hazard (11.8 percent), and 5 as low hazard (29.4 percent). The hazard classification system is based on the potential impacts to downstream areas in the event of inundation, but it does not assess the structural integrity or the likelihood of dam failure.

For the five regulated dams, safety is monitored through two main processes: 1) regular inspections, and 2) Emergency Action Planning (EAP). Four of the dams within the planning area have Emergency Action Plans in place. The Missouri State Hazard Mitigation Plan ranks Greene County among the top five counties in the state most at risk in the event of a dam failure.

Emergency Action Planning/Inundation Mapping

An Emergency Action Plan (EAP) is a critical tool for emergency managers, as it helps identify structures at risk and flooded roadways, allowing for the development of evacuation routes and effective emergency management efforts. As of May 2023, four of the five dams required to have an EAP in the planning area have completed these plans. Since 2009, the Missouri Department of Natural Resources has been collaborating with dam owners and emergency personnel to create these plans. An important component of the EAP is the dam inundation map, which is required for all state-regulated high-hazard potential dams in Missouri.

The Missouri Department of Natural Resources has provided an EAP template accessible through the Dam and Reservoir Safety Program Emergency Action Planning section of their website. To date, 33 percent of high-hazard potential dams in Missouri have completed their EAPs, developed with assistance from local emergency management directors (EMDs) and the Department of Natural Resources.

In addition, each U.S. Army Corps of Engineers (USACE) dam has its own Emergency Action Plan and inundation map, which are generally updated on an annual basis. The USACE Modeling, Mapping, and Consequences (MMC) Production Center, part of the USACE Risk Management Center, is responsible for producing these maps.

When a dam fails, the sudden release of stored water can have catastrophic effects on life and property downstream. Homes, bridges, roads, and other critical infrastructure can be destroyed in minutes. Residents near high-hazard or significant-hazard dams should familiarize themselves with the dam's emergency action plan, if available. Currently, there are no USACE dams within the planning area, and only 23 of Missouri’s 5,400 dams are USACE-managed.

Emergency Action Plan Contents

EAPs for dams include essential guidance for evaluating emergency situations at the dam, as well as notification charts, emergency contact information, and basic physical and geographical data about the regulated dam. Inundation zone maps, although not required, are strongly recommended as part of these plans. Additionally, the plans list residents, businesses, and entities within the downstream inundation zone, along with available resources for responding to dam emergencies.

People at risk in the inundation areas include farm workers, hunters, anglers, hikers, campers, and other recreationists closest to the dam. Livestock may also be in danger, and crops could suffer damage. To assess the vulnerability of people and property to potential dam failure in Missouri, a quantitative analysis was conducted based on available inundation maps for state- and federally regulated dams. While this analysis does not capture vulnerability from all dams in the state, it represents the most comprehensive assessment possible using current data.

Figure 3.4.58 Total Number of Dams by County

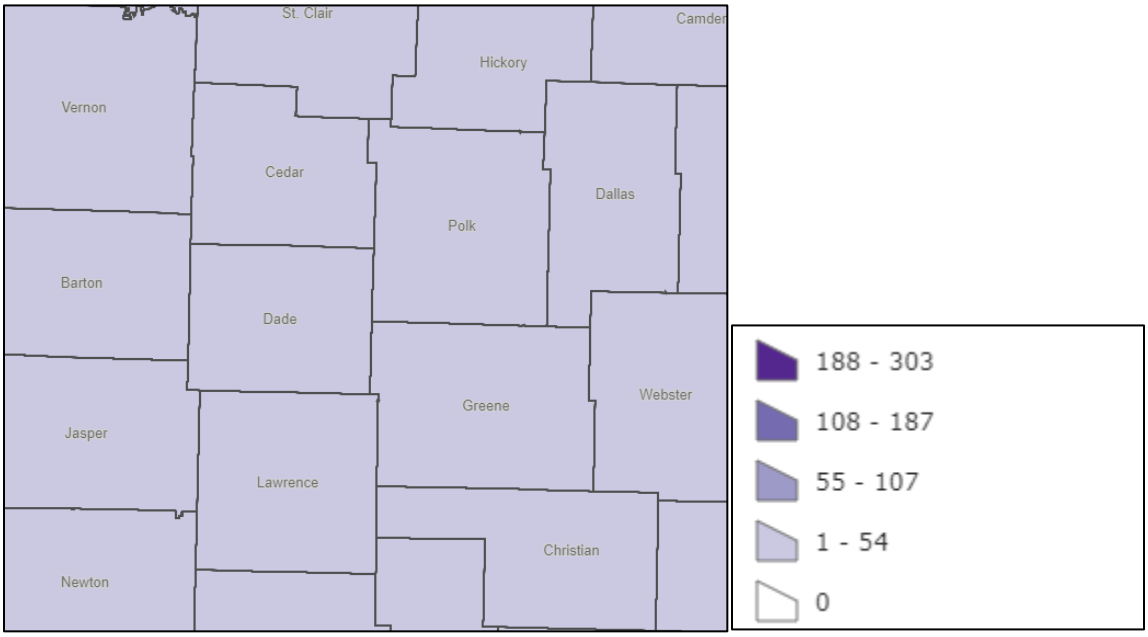


Figure 3.4.59 Total Number of High Hazard Dams by County

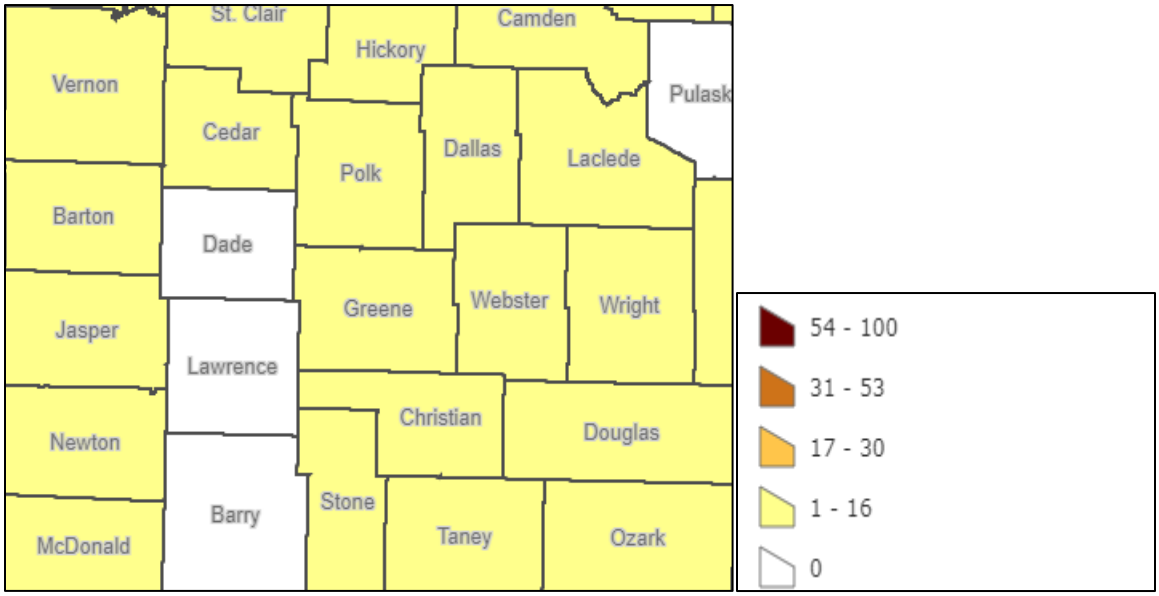


Figure 3.4.60 Total Number of Significant Hazard Dams by County

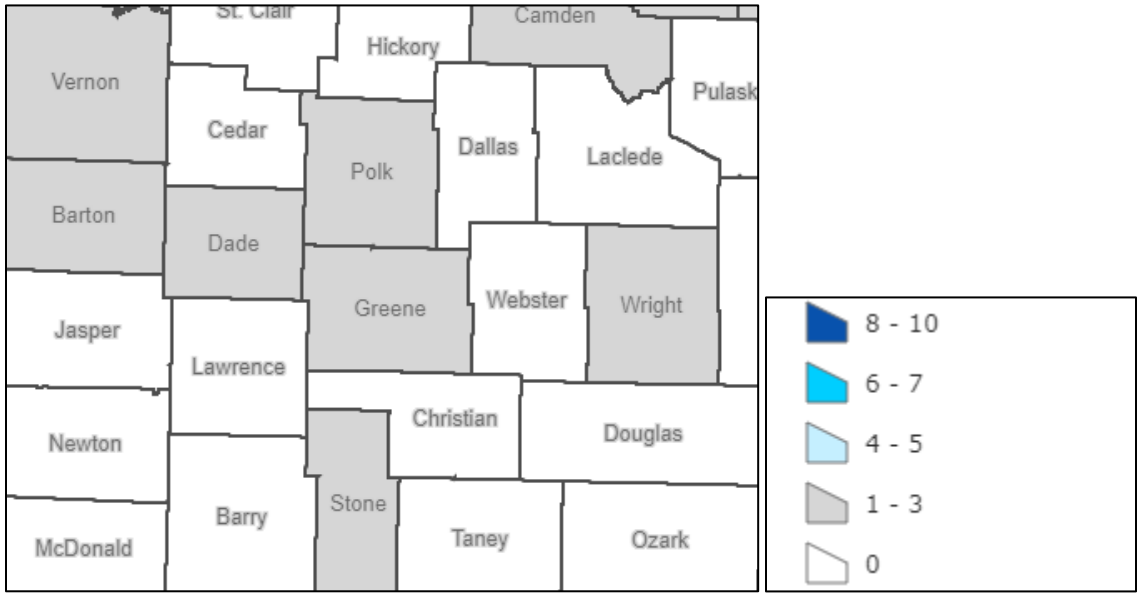


Figure 3.4.61 Total Number of Low Hazard Dams by County

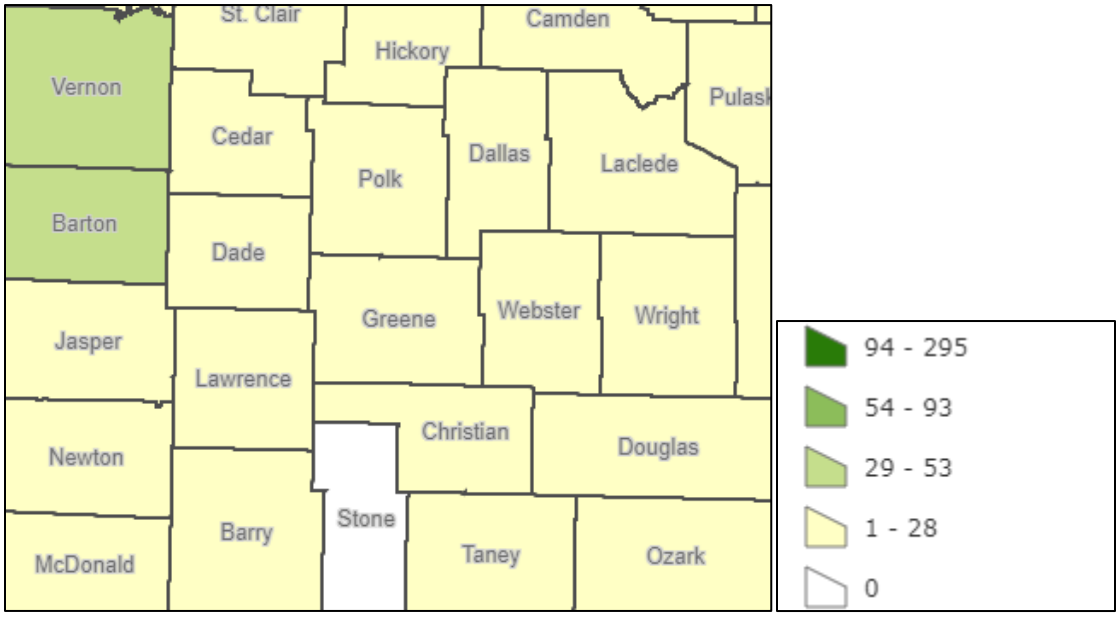
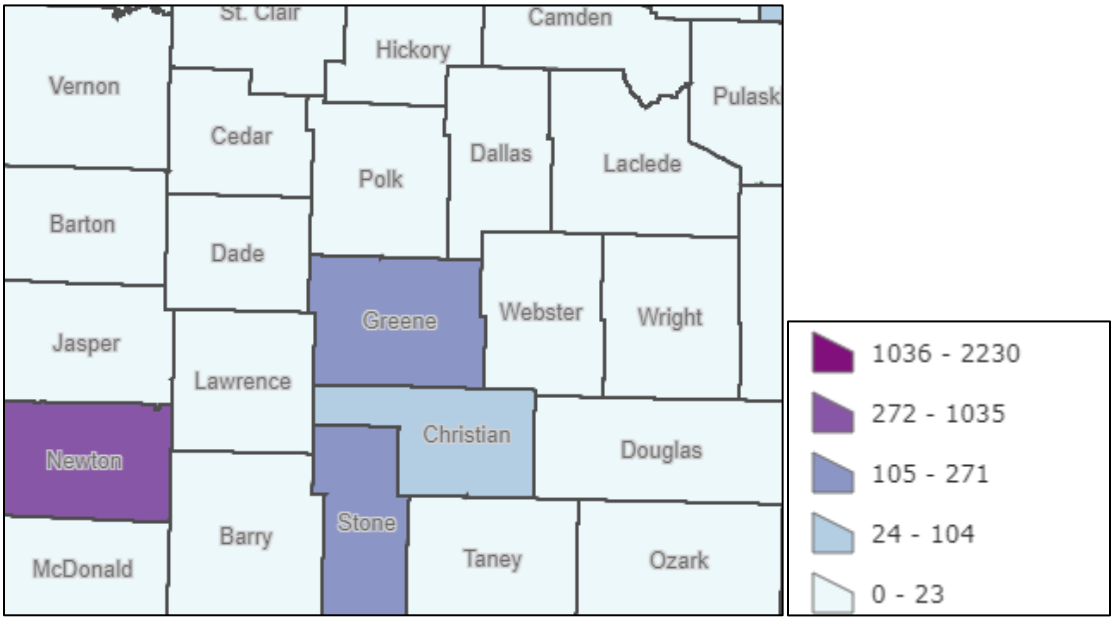


Figure 3.4.62 Population Affected by State Dams



POTENTIAL LOSSES TO EXISTING DEVELOPMENT

Figure 3.4.63 Number of Structures Affected by State Dams

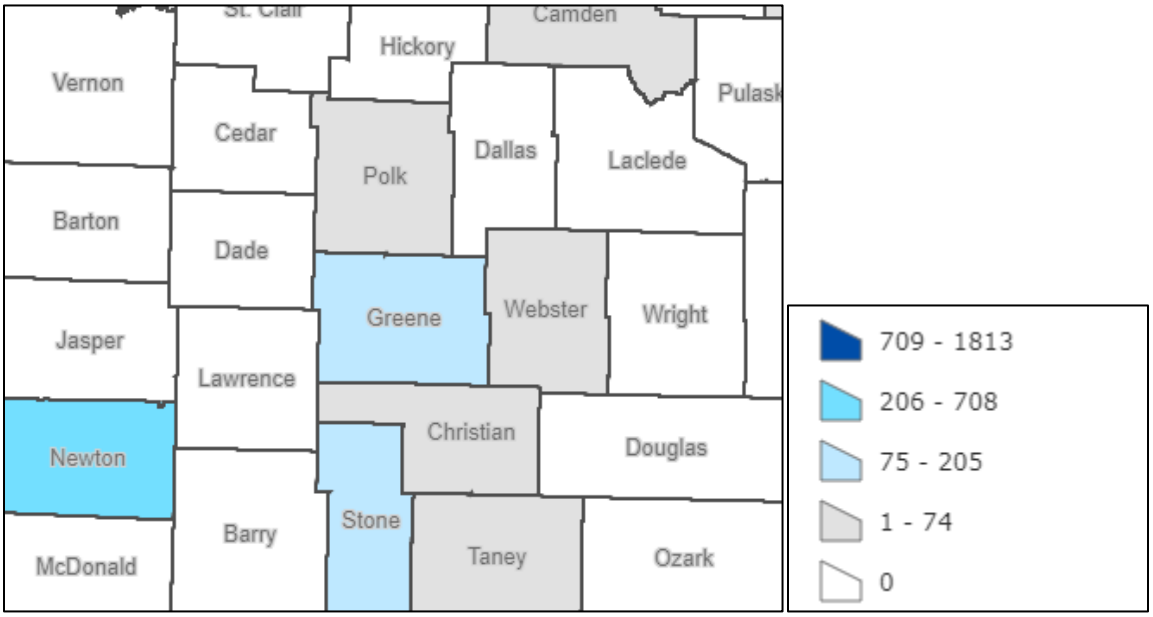
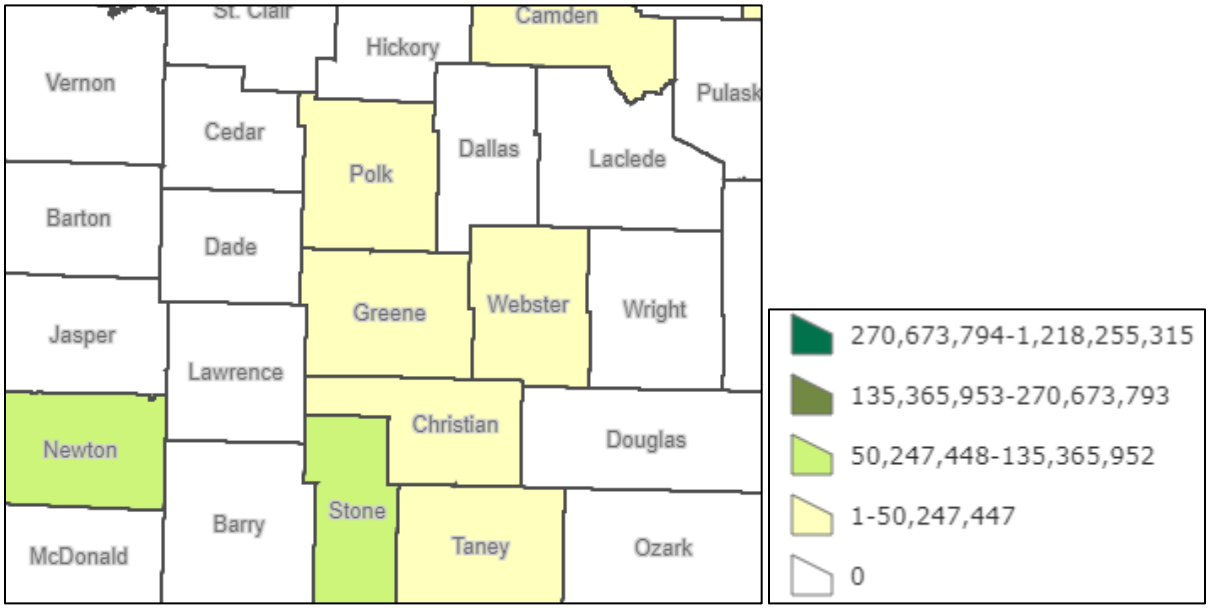


Figure 3.4.64 Structures (In Dollars) Affected by State Dams



Impact of Dam Failures

Dam failures can cause significant damage to the community. The graphics above illustrate the potential impacts of state-regulated dams in Greene County, but it's important to recognize that many other dams in the area also pose risks. One of the major dangers of dam failure is the environmental impact. Soil erosion and scouring can be severely exacerbated by large volumes of fast-moving water, which can quickly affect small areas. The resulting sedimentation from erosion can drastically alter the landscape and disrupt local ecosystems.

IMPACT OF PREVIOUS AND FUTURE DEVELOPMENT

As development continues to expand in Greene County, the risk of various hazards, including those associated with dam failures, grows. While there is limited space for development around Lake Springfield Dam, there is still room around Fellows Lake Dam. As two of the largest dams in the county, these pose the greatest risk in the event of failure. There are also many smaller dams scattered throughout the planning area. Any new development near these dams would increase the vulnerability of property and people to potential dam failures and their associated damages.

EMAP CONSEQUENCE ANALYSIS

Table 3.4.58 EMAP Impact Analysis: Dam Failure

Subject	Detrimental Impacts
Public	A dam failure in Greene County could result in the loss or severe limitation of drinking water. Health and safety concerns associated with dehydration could cause major widespread safety concerns, and possible illness and death.
Responders	Responder safety and response functions would be impacted due to a lack of water. This would become even more of a safety issue if the dam failure occurred in times of extreme heat or drought.
Continuity of Operations	A shortage of water from dam failure would create interruptions from some services, and others may be delayed.
Property, Facilities, and Infrastructure	A dam failure in Greene County would cause little to no property damage. Utilities and essential facilities such as hospitals would not be able to operate efficiently without water. Facilities would experience little damage; however, they would be impacted in a water shortage situation.
Environment	The environment would experience multiple instances of significant damage in the event of water shortage.
Economic Condition of Jurisdiction	A dam failure would greatly impact the economic conditions throughout the jurisdiction in areas affected by the dam failure.
Public Confidence in Jurisdiction Governance	A water shortage from dam failure would cause minor isolated instances of loss of public confidence in governance.

HAZARD SUMMARY BY JURISDICTION

Greene County

There are 17 dams within the planning area, the largest two being in Springfield. Failure of these dams could result in substantial property damage, injuries, and even loss of life. Additionally, dam failures can lead to environmental degradation, including soil erosion and water contamination. The effects of dam failures are often similar to those of flooding, which is addressed in its own section.

City of Ash Grove

The City of Ash Grove did not list dam failure as a hazard for this mitigation plan. This is due to the fact that there are no high-risk dams within the limits of Ash Grove or within range of damage if a Greene County dam was to fail. Resources could be thin within the city if their Fire Department was to respond to the Springfield area after a dam failure.

City of Battlefield

Between Springfield and the City of Battlefield is one of the largest dams within the planning area, Lake Springfield Dam. This dam contains enough water to cover 20,077 acres of land in a foot of water. This could cause extensive damage to properties and buildings near the dam but also in a larger range it could cause flash flooding issues in the planning area. There could be loss of life, loss of property and serious environmental issues.

City of Fair Grove

The City of Fair Grove has one high risk dam, Hardeke Lake Dam, and contains enough water on average to cover 92 acres with a foot of water. Due to the terrain around the lake even a complete failure is not expected to cause widespread damage. There could be localized flooding on private properties. Considering this, Fair Grove did not list dam failure as a hazard that impacts them.

City of Republic

The City of Republic is not close enough to any high-risk dams in the planning area or surrounding areas. Because of this it was not identified as a hazard for the City of Republic. It could be expected that responders from Republic would go to an area heavily impacted by a dam failure which could cause delays in response times.

City of Springfield

Two major dams in Springfield pose significant risks to the city if they were to fail: Lake Springfield Dam and Fellows Lake Dam. A failure of either of these dams could cause extensive damage to the city. Lake Springfield, surrounded by many neighborhoods, would be especially vulnerable to flooding, with substantial property damage expected. Additionally, the James River Power Station, located right on the dam, could face significant disruption. Fellows Lake Dam, while not surrounded by as much development, still has some residential areas nearby that would be affected in the event of a failure.

City of Strafford

The City of Strafford is not downstream to any high hazard dams. Because of this, dam failure was not considered a hazard in this Mitigation Plan. There could be some localized flooding in the surrounding area if one of the smaller dams was to fail but many of these are privately owned and would not impact the City as a whole.

Ash Grove School District

The City of Ash Grove did not list dam failure as a hazard for this mitigation plan. This is due to the fact that there are no high-risk dams within the limits of Ash Grove or within range of damage if a Greene County dam was to fail. Because of this the Ash Grove School District did not consider dam failure to be a hazard in this plan update.

Springfield School District

Springfield Public Schools could potentially see damage to buildings within the immediate radius of the dams if there was to be a catastrophic failure. This could include structural damage to foundation, flooding of the property, interior flooding and loss of property. If the incident was to happen during school hours there could potentially be a loss of personal property, injury to staff and students, power outages that could impact disabled staff and students, as well as emotional strain on staff and students.

Ozark Technical College

While the City of Springfield is at risk of flooding in the event of a dam failure, Ozark Technical College, OTC, is not within the area of risk. They are situated in the center of Springfield rather than either of the edges near the dams. Considering this, OTC did not list damn failure as a risk. In many instances if there was to be dam failure, they may experience some flash flooding within the city but it is not expected to do damage in the area.

Battlefield Fire Protection District

The City of Battlefield is at risk from a high hazard dam, because of this the Fire Protection District would be impacted. They could expect to respond to water rescue calls, roadside collision or accidents due to flooding as there wouldn't be a lot of warning time for drivers and there could be downed power lines that could cause electrical fires.

Brookline Fire Protection District

Brookline Fire Protection District is not directly at risk from a high hazard dam and because of this did not consider it a risk in this mitigation plan. However, it can be expected that they could respond to other jurisdictions through mutual aid agreements.

Willard Fire Protection District

Willard Fire Protection District is not directly at risk from a high hazard dam and because of this did not consider it a risk in this mitigation plan. However, it can be expected that they could respond to other jurisdictions through mutual aid agreements.

PROBLEM STATEMENT

Greene County is home to numerous dams spread across the planning area, many of which are smaller and situated in less developed areas. However, the two most significant dams in terms of potential damage are Lake Springfield Dam and Fellows Lake Dam. Failure of these dams could result in substantial property damage, injuries, and even loss of life. Additionally, dam failures can lead to environmental degradation, including soil erosion and water contamination. The effects of dam failures are often similar to those of flooding, which is addressed in its own section. While Greene County has not experienced a dam failure, the risk remains for any of the 17 dams in the area, and the Missouri State Hazard Mitigation Plan lists Greene County among the top five counties in the state for potential residential losses due to dam failure. Potential mitigation measures include relocating dams, improving safety features around the structures, and conducting regular maintenance and upgrades to dam infrastructure.

3.4.13 TECHNOLOGICAL HAZARD: HAZARDOUS MATERIALS

HAZARD SUMMARY

The Department of Transportation (DOT) has defined a hazardous material as any substance or material that can cause harm to the safety of the public, handlers or carriers during transportation. Hazardous materials are essential to the economy of the United States, where on average there are 3 billion tons of regulated hazardous materials transported each year.

Table 3.4.59 Hazardous Materials by Class

Class 1: Explosives	Division 1.1: Explosives which have a mass explosion hazard Division 1.2: Explosives which have a projection hazard Division 1.3: Explosives which have a fire hazard and a minor blast hazard or a minor projection hazard Division 1.4: Explosives with no significant hazard Division 1.5: Very intense explosives with a mass explosion hazard Division 1.6**:** Extremely insensitive materials with no mass explosion hazard
Class 2: Compressed Gasses	Division 2.1: Flammable gas Division 2.2: No flammable, non-toxic gas Division 2.3: Toxic gas
Class 3: Flammable Liquids	Flammable and combustible Liquids
Class 4: Flammable Solids	Division 4.1: Flammable solids, self-reactive substances and solid desensitized explosives Division 4.2: Substances liable to spontaneous combustion Division 4.3: Substances that emit flammable gases when exposed to water
Class 5: Oxidizing Agents and Organic Peroxides	Division 5.1: Oxidizing Substances Division 5.2: Organic Peroxides
Class 6: Toxic Materials	Division 6.1: Toxic substances Division 6.2: Infectious substances
Class 7: Radioactive Materials	Radioactive substances and materials
Class 8: Corrosive Materials	Corrosive substances and materials
Class 9: Miscellaneous	Other materials or substances that carry a risk to the public, handler and carriers during transportation. They can have a risk of spontaneous and violent reactions.

Source: Department of Transportation 2024 Emergency Response Guidebook

The Emergency Response Guide (ERG) provides recommended distances to help ensure public safety from vapors and other hazards during a spill. For many materials, the immediate action following a spill is to evacuate everyone at least 100 meters (330 feet) away from the incident. Each material in the guidebook has specific safety protocols tailored to its hazards, ensuring the protection of both responders and civilians in the area. Additionally, the Occupational Safety and Health Administration (OSHA) requires that every chemical has a Safety Data Sheet (SDS), which must be presented in a consistent, user-friendly format. The SDS includes crucial information on the material's properties, physical and health hazards, environmental impacts, as well as protective measures and safety precautions for handling, storing, and transporting the material.

GEOGRAPHIC LOCATION

The entire planning area is vulnerable to hazardous materials, with areas near transportation routes being especially at risk due to the volume of hazardous materials transported through Greene County annually. In addition to transportation hazards, Greene County is home to over 300 facilities that store hazardous materials. These facilities are classified as Tier II Facilities under federal regulations.

The Environmental Protection Agency (EPA) also maintains the National Priority List (NPL), which identifies sites of national priority due to the release or potential release of hazardous materials, substances, contaminants, and pollutants across the United States. The NPL serves to guide the EPA in determining which sites require further investigation. Inclusion on the NPL does not imply a judgment of the operator's actions, nor does it mandate any specific actions or assign liability to the site’s owner or operator. In Greene County, there are three active NPL sites: Compass Plaza Well TCE, Fulbright Landfill, and Solid-State Circuits, Inc.

STRENGTH/MAGNITUDE/EXTENT

The magnitude of a hazardous materials release incident will vary depending on several factors, including the amount of material spilled or released, the type of chemical, the method of release, the location, the time of day, and prevailing weather conditions. Effective coordination between the Missouri Department of Natural Resources (MoDNR), the U.S. Environmental Protection Agency (EPA), local authorities, and the responsible party will be crucial in minimizing the potential impact on public health and the environment. A hazardous materials incident has the potential to cause widespread property damage and result in injuries or illness, posing a significant threat to human life.

PREVIOUS OCCURENCES

Below are the reported hazardous materials spills over the last 5 years, for the sake of this plan previous dates were excluded due to the number of events. Between 2011 and 2021 alone there were 676 reported events. A complete detailed list of events that have been reported in Greene County can be found at: https://dnr.mo.gov/

Table 3.4.60 Hazardous Material Spills

Incident Number	Address	Report Date
211115-0755-SMC	2631 North Glenstone Avenue, Springfield, MO, 65803	11/15/2021
211122-0745-WMH	Intersection of Highway 60 and Route MM, Republic, MO	11/22/2021
211220-1200-SMC	3520 South Campbell Avenue, Springfield, MO, 65807	12/20/2021
220105-1717-SMC	3610 East Kearney Street, Springfield, MO, 65802	1/5/2022
220113-1420-BPA	3264 East Battlefield Road, Springfield, MO, 65804	1/13/2022

220116-1720-RDH	2704 South Campbell Avenue, Springfield, MO, 65807	1/16/2022
220204-0845-SEH	Interstate 44 Eastbound at Mile Marker 81, Springfield, MO	2/4/2022
220210-1337-BPA	4811 West Kearney Street, Springfield, MO, 65803	2/10/2022
220413-1044-ADC	James River Expressway, Springfield, MO	4/13/2022
220422-1645-RDH	Highway 65 South Ramp to Highway 60 East, Springfield, MO, 65804	4/22/2022
220511-1139-RSM	3201 East Division Street, Springfield, MO, 65804	5/11/2022
220519-1242-RLG	1948 East Sunset Drive, Springfield, MO, 65804	5/19/2022
220622-1530-CMH	6691 West Farm Road 140, Springfield, MO, 65802	6/22/2022
220804-2146-BPA	225 East Evergreen Street, Strafford, MO, 65757	8/4/2022
220808-1327-TGR	Highway 65 and Chestnut Expressway, Springfield, MO, 65802	8/8/2022
220809-1423-SEH	3445 East Kearney Street, Springfield, MO, 65803	8/9/2022
220815-1203-LDH	1625 North Lexington Avenue, Springfield, MO, 65802	8/15/2022
220825-1300-MPJ	605 West Belmont Court, Springfield, MO, 65806	8/25/2022
220909-1342-BPA	510 West Republic Road, Springfield, MO, 65807	9/9/2022
220920-0800-SEH	Interstate 44 Eastbound at Mile Marker 75.4, Springfield, MO	9/20/2022
220927-1359-BPA	1320 North Alliance Avenue, Springfield, MO, 65802	9/27/2022
220929-1335-SEH	1056 South Pickwick Avenue, Springfield, MO, 65804	9/29/2022
221010-1336-MPJ	1950 South Scenic Avenue, Springfield, MO, 65807	10/10/2022
221013-2140-BPA	North Farm Road 235, Fair Grove, MO, 65648	10/13/2022
221123-1942-SEH	587 South Route B, Springfield, MO, 65802	11/23/2022
221123-2232-SEH	Highway 60 and Farm Road 94, Willard, MO, 65781	11/23/2022
221128-1417-LDH	Blockage/Bypass	11/28/2022
221206-0936-ADC	2426 South Delaware Avenue, Springfield, MO, 65804	12/6/2022
221208-1645-TGR	Interstate 44 Westbound at Mile Marker 69.2, Republic, MO	12/8/2022
221214-1115-MPJ	North Kansas Avenue, Springfield, MO, 65803	12/14/2022
221218-1224-MPJ	7326 West Route BB, Willard, MO, 65781	12/18/2022
221230-1736-LDH	5740 Highway 60, Brookline, MO, 65619	12/30/2022
230116-2335-RSM	9718 West Farm Road 116, Bois D'Arc, MO, 65612	1/16/2023
230126-0914-SEH	1505 North National Avenue, Springfield, MO, 65803	1/26/2023

230130-0915-TGR	3106 West Battlefield Road, Springfield, MO, 65807	1/30/2023
230208-1345-MPJ	3401 West Norton Road, Springfield, MO, 65803	2/8/2023
230221-1035-LDH	225 East Evergreen Street, Strafford, MO, 65757	2/21/2023
230302-1133-SEH	Interstate 44 Eastbound near Exit 61, Bois D'Arc, MO, 65612	3/2/2023
230406-1045-SEH	3000 North Grant Avenue, Springfield, MO, 65803	4/6/2023
230424-1848-RLG	4020 West Battlefield Road, Springfield, MO, 65807	4/24/2023
230501-1403-SEH	4500 East Mustard Way, Springfield, MO, 65803	5/1/2023
230518-1340-SEH	Intersection of North Drury Lane and West Farm Road 156, Brookline, MO	5/18/2023
230601-0640-MPJ	2925 East Battlefield Road, Springfield, MO, 65804	6/1/2023
230606-1737-KAH	1920 North Nias Avenue, Springfield, MO, 65803	6/6/2023
230717-1354-SEH	6150 Riverdowns Road, Springfield, MO	7/17/2023
230724-0930-WMH	4938 South Charleston Avenue, Springfield, MO, 65804	7/24/2023
230809-1147-MPJ	South Farm Road 193, Springfield, MO, 65809	8/9/2023
230811-1235-KAH	2929 North Eastgate Avenue, Springfield, MO, 68503	8/11/2023
230910-1440-WMH	5403 Route OO, Strafford, MO, 65757	9/10/2023
230911-1853-KAH	325 East Evergreen Street, Strafford, MO, 65757	9/11/2023
230915-1847-MPJ	325 East Evergreen Street, Strafford, MO, 65757	9/15/2023
231002-0521-KAH	Corner of Highway 125 and Route DD, Strafford, MO, 65757	10/2/2023
231008-2132-LDH	Interstate 44 Eastbound at Mile Marker 64, Springfield, MO	10/8/2023
231118-0906-LDH	1625 North Lexington Avenue, Springfield, MO, 65802	11/18/2023
231124-0600-KAH	123 Holly Circle, Willard, MO, 65781	11/24/2023
240108-1344-KAH	Highway 160 at Farm Road 94, Willard, MO	1/8/2024
240108-1925-KAH	4216 North Farm Road 189, Fair Grove, MO, 65648	1/8/2024
240110-1500-SEH	Highway 65 at Mile Marker 59.8, Strafford, MO	1/10/2024
240124-1750-WMH	1900 Le Compte Road, Springfield, MO, 65802	1/24/2024
240217-1124-LDH	2460 West Bennett Street, Springfield, MO, 65807	2/17/2024
240309-2346-AJH	South Farm Road 83, Springfield, MO, 65802	3/9/2024
240327-1848-WMH	400 North State Highway 125, Strafford, MO, 65757	3/27/2024
240425-1008-TGR	1324 North National Avenue, Springfield, MO, 65802	4/25/2024

240428-1245-CCG	2101 North Packer Road, Springfield, MO, 65803	4/28/2024
240521-1702-AJH	2800 West High Street, Springfield, MO, 65803	5/21/2024
240531-1041-SEH	4150 South Campbell Avenue, Springfield, MO, 65807	5/31/2024
240531-1630-CCG	1015 South Quarry Road, Springfield, MO, 65803	5/31/2024
240604-1502-AJH	Interstate 44 at Mile Marker 90.6, Strafford, MO, 65757	6/4/2024
240607-1504-TGR	2552 North Brookline Avenue, Brookline, MO, 65619	6/7/2024
240614-1003-BPA	1905 East Commercial Street, Springfield, MO, 65803	6/14/2024
240618-1100-LDH	273 West Beech Lane, Brighton, MO, 65617	6/18/2024
240719-1301-JDC	1165 North Hampton Avenue, Springfield, MO, 65802	7/19/2024
240725-1300-KAH	4901 East Farm Road 66, Springfield, MO, 65803	7/25/2024
240731-1240-LDH	2815 Glenstone Avenue, Springfield, MO, 65803	7/31/2024
240807-1703-KAH	2202 North Westgate Avenue, Springfield, MO, 65803	8/7/2024
240820-1128-BPA	3341 South Scenic Avenue, Springfield, MO, 65807	8/20/2024
240902-1610-WMH	2350 North Clifton Avenue, Springfield, MO, 65803	9/2/2024
240908-1830-MPJ	Interstate 44 Westbound at Mile Marker 64.2, Halltown, MO, 65664	9/8/2024
240909-2339-SEH	712 Copper Rock Drive, Rogersville, MO, 65742	9/9/2024
240918-1509-SEH	400 North Highway 25, Strafford, MO, 65757	9/18/2024
240927-1632-AJH	Interstate 44 Eastbound between Mile Marker 76.0 and 76.2, Springfield, MO, Greene	9/27/2024
240930-1358-CCG	3445 East Kearney Street, Springfield, MO, 65804	9/30/2024
241003-1740-TGR	1402 East Republic Road, Springfield, MO, 65807	10/3/2024
241021-0258-AJH	Interstate 44 Eastbound near Mile Marker 60, Halltown, MO	10/21/2024
241031-0600-SEH	Interstate 44 Eastbound at Mile Marker 75.8, Springfield, MO, 65803	10/31/2024
241115-0025-SEH	721 North Glenstone Avenue, Springfield, MO, 65802	11/15/2024
241220-1520-BPA	1475 North Washington Avenue, Springfield, MO, 65802	12/20/2024
241229-0952-SEH	2460 West Bennett Street, Springfield, MO, 65807	12/29/2024
241229-0952-SEH	800 West Tampa Street, Springfield, MO, 65802	12/29/2024

PROBABILITY OF FUTURE OCCURRENCES

Between 2011 and 2025, there were 762 reported incidents involving hazardous material spills. Many of these incidents did not require specialized clean-up crews and were managed by the companies responsible for the spill. In some cases, Fire Protection Districts or local police responded to the incident. On average, over the last 14 years, there has been an average of 54.4 incidents per year. It is reasonable to expect that hazardous material spills will continue to occur within the planning area.

CHANGING FUTURE CONSIDERATIONS

According to the Missouri State Hazard Mitigation Plan, accidental or incidental releases of hazardous materials are considered non-natural events, meaning there are no direct implications for climate change. However, there is growing concern that hazardous material releases triggered by natural hazards could pose significant risks. In these cases, the impact of climate change may be secondary, potentially exacerbating natural hazards and triggering hazardous material releases.

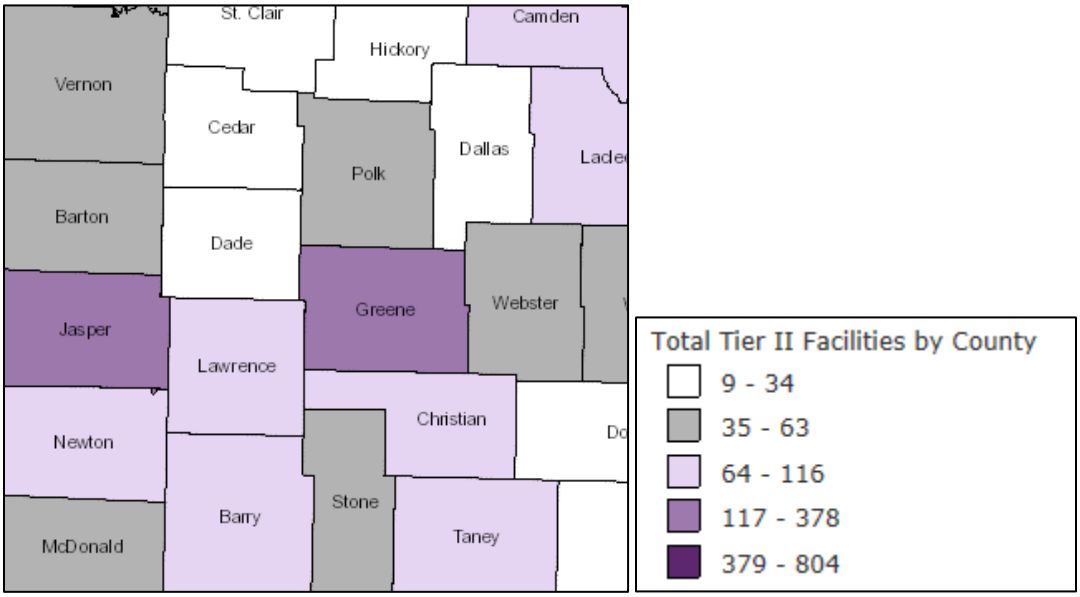
VULNERABILITY OVERVIEW

The entire county is susceptible to hazardous materials incidents, which could significantly impact public health, the environment, private property, and the economy. These events are most likely to be localized to the immediate area surrounding the incident. The primary concern will be the safety of people, followed by the protection of the environment. If contamination occurs, the responsible party will be liable for the cleanup and will work closely with the Department of Natural Resources, the Environmental Protection Agency (EPA), and local authorities to ensure that the clean-up is performed safely and in accordance with federal and state regulations.

Local responders are typically the first on scene for any incident. Their role includes treating injured victims and transporting them to hospitals for further care. First responders also have the responsibility of controlling exposure to hazardous materials, including radioactive substances. While the shipper is typically responsible for the clean-up of radioactive materials, local responders may need to provide site control for several hours until the responsible parties arrive.

Every day, hundreds of trucks carrying chemical tanks pass through Greene County on Interstate 44 (I-44) and other highways. Hazardous materials are also transported through the county by rail, and there are six major pipeline companies that operate within Greene County, transporting hazardous materials. These trucks, railway cars, and pipelines pose hazards that could result in incidents anywhere along their routes. In addition, several fixed facilities in the county store and use chemicals that have the potential for accidents. During hazardous materials release, toxins heavier than air settle near the ground, posing risks to those nearby. Toxins lighter than air can spread over longer distances, affecting people in more distant areas.

Figure 3.4.65 Total Tier II Facilities in Greene County and Surrounding Area



POTENTIAL LOSSES TO EXISTING DEVELOPMENT

incident. The initial concern will be for people, then the environment. It is difficult to determine the potential losses to existing development because of the variable natures of a hazardous materials spill. If there was a hazardous spill in a heavily populated area, it would have greater potential for loss of life. If a spill happened in an agricultural area, the risk to life would be less.

Table 3.4.61 Potential Cost Estimate for a HAZ-MAT Spill Remediation

Associated Costs	Cost per Hour/Unit	Number of Hours/Units	Total Cost
Project Manager	$90.00	8	$720.00
Equipment Operator	$124.59	8	$996.72
Response Vehicle	$250.00	1	$250.00
Track Hoe	$600.00	1	$600.00
Environmental Tech	$98.55	8	$788.40
Duct Tape	$7.63	6	$45.78
Haz Cat Kit	$150.00	1	$150.00
PPE - Level B Protection	$245.00	3 Staff @1 Day	$735.00
Vermiculite (19 lb. bag)	$30.00	4	$120.00
55 Gallon Drum	$95.00	20	$1,900.00
95 Gallon Overpack Drum	$285.00	20	$5,700.00
		TOTAL	**$12,005.90**

Source: Missouri State Hazard Mitigation Plan

The total of $12,005.90 is the maximum cost for the essential personnel and equipment that are taken from the current State of Missouri contracts for Hazardous Substance Clean up and Disposal Services. The nature of hazardous materials events is so variable, and because of this it is difficult to create a potential dollar loss estimate for Greene County specifically. The damage that would be expected would be based on the type of chemical release, weather condition, location of the spill, size of the spill, etc.

IMPACT OF PREVIOUS AND FUTURE DEVELOPMENT

As the population continues to increase along with the industries and the number and type of hazardous materials stored and transported through Greene County, the number of potential losses will also increase. According to the Missouri State Hazard Mitigation Plan, increased use and transport of materials across the country also creates serious problems for emergency services personnel. Many factors can increase the magnitude of an otherwise simple transportation accident into an incident of potential hazard to a high number of people. The following are potential factors to be considered.

- Over 14,000 different chemicals are estimated as being shipped by the various transportation modes. Some types of highly toxic chemicals do not require placarding if below a certain capacity or a general plaque can be used for some transportation types that carry multiple chemicals at once.
- Only a few emergency response organizations in the larger cities and countries near the more metropolitan areas have the resources to deal with a large-scale hazardous materials spill or event.
- Tourism around big events increases, meaning there are more people on the roads in and out of the county as well as residing inside the planning area.

EMAP CONSEQUENCE ANALYSIS

Table 3.4.62 EMAP Impact Analysis: Hazardous Materials

Subject	Detrimental Impacts
Public	Hazardous materials have caused documented injuries in Greene County. Fatalities have not occurred; however, they are very possible.
Responders	Depending on the type of hazardous materials that are involved, there could be significant safety risks for responders. Response functions may also be impacted.
Continuity of Operations	Hazardous materials have had little to no impact on service operations.
Property, Facilities, and Infrastructure	Areas around modes of transportation are especially vulnerable due to the number of hazardous materials that go through the Greene County area. Hazardous materials in various forms can cause damage to buildings, homes and other property. Many products containing hazardous chemicals are used and stored in homes routinely. These products are also shipped daily on the nation's highways, railroads, waterways and pipelines. Some infrastructure functions such as transportation may have a minor impact, especially if the incident occurs on a highway. Greene County has experienced little to no impact on facilities due to hazardous materials.
Environment	Hazardous materials in Greene County can cause multiple instances of damage to the environment if the spill creates a runoff of the roadway.
Economic Condition of Jurisdiction	Hazardous materials could have a minor impact on the economy in Greene County.
Public Confidence in Jurisdiction Governance	Hazardous materials incidents cause little or no loss of public confidence in governance.

HAZARD SUMMARY BY JURISDICTION

Although the entire planning area is vulnerable to hazardous materials risks, certain jurisdictions are more likely to experience an incident. Jurisdictions along I-44 are more directly exposed to hazardous materials transported through Greene County. Two major jurisdictions alongside I-44, Springfield and Strafford, are especially at risk. Strafford School District, located near the I-44 exit, faces increased vulnerability. Other areas at higher risk include cities or communities with railroads running through them. The main jurisdictions affected by rail travel are Springfield, Strafford, Ash Grove, Rogersville, and Republic. Many hazardous materials are transported by rail, and train derailment could lead to significant exposure. In fact, the railroad in Strafford runs directly through the middle of the town, making it especially dangerous if hazardous materials were to derail.

PROBLEM STATEMENT

Greene County has numerous Tier II facilities, many of which store extremely hazardous substances. The presence of I-44, a major interstate running through the county, further increases the risk of hazardous materials incidents. These incidents often arise from motor vehicle accidents or train derailments. Hazardous materials incidents pose serious threats to public and responder health, and the cleanup process can be costly. Immediate response is crucial to contain and mitigate the impact of these incidents. It is highly probable that Greene County will continue to face hazardous materials events. Mitigation solutions include establishing a dedicated Hazardous Materials Response Team, training additional fire personnel to handle these incidents, investing in better equipment, and providing public education on the risks and response measures.

3.4.14 TECHNICAL HAZARD: POWER FAILURE

HAZARD PROFILE

Power failure refers to any interruption or loss of electrical service due to disruptions in power transmission, which can be caused by accidents, sabotage, natural hazards, or equipment failure. There are several potential causes of power failure, including issues at power stations, damage to power lines, substations, or the distribution system, short circuits, or even overloading of the power grid. Many systems, critical to both cities and human life, rely on electricity. To mitigate the impact of power loss, many of these sites are equipped with automatic backup generators that activate when electrical power is lost.

- Transient Fault: A transient fault occurs when there is a brief power loss (lasting only a few seconds), after which power is quickly restored.
- Brownout: A brownout refers to a deliberate or unintentional drop in voltage within the electrical power supply system. This may result from a disruption in the electrical grid or be imposed to reduce the load and prevent a full-scale blackout.
- Blackout: A blackout is the total loss of power in each area and is the most severe type of power outage. Blackouts can range in duration from minutes to weeks, depending on the cause and the complexity of the repair.

GEOGRAPHIC LOCATION

Power failure can impact any private or public property reliant on electrical power. The source of the hazard lies at the point where the power is generated or transmitted. Springfield City Utilities supplies both gas and electricity to customers within Springfield. Outside the city, the rest of Greene County is serviced by four electric providers: Empire Electric, Southwest Electric, Ozark Electric, and Webster Electric.

STRENGTH/MAGNITUDE/EXTENT

Electric companies have multiple transmission and distribution lines serving a community. If one line goes down, an alternative line typically provides power to the affected area, minimizing the extent and duration of the outage. Many utilities, such as water companies, have backup systems like water impoundments, deep wells, storage tanks, or interconnections with other water providers to ensure continued service. Communications systems may have similar switching and rerouting capabilities. Damage to natural gas utilities can often be isolated, leaving only specific areas without service for a period of time.

Many utilities use emergency batteries or generators to supply backup power for essential equipment. Typically, power outages last from a few minutes to a few hours, which poses minimal risk to the public, even during extreme summer heat or winter cold. However, if power is lost for an extended period, serious problems can arise. Extended power failures during extreme temperatures could put people at risk for heat-related illnesses, such as heat stroke, or cold-related illnesses like hypothermia.

Short-Term Power Failure Severity

Refrigerated foods are at risk of contamination within a few hours and should not be consumed. Water supplies are also vulnerable to contamination if water filtration systems lose power. The longer a power failure lasts, the greater the risk to public health. A lack of food, water, and heating or cooling can lead to more serious health issues, and in some cases, even death.

Downed power lines are a significant hazard. Both overhead and buried power lines carry extremely high voltage, posing the risk of fatal electrocution. Burns and falls are also potential dangers associated with downed power lines.

Long-Term Power Failure Severity

Prolonged power failures can lead to secondary hazards and have a broader impact on the health and safety of the community. One potential secondary hazard is the occurrence of chemical accidents when power is restored to industrial facilities. These spills can have severe health and environmental consequences.

Another secondary hazard that may arise is the loss of communication capabilities for first responders, which can compromise public safety. In such situations, backup communication systems, such as amateur radio operators, may be required to maintain coordination.

Power outages can also trigger civil disturbances, including looting. Moreover, interruptions in wastewater and potable water utilities are a concern, as these are essential for community health and recovery. The disruption of these services can have cascading economic and environmental impacts. Retail and wholesale gas suppliers may also be affected, as they cannot access gas stored in underground tanks or power the necessary pumps to deliver fuel.

While hospitals typically have backup generators, extended power outages could result in significant harm to hospital operations, especially if backup systems fail. Power outages can last anywhere from a few minutes to several days. Typically, power failures last no longer than a few hours. However, there have been instances where power has been lost for over a week. Greene County generally experiences short and limited power outages, with the severity being minimal—usually resulting in little property damage, no injuries, and no critical facility shutdowns lasting more than 24 hours.

PREVIOUS OCCURRENCES

The following incidents listed impacted 1,000 people or more. Although power outages occur frequently throughout Greene County, the City Utilities website maintains an outage map that provides information on current outages. This can be viewed at: https://www.cityutilities.net/outage/map-status/

Table 3.4.63 Power Outages Greater Than 1,000 Users

Date	Number of People Without Power	Cause
1/12-14/2007	200,000 people across southwestern Missouri were without power.	3-day ice storm that accumulated approximately 1’’ to 2" of ice on power lines.
9/21/2012	1,000 customers were without power in Springfield.	Severe thunderstorms in the area.
9/27/2012	2,500 people were without power within Springfield, including Cox Health.	Line failure at an electric substation.
9/12/2018	7,000 people were without power in the Republic area.	Overloaded substations. It was encouraged by Liberty Utilities and Empire Electric for customers to raise temperatures in their homes to reduce strain on systems.
03/19/2018	5,000 customers were without power, including Mercy Hospital campus.	A contractor crew damaged a line near Seminole Street and Kings Avenue, which caused power outages in homes, as well as in major intersections like National Avenue and Sunshine Street.

06/19/2019	Most of the Missouri State campus was out of power, including classroom halls and dormitories.	The university shut down their power after a bird disrupted their power grid. Repairs were made over the course of an hour before power was restored.
6/4/2020	10,000 people were without power.	A severe storm downed 13 power poles and several power lines in Springfield.
7/22/2020	1,500 people were without power in Springfield.	Severe overnight thunderstorms in the area.
8/20/2020	1,000 people were without power in Springfield.	A car crashed into a utility pole. Power was restored within a few hours.
9/17/2020	3,000 Ozark Electric Coop Customers were without power, most of which were within Greene County.	The cause was unknown at the time of record and never updated.
11/26/2020	1,000 customers were without power in Springfield.	A car crashed into a utility pole. Power was restored within a few hours.
12/13/2020	2,000 customers were without power in Springfield.	A car crashed into a utility pole. Power was restored within a few hours.
1/1/2021	15,000 people were without power in the Springfield area.	An ice storm during the day and the night before had resulted in falling ice and tree limbs which made response difficult. Power was restored over the next several hours and some the following morning.
2/16/2021	15,000 people were without power over the span of several hours.	Rolling blackouts are issued by City Utilities and Liberty Utilities.
2/26/2021	1,700 customers were without power in the Springfield area.	A car crashed into a utility pole. Power was restored within a few hours.
5/6/2021	1,200 people were without power in the Republic area.	Liberty Utilities restored power after a few hours. The cause was not reported.
12/10/2021	4,400 customers were without power in the Springfield area.	Severe weather caused broken utility poles and downed power lines. Power was restored over the next day.
1/11/2022	1,500 people were without power in Springfield.	A car crashed into a utility pole. Power was restored within a few hours.
5/13/2022	2,000 people were without power in the Springfield area.	A truck crashed into a utility pole and took down several power lines. Power was restored after several hours.

6/30/2022	2,000 customers were without power in the Springfield area.	Power was restored over several hours. The cause of power outages was not reported, but many areas in Springfield were affected.
11/24/2022	2,000 people were without power in the Springfield area.	A car crashed into a utility pole. Power was restored within a few hours.
1/2/2023	1,000 people were without power in the Springfield area.	Severe weather is reported to have caused the power outages
3/25/2023	1,500 people were without power in Springfield.	A car crash damaged 3 utility poles. Power was restored over several hours.
5/15/2023	1,486 people were without power in the Springfield area.	Severe weather-related damage caused equipment failure.
7/7/2023	1,400 people were without power in the Springfield area.	Severe weather in the area and flash flooding. Power was restored over the next several hours.
7/31/2023	8,500 people were without power in Greene County.	Severe weather caused damage across Missouri and Arkansas. Power was restored over the span of 48 hours.
9/4/2023	1,000 people were without power in the Springfield area.	Severe weather in the area. Power was restored over the next few hours.
11/5/2023	2,000 people were without power in the Springfield area.	Equipment failure on a utility pole. Power was restored throughout the day.
1/22/2024	1,437 people were without power in the Springfield area.	Power was restored over several hours. The cause of power outages was not reported, but many areas in Springfield were affected.
5/7/2024	1,000 outages across the Greene County area.	Severe weather in the area. Power was restored over the next few hours.
5/20/2024	1,700 people were without power in the Springfield area.	Severe weather caused a tree to collapse on power lines. Power was restored over the next several hours.

PROBABILITY OF FUTURE OCCURRENCES

Between 2012 and 2024, there was an average of 3.4 incidents per year where more than 1,000 residents experienced power loss. Smaller incidents that affect fewer people still pose a significant hazard, particularly to at-risk populations in Greene County. It is likely that the planning area will continue to experience large-scale power outages, especially during the spring and summer months when severe weather events are more common.

CHANGING FUTURE CONDITIONS AND CONSIDERATIONS

According to the Missouri State Hazard Mitigation Plan, deteriorating infrastructure is a growing national issue that will likely worsen with changing future conditions. For example, higher temperatures in the future could increase the demand for cooling in homes, businesses, and public buildings, placing additional stress on power systems. Other extreme weather events, such as high winds and tornadoes, can also contribute to power outages. If the frequency of severe storms in the county increases, the risk of power outages will likely rise as well.

VULNERABILITY OVERVIEW

All utilities, including power, are susceptible to damage from various natural hazards. The primary concerns with this hazard are public health and safety, as well as potential economic impacts. Power infrastructure is especially vulnerable, with the most damage typically resulting from strong winds, lightning, winter storms, or tornadoes. The electrical grid is particularly vulnerable during periods of extreme heat, when air conditioning use peaks. Underground utilities are also at risk from factors such as expansive soils, erosion, earthquakes, and both intentional and unintentional human actions. The Missouri Underground Facility Safety and Damage Prevention Act helps mitigate accidental damage to underground facilities by making it illegal to excavate without first notifying and obtaining information about the location of these facilities.

POTENTIAL LOSSES TO EXISTING DEVELOPMENT

Electrical blackouts and power surges can damage high-tech equipment but generally do not cause structural damage. To mitigate the impact of severe weather, Missouri's electrical utilities prepare for disasters, and tree-trimming plans are in place to ensure that overhead power lines are clear of potential hazards like falling branches. In most cases, power outages cause damage to equipment and the systems that manage the distribution of power rather than to structures themselves.

IMPACT OF PREVIOUS AND FUTURE DEVELOPMENT

As with other hazards, population growth can place additional strain on power systems, increasing the likelihood of power failures. This was evident in July 2018, when the City of Republic and other Greene County residents experienced outages due to high demand. Future utility and infrastructure development should be minimized or mitigated in known hazard areas to prevent increased vulnerability to power outages and other related hazards.

EMAP CONSEQUENCE ANAYLSIS

Table 3.4.64 EMAP Impact Analysis: Power Failure

Subject	Detrimental Impacts
Public	Power failure can cause minor injuries or illnesses and a few safety concerns. Power failure in Greene County can cause illnesses if spoiled food is consumed, and lack of power can be a safety concern in weather extremes such as heat or cold. Power outages can also negatively affect Greene County citizens with medical devices that rely on electricity.
Responders	Response functions are slightly impacted during a power failure. There is no life safety issues for responders.
Continuity of Operations	Power failure can cause many severe operations to be delayed or even suspended.

Property, Facilities, and Infrastructure	Power failure in Greene County has caused little property damage. Infrastructure is very dependent on power. Fire alarms and water sprinklers that cease to function, inability to communicate via phone or email with emergency services. Major critical infrastructure Is impacted in all key sectors in power failure. Power failure in Greene County has caused little facility damage.
Environment	Power failure in Greene County has had little to no impact on the county's environment.
Economic Condition of Jurisdiction	Power failure would greatly impact the economic condition for the industrial and business operations.
Public Confidence in Jurisdiction Governance	Power failure would cause minor isolated instances of loss of public confidence in governance.

HAZARD SUMMARY BY JURISDICTION

The entire planning area is susceptible to power outages at any time throughout the year. Utility companies are generally well-prepared for routine outages. However, all jurisdictions, including school districts and universities, face the risk of experiencing prolonged power outages that could last for days. Cities and communities that experience more frequent damage from high winds or severe storms may be more likely to suffer from power outages compared to others. Additionally, jurisdictions with underground power cables may face a lower risk of outages.

PROBLEM STATEMENT

Power outages are a persistent hazard that the planning area will continue to face. While power outages occur daily across the country and are typically resolved quickly, an increase in severe weather events could heighten the risk of extended outages. Prolonged power loss can have significant negative impacts on the health and well-being of Greene County residents. Given the frequency of this hazard, power outages are to be expected in the region. A major mitigation strategy for addressing power outages is to equip critical facilities throughout the planning area with backup generators.

3.4.15 TECHNOLOGICAL HAZARD: TRAIN DERAILMENT

HAZARD PROFILE

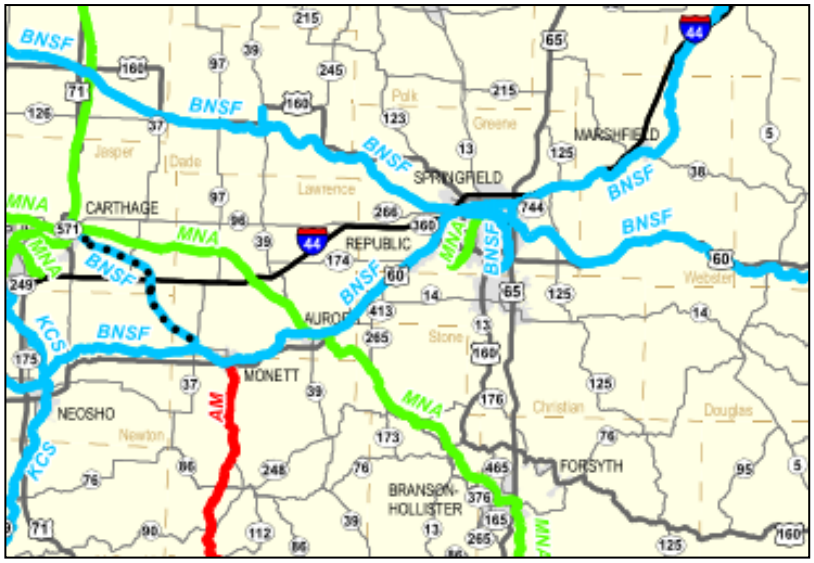
A train derailment occurs when a train leaves its tracks. While many derailments are minor, they all result in temporary disruptions to the proper functioning of the railway system and can pose serious risks to human health and safety. In Missouri, there are approximately 4,400 miles of main track, 2,500 miles of yard track, and about 7,000 public and private crossings. There are various reasons why a train may derail, including:

- Primary mechanical failure of a track component (e.g., broken rails, gauge spread due to tie failure).
- Primary mechanical failure of a component in the vehicle's running gear (e.g., axle box failure, wheel breakage).
- Faults in the geometry of the track or running gear, resulting in quasistatic failure during operation (e.g., rail climbing due to excessive wear of wheels or rails, earthwork slip).
- Dynamic effects from the track-vehicle interaction (e.g., vertical bounce, track shift under a train, excessive speed).
- Improper operation of points or failure to observe signals protecting them.
- Secondary events following a collision with other trains, road vehicles, or other obstructions.
- Train handling issues (e.g., snatching due to sudden traction or braking forces).

GEOGRAPHIC LOCATION

Passenger trains no longer serve Springfield; however, more than 65 freight trains pass through the city each day. The Burlington Northern Santa Fe (BNSF) Railway is the largest operator, with three switching yards in Springfield. Mainlines to and from Kansas City, St. Louis, Memphis, and Tulsa converge at the railroad's yard facility located in the northern part of the city. The Missouri and Northern Arkansas Railroad also operates several miles of industrial track within Springfield. Many other jurisdictions, including Strafford, Ash Grove, Rogersville, and Republic, also have railroads passing through them. These jurisdictions are at risk of experiencing a train derailment.

Figure 3.4.66 Greene County, MO Railroad Lines from BNSF



STRENGTH/MAGNITUDE/EXTENT

Train derailments pose several significant threats to Greene County, including the potential for loss of life, explosions and subsequent fires, chemical or gas spills, and damage to both the natural and man-made environment. A derailment involving hazardous materials could affect the surrounding area for up to a mile or more. In an urban setting, a fire could spread rapidly, posing a significant risk to the densely populated area. Given the many possible causes of derailment and the lack of warning time, the public remains highly vulnerable to accidents.

PREVIOUS OCCURRENCES

January 2019

Five train cars and a locomotive derailed at the BNSF rail yard just north of Division Street in Springfield. Three of the cars were carrying Anhydrous Ammonia, and another contained Ethylene Oxide. The Springfield Fire Department investigated the scene to ensure there were no hazardous material leaks. Fortunately, no leaks were discovered, and the rail cars were lifted without incident. Had a leak been found, evacuations would have been initiated immediately.

February 2013

Lilbourn, MO: Over a dozen rail cars flipped over when a faulty wheel broke on a train. Fortunately, no one was injured, though the derailment blocked an entire street.

May 2013

Rockview, MO: Two trains collided, resulting in a derailment and the collapse of a highway overpass. Several people were injured, including the train crew and two individuals driving under the overpass at the time.

June 2012

Portageville, MO: Twenty rail cars tipped over, spilling coal after a derailment. No injuries were reported.

PROBABILITY OF FUTURE OCCURRENCE

Historically, there have been very few train derailments in Greene County, with only one occurring between 2015 and 2025. It is estimated that there is a 10 percent chance of another train derailment event in the county during the next planning period. Though train derailments are uncommon, they can result in the release of hazardous materials into the environment and local waterways.

CHANGING FUTURE CONDITIONS CONSIDERATIONS

Weather-related hazards such as ice, snow, tornadoes, and damaging winds can contribute to train derailments. As these weather events increase in frequency or severity, there may be a corresponding rise in derailment incidents. However, most derailments are caused by mechanical or equipment failure rather than weather-related factors.

VULNERABILITY OVERVIEW

Large train derailments, particularly those involving hazardous materials, can be extremely dangerous and cause extensive damage. A derailment involving hazardous materials may lead to public health concerns and potentially result in evacuations spanning several miles from the site. While derailments are relatively rare, their potential impacts are significant. Trains carry everything from explosives to hazardous chemicals, and derailments could lead to urban or wildfire.

POTENTIAL LOSSES TO EXISTING DEVELOPMENT

The financial impact of a train derailment can be considerable, depending on its scale and the materials involved. If hazardous materials are present, the cost of hazmat cleanup can be substantial (refer to Section 3.5.4 for more details on cleanup costs). Typically, the damage from a derailment is localized to a specific area.

IMPACT OF PREVIOUS AND FUTURE DEVELOPMENT

As the population grows, the number of people potentially affected by train derailments may increase, though train derailments generally remain localized. New developments located near railroads would face higher risks of damage from derailments. Population growth typically leads to more development, which could result in more individuals being at risk from these types of incidents.

EMAP CONSEQUENCES ANALYSIS

Table 3.4.65 EMAP Impact Analysis: Train Derailment

Subject	Detrimental Impacts
Public	A recent train derailment that happened in Springfield could have caused a large public safety risk if the rail cars that tipped would have leaked. There is a possibility for injuries and there are definite safety concerns with train derailment and hazardous materials.
Responders	Responding to the response and response functions may be impacted depending on what the train was carrying (hazardous materials) and the severity of the derailment.
Continuity of Operations	Minor service operations may be interrupted and there may be some delays of service depending on the train load, location of the incident, and the situation.
Property, Facilities, and Infrastructure	Train derailment could cause multiple instances of significant property damage in Greene County. Minor impacts to some key infrastructure sectors may occur from a train derailment incident depending on the rail load, the location of the incident, and situation. A train derailment would result in little to no facility damage.
Environment	A train derailment could cause minor instances of environmental damage depending on what type of chemicals are involved and the amount of contaminated environment.
Economic Condition of Jurisdiction	A train derailment may have a minor economic impact depending on the train load, location of the incident and the situation.
Public Confidence in Jurisdiction Governance	There is little to no effect on public confidence in governance from a train derailment incident.

HAZARD SUMMARY BY JURISDICTION

Train derailments pose a greater risk to certain jurisdictions in Greene County. Cities with railroads running through them, such as Springfield, Strafford, Ash Grove, Rogersville, and Republic, are more vulnerable. The City of Strafford has a railroad track that runs directly through the middle of town, near businesses and the school district. If a derailment involving hazardous materials were to occur in Strafford, it would likely necessitate the evacuation of local schools.

PROBLEM STATEMENT

While train derailments are rare in Greene County, they still pose a significant risk to the planning area. A derailment involving hazardous materials could lead to serious public health threats and it would be very costly to clean up. In densely populated areas, such as Strafford, a derailment could result in extensive damage and injuries to nearby residents. Mitigating train derailments is challenging, but possible solutions include public education, faster response times, and relocating critical facilities away from railroad tracks. However, no participating jurisdiction selected a project specifically aimed at mitigating train derailment risks in this Hazard Mitigation Plan.

3.4.15 TECHNICAL HAZARD: URBAN FIRE

HAZARD PROFILE

An urban fire refers to an uncontrolled fire within a city or densely populated area. Protection against urban fires depends largely on the number of firefighters, built-in fire protection systems, and building construction techniques. An urban conflagration is a term used for a large, catastrophic urban fire that spreads beyond natural or artificial barriers, often causing significant financial losses and potentially fatalities. These fires can be triggered by a variety of factors, including secondary events like a ruptured gas line or flood. Urban fires may also result from open flames or accidents. Everyday heating sources in homes or industrial processes can also ignite fires, allowing them to spread rapidly.

Causes of Urban Fires:

- Storms
- Droughts
- Transportation Accidents
- Hazardous Material Spills
- Arson
- Terrorism

Urban fires can be controlled and limited by creating natural breaks between buildings, incorporating sprinkler systems into structures, ensuring adequate water pressure and volume, providing secondary water sources, and maintaining an adequate number of firefighters to reduce the chances of a fire escalating into a larger urban conflagration.

GEOGRAPHIC LOCATION

Urban fires can occur anywhere in the planning area, but they need both fuel and room to grow. Large urban fires are most likely to happen in areas with dense populations, crowded buildings with little open space, or in buildings that don't meet current building codes. Urban fires can occur within towns, cities, buildings or structures, as well as in transportation routes such as buses, trains, or vehicles on the road.

STRENGTH/MAGNITUDE/EXTENT

Urban or structural fires can result in substantial damage. Even single-structure fires can cause significant losses to the affected building. If the fire spreads, it can damage neighboring properties, making it harder to contain and leading to potential loss of life or injury to people and animals. The age of the buildings and whether they meet current building codes play a significant role in the extent of the damage caused.

The damage caused by fires is often influenced by insurance coverage. Some fires can result in catastrophic losses, and if the building is not insured, the owner may face severe financial hardship. Additionally, insurance does not always cover all the contents lost in the fire.

PREVIOUS OCCURRENCES

Individual structure fires occur frequently in Greene County, sometimes weekly or even daily at certain times of the year. However, Greene County has not experienced a large-scale event involving multiple buildings or a widespread urban fire.

PROBABILITY OF FUTURE OCCURRENCES

Historically, Greene County has not seen multi-structured fires in urban areas, so the likelihood of such events is low but not impossible. Most fires in Greene County are accidental or caused by utility failures within homes, though some may be caused by arson or lightning strikes. Changing climate conditions could increase the potential for fires to spread to other structures in the future.

CHANGING FUTURE CONDITIONS AND CONSIDERATIONS

Urban fires can be influenced by weather events such as storms and droughts. As noted in previous sections, climate change may lead to more severe storms and prolonged droughts in Greene County. Drought conditions can dry out vegetation, making it easier for fires to spread. Flooding increases the likelihood of electrical fires, which can trigger structural fires. Large floods can even result in catastrophic urban fires, as demonstrated during Hurricane Sandy when seawater hit electrical systems in Queens, New York, causing fires that destroyed 122 homes.

VULNERABILITY OVERVIEW

Urban fires can be extremely dangerous and cause significant property loss if not controlled quickly. While the entire planning area is at risk of urban fire damage, densely populated areas are more likely to experience large-scale urban fires. The elderly population is particularly vulnerable, experiencing the highest number of fatalities per fire. Children are the second most vulnerable group. Older homes are more at risk for urban fires due to outdated building materials and lack of modern fire safety systems. Urban fires most often occur in densely populated and developed areas.

Figure 3.4.67 Structure/Urban Fire Average Annual Occurrence

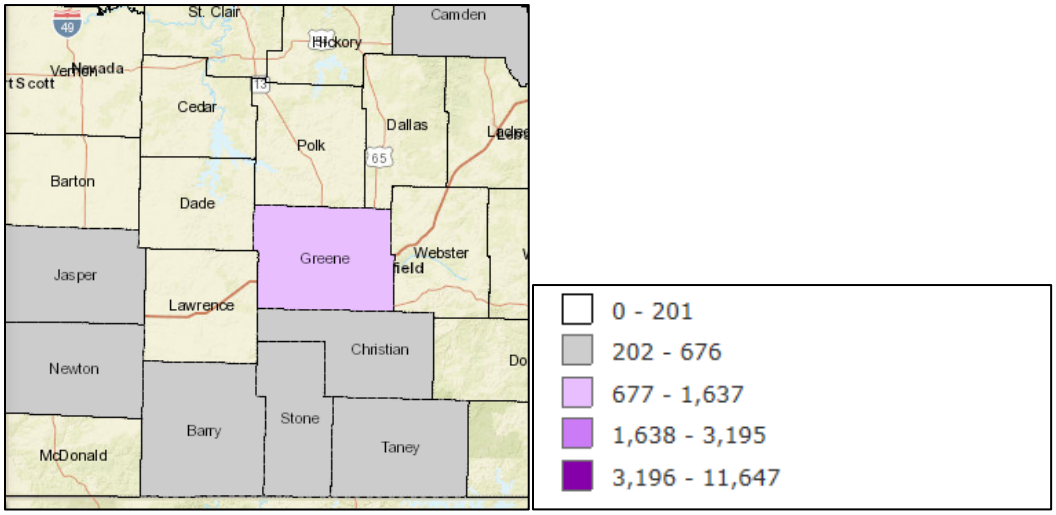


Figure 3.4.68 Vulnerability of Occurrence

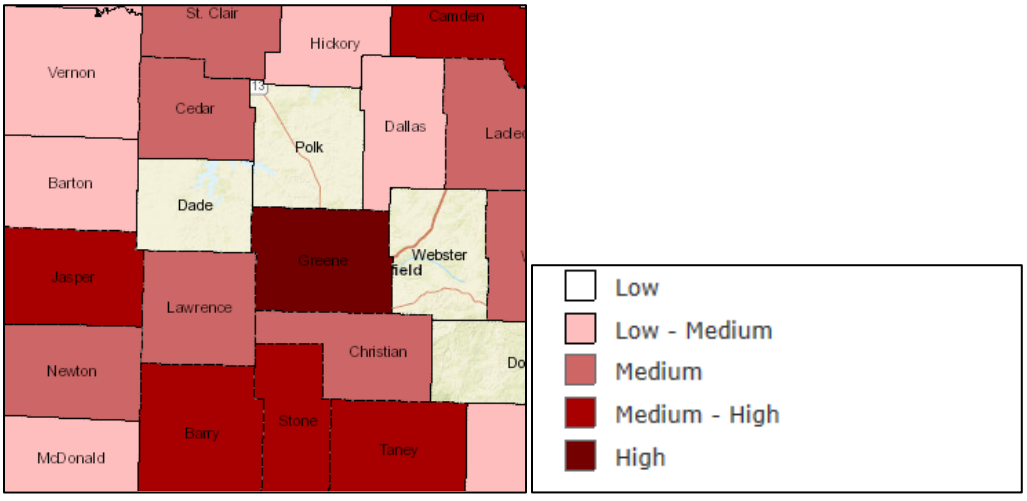


Figure 3.4.69 Historical Number of Deaths and Injuries

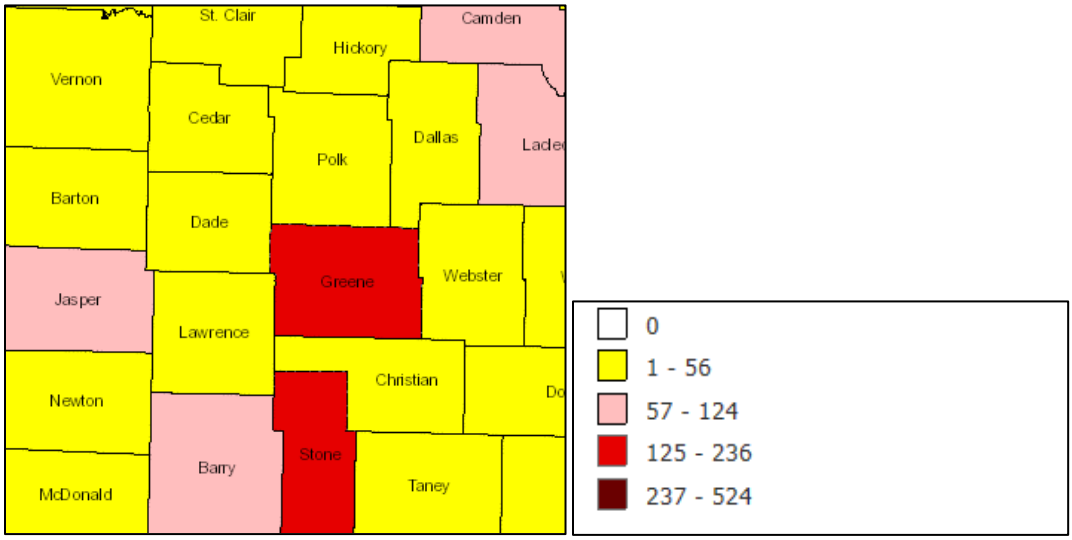
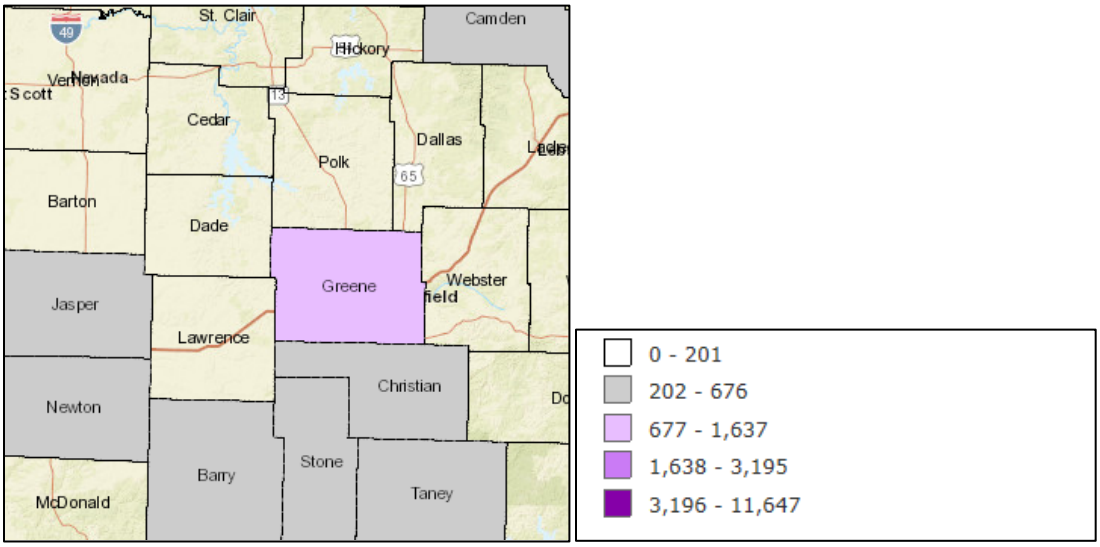


Figure 3.4.70 Average Annual Occurrence



POTENTIAL LOSSES TO EXISTING DEVELOPMENT

As previously mentioned, urban fires can cause significant damage, leading to substantial financial losses for both property owners and insurance companies. If a fire is not controlled quickly, the potential for damage to additional structures increases. Older homes and buildings are especially vulnerable to extensive damage in the event of an urban fire, and many of our jurisdictions contain older properties that are more susceptible to fire-related destruction.

IMPACT OF PREVIOUS AND FUTURE DEVELOPMENT

The likelihood of fires occurring increases with population growth. This is largely due to human error and carelessness, both of which are major contributors to urban fires. As the population grows, more people may rely on alternative heating sources like wood-burning stoves or space heaters, which can also increase fire risks. Additionally, population growth leads to more development, with newer homes potentially being built closer together to accommodate the rising number of residents. This reduced space between structures raises the risk of a larger urban fire affecting multiple properties.

EMAP CONSEQUENCE ANALYSIS

Table 3.4.66 EMAP Impact Analysis: Urban Fire

Subject	Detrimental Impacts
Public	The safety of the public is of significant concern if an urban fire were to take place. Older neighborhoods in Greene County could cause many injuries or fatalities.
Responders	An urban fire in Greene County could present life threatening issues and challenges for response functions.
Continuity of Operations	An urban fire would have little to no impact on service operations in Greene County.
Property, Facilities, and Infrastructure	An urban fire could cause widespread significant property damage. Large urban fires are most likely to occur in areas of dense population, crowded buildings with little or no open spaces, or in buildings that do not meet building code requirements. An urban fire could cause multiple critical infrastructure sectors to be impacted such as bank and finance, emergency responders, etc. An urban fire could also cause widespread or multiple instances of facility damage.
Environment	An urban fire would have a very limited effect on the environment, because of being in an urban area. There may be minor isolated instances of damage to the environment.
Economic Condition of Jurisdiction	An urban fire could greatly impact the economic system due to damage in Greene County.
Public Confidence Jurisdiction Governance	An urban fire would cause little to no loss of public confidence in governance in Greene County.

HAZARD SUMMARY BY JURISDICTION

Urban fires are a hazard that the entire planning area is vulnerable to, with certain areas at a higher risk of experiencing greater damage. Springfield, being the most densely populated community in Greene County, faces a higher risk due to its many older homes and buildings that are closely situated together. This increases the likelihood of fires spreading quickly. However, Springfield is equipped with numerous fire stations throughout the city, which helps mitigate the impact and reduce the risk of significant damage. Ash Grove also has many older homes and buildings that are more susceptible to damage from urban fires. Areas within the planning region experiencing poverty may be at greater risk, as alternative heating sources, such as space heaters or wood-burning stoves, are more commonly used during the winter months, which can increase the potential for fire hazards.

PROBLEM STATEMENT

Urban fires have the potential to become extremely dangerous in the planning area, causing significant property damage if not contained quickly. These fires can also result in loss of life for both people and animals. While Greene County has not experienced a large urban fire event, smaller structural fires occur frequently and can escalate into larger urban fire incidents. Additional hazards, such as storms and droughts, can also contribute to an increase in urban fires. Mitigation strategies for urban fires include enhanced training for fire personnel, expanding fire protection districts, public education campaigns, and thoughtful development planning by local governments. No participating jurisdiction has proposed mitigation projects for urban fires in this Hazard Mitigation Plan.

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MITIGATION STRATEGY 4

44 CFR Requirement §201.6(c)(3): The plan shall include a mitigation strategy that provides the jurisdiction's blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs and resources, and its ability to expand on and improve these existing tools.

This section presents the Mitigation Strategy, updated by the Mitigation Planning Committee (MPC), based on the updated risk assessment. The Mitigation Strategy was developed through a collaborative group process. This process included review of updated general goal statements to guide the jurisdictions in lessening disaster impacts, as well as specific mitigation actions to directly reduce vulnerability to hazards and losses. The following definitions are taken from FEMA's Local Mitigation Planning Policy Guide (2023):

- **Goals** are broad, long-term policy and vision statements that explain what is to be achieved by implementing the mitigation strategy.
- **A mitigation action** is a measure, project, plan, or activity proposed to reduce current and future vulnerabilities described in the Risk Assessment.

Actual Projects can be found in Appendix B

4.1 GOALS

44 CFR Requirement §201.6(c)(3)(i): The hazard mitigation strategy shall include a description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.

This planning update revises Greene County's existing Hazard Mitigation Plan, originally approved by FEMA on August 27, 2020. The goals from the 2020-2025 Greene County Hazard Mitigation Plan were reviewed to evaluate their relevance, feasibility, practicality, and alignment with the identified hazard impacts. During their first and second meetings, the Mitigation Planning Committee (MPC) held discussions to assess these goals and proposed necessary adjustments. To ensure the updated goals were comprehensive and aligned with state priorities, the 2023 state hazard mitigation goals were also reviewed. Additionally, the MPC examined the goals from surrounding counties' current and past plans.

In the previous 2020-2025 plan, goals for the planning area were not explicitly defined, with broader goals set by individual jurisdictions instead. As part of this update, the jurisdictions agreed on the following refined goals to guide future mitigation projects:

1. Limit development in hazard-prone areas, including flood zones.
2. Reduce losses to both existing and future structures in hazard-prone areas.
3. Enhance protection for critical facilities and infrastructure to create a safer, more resilient community.
4. Strengthen local mitigation capabilities to ensure public safety, reduce damage to public buildings, and maintain emergency services continuity.
5. Raise public awareness about the risks posed by natural hazards.
6. Improve coordination and communication with federal, state, regional, and local emergency management personnel, as well as other key partners.

During the second MPC meeting, the results of the updated risk assessment were presented to the committee for review, highlighting the key issues associated with specific hazards. Changes in risk since the adoption of the previous plan were discussed, along with an evaluation of its actions, categorized into completed, ongoing, and actions with no progress made. The committee also reviewed the funding priorities identified by the State Emergency Management Agency (SEMA) and the types of mitigation actions generally recognized by FEMA.

To further refine the update, the MPC included problem statements at the end of each hazard profile in the plan. These problem statements summarize the risks each hazard poses to the planning area and suggest potential methods to reduce those risks. By incorporating these problem statements, the MPC was able to identify new and innovative strategies for mitigating risks in the region.

In the third meeting, the MPC finalized updates to the Mitigation Strategy. To ensure a comprehensive range of mitigation actions were considered, the MPC reviewed the following information in individual meetings:

- A list of proposed actions from the previous mitigation plan, the current state plan, and approved plans from surrounding counties.
- Key issues identified in the risk assessments, including the problem statements and vulnerability analysis for each hazard.
- State priorities for Hazard Mitigation Assistance (HMA) grants.
- Public input gathered during meetings, responses to data collection questionnaires, and other public engagement efforts throughout the plan development process.

Also, in the third meeting, individual jurisdictions, including schools and special districts, were tasked with developing their final mitigation strategies for submission to the Mitigation Planning Committee (MPC). Jurisdictions were encouraged to review the risk assessment vulnerability analysis specific to their areas. Additionally, they were provided with a link to FEMA's publication *Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards* (January 2013), which serves as a resource to identify a wide range of potential mitigation actions for reducing risk from natural hazards and disasters.

The MPC reviewed the progress of actions from the previously approved plan, utilizing worksheets provided in Appendix B of this update. Prior to the third meeting, the action lists for each jurisdiction were distributed to their respective MPC representatives, along with the worksheets. Jurisdictions were instructed to report the "Action Status" for each item, using one of the following designations:

- **Completed**: with a description of the progress made.
- **Ongoing**: with a summary of progress to date.
- **Not Yet Started**: with an explanation for the lack of progress.

Furthermore, each mitigation action's future inclusion in the updated plan was assessed, with decisions made to either retain, remove, or modify each action. Based on the status updates received, 14 actions were marked as completed, 20 actions were designated as ongoing or modified, and one action was identified for deletion.

Table 4.1.1 Action Status Summary

Jurisdiction	Completed Actions	Continuous/Modified Actions	Deleted Actions
Ash Grove	1	5	0
Battlefield	1	3	0
Fair Grove	1	1	0
Republic	1	2	0
Strafford	0	2	0
Springfield	0	1	0
Ash Grove School District	0	1	0
Logan Rogersville School District	0	0	0
Springfield Public Schools	4	0	1
Battlefield Fire Protection District	2	0	0
Brookline Fire Protection District	0	0	0
Willard Fire Protection District	2	2	0
Ozark Technical College	1	0	0

Table 4.1.2 Summary Of Completed And Deleted Actions

COMPLETED ACTIONS	
Dangerous bridges are effecting travel for some emergencies and utility vehicles.	Completed- Unknown Date
Purchase 800 MHz radios for city officials.	Completed - 2021
Replace, add and update storm sirens as needed across the city to protect and warn the citizens when severe weather is in the area.	Completed- Unknown Date
Study of relocation of stormwater from 1740 US 60 E to 1000 block of US 60 E.	Completed 2022-2023
Build FEMA Safe Rooms across the district to protect all students and staff from tornado and severe weather events	Completed 2021-2024
Purchase generators that can support the different critical facilities in the district	Completed 2022-2023
Rebuild and relocate Jaret Middle Schools in an area that does not have flooding issues.	Completed 2023
Purchase weather radios for all schools and essential personnel.	Completed 2021-2024
Build new fire apparatus and create a replacement plan for existing apparatus.	Completed 2022
Acquire more full-time staffing for the district.	Completed 2022-2024
Replace SCBA's and spare bottle before full expiration date is reached. Purchase compressor to fill bottles.	Completed - Unknown Date
Upgrade all portable and mobile radios to P25 status as well as purchase a radio capable of using multiband and MOSWIN.	Completed Unknown Date
Construct a new Center for Advancement Manufacturing building for the OTC community.	Completed 2023
DELETED ACTION	
To prepare the students and staff members of the Springfield Public School District for all hazards.	

Springfield Public Schools was the only jurisdiction to delete an action, and this was because they no longer feel as though they have the capabilities to perform the action or the resources.

4.2 IMPLEMENTATION OF MITIGATION ACTIONS

44 CFR Requirement §201.6(c)(3)(ii): The mitigation strategy shall include an action strategy describing how the actions identified in paragraph (c)(2)(ii) will be prioritized, implemented, and administered by the local jurisdiction. Prioritization shall include a special emphasis on the extent to which benefits are maximized according to a cost benefits review of the proposed projects and their associated costs.

Greene County Jurisdiction MPC members were encouraged to engage with their community stakeholders to finalize the actions to be included in the updated Mitigation Strategy. Throughout the MPC's discussions, particular emphasis was placed on the significance of conducting a benefit-cost analysis to determine project priorities. As mandated by the Disaster Mitigation Act, a benefit-cost review is the primary method for prioritizing mitigation projects. The MPC agreed to pursue implementation based on factors such as the timing and location of damage, available funding, political will, jurisdictional priorities, and the priorities outlined in the 2023 Missouri State Hazard Mitigation Plan.

The benefit-cost analysis conducted during the planning stage was primarily qualitative and did not include the detailed process required for grant funding applications. For each proposed action, the plan provides a narrative outlining the anticipated benefits from implementation, with cost estimates provided to the best of the team’s ability. These estimates will be refined as projects progress through development.

FEMA’s STAPLEE methodology was utilized to assess the costs, benefits, overall feasibility, and other factors impacting each mitigation action. During the prioritization process, jurisdictions used worksheets that assigned scores based on STAPLEE criteria, as well as the potential effectiveness of each mitigation action. The following scores were derived from responses to specific questions related to these elements:

Definitely YES = 3 points
Maybe YES = 2 points
Probably NO = 1 point
Definitely NO = 0 points

The following questions were asked for each proposed action:

S: Is the action socially acceptable?
T: Is the action technically feasible and potentially successful?
A: Does the jurisdiction have the administrative capability to successfully implement this action?
P: Is the action politically acceptable?
L: Does the jurisdiction have the legal authority to implement the action?
E: Is the action economically beneficial?
E: Will the project have an environmental impact that is either beneficial or neutral? (score “3” if positive and “2” if neutral.)

Will the implemented action result in lives being saved?
Will the implemented action result in a reduction in disaster damage?

The final scores for each action are presented below in the analysis of each action. The corresponding worksheets are included in Appendix B of this plan. The STAPLEE final score for each action, excluding other factors such as local project needs, determined its priority level. Actions with a total score between 0 and 24 were categorized as low priority, those scoring between 25 and 29 were considered moderate priority, and actions with a score of 30 or above were classified as high priority. A blank STAPLEE worksheet is provided below in Figure 4.1.

Figure 4.1 Blank STAPLEE Worksheet

STAPLEE Worksheet		
Name of Jurisdiction:		
Action or Project		
Action/Project Number:	Insert a unique action number for this action for future tracking purposes. This can be a combination of the jurisdiction name, followed by the goal number and action number (i.e. Joplin 1.1)	
Name of Action or Project:		
Mitigation Category:	Prevention, Structure and Infrastructure Projects, Natural Systems Protection, Education and Outreach, Emergency Services	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** acceptable		
T: Is it **Technically** feasible and potentially successful?		
A: Does the jurisdiction have the **administrative** capacity to execute this action?		
P: Is it **Politically** acceptable?		
L: Is there **Legal** Authority to implement?		
E: Is it **Economically** beneficial?		
E: Will the project have either a neutral or positive impact on the natural **Environment**?		
Will historic structures be saved or protected?		
Could it be implemented quickly?		
STAPLEE SCORE		
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	
Will the implemented action result in a reduction in disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	
MITIGATION EFFECTIVENESS SCORE		
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		

☐ **High Priority (30+ points)**	☐ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by
(Name, Title, Phone Number) _____

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5.1 MONITORING, EVALUATING, AND UPDATING THE PLAN

This chapter of the plan outlines the overall strategy for plan maintenance, including the methods and schedule for monitoring, updating, and evaluating the plan. It also discusses the integration of the plan into existing planning mechanisms and details the approach for ensuring continued public involvement throughout the next five-year cycle.

44 CFR Requirement 201.6 (c)(4): The plan maintenance process shall include a section describing the method and schedule of monitoring, evaluating, and updating the mitigation plan within a five-year cycle.

5.1.1 RESPONSIBILITY FOR PLAN MAINTENANCE

Each jurisdiction participating will be responsible for updating goals and actions throughout the five-year cycle. The city planner at the Springfield-Greene County Office of Emergency Management will request annual updates for goals and actions. The plan will be reviewed and updated annually by both the individual jurisdictions and the Springfield-Greene County Office of Emergency Management. As necessary, the Mitigation Planning Committee (MPC) may convene to discuss potential changes to the plan that could impact multiple jurisdictions. Additionally, all participating jurisdictions are responsible for monitoring multi-objective, cost-share, and other funding opportunities to support the implementation of the plan's recommended actions for which no current funding is available.

The Mitigation Planning Committee (MPC) and the Springfield-Greene County Office of Emergency Management serve as advisory bodies, with the authority to make recommendations to elected officials at the county, city, town, or district levels. Their primary goal is to ensure the successful implementation of the plan and to provide updates to county officials and the public regarding its status. Additionally, their focus includes promoting mitigation proposals, addressing stakeholder concerns about hazard mitigation, relaying concerns to the appropriate entities, and making relevant information publicly accessible.

5.1.2 PLAN MAINTENANCE SCHEDULE

The Mitigation Planning Committee (MPC) and Springfield-Greene County Office of Emergency Management (OEM) will review the plan annually and following any state or federally declared hazard event or disaster, as appropriate, will assess progress and update the Mitigation Strategy. In collaboration with all participating jurisdictions, the Emergency Management Director will be responsible for initiating a written update of the plan every five years. This update will be submitted to the Missouri State Emergency Management Agency (SEMA) and the Federal Emergency Management Agency (FEMA) Region VII, in accordance with requirement 201.6(4)(i) of the Disaster Mitigation Act of 2000, unless in the event of a disaster or other circumstance, such as changes in regulations, necessitate adjustments to the schedule.

5.1.3 PLAN MAINTENANCE PROCESS

Goals and actions will be updated annually by each participating jurisdiction. This process will take place during the annual meetings with the participating jurisdictions and their representatives on the Mitigation Planning Committee (MPC). During these meetings, progress on the Mitigation Strategy will be reviewed, and any necessary changes for the future will be discussed. The progress of proposed actions can be monitored by evaluating changes in vulnerabilities identified in the plan. As part of the annual plan update, the MPC will assess the following changes in vulnerability:

- Decreased vulnerability as a result of implementing recommended actions.
- Increased vulnerability due to failed or ineffective mitigation action.
- Increased vulnerability from hazard events.

- Increased vulnerability resulting from new development and/or annexation.

Future five-year updates to this plan will include the following activities:

- Evaluation of changes in vulnerability resulting from the implementation of mitigation actions.
- Documentation of success stories where mitigation efforts have been effective.
- Recording of unsuccessful mitigation actions and an analysis of why they were ineffective.
- Identification of previously overlooked hazard events that may have occurred since the last plan update.
- Integration of new data or studies related to hazard risks.
- Inclusion of new capabilities or changes in existing capabilities.
- Incorporation of growth data and updates to inventories.
- Introduction of new action ideas and adjustments to action prioritization.

To effectively evaluate changes in vulnerabilities resulting from the implementation of the plan, participating jurisdictions will adopt the following process:

- Each proposed action in the plan will designate an individual, office, or agency responsible for its implementation. This entity will track progress and provide an annual report to the jurisdictional MPC (or designated responsible entity) member on the status of the action. The entity will also assess whether the action, as implemented, meets the defined objectives and is likely to succeed in reducing risk.
- If the action does not meet the identified objectives, the jurisdictional MPC (or designated responsible entity) member will determine the necessary corrective measures and make any required modifications to the plan.

Modifications will be made to the plan to address actions that have failed or are deemed unfeasible. Feasibility will be evaluated based on the action’s alignment with established criteria, time frame, community priorities, and available funding resources. Actions that were not initially ranked highly but were identified as potential mitigation strategies will also be reviewed during the monitoring process.

Plan updates will be made through written changes and submissions, as deemed appropriate and necessary by the MPC or designated responsible entity. All changes will require approval from the Greene County Board of Commissioners and the governing boards of the jurisdictions participating.

5.2 INCORPORATION INTO EXISTING PLANNING MECHANISMS

44 CFR Requirements 201.6(c)(4)(ii): The plan shall include a process by which local governments incorporate the requirements of the mitigation plan into other planning mechanisms such as comprehensive or capital improvement plans, when appropriate.

Where possible, plan participants, including schools and special districts, will utilize existing plans and programs to implement hazard mitigation actions. These existing plans and programs are outlined in the capability profile sections of this plan. Based on the capability assessments of the participating jurisdictions, communities in Greene County will continue to develop and implement programs aimed at reducing the risks to life and property from hazards. This plan builds upon the momentum generated by previous and related planning efforts and mitigation programs, recommending that actions be implemented through the following plans, where feasible:

- General or master plans of participating jurisdictions
- Ordinances of participating jurisdictions
- Greene County Emergency Operations Plan
- Capital Improvement plans and budgets
- School and Special District Plans and budgets
- Other community plans

Members of the MPC (or designated entity) involved in updating these existing planning mechanisms will be responsible for incorporating the findings and actions from the mitigation plan, as appropriate. The MPC (or designated entity) will also oversee the integration process and ensure that the relevant information is included in the five-year update of the multi-jurisdictional hazard mitigation plan.

Furthermore, following the annual review of the Hazard Mitigation Plan, the Springfield-Greene County Emergency Management Director will provide the updated Mitigation Strategy, along with the current status of each mitigation action, to the county commissions, as well as all mayors, city clerks, and school district superintendents. The Springfield-Greene County Emergency Management Director will also request that the mitigation strategy be incorporated, where appropriate, into other planning mechanisms.

Below are the planning mechanisms by jurisdiction in which the Hazard Mitigation Plan will be integrated.

Table 5.1 Planning Mechanisms Identified for Integration of Hazard Mitigation Plan

Jurisdiction	Planning Mechanisms	Integration Process for Previous Plan	Integration Process for Current Plan
Greene County	County Emergency Operations Plan	When updating the EOP, the planning team at OEM worked with the Mitigation Plan to add and update actions into the EOP.	The planning team at OEM will identify new actions that can be added to the next EOP update.
City of Ash Grove	Comprehensive Plan	When updating the Comprehensive Plan, city officials implemented development possibilities and used the Mitigation Plan as a resource.	Identify new developments/projects for the next Comprehensive Plan.

City of Battlefield	Comprehensive Plan	When updating the Comprehensive Plan, city officials implemented development possibilities and used the Mitigation Plan as a resource.	Identify new developments/projects for the next Comprehensive Plan.
City of Fair Grove	Comprehensive Plan	When updating the Comprehensive Plan, city officials implemented development possibilities and used the Mitigation Plan as a resource.	Identify new developments/projects for the next Comprehensive Plan.
City of Republic	Comprehensive Plan	When updating the Comprehensive Plan, city officials implemented development possibilities and used the Mitigation Plan as a resource.	Identify new developments/projects for the next Comprehensive Plan.
City of Springfield	Comprehensive Plan	When updating the Comprehensive Plan, city officials implemented development possibilities and used the Mitigation Plan as a resource.	Identify new developments/projects for the next Comprehensive Plan.
City of Strafford	Comprehensive Plan	When updating the Comprehensive Plan, city officials implemented development possibilities and used the Mitigation Plan as a resource.	Identify new developments/projects for the next Comprehensive Plan.
City of Walnut Grove	Comprehensive Plan	When updating the Comprehensive Plan, city officials implemented development possibilities and used the Mitigation Plan as a resource.	Identify new developments/projects for the next Comprehensive Plan.
City of Willard	Comprehensive Plan	When updating the Comprehensive Plan, city officials implemented development possibilities and used the Mitigation Plan as a resource.	Identify new developments/projects for the next Comprehensive Plan.
Ash Grove Fire Protection District	Strategic Plan	When updating the Strategic Plan, the school district used the Mitigation Plan as a resource.	Identify new developments/projects for the next Strategic Plan.
Battlefield Fire Protection District	Strategic Plan	When updating the Strategic Plan, the school district used the Mitigation Plan as a resource.	Identify new developments/projects for the next Strategic Plan.

Ebenezer Fire Protection District	Strategic Plan	When updating the Strategic Plan, the school district used the Mitigation Plan as a resource.	Identify new developments/projects for the next Strategic Plan.
Fair Grove Fire Protection District	Strategic Plan	When updating the Strategic Plan, the school district used the Mitigation Plan as a resource.	Identify new developments/projects for the next Strategic Plan.
Logan-Rogersville Fire Protection District	Strategic Plan	When updating the Strategic Plan, the school district used the Mitigation Plan as a resource.	Identify new developments/projects for the next Strategic Plan.
Strafford Fire Protection District	Strategic Plan	When updating the Strategic Plan, the school district used the Mitigation Plan as a resource.	Identify new developments/projects for the next Strategic Plan.
Walnut Grove Fire Protection District	Strategic Plan	When updating the Strategic Plan, the school district used the Mitigation Plan as a resource.	Identify new developments/projects for the next Strategic Plan.
Willard Fire Protection District	Strategic Plan	When updating the Strategic Plan, the school district used the Mitigation Plan as a resource.	Identify new developments/projects for the next Strategic Plan.
Ash Grove Public School District	Comprehensive School Improvement Plan	When updating the CSIP, the school district used the Mitigation Plan as a resource.	Identify new developments/projects for the next Comprehensive School Improvement Plan.
Fair Grove Public School District	Comprehensive School Improvement Plan	When updating the CSIP, the school district used the Mitigation Plan as a resource.	Identify new developments/projects for the next Comprehensive School Improvement Plan.
Republic Public School District	Comprehensive School Improvement Plan	When updating the CSIP, the school district used the Mitigation Plan as a resource.	Identify new developments/projects for the next Comprehensive School Improvement Plan.

Springfield Public School District	Strategic Plan	When updating the Strategic Plan, the school district used the Mitigation Plan as a resource.	Identify new developments/projects for the next Strategic Plan.
Strafford Public School District	Comprehensive Plan	When updating the Comprehensive Plan, the school district used the Mitigation Plan as a resource.	Identify new developments/projects for the next Comprehensive Plan.
Walnut Grove Public School District	Facility Master Plan	When updating the Facility Master Plan, the school district used the Mitigation Plan as a resource.	Identify new developments/projects for the next Facility Master Plan.
Willard Public School District	Strategic Plan	When updating the Strategic Plan, the school district used the Mitigation Plan as a resource.	Identify new developments/projects for the next Strategic Plan.
Ozarks Technical Community College	Strategic Plan	When updating the Strategic Plan, the school district used the Mitigation Plan as a resource.	Identify new developments/projects for the next Strategic Plan.
Missouri State University	Strategic Plan	When updating the Strategic Plan, the school district used the Mitigation Plan as a resource.	Identify new developments/projects for the next Strategic Plan.

5.3 CONTINUED PUBLIC INVOLVEMENT

44 CFR Requirement 201.6(c)(4)(iii): The plan maintenance process shall include a discussion on how the community will continue public participation in the plan maintenance process.

The Hazard Mitigation Plan update process presents an opportunity to highlight success stories resulting from the plan's implementation and to gather additional public feedback. Information regarding the annual reviews will be made available on Springfield-Greene County Emergency Management's website and social media platforms. Following the release of this information, a public survey will be distributed to collect community input. Participating jurisdictions will also have the opportunity to incorporate hazard-related feedback from their respective communities. As the Mitigation Planning Committee (MPC) reconvenes for the five-year update, it will collaborate with all stakeholders involved in the planning process, including any new members who joined the MPC after the initial effort. Public notices will be posted, and public participation will be actively encouraged through open forums and surveys to ensure broad community involvement.

APPENDIX A
Critical Facilities

Critical Facilities Inventory: Ash Grove

SCHOOLS			
Ash Grove Elementary	100 N. Maple Ln	Ash Grove	65604
Ash Grove High School	100 N. Maple Ln.	Ash Grove	65604
Bois D'Arc Elementary	10315 W. State Highway T	Bois D'Arc	65612
NURSING HOMES			
Ash Grove Healthcare Facility	401 North Medical Drive, P.O. Box 247	Ash Grove	65604
Ash Grove Rehabilitation Clinic	401 Independence Circle	Ash Grove	65604
POLICE			
Ash Grove	100 W. Main	Ash Grove	65604
FIRE			
Ash Grove Fire Protection District	112 N. Pipper Rd.	Ash Grove	65604
CITY GOVERNMENT			
Ash Grove City Hall	100 W. Main	Ash Grove	65604
WASTE FACILITIES/RECYCLING CENTERS			
Ash Grove Recycling Center	704 Industrial Dr.	Ash Grove	65604
PLACES OF WORSHIP			
First Baptist Church	201 E Walker St	Ash Grove	65604
The First Christian Church	211 State Hwy F	Ash Grove	65604
Ash Grove United Methodist-Presbyterian Church	403 E Boone St	Ash Grove	65604
Ash Grove Assembly of God	411 N Crestview Ave	Ash Grove	65604
Bible Baptist Church	405 N Crestview Ave	Ash Grove	65604
Theotokos Unexpected Joy Church	810 W Woodbine Rd	Ash Grove	65604
SOULFIRE	114 E Main St	Ash Grove	65604
CHILD CARE AND HEAD STARTS			
Sugar Dumplin's Daycare and Preschool	600 E Wells St.	Ash Grove	65604
Little Pirates Daycare and Preschool	305 E. Prairie Ln.	Ash Grove	65604

Little Explorer's Daycare	18823 Lawrence 2078	Ash Grove	65604
Vibrancy in Christ	415 E. Walker Stn	Ash Grove	65604
Ash Grove Head Start	117 S. Calhoun	Ash Grove	65604

Critical Facilities Inventory: Battlefield

POLICE			
Battlefield	5434 S. Tower Dr.	Battlefield	65619
FIRE			
Battlefield Fire Protection District	4117 W. Second St.	Battlefield	65619
CITY GOVERNMENT			
Battlefield	5424 S. Tower	Battlefield	65619
PLACES OF WORSHIP			
180 Church	4032 W. Lark St.	Battlefield	65619
Battlefield Assembly of God	5154 State Highway FF	Battlefield	65619
Battlefield United Methodist Church	5475 S. Daniel St.	Battlefield	65619
First Baptist Church of Battlefield	5010 S. State Highway FF	Battlefield	65619
Souled Out Youth Ministries	4852 S. State Highway FF	Battlefield	65619
Wilson Creek Baptist Church	6411 S. Farm Road 115	Battlefield	65619
Battlefield First Baptist Church	5010 West Bypass	Battlefield	65619
Christ Community Church	4224 S Farm Rod	Battlefield	65619
The Catalyst Church	4852 West Bypass C	Battlefield	65619
CHILD CARE AND HEAD STARTS			
Butterflies and Daisies	3501 W Moark St.	Battlefield	65619
Little Angels Learning Academy	4222 W. Sandy	Battlefield	65619
Wilson's Creek 5th/6th Grade	4035 W. Weaver Rf.	Battlefield	65619

Critical Facilities Inventory: Bois D'Arc

FIRE			
Bois D'Arc Fire Protection District	10515 W. State Highway T	Bois D'Arc	65612
PLACES OF WORSHIP			
St. Luke United Methodist	10463 State Highway T	Bois D'Arc	65612
CHILD CARE AND HEAD STARTS			
Bois D'Arc Elementary	10315 W. State Highway T	Bois D'Arc	65612

Critical Facilities Inventory: Brookline

FIRE			
Brookline Fire Protection District	3504 E. Orr St.	Brookline	65619
PLACES OF WORSHIP			
Brookline Church of Christ	3086 N. Brookline Ave.	Brookline	65619
Christ Community Church	4224 S. Farm Road 115	Brookline	65619
Wilson Creek Baptist	6411 S. Farm Road 115	Brookline	65619

Critical Facilities Inventory: Fair Grove

SCHOOLS			
Fair Grove Elementary	132 N. Main St.	Fair Grove	65648
Fair Grove Middle School	132 N. Main St.	Fair Grove	65648
Fair Grove High School	132 N. Main St.	Fair Grove	65648
POLICE			
Fair Grove	81 S. Orchard Blvd.	Fair Grove	65648
FIRE			
Fair Grove Station 2	4242 Missouri KK	Fair Grove	65648
Fair Grove Station 1 Headquarters	340 W. Eagle Ct.	Fair Grove	65648
CITY GOVERNMENT			
Fair Grove	81 S. Orchard	Fair Grove	65648
PLACES OF WORSHIP			
Cedar Bluff Baptist Church	8505 E. State Highway E	Fair Grove	65648
Church of the Redeemer	532 S. Orchard Blvd.	Fair Grove	65648
Community Southern Baptist	4686 State Highway CC	Fair Grove	65648
Fair Grove Assembly of God Church	255 W. Cherry St.	Fair Grove	65648
Fair Grove Baptist Temple	532 S. Orchard Blvd.	Fair Grove	65648
Fair Grove First Baptist	14 E. Maple St.	Fair Grove	65648
Fair Grove United Methodist Church	83 E. Hickory St.	Fair Grove	65648
Faith Freewill Baptist	373 Union Grave Rd.	Fair Grove	65648
Peace Chapel Assembly of God	9260 N. Farm Road 183	Fair Grove	65648
Pleasant Ridge Church	12107 N. Farm Road 221	Fair Grove	65648
CHILD CARE AND HEAD STARTS			
A Lil Nature At K's, LLC	7308 Farm Road 197	Fair Grove	65648
Fair Grove Head Start	103 N. Main	Fair Grove	65648
The Little School, LLC	163 W. Saddle Club Rd.	Fair Grove	65648

Critical Facilities Inventory: Republic

SCHOOLS			
Sweeny Elementary	720 N. Main St.	Republic	65738
Lyon Elementary	201 E. Highway 174	Republic	65738
Moculloch Elementary	234 E. Anderson St.	Republic	65738
Price Elementary	518 N. Hampton St.	Republic	65738
Schofield Elementary	253 E. Anderson St.	Republic	65738
Republic Middle School	#1 Tiger Dr.	Republic	65738
Republic High School	4370 Repmo Dr.	Republic	65738
NURSING HOMES			
Bristol Manor of Republic	634 East Highway 174	Republic	65738
Republic Nursing and Rehab	901 East Highway 174	Republic	65738
Sunshine Manor	300 South Cottonwood Ave.	Republic	65738
POLICE			
Republic Police Department	540 W. Civic Blvd	Republic	65738
FIRE			
Republic Fire Department	701 U.S. Highway 60 E	Republic	65738
West Republic Fire Protection District	11088 W. Farm Road 168	Republic	65738
CITY GOVERNMENT			
Republic City Hall	213 N. Main St.	Republic	65738
PLACES OF WORSHIP			
Bible Baptist Church	227 E. Brooks St.	Republic	65738
Anchor Baptist Church	210 N. Main St.	Republic	65738
Calvary Baptist	804 U.S 60	Republic	65738
Calvary Chapel Republic	210 E. Hines St.	Republic	65738
Crosspoint Fellowship	1664 U.S 60	Republic	65738
Destiny Church	526 E. Harrison St	Republic	65738
First Baptist Church of Republic	305 N. Main St.	Republic	65738
First Christian Church	443 N. Main St.	Republic	65738
Hood United Methodist	139 N. Walnut Ave.	Republic	65738
Hope Lutheran	218 MO-174	Republic	65738
Liberty Faith Church of God	830 MO-174	Republic	65738
Live Church	1244 U.S. 60	Republic	65738
New horizon Seventh-Day Adventist	4421 S. Farm Road 85	Republic	65738
Republic Assembly of God	341 U.S. Highway 60 West	Republic	65738
Republic Church of Christ	323 E. Harrison St.	Republic	65738
Republic Church of the Nazarene	1003 E. Harrison St.	Republic	65738

Republic Family Church	317 N. Walnut Ave.	Republic	65738
Republic Free Will Baptist Church	437 N. Walnut St.	Republic	65738
United Pentecostal Church	303 MO-174	Republic	65738
Westside Christian Church	537 W. Elm St.	Republic	65738
CHILD CARE AND HEAD STARTS			
Bethany Pate	2436 E Willow	Republic	65738
ABCs and One Two Three Preschool	139 N. Walnut	Republic	65738
B. Jill Canfield	1610 Jody Cir.	Republic	65738
Building Blocks Learning Center	505 E. Harrison	Republic	65738
Child Life Academy LLC	517 E. Elm St.	Republic	65738
Elizabeth Bashore	720 Highway 60	Republic	65738
Growing Kids Childcare	341 US Highway 60 W	Republic	65738
Hale Home Day Care	525 S. Ventura	Republic	
Hope Child Care Center	218 E. Highway 174	Republic	65738
Hope Lutheran Church	218 MO-174	Republic	65738
Learn and Grow Organic Daycare LLC	545 N. Walnut Ave.	Republic	65738
Little People's Workshop	139 N Walnut Ave.	Republic	65738
Little Stepping Stones Academy LLC	975 N. Lindsey Ave.	Republic	65738
Lyon Elementary	201 E. Highway 174	Republic	65738
Mandi Pilkinton	601 Lexington	Republic	65738
Mary Ladwig	1002 E. Harrison	Republic	65738
Moculloch Elementary	234 E. Anderson	Republic	65738
Price Elementary	518 N. Hampton	Republic	65738
Republic Early Childhood Center Preschool	636 N. Main St.	Republic	65738
Republic Head Start	933 N. Lindsey Ave.	Republic	65738
Republic Middle School	#1 Tiger Dr.	Republic	65738
Sandra Richesin	7628 W. Farm Road 174	Republic	65738
Schofield Elementary	253 E. Anderson	Republic	65738
Sweeny Elementary	720 N. Main St.	Republic	65738
Teresa Hale	525 S. Ventura	Republic	65738
Tots Spot, LLC	220 N. Cedar	Republic	65738

Critical Facilities Inventory: Springfield

SCHOOLS			
Bingham Elementary	2126 E. Cherry	Springfield	65802
Bissett Elementary	3014 W. Calhoun	Springfield	65802
Bowerman Elementary	2148 N. Douglas	Springfield	65803
Boyd Elementary	1409 Washington	Springfield	65802
Campbell Elementary	506 S. Grant	Springfield	65806
Carver Middle School	3325 W. Battlefield	Springfield	65807
Central High School	423 E. Central	Springfield	65802
Cherokee Middle School	420 E. Farm Rd 182	Springfield	65810
Cowden Elementary	2927 S. Kimbrough	Springfield	65807
Delaware Elementary	1505 S. Delaware	Springfield	65804
Disney Elementary	4100 S. Fremont	Springfield	65804
Field Elementary	2120 Barataria	Springfield	65804
Fremont Elementary	2814 N. Fremont	Springfield	65803
Glendale High School	2727 S. Ingram Mill Rd.	Springfield	65804
Gray Elementary	2101 W. Farm Rd 182	Springfield	65810
Hickory Hills Elementary	3429 E. Trafficway	Springfield	65802
Hickory Hills Middle School	3429 E. Trafficway	Springfield	65802
Hillcrest High School	3319 N. Grant	Springfield	65803
Holland Elementary	2403 S. Holland	Springfield	65807
Jarrett Middle School	840 S. Jefferson	Springfield	65806
Jefferies Elementary	4051 S. Scenic	Springfield	65807
Kickapoo High School	3710 S. Jefferson Ave.	Springfield	65807
Mann Elementary	3745 S. Broadway	Springfield	65807
McBride Elementary	5005 S. Farm Rd 135	Springfield	65810
McGregor Elementary	1221 W. Madison	Springfield	65806
Parkview High School	516 W. Meadowmere	Springfield	65807
Pershing Elementary	2120 S. Ventura	Springfield	65804
Pershing Middle School	2120 S. Ventura	Springfield	65804
Pipkin Middle School	1215 N. Boonville	Springfield	65802
Pittman Elementary	2934 E. Bennett	Springfield	65804
Pleasant View Elementary	2210 E. State Highway AA	Springfield	65803
Pleasant View Middle School	2210 E. State Highway AA	Springfield	65803
Portland Elementary	906 W. Portland	Springfield	65807
Reed Middle School	2000 N. Lyon	Springfield	65803
Robberson Elementary	1100 E. Kearney	Springfield	65803

Rountree Elementary	1333 E. Grand	Springfield	65804
Sequitoa Elementary	3414 Mentor Road	Springfield	65804
Shady Dell Elementary	2757 E. Division	Springfield	65803
Sherwood Elementary	1813 S. Scenic	Springfield	65807
Study Middle School	2343 W. Olive	Springfield	65802
Sunshine Elementary	421 E. Sunshine	Springfield	65807
Truman Elementary	3850 N. Farm Rd. 159	Springfield	65803
Twain Elementary	2352 S. Weaver	Springfield	65807
Watkins Elementary	732 W. Talmage	Springfield	65803
Weaver Elementary	1461 N. Douglas	Springfield	65802
Weller Elementary	1630 N. Weller	Springfield	65803
Westport Elementary	415 S. Golden	Springfield	65802
Wilder Elementary	2526 S. Hillsboro	Springfield	65804
Williams Elementary	2205 W. Kearney	Springfield	65803
Wilson's Creek 5-6	4035 W. Weaver	Battlefield	65619
York Elementary	2100 Nichols	Springfield	65802
ALTERNATIVE SCHOOLS/PROGRAMS			
A.I.M.S.	911 E. Division	Springfield	65803
Baily Alternative School	501 W. Central	Springfield	65802
C.T.C.	924 N. Main Street	Springfield	65802
Juvenile Detention Center	1111 N. Robberson	Springfield	65802
Middle College, OTC	1001 E. Chestnut Expy.	Springfield	65802
Parents As Teachers Programs at Doling School	1423 W. Atlantic	Springfield	65803
Solutions/A.C.E./PALS/Storefront/Elementary Suspension Program	1518 E. Dale	Springfield	65803
S.E.A.L.	1518 E. Dale	Springfield	65803
Springfield Option Site (S.O.S.)	1212 W. Lombard	Springfield	65806
GIFTED PROGRAMS			
Bridges	1630 N. Weller Ave.	Springfield	65803
MYSP	423 E. Central	Springfield	65802
Phelps School for Gifted/WINGS	934 S. Kimbrough	Springfield	65806
PRIVATE SCHOOLS			
Christian Schools of Springfield	739 W. Talmage	Springfield	65803
Greenwood Laboratory School	901 S. National	Springfield	65897
Springfield Lutheran	2852 S Dayton Ave.	Springfield	65807
Springfield Seventh Day Adventist	704 S. Belview	Springfield	65802
Springfield Catholic	2340 S. Eastgate Ave	Springfield	65809

St. Agnes School	531 South Jefferson	Springfield	65806
St. Elizabeth Seton School	2200 W. Republic Rd.	Springfield	65807
Immaculate Conception School	3555 S. Fremont	Springfield	65804
St. Joseph School	515 West Scott St.	Springfield	65802
Springfield Catholic High School	2340 S. Eastgate	Springfield	65809
COLLEGES, UNIVERSITIES AND TECHNICAL SCHOOLS			
Assembly of God Theological Seminary	1435 N. Glenstone	Springfield	65802
Baptist Bible College	628 E. Kearney	Springfield	65803
Bryan College	237 S. Florence	Springfield	65806
Central Bible College	3000 N. Grant Ave.	Springfield	65803
Drury University	900 N. Benton	Springfield	65802
Evangel University	1111 N. Glenstone	Springfield	65802
Everest College	1010 W. Sunshine	Springfield	65807
Forest Institute of Psychology	2885 W. Battlefield	Springfield	65807
Global University	1211 S. Glenstone	Springfield	65804
Ozarks Technical College	1001 E. Chestnut Expy.	Springfield	65802
Missouri State University	901 S. National Ave.	Springfield	65897
Vatterott College	3850 S. Campbell	Springfield	65807
University of Phoenix	1343 E. Kingsley	Springfield	65804
Webster University	321 W. Battlefield	Springfield	65807
COXHEALTH SYSTEMS SCHOOLS			
School of Radiology	3801 S. National	Springfield	65807
School of Medical Technology	3801 S. National	Springfield	65807
School of Nursing	1423 N. Jefferson	Springfield	65802
MERCY HEALTH SYSTEMS SCHOOLS			
School of Radiology	1235 E. Cherokee	Springfield	65804
School of Nursing	4431 S. Fremont	Springfield	65804
LODGING			
Abor Suites	1550 E. Raynell	Springfield	65807
Baymont Inn & Suites	2445 N. Airport Plaza Ave.	Springfield	65803
Baymont Inn & Suites	3776 S. Glenstone	Springfield	65804
Best Budget Inn	4433 W. Chestnut Expy.	Springfield	65802
Best Western Coach House Inn	2535 N. Glenstone	Springfield	65803
Best Western Deerfield Inn	3343 E. Battlefield	Springfield	65804
Best Western Route 66 Rail Haven	203 S. Glenstone	Springfield	65802
Blackberry Creek Retreat Bed and Breakfast	5086 Route KK	Rogersville	65752
Budget Lodge	3050 N. Kentwood	Springfield	65803

Candlewood Suites	1920 E. Kerr	Springfield	65803
Clarion Hotel & Conference Center	3333 S. Glenstone	Springfield	65804
Comfort Inn & Conference Center	3370 E. Battlefield	Springfield	65804
Comfort Inn Suites	2815 N. Glenstone	Springfield	65803
Comfort Suites Medical District	310 E. Monastery	Springfield	65810
Courtyard by Marriott	3527 W. Kearney St.	Springfield	65803
Crystal Suites	1260 E. Independence	Springfield	65804
Days Inn South	621 W. Sunshine	Springfield	65807
Dogwood Park Inn	815 N. Glenstone	Springfield	65803
Doubletree Hotel Springfield	2431 N. Glenstone	Springfield	65803
Drury Inn & Suites Springfield	2715 N. Glenstone	Springfield	65803
Econo Lodge	2808 N. Kansas	Springfield	65803
Econo Lodge	2611 N. Glenstone	Springfield	65803
Econo Lodge	3404 E. Ridgeview	Springfield	65804
Economy Inn	2555 N. Glenstone	Springfield	65803
Elliott Lodging, LTD	1736 E. Sunshine, #101	Springfield	65804
Flagship Motel	2209 N. Glenstone	Springfield	65803
Hampton Inn	222 N. Ingram Mill	Springfield	65802
Hampton Inn	2750 N. Glenstone	Springfield	65803
Hampton Inn	3232 S. Glenstone	Springfield	65804
Holiday Inn Express Hotel & Suites	1117 E. St. Louis	Springfield	65806
Holiday Inn North I-44	2720 N. Glenstone	Springfield	65803
Kyrstal Aire Inn & Suites	2745 N. Glenstone	Springfield	65803
La Quinta Inn	1610 E. Evergreen	Springfield	65803
La Quinta South	2535 S. Campbell	Springfield	65807
Lamplighter Inn - North	2820 N. Glenstone	Springfield	65803
Lamplighter Inn - South	1772 S. Glenstone	Springfield	65804
Magers Lodgings	2776 S. Campbell	Springfield	65807
Mansion at Elfindale Bed and Breakfast	1701 S. Fort	Springfield	65807
Merigold Inn	2006 S. Glenstone	Springfield	65804
Microtell Inn	3125 N. Kentwood	Springfield	65803
Motel 6	2655 N. Glenstone	Springfield	65803
Oasis Hotel & Convention Center	2550 N. Glenstone	Springfield	65803
Ozark Inn	2601 N. Glenstone	Springfield	65803
Plaza Inn	2933 N. Glenstone	Springfield	65803
Quality Inn - E. Battlefield	3303 E. Battlefield Road	Springfield	65804
Quality Inn & Suites	3930 S. Overland Ave.	Springfield	65807
Ramada Oasis and Conference Center	2500 N. Glenstone	Springfield	65803

Residence Inn by Marriott	1303 E. Kingsley	Springfield	65804
Rest Haven Court	2000 E. Kearney	Springfield	65803
Sleep Inn of Springfield	233 E. Camino Alto	Springfield	65810
Super 8 Motel	3034 S. Moulder	Springfield	65804
University Plaza Hotel & Convention Center	333 S. John Q. Hammons Pkwy.	Springfield	65806
Value Place	2021 W. Kingsley	Springfield	65807
Virginia Rose Bed and Breakfast	317 E. Glenwood	Springfield	65807
Walnut Street Inn Bed and Breakfast	900 E. Walnut	Springfield	65806
Wishing Well Motor Inn	3500 W. Chestnut Expy.	Springfield	65802
HOSPITALS AND URGENT CARES			
CoxHealth Systems North	1423 N. Jefferson	Springfield	65802
CoxHealth Systems South	3801 S. National Ave.	Springfield	65807
CoxHealth Systems Walnut Lawn	1000 E. Walnut Lawn	Springfield	65807
Lakeland Regional Hospital	440 S. Market Ave.	Springfield	65806
Ozarks Community Hospital	2828 N. National	Springfield	65803
Mercy Hospital	1235 E. Cherokee	Springfield	65804
U.S. Medical Center for Federal Prisoners	1900 W. Sunshine	Springfield	65807
Concentra Urgent Care	1308 N. Glenstone	Springfield	65802
Cox Pediatric Urgent Care	1000 E. Primrose #170	Springfield	65804
Cox Walnut Lawn Urgent Care	1000 E. Walnut Lawn	Springfield	65807
Mercy Northside Urgent Care	2120 W. Kearney	Springfield	65803
Mercy Urgent Care Center/Pediatric Urgent Care	3231 S. National	Springfield	65807
Cox Family Medical Walk-in Clinic	4049 S. Campbell	Springfield	65807
NURSING HOMES			
Christian Health Care of Springfield East	3535 East Cherokee	Springfield	65809
Christian Health Care of Springfield West	3403 West Mt. Vernon	Springfield	65802
Culpepper Place of Chesterfield Village	2410 Chesterfield Blvd.	Springfield	65807
Culpepper Place of Springfield	3540 East Cherokee	Springfield	65809
Gardens, The	1302 West Sunset	Springfield	65807
Golden Estate Residential Care	1134 West Norton Rd.	Springfield	65803
Jacob's Care Center	932 West State	Springfield	65806
James River Care and Rehabilitation Center, Inc.	3550 East Battlefield	Springfield	65809
Jordan Creek Nursing & Rehab	910 South West Ave.	Springfield	65802
Joy Assisted Living for Seniors	2030 West Mt. Vernon, P.O. Box 9655	Springfield	65802
Lakewood - Assisted Living by Americare	4685 Robberson Ave.	Springfield	65810
Lodges, The	2401 West Grand	Springfield	65802

Magnolia Square Nursing and Rehabilitation Center	1502 West Edgewood	Springfield	65807
Manor at Elfindale, The	1707 West Elfindale St.	Springfield	65807
ManorCare Health Services	2915 South Fremont	Springfield	65804
Maranatha Village, Inc.	233 East Norton Rd.	Springfield	65803
Mercy Villa	1100 East Montclair	Springfield	65807
Neighborhood at Quail Creek, The	1514 West Lark	Springfield	65810
Primrose Place Health Care Center	1115 East Primrose St.	Springfield	65807
Quality Residential Care	2034 West College	Springfield	65806
Ravenwood - Assisted Living by Americare	1950 East Republic Rd.	Springfield	65807
Spring Ridge - Assisted Living by Americare	2828 South Meadowbrook	Springfield	65807
Springfield Rehabilitation & Health Care Center	2800 South Fort Avenue, P.O. Box 3438GS	Springfield	65807
Springfield Skilled Care Center	2401 West Grand	Springfield	65802
Woodland Manor	1347 East Valley Watermill Rd.	Springfield	65803
AIRPORTS			
Springfield/Branson Regional Airport	5000 West Kearney	Springfield	65803
Springfield Downtown Airport	2546 E. Division	Springfield	65803
BUS STATION			
CU Bus Transportation Offices	1505 N. Boonville	Springfield	65803
POLICE			
Headquarters	321 E. Chestnut Expy.	Springfield	65802
South District Station	2620 W. Battlefield Rd.	Springfield	65807
Missouri State University Sub-Station	901 S. National Ave.	Springfield	65897
FIRE			
Ebenezer Fire Protection District	7918 N. FR 145	Springfield	65803
Pleasant View Fire Protection District	2313 E. State Highway AA	Springfield	65803
Springfield Fire Department	830 N. Boonville	Springfield	65802
Station 1	720 E. Grand	Springfield	65807
Station 2	608 W. Commercial St.	Springfield	65803
Station 3	205 N. Patterson Ave.	Springfield	65802
Station 4	2423 N. Delaware	Springfield	65803
Station 5	2750 W. Kearney St.	Springfield	65803
Station 6	2620 W. Battlefield Rd.	Springfield	65807
Station 7	2129 E. Sunshine	Springfield	65804
Station 8	1405 S. Scenic Ave.	Springfield	65807
Station 9	450 W. Walnut Lawn	Springfield	65807

Station 10	2245 E. Galloway	Springfield	65804
Station 11	4940 S. Fremont	Springfield	65804
Station 12	2455 S. Blackman Rd.	Springfield	65809
CITY GOVERNMENT			
Springfield Art Museum	1111 E. Brookside Dr.	Springfield	65807
Emergency Communications	319 E. Chestnut Expy.	Springfield	65802
Health Department	227 E. Chestnut Expy.	Springfield	65802
Department of Information Systems	220 E. Central	Springfield	65801
Springfield Municipal Division	625 N. Benton	Springfield	65806
Springfield-Greene County Park Board	1923 N. Weller	Springfield	65803
Workforce Development	1514 S. Glenstone	Springfield	65804
Busch Municipal Building	840 Boonville Ave	Springfield	65802
Department of Building Development Services	840 Boonville Ave.	Springfield	65802
City Attorney	840 Boonville Ave.	Springfield	65802
City Clerk	840 Boonville Ave.	Springfield	65802
City Manager	840 Boonville Ave.	Springfield	65802
Finance Department	840 Boonville Ave.	Springfield	658020
Human Resources	840 Boonville Ave.	Springfield	65802
Public Information	840 Boonville Ave.	Springfield	65802
Planning and Development	840 Boonville Ave.	Springfield	65802
Public Works	840 Boonville Ave.	Springfield	65802
GREENE COUNTY DEPARTMENTS			
Archives	1126 N. Boonville Ave.	Springfield	65802
Budget Office	933 N. Robberson	Springfield	65802
Building Regulations	940 N. Boonville Ave.	Springfield	65802
Emergency Management	330 W. Scott St.	Springfield	65802
Highway	2065 N. Clifton	Springfield	65803
Human Resources	933 N. Robberson	Springfield	65802
Juvenile	1111 N. Robberson	Springfield	65802
Medical Examiner	917 N. Boonville Ave.	Springfield	65802
Planning & Zoning	940 N. Boonville Ave.	Springfield	65802
Public Information	940 N. Boonville Ave.	Springfield	65802
Purchasing	933 N. Robberson	Springfield	65802
GREENE COUNTY OFFICES			
Assessor	940 N. Boonville Ave.	Springfield	65802
Auditor	940 N. Boonville Ave.	Springfield	65802
Circuit Clerk/Court	1010 N. Boonville Ave.	Springfield	65802

Collector	940 N. Boonville Ave.	Springfield	65802
County Clerk	940 N. Boonville Ave.	Springfield	65802
County Commission	933 N. Robberson	Springfield	65802
Prosecuting Attorney	1010 N. Boonville Ave.	Springfield	65802
Public Administrator	843 N. Boonville Ave.	Springfield	65802
Recorder	940 N. Boonville Ave.	Springfield	65802
Sheriff	1010 N. Boonville Ave.	Springfield	65802
Treasurer	940 N. Boonville Ave.	Springfield	65802
STATE OF MISSOURI GOVERNMENT OFFICES			
Administrative Offices/State Office Buildings	149 Park Central	Springfield	65806
Agriculture Department, Veterinary Lab	701 N. Miller	Springfield	65802
Conservation Nature Center	4600 Chrisman	Springfield	65804
Courts of Appeals	300 Hammons Parkway	Springfield	65806
Department of Conservation	2630 N. Mayfair	Springfield	65803
Department of Corrections, Probation and Parole	2530 S. Campbell	Springfield	65807
Department of Economic Development	1360 Fairway	Springfield	65804
Department of Elementary and Secondary Education	2530-I S. Campbell	Springfield	65807
Department of Health and Senior Services	1414 W. Elfindale	Springfield	65807
Department of Natural Resources	2040 Woodland	Springfield	65807
Department of Social Services, Child Support	1410 Kansas Expy.	Springfield	65807
Department of Social Services, Division of Aging	1721 E. Elfindale	Springfield	65807
Department of Transportation	2549 N. Mayfair	Springfield	65803
Employment Security	505 E. Walnut	Springfield	65806
Lottery Commission	1506 E. Raynell	Springfield	65804
Missouri Career Center	1514 S. Glenstone	Springfield	65804
National Guard	1400 N. Fremont	Springfield	65802
Public Defender	333 Park Central	Springfield	65806
Southwest Missouri Office on Aging	1923 E. Kearney	Springfield	65803
Springfield Regional Center	1515 E. Pythian	Springfield	65802
State Highway Patrol	3131 E. Kearney	Springfield	65803
State Veteran Cemetery	5201 S. Southwood Rd.	Springfield	68504
U.S. GOVERNMENT OFFICES			
Department of Agriculture	3003 E. Chestnut	Springfield	65802
USDA Service Center	688 S. State Highway B.	Springfield	65802
Departments of Army, Air Force, Navy and Marines	1110 N. Fremont	Springfield	65802
Public Defender	901 E. St. Louis	Springfield	65806

Federal Courthouse	222 N. Hammons Parkway	Springfield	65806
Department of Energy	2858 S. Golden	Springfield	65807
Federal Bureau of Investigation	1932 W. Chesterfield Blvd.	Springfield	65807
Food Safety & Quality Service	3003 E. Chestnut	Springfield	65802
Department of Labor	901 E. St. Louis	Springfield	65806
Internal Revenue Service	3333 S. National	Springfield	65807
Immigration and Naturalization Service	2401 W. Old Route 66	Strafford	65757
Medical Center for Federal Prisoners	1900 W. Sunshine	Springfield	65807
Wilson's Creek National Battlefield	6424 W. Farm Rd. 182	Republic	65738
Post Office – Main	500 W. Chestnut	Springfield	65801
Secret Service	901 E. St. Louis	Springfield	65806
Small Business Administration	830 E. Primrose	Springfield	65807
Social Security Administration	1570 W. Battlefield	Springfield	65807
Springfield Natural Cemetery	1702 E. Seminole	Springfield	65804
Transportation Security Administration	5000 W. Kearney	Springfield	65803
National Weather Service	5805 W. Highway EE	Springfield	65802
WASTE, WATER AND ENERGY MANAGEMENT			
CU Southwest Wastewater Treatment Plant	3301 S. FF Highway	Springfield	65807
CU Northwest Wastewater Treatment Plant	4901 N. Highway 12	Springfield	65803
WASTE FACILITIES/RECYCLING CENTERS			
American Disposal Services	357 N. Fort	Springfield	65802
Commercial Metals	634 E. Phelps	Springfield	65806
Computer Recycling Center	1434 N. National	Springfield	65802
Habitat for Humanity ReStore	2410 S. Scenic	Springfield	65807
Household Chemical Collection Center	1226 W. Nichols	Springfield	65802
McCoy's Iron and Metal	321 N. Fort	Springfield	65802
Midwest Fibre Sales Corp	911 N FR 123	Springfield	65802
Missouri Council of the Blind	1445 W. Kearney	Springfield	65803
New American Recycling	357 N. Fort	Springfield	65802
Ozarks Literacy Council	430 South Avenue, #200	Springfield	65806
Southwest Treatment Plant	Off Farm Roads 115/116		
Springfield Recycling Center	731 N. Franklin	Springfield	65802
Springfield Recycling Center	3020 S. Lone Pine	Springfield	
Springfield Recycling Center	2525 W. College	Springfield	65802
Springfield Recycling Center	1831 W. Kearney	Springfield	65803
Springfield Recycling Center	1717 W. Battlefield	Springfield	65807
Springfield Sanitary Landfill	Highway 13	Springfield	

SW MO Humane Society	3161 W. Norton	Springfield	65803
Waste Corp of America	2120 W. Bennett	Springfield	65807
PLACES OF WORSHIP			
Abundant Life Ministries	157 Park Central Sq.	Springfield	65806
All Saint's Anglican	1842 E. Richmond Pl.	Springfield	65804
Altar of Praise Family Church	2219 E. Kearney	Springfield	65803
Amazing Grace Fellowship	3801 S. Kansas Ave.	Springfield	65807
Anitoch United Methodist Church	3614 N. Glenstone	Springfield	65803
Apostolic United Pentecostal Church	3010 W. Nichols St.	Springfield	65803
Asbury United Methodist Church	1500 S. Campbell	Springfield	65804
Ascension Episcopal Church	903 W. Katella	Springfield	65807
Assemblies of God Europe Development Office	1927 S. National Ave.	Springfield	65804
Assemblies of God Southern Missouri District Headquarters	528 E. Battlefield	Springfield	65807
Baha'I Faith	941 N. Rogers Ave.	Springfield	65802
Baptist Temple of Springfield	2655 N. Grant Ave.	Springfield	65803
Berean Baptist Church	507 E. Norton Rd.	Springfield	65803
Bible Baptist Church	2631 S. Mccann Ave.	Springfield	65804
Boulevard Baptist Church	1030 S. Eastgate Ave.	Springfield	65809
Brentwood Christian Church	1900 E. Barataria St.	Springfield	65804
Brentwood Church of Christ	1010 S. Elm	Springfield	65806
Briar Street Baptist Church	1361 E. Briar St.	Springfield	65804
Broadway Baptist Church	2537 N. Broadway	Springfield	65803
Brown Avenue Baptist Church	805 N. Brown Ave.	Springfield	65803
Calvary Chapel of Springfield	2440 E. Seminole St.	Springfield	65804
Campbell United Methodist Church	1747 E. Republic Rd.	Springfield	65804
Central Assembly of God	1301 N. Boonville Ave.	Springfield	65802
Central Baptist Church	916 N. Campbell	Springfield	65802
Central Christian Church	1475 N. Washington Ave.	Springfield	65802
Charity Baptist Church	2603 S. Westwood	Springfield	65807
Cherry Street Baptist Church	1201 S. Oak Grove	Springfield	65804
Christ Church Unity	2214 S. Seminole St.	Springfield	65804
Christ Episcopal Church	601 E. Walnut St.	Springfield	65806
Christ the King Church	1517 E. Valley Water Mill Rd.	Springfield	65803
Christian Foundation Inc	1601 W. College St.	Springfield	65802
Church of Christ	2540 N. Kansas	Springfield	65803
Church of Christ	2220 E. Grand	Springfield	65804

Church of Christ - East Sunshine	3721 E. Sunshine	Springfield	65809
Church of Christ Minister	2540 N. Kansas	Springfield	65803
Church of Christ South Side	802 W. Sunshine	Springfield	65807
Church of Christ Southside	1517 E. Cherokee	Springfield	65804
Church of Christ Walnut Lawn	216 E. Walnut Lawn St.	Springfield	65807
Church of God International	3731 S. Glenstone Ave.	Springfield	65804
Church of God Seventh Day	1521 E. 24th	Springfield	65803
Church of Jesus Christ Latter Day Saints	4450 S. Farm Road 141	Springfield	65810
Church of the Harvest	501 W. College	Springfield	65806
Church of the Nazarene Dayspring	2812 E. Grand	Springfield	65804
Church of the Nazarene Scenic Drive	550 S. Scenic Ave.	Springfield	65802
College Street Baptist Church	2216 College	Springfield	65806
Common Ground Church	1701 W. Sunshine	Springfield	65807
Cornerstone Church	1701 S. Fort	Springfield	65807
Covenant of Grace Christian Center	713 S. Newton Ave.	Springfield	65806
Covenant Presbyterian Church	2441 S. Lone Pine Ave.	Springfield	65804
Cumberland Presbyterian Church	4216 S. Charleston Ave.	Springfield	65804
Dayspring Christian Fellowship	2157 N. Prospect Ave.	Springfield	65803
Dayspring Church of the Nazarene	2812 E. Grand	Springfield	65804
Deliverance Temple Church	2101 W. Chestnut Expy.	Springfield	65802
Eastern Gate Freewill Baptist Church	922 S. Eastgate	Springfield	65809
Eben-Ezer Romanian Assembly	2233 N. East Ave.	Springfield	65803
Eckankar of Springfield	1950 S. Glenstone Ave.	Springfield	65804
El Faro Assembly of God	644 S. Eastgate Ave.	Springfield	65809
Elwood Full Gospel Word Church	6824 W. Farm Road 124	Springfield	65802
Evangel Temple Christian Center	2035 E. Holly Cir.	Springfield	65804
Evangel Temple Christian Center	2020 E. Battlefield Rd.	Springfield	65804
Faith Assembly of God Church	3001 W. Division St.	Springfield	65802
Faith Christian Fellowship of Springfield	1535 E. St. Louis St.	Springfield	65802
Faith Outreach Pentecostal Church	518 E. Atlantic St.	Springfield	65803
Faith Tabernacle Apostolic Church	2548 N. Fremont Ave.	Springfield	65803
First & Calvary Presbyterian Church	820 E. Cherry	Springfield	65806
First Baptist Church	525 South Ave.	Springfield	6806
First Church of Christ Scientist	960 S. Eastgate Ave.	Springfield	65809
First Evangelical Free Church	5500 S. Southwood Rd.	Springfield	65804
First Freewill Baptist Church	2635 W. Nichols St.	Springfield	65802
First Korean Presbyterian Church	205 E. South	Springfield	65806
First Unitarian Universalist Church	2434 S. Battlefield	Springfield	65804

First United Methodist Church	1600 N. Central	Springfield	65802
Forest Avenue Assembly of God	806 N. Forest Ave.	Springfield	65802
Foundation of Life Christian Fellowship	2850 N. Park Ave.	Springfield	65803
Fremont Hills FBC	4367 N. Fremont Rd.	Springfield	65804
Fresh Heart Foursquare Church	5357 N. Farm Road 151	Springfield	65803
Fresh Oil Ministries	1700 N. Benton Ave.	Springfield	65803
Friendship Assembly of God	1349 W. Meadowmere	Springfield	65807
Fruitland Road Country Church	9925 N. Farm Road 173	Springfield	65803
General Baptist Church First	1400 W. Walnut	Springfield	65806
Glad Tidings Assembly of God	1301 W. Atlantic	Springfield	65803
Glendale Baptist Church	2236 Ingram Mill Rd.	Springfield	65804
Glendale Christian Church	2110 S. Blackman Rd.	Springfield	65809
Glenstone Baptist Church	413 S. Glenstone	Springfield	65802
Grace Assembly of God	514 W. Mt. Vernon St.	Springfield	65806
Grace Chapel Church	1120 E. Farm Road 182	Springfield	65810
Grace Church of The Nazarene	540 E. Walnut Lawn	Springfield	65807
Grace Independent Baptist Church	2101 N. Johnston Ave.	Springfield	65803
Grace Life Fellowship	1831 W. Melville Rd.	Springfield	65803
Grace United Methodist Church	600 S. Jefferson	Springfield	65806
Graceway Baptist Church	5010 S. Farm Road 135	Springfield	65810
Grant Avenue Free Will Baptist Church	1060 S. Grant Ave.	Springfield	65807
Grandview Baptist Church	3208 N. Barnes	Springfield	65803
Grant Avenue Baptist Church	1033 N. Grant Ave.	Springfield	65802
Grant Avenue Free Will Baptist Church	1060 S. Grant Ave.	Springfield	65807
Greater Metropolitan Baptist	1400 N. West	Springfield	65802
Hamlin Memorial Baptist Church	829 W. Atlantic	Springfield	65803
Harvest Ministries UPC	3114 W. Sunset St.	Springfield	65807
High Street Baptist Church	900 N. Eastgate	Springfield	65802
Hillcrest Presbyterian Church	722 W. Atlantic	Springfield	65803
Holy Ground Ministry Church of God in Christ	1034 N. Broadway Ave.	Springfield	65802
Holy Trinity Catholic Church	2818 E. Bennett St.	Springfield	65804
Holy Trinity Parish Hall	515 E. Washington	Springfield	65806
Hope Community Church	2121 S. Blackman Rd.	Springfield	65809
Immaculate Conception Church	3555 S. Fremont	Springfield	65807
Immanuel Baptist Church	1931 W. Nichols	Springfield	65802
Immanuel Korean Church	819 E. Dale St.	Springfield	65803
Immanuel Lutheran Church AFLC	2756 Blackman Rd.	Springfield	65809
Jefferson Avenue Baptist Church	316 E. Sunshine	Springfield	65807

Jehovah's Witnesses	403 E. Elm	Springfield	65806
Jehovah's Witnesses Parkview Congregation	3886 S. Farm Road 135	Springfield	65807
John Calvin Presbytery	2150 W. Republic Rd.	Springfield	65807
Journey Fellowship Church	1400 W. Walnut	Springfield	65806
King's Chapel Assembly of God	2434 E. Cherry St.	Springfield	65802
King's Way United Methodist Church	2401 S. Lone Pine Ave.	Springfield	65804
Kingsway Free Will Baptist Church	2615 N. Park Ave.	Springfield	65803
Korean Baptist Church of Springfield	3112 W. Grand	Springfield	65802
Korean Presbyterian Church of Springfield	1559 S. Grant	Springfield	65807
Life Fellowship Church	3145 W. Republic Rd.	Springfield	65807
Life Publishers	1625 N. Robberson Ave.	Springfield	65803
Macedonia Baptist Church	3110 W. Sunshine	Springfield	65807
Messiah Lutheran ELCA	925 E. Seminole	Springfield	65807
Mt. Carmel United Methodist	1001 N. National	Springfield	65802
National Avenue Assembly of God	931 N. National	Springfield	65802
National Avenue Christian Church	1515 S. National	Springfield	65804
National Heights Baptist Church	3050 N. National	Springfield	65804
New Life Church	776 W. Farm Road 186	Springfield	65810
New Star Community Chapel	309 S. Scenic Ave.	Springfield	65802
New Vision Ministries	1440 N. State Highway AB	Springfield	65802
North Point Church	3401 W. Norton Rd.	Springfield	65803
North Side Assembly of God Office	2310 N. Campbell Ave.	Springfield	65803
Northside Christian Church	4902 State Highway H	Springfield	65803
Northside General Baptist Church	2305 N. Golden	Springfield	65803
Northwest Baptist Church	3075 W. Norton Rd.	Springfield	65803
Oak Grove Assembly of God	1320 S. Oak Grove Ave.	Springfield	65804
Ozark Lake Area Office of the Christian Church	500 South Ave.	Springfield	65806
Palmer Heights Baptist Church	1606 W. High	Springfield	65803
Park Crest Assembly of God Church	3581 S. Kansas Ave.	Springfield	65807
Park Crest Baptist Church	816 W. Republic	Springfield	65807
Park Crest Calvary Temple, Calvary Campus	444 W. Grand	Springfield	65807
Park Crest Calvary Temple, Park Crest Campus	3581 S. Kansas Ave.	Springfield	65807
Pitts Chapel United Methodist Church	600 N. Benton	Springfield	65806
Pleasant Home Baptist Church	3630 E. State Highway AA	Springfield	65803
Pleasant Valley Church	722 W. Farm Road 80	Springfield	65803
Praise Assembly	3535 N. Glenstone	Springfield	65803
Prince of Peace Lutheran Church ELCA	815 East Farm Road 182	Springfield	65810

Pythian Avenue Baptist Church	1001 N. Rogers	Springfield	65802
Queen of All Saints Catholic Church	1505 W. Atlantic St.	Springfield	65803
Recovery Fellowship Ministries	2235 E. Fritts Ln.	Springfield	65804
Redeemer Lutheran Church	2852 S. Dayton Ave.	Springfield	65807
Resurrection Ministry	1706 N. Jefferson Ave.	Springfield	65803
Ridgecrest Baptist Church	2210 W. Republic	Springfield	65807
Sacred Heart Church	1609 N. Summit Ave.	Springfield	65803
Schweitzer United Methodist Church	2747 E. Sunshine	Springfield	65804
Second Baptist	3111 E. Battlefield Rd.	Springfield	65804
Seminole Baptist Temple	4221 S. National Ave.	Springfield	65810
Seventh-Day Adventist Church	702 S. Belview Ave.	Springfield	65802
Seventh-Day Adventist Church Providence	1402 N. Prospect Ave.	Springfield	65802
Silver Springs Church of God	1010 E. Pythian	Springfield	65802
Solid Rock Assembly	1040 N. Sherman Ave.	Springfield	65802
South Campbell Avenue Baptist Church	927 S. Campbell	Springfield	65806
South Creek Church	5360 S. Campbell Ave.	Springfield	65810
South Fremont Free Will Baptist Church	4547 S. Fremont Ave.	Springfield	65810
South Gate Baptist Church	5701 S. Farm Road 157	Springfield	65810
South Haven Baptist Church	2353 S. Campbell Ave.	Springfield	65807
South Side Baptist Church	465 S. Grant	Springfield	65806
Southern Heights Bible Church	2228 S. Jefferson Ave.	Springfield	65807
Southland Christian Church	1630 W. Republic	Springfield	65807
Southminster Presbyterian	2245 S. Holland Ave.	Springfield	65807
Sovereign Grace Baptist Church	2766 W. Weaver Rd.	Springfield	65810
Springfield Bible Church	2145 E. Grand	Springfield	65804
Springfield Chinese Church Assembly of God	1909 W. Chestnut Expy.	Springfield	65802
Springfield Community Church	2616 E. Battlefield	Springfield	65804
Springfield First Nazarene	3245 S. Kansas Ave.	Springfield	65807
Springfield Korean Presbyterian Church	313 E. Edgewood	Springfield	65807
Springhill Baptist Church	7370 N. Farm Road 159	Springfield	65803
St. Agnes Cathedral	533 S. Jefferson Ave.	Springfield	65806
St. Elizabeth Ann Seton Church	2200 W. Republic Rd.	Springfield	65807
St. James Episcopal Church	2645 Southern Hills	Springfield	65804
St. John's Chapel UCC	4344 S. Fremont	Springfield	65804
St. John's Episcopal Church	515 E. Division	Springfield	65803
St. Joseph Catholic Church	1115 N. Campbell	Springfield	65802
St. Stephen's Episcopal Church	601 E. Benton	Springfield	65806
St. Thomas The Apostle Orthodox Church	4200 S. Holiday Ave.	Springfield	65810

Sunset Church of Christ	1222 W. Sunset St.	Springfield	65807
Sunshine Baptist Church	5034 E. Sunshine	Springfield	65809
Sycamore Baptist Church	3146 S. Golden Ave.	Springfield	65807
Tampa Assembly of God	2006 W. High St.	Springfield	65803
Temple Baptist Church	845 S. Fort	Springfield	65806
The Catholic Center	601 S. Jefferson	Springfield	65806
The King's Way United Methodist Church	2401 S. Lone Pine	Springfield	65804
Trinity Pentecostal Church of God	530 S. Miller Ave.	Springfield	65802
Truth Community Church	2848 N. Broadway	Springfield	65803
Union Hill Church of Christ	865 N. Nicholas Rd.	Springfield	65802
United Baptist Church	2501 W. State St.	Springfield	65802
United Methodist District Office	506 N. Stewart Ave.	Springfield	65802
United Methodist Hispanic Ministry	1232 E. Dale St.	Springfield	65803
University Heights Baptist Church	1010 S. National Ave.	Springfield	65804
Walnut Lawn Church of God	544 W. Walnut Lawn St.	Springfield	65807
Walnut Street Christian Church	2201 W. Walnut	Springfield	65806
Washington Avenue Baptist Church	1722 N. National Ave.	Springfield	65803
Water Mill Church of Christ	3020 N. Barnes	Springfield	65803
Webster Park Assembly of God	1905 N. Yates Ave.	Springfield	65803
Webster Park Baptist Church	1513 N. Old Orchard	Springfield	65803
Wesley United Methodist Church	922 W. Republic Rd.	Springfield	65807
West Atlantic Street Baptist Church	2301 W. Atlantic	Springfield	65803
West Division Street Baptist Church	3104 W. Division St.	Springfield	65802
Westminster Presbyterian Church	1551 E. Portland	Springfield	65804
Westport Baptist Church	2919 W. College	Springfield	65802
Woodland Heights Presbyterian Church	722 W. Atlantic	Springfield	65802
Zion Evangelical Lutheran Church	4717 S. Farm Road 135	Springfield	65810
CHILD CARE AND HEAD STARTS			
Alpha Tots Learning Center, Inc.	1601 W. Sunshine, Ste Q.	Springfield	65807
Amazing Kidz Day Care	3801 S. Kansas	Springfield	65807
Angela Kostron	540 W. Crestview	Springfield	65807
Ark Angels Childcare Center	1513 N. Old Orchard	Springfield	65803
Bambi Yoast	1021 S. Craig	Springfield	65804
Beverly Barnett	5721 S. King	Springfield	65810
Brenda Rumley	2644 E. Verona	Springfield	65804
Brenda Thomas	1837 W. Primrose	Springfield	65807
Bright Beginnings	2263 E. Cherry	Springfield	65802
Bright Minds Learning Academy, LLC	1926 S. Ingram Mill Rd	Springfield	65804

Broadway Head Start	1477 N. Broadway	Springfield	65802
Buenola Kincaid	723 N. Fulbright	Springfield	65802
Campbell United Methodist Church	1747 E. Republic Rd.	Springfield	65804
Carol Jones Daycare Preschool	2411 W. Catalpa	Springfield	65807
Carline Denise Payne	1225 S. Estate	Springfield	65804
Carolyn Sue Dobbelare	2779 W. Vincent	Springfield	65810
Carpenters Kids Preschool	2353 S. Campbell	Springfield	65807
Cassandra Hunt	838 S. Rogers	Springfield	65804
Cherished Days	1895 N. Kansas	Springfield	65803
Christine Kensinger	2435 E. Bodeb	Springfield	65802
Cox Learning Center North	1632 N. Robberson	Springfield	65803
Cox Learning Center South	950 E. Primrose	Springfield	65807
Creative Learning Center, Education-Recreation, LLC	2551 S. Campbell	Springfield	65807
Creative Minds	1439 E. Lark	Springfield	65804
Cross Training Summer Day Camp	2353 S. Campbell	Springfield	65807
Dal Vero Early Childhood Academy, LLC	1500 S. Campbell	Springfield	65807
Dawn Ray	2102 E. Cinderella	Springfield	65806
Debby Scott	3051 S. Lone Pine	Springfield	65804
Deborah Hinkle	3215 W. Calhoun	Springfield	65802
Debra Balty	926 W. Downing	Springfield	65807
Developmental Center of the Ozarks	1545 E. Pythian	Springfield	65802
Developmental Learning Center	2020 E. Battlefield	Springfield	65804
Donna Byrd	3543 S. Newton	Springfield	65807
Douglas Head Start	1042 S. Douglas	Springfield	65807
East Grand Church of Christ Programs	2220 E. Grand	Springfield	65804
East Grand Community Services	2220 E. Grand	Springfield	65804
Ed. V. Williams Elementary	2205 W. Kearney	Springfield	65803
Ellen P. Montford	951 E. Snider	Springfield	65803
Ernestine Guiterrez	2930 E. Linwood	Springfield	65804
Geniece Frymire	1120 W. Westview	Springfield	65807
Gina Steffins	2738 W. Roxbury	Springfield	65807
Golden Avenue Head Start	3146 S. Golden	Springfield	65807
Grant Avenue Baptist Daycare	1033 N. Grant	Springfield	65802
Grant Training Center	1051 S. Grant Ave.	Springfield	65807
Grow to Know	2747 E. Sunshine	Springfield	65804
Heidi Bailey	3318 S. Palisades Dr.	Springfield	65807
Jo Brake	2841 Eastmoor	Springfield	65804

Joans Family Childcare HM/PRES	3330 W. Sexton	Springfield	65810
Jody Langstraat	1264 McClernon	Springfield	65803
Joyland Learning Center	1301 N. Boonville	Springfield	65802
Judith A. Johnston	2778 Village Terrace	Springfield	65810
Judith Hall	2917 E. Portland	Springfield	65804
Julie Brown	2789 W. Vincent	Springfield	65810
Kerri's Kidsville/Babyville	2559 South Ave.	Springfield	65807
Kids First Preschool	4344 S. Fremont Ave.	Springfield	65804
Kingswood Programs	2401 S. Lone Pine	Springfield	65804
La Petite Academy one	1714 S. Enterprise Ave.	Springfield	65804
Latisha Rush	1425 E. Arlington	Springfield	65803
Life Skills Learning Center	452 S. Grant	Springfield	65803
Lighthouse Child and Family Development Center	2548 N. Fremont, Ste 100	Springfield	65803
Linda Dixon	3865 S. Cottage	Springfield	65807
Little Sunshine Playhouse and Preschool	201 E. Cardinal	Springfield	65810
Little Sunshine's Playhouse and Preschool, Inc.	2826 W. Chestnut Expy.	Springfield	65802
Little Sunshine's Playhouse, LLC	2937 S. Claremont	Springfield	65804
Macedonia Preschool	3110 W. Sunshine	Springfield	65807
Missouri State Child Development Center	609 E. Cherry St.	Springfield	65806
Monarch Children's Academy	1108 N. Robberson Ave.	Springfield	65802
Mother's Touch Learning Center	2115 S. Brentwood	Springfield	65807
OTC Early Childhood Education Center	936 N. Hampton Ave.	Springfield	65802
Our World, LLC	1720 W. Elfindale	Springfield	65807
Ozarks Regional YMCA - Bingham Prime Time	2126 Cherry	Springfield	65802
Ozarks Regional YMCA - Bisset Prime Time	3014 W. Calhoun	Springfield	65802
Ozarks Regional YMCA - Bowerman Prime Time	2148 N. Douglas	Springfield	65803
Ozarks Regional YMCA - Campbell Prime Time	506 S. Grant	Springfield	65806
Ozarks Regional YMCA - Cowden Prime Time	2927 S. Kimbrough	Springfield	65807
Ozarks Regional YMCA - Delaware Prime Time	1505 S. Delaware	Springfield	65804
Ozarks Regional YMCA - Disney Prime Time	4100 S. Fremont	Springfield	65804
Ozarks Regional YMCA - Field Prime Time	2120 Barataria St.	Springfield	65804
Ozarks Regional YMCA - Fremont Prime Time	2814 N. Fremont	Springfield	65804
Ozarks Regional YMCA - Gray Prime Time	2102 W. 182 Farm Rd.	Springfield	65810
Ozarks Regional YMCA - Greenwood Prime Time	901 S. National	Springfield	65804
Ozarks Regional YMCA - Hickory Hills Prime Time	3429 E. Trafficway St.	Springfield	65802
Ozarks Regional YMCA - Holland Prime Time	2403 S. Holland	Springfield	65807

Ozarks Regional YMCA - Immaculate Conception Prime Time	3555 S. Fremont	Springfield	65804
Ozarks Regional YMCA - Jeffries Prime Time	4051 S. Scenic	Springfield	65807
Ozarks Regional YMCA - Mann Prime Time	3745 S. Broadway Ave.	Springfield	65807
Ozarks Regional YMCA - McBride Prime Time	5005 S. Farm Road 135	Springfield	65806
Ozarks Regional YMCA - Pershing	2120 S. Ventura	Springfield	65804
Ozarks Regional YMCA - Pittman Prime Time	2934 E. Bennett	Springfield	65804
Ozarks Regional YMCA - Pleasant View Prime Time	2210 E. AA State Hwy.	Springfield	65803
Ozarks Regional YMCA - Portland Prime Time	906 W. Portland St.	Springfield	65807
Ozarks Regional YMCA - Robberson Prime Time	1100 E. Kearney	Springfield	65803
Ozarks Regional YMCA - Sequiota Prime Time	3414 S. Mentor Ave.	Springfield	65804
Ozarks Regional YMCA - Sherwood Prime Time	1813 S. Scenic Ave.	Springfield	65807
Ozarks Regional YMCA - St. Agnes Prime Time	531 S. Jefferson	Springfield	65806
Ozarks Regional YMCA - St. Elizabeth Prime Time	2200 W. Republic	Springfield	65807
Ozarks Regional YMCA - St. Joseph Prime Time	515 W. Scott St.	Springfield	65802
Ozarks Regional YMCA - Sunshine Prime Time	421 E. Sunshine	Springfield	65807
Ozarks Regional YMCA - Truman Prime Time	3850 N. Vernon Rd.	Springfield	65803
Ozarks Regional YMCA - Twain Prime Time	2352 S. Weaver	Springfield	65807
Ozarks Regional YMCA - Watkins Prime Time	732 W. Talmage St.	Springfield	65803
Ozarks Regional YMCA - Weller Prime Time	1630 N. Weller Ave.	Springfield	65803
Ozarks Regional YMCA - Westport Prime Time	415 S. Golden	Springfield	65802
Ozarks Regional YMCA - Wilder Prime Time	2526 S. Hillsboro	Springfield	65806
Paradise Preschool & Childcare, LLC	4636 S. West Ave.	Springfield	65810
Parent Cooperative Preschool	922 W. Republic	Springfield	65807
Parkcrest Day Care Center	3581 S. Kansas St.	Springfield	65807
Patsy R. Egan	1765 E. Lafayette	Springfield	65804
Peapod Learning Center	1355 S. Black Locust Pl.	Springfield	65809
Pickwick Place Children's Center	614 S. Pickwick	Springfield	65802
Precious Gems Daycare Facility	1421 W. Kearney	Springfield	65802
Primekids Learning Center	2740 N. Mayfair	Springfield	65803
Promise Preschool and Child Development Center	5701 S. Farm Road 157	Springfield	65810
Queen of Angels Daycare Center Inc.	625 S. Jefferson	Springfield	65806
Rebecca Hummel	3870 S. Homewood Ave.	Springfield	65807
Rebecca S. Campbell	1327 S. Arcadia	Springfield	65804
Rhonda Ellen Hersh	1522 E. Price	Springfield	65804

Ridge Kids Preschool	2210 W. Republic Rd.	Springfield	65807
Rise and Shine Montessori Learning Center	420 W. Broadmoor	Springfield	65807
Ritter Head Start	3601 N. Farm Road 139	Springfield	65803
Safe n Sound Playground	3216 S. Scenic	Springfield	65807
Safe n Sound Playground Too	3386 S. Scenic	Springfield	65807
Salvation Army After School Center and Summer Day Camp	1707 W. Chestnut Expressway	Springfield	65802
Sarah Carr	2784 W. Vincent St.	Springfield	65810
Second Baptist Church Child Development Center	3111 E. Battlefield	Springfield	65804
Sharon Davis	2214 W. Walnut St.	Springfield	65806
Smart Start Day Care & Preschool, LLC	2425 N. Pine	Springfield	65802
Southside Kids Childcare Center and Preschool, Inc.	2723 S. Meadowbrook	Springfield	65807
Squibblestix After School Program	1201 S. Oak Grove Ave.	Springfield	65804
St. John's Employee Child Development Center I	1831 S. Fremont	Springfield	65804
St. John's Employee Child Development Center II	3540 S. Culpepper	Springfield	65804
Stephanie Cartwright	1125 N. Oak Park Dr.	Springfield	65802
Stewart Head Start	552 N. Stewart	Springfield	65802
Tammy Stephens	1634 S. Estate	Springfield	65803
Teresa Snyder	1905 S. Luster	Springfield	65804
The Goddard School	2238 W. Kingsley Rd.	Springfield	65810
The Little Rascals Preschool	1381 E. Division	Springfield	65802
The Nurturing Place	3039 N. National	Springfield	65803
Thresa Lee	3027 W. Latoka	Springfield	65804
Touch of Nature Quality Child Care, Inc.	622 S. Pickwick	Springfield	65802
Touch of Nature Quality Child Care Too	1446 E. Lark	Springfield	65804
University Child Care Center	500 South St.	Springfield	65806
Verna Dayton	3211 W. Village Ln.	Springfield	65807
Victoria A. Taylor	2246 N. Roosevelt	Springfield	65802
Wesley Kids Club	922 W. Republic	Springfield	65807
West Chestnut Head Start	246 W. Farm Road 115	Springfield	65802
Westminster Parents Day Out and Preschool At Westminster	1551 E. Portland	Springfield	65804
Yellow Brick Road, Inc.	627 E. Monroe	Springfield	65806

Critical Facilities Inventory: Strafford

SCHOOLS			
Strafford Elementary	201 W. McCabe St.	Strafford	65757
Strafford Middle School	201 W. McCabe St.	Strafford	65757
Strafford High School	201 W. McCabe St.	Strafford	65757
NURSING HOME			
Strafford Care Center	505 West Evergreen	Strafford	65757
POLICE			
Strafford Police Department	113 E. Pine	Strafford	65757
FIRE			
Strafford Fire Protection District	207 W. Stan Harriman	Strafford	65757
CITY GOVERNMENT			
Strafford City Hall	126 N. Washington	Strafford	65757
WASTE FACILITIES/RECYCLING CENTERS			
Strafford Recycling Center	333 E. Evergreen	Strafford	65757
Strafford Recycling Center	(Behind Building) 201 W. McCabe	Strafford	65757
Strafford Recycling Center	113 W. Old Rte 66	Strafford	65757
PLACES OF WORSHIP			
First Assembly of God of Strafford	1113 W. Old Route 66	Strafford	65757
Church of Christ	11 S. Redwood Dr.	Strafford	65757
First Baptist Church of Strafford	400 S. Madison Ave.	Strafford	65757
Harvest Hill Baptist	101 E. Evergreen St.	Strafford	65757
Landmark Church	200 S. Peach Tree Ln.	Strafford	65757
Strafford Church of Nazarene	101 MO-125 B	Strafford	65757
Strafford United Methodist Church	200 E. Chestnut St.	Strafford	65757
CHILD CARE AND HEAD STARTS			
A Touch Above Child Care	9379 E. Evergreen St.	Strafford	65757
Rainbow Connection	222 McCabe St.	Strafford	65757
Strafford Early Childhood Center	218 W. McCabe St.	Strafford	65757
Strafford Pre-School	205 Rt. 66	Strafford	65757
Westermans Day Care	406 Dell St.	Strafford	65757

Critical Facilities Inventory: Walnut Grove

SCHOOLS			
Walnut Grove Elementary	300 College St.	Walnut Grove	65770
Walnut Grove Junior High and High School	300 College St.	Walnut Grove	65770
POLICE			
Walnut Grove Police Department	116 N. Washington	Walnut Grove	65770
FIRE			
Walnut Grove Fire Protection District	540 N. Washington	Walnut Grove	65770
CITY GOVERNMENT			
Walnut Grove	101 S. Washington	Walnut Grove	65770
PLACES OF WORSHIP			
Apostolic Lighthouse of Praise	5663 S. 6oth Rd.	Walnut Grove	65770
Harold Baptist Church	10110 N. Farm Road 51	Walnut Grove	65770
Walnut Grove First Baptist	417 S. Washington	Walnut Grove	65770
Walnut Grove First Christian	301 E. Main	Walnut Grove	65770
CHILD CARE AND HEAD STARTS			
Walnut Grove Preschool	300 E. College	Walnut Grove	65770

Critical Facilities Inventory: Willard

SCHOOLS			
Willard Central Elementary	2625 N Farm Rd. 101	Springfield	65802
Willard East Elementary	518 Kime	Willard	65781
Willard Intermediate School	407 Farmer Rd.	Willard	65781
Willard North Elementary	409A Farmer Rd.	Willard	65781
Willard Orchard Hills Elementary	4595 W. Farm Rd. 140	Willard	65781
Willard South Elementary	4151 W. Division	Springfield	65802
Willard Middle School	205 Miller Rd.	Willard	65781
Willard High School	515 E. Jackson	Willard	65781
Willard Alternate School	406 S. Farmer Rd.	Willard	65781
Willard Special Services	405 S. Farmer Rd.	Willard	65781
NURSING HOME			
Briston Manor of Willard	511 Watson	Willard	65781
Willard Care Centre, Inc.	400 Walnut Ln.	Willard	65781
POLICE			
Willard Police Department	795 Hughes St.	Willard	65781
FIRE			
Willard Fire Protection District	240 N State Highway Z	Willard	65781
Willard Fire Station	2455 N Pine Ave	Willard	65781
CITY GOVERNMENT			
Willard City Hall	224 W. Jackson	Willard	65781
WASTE FACILITIES/RECYCLING CENTERS			
Willard Recycling Center	613 Tower Rd.	Willard	65781
PLACES OF WORSHIP			
Lighthouse Gospel Center	201 W. Jackson	Willard	65781
Calvary Assembly of God	8580 W. Farm Road 52	Willard	65781
Carpenter's House Church	410 E. Jackson	Willard	65781
Crosspoint Independent Baptist	4295 N. Willard	Willard	65781
Emanuel Romanian Christian	510 S. Miller Rd.	Willard	65781
Jackson St. Church of Christ	304 E. Jackson #303	Willard	65781
Lone Star Baptist Church	3518 W. Farm Road 44	Willard	65781
New Life Baptist Church	414 E. New Melville Rd.	Willard	65781
Noble Hill Baptist	3285 W. Farm Road 36	Willard	65781
Renew united Methodist	218 S. Farmer Rd.	Willard	65781
Robberson Prairie Baptist Church	3244 W. Farm Road 50	Willard	65781

Rose Hill Baptist	9903 N. State Highway Z	Willard	65781
The Church of Jesus Christ of Latter-Day Saints	320 W. Jackson	Willard	65781
Willard Assembly of God	203 Miller Rd.	Willard	65781
Willard Community Christian Church	300 E. Proctor Rd.	Willard	65781
Willard First Baptist Church	202 W. Jackson	Willard	65781
Willard Presbyterian Church	800 S. State Highway AB	Willard	65781
Willard United Methodist Church	304 S. Farmer Rd.	Willard	65781
CHILD CARE AND HEAD STARTS			
Ladonna Woolsey	5994 N. Farm Rd. 117	Willard	65781
Michelle Crawford	603 S. Miller Rd.	Willard	65781
Smart Start Day Care & Preschool II, LLC	105 Willey	Willard	65781
Willard Preschool	203 Miller Rd.	Willard	65781

APPENDIX B

Mitigation Projects

Action Worksheet	
Name of Jurisdiction:	Ash Grove Schools
Risk / Vulnerability	
Hazard(s) Addressed:	Tornado, high winds and severe storms
Problem being Mitigated:	Currently, the Ash Grove Schools campus and the Bois D'Arc Elementary School campus do not have adequate shelter for the student and faculty population in the event of a severe storm.
Action or Project	
Applicable Goal Statement:	The Ash Grove Schools would like to build safe room shelters on the Ash Grove Schools campus and the Bois D'Arc Elementary School campus to prevent the loss of lives and property.
Action/Project Number:	Ash Grove Schools Goal 3.1
Name of Action or Project:	Ash Grove School Shelters
Mitigation Category:	Prevention; Structure and Infrastructure Projects
Action or Project Description:	1. Build a safe room/storm shelter on the campus for Ash Grove Elementary (PreK-3rd grade) and JH/HS (7th-12th grade) can utilize in the event of a severe storm/high winds/tornado. The room would be constructed as a gymnasium. (100 North Maple Lane, Ash Grove MO, 65604) 2. Build a safe room/storm shelter on the campus of Bois D'Arc Elementary (3rd-6th grade) can utilize in the event of a severe storm/high winds/tornado. The room would be constructed as a multipurpose gym/cafeteria. (10315 State Highway T, Bois D'Arc, MO, 65612)
Estimated Cost:	Approximately $2-3 million for Project 1. Approximately $1.5-$2.5 million for Project 2.
Benefits:	Protect against the loss of student, staff and community members lives and the loss of property due to frequent, severe storms that happen in the Ash Grove area.
Plan for Implementation	
Responsible Organization/Department:	The Ash Grove Schools Director of Operations will be responsible for organizing and tracking the progress of this project.
Supporting Organization/Department:	The Ash Grove Schools Director of Operations will be supported by the superintendent and Board of Education.
Action/Project Priority:	High
Timeline for Completion:	1-3 years
Potential Fund Sources:	Grants including HMA and HMPG, Local tax effort dollars, bonds and capital project funds would be utilized for the projects.
Local Planning Mechanisms to be Used in Implementation, if any:	None
Progress Report	
Action Status:	New
Report of Progress:	

Action Worksheet	
Name of Jurisdiction:	Ash Grove Schools
Risk / Vulnerability	
Hazard(s) Addressed:	Targeted Violence, hazardous materials, train derailment, severe winter weather
Problem being Mitigated:	Currently, the Ash Grove Schools campus and the Bois D'Arc Elementary School campus do not have school resource officers or dedicated emergency response personnel.
Action or Project	
Applicable Goal Statement:	The Ash Grove Schools would like to hire two school resource officers to support student safety to serve the Ash Grove Schools campus and the Bois D'Arc Elementary School campus to prevent the loss of lives and property due to targeted violence, the transportation of hazardous materials on the nearby railroad and other human-caused hazards.
Action/Project Number:	Ash Grove Schools Goal 3.2
Name of Action or Project:	Ash Grove School Resource Officers and Emergency Response Team
Mitigation Category:	Prevention; Emergency Services, Education
Action or Project Description:	Hire 2 school resource officers to support student and campus safety to prevent targeted acts of violence. These emergency personnel would also educate and train students and staff in responding to and handling emergency situations.
Estimated Cost:	Physical resources of vehicles, supplies and safety equipment - $80,000 Salaries for 2 SROs - $90,000
Benefits:	Protect against the loss of student, staff and community members lives and the loss of property due to a targeted act of violence or hazardous material issue.
Plan for Implementation	
Responsible Organization/Department:	The Ash Grove Schools Director of Operations will be responsible for organizing and tracking the progress of this project.
Supporting Organization/Department:	The Ash Grove Schools Director of Operations will be supported by the superintendent and Board of Education.
Action/Project Priority:	High
Timeline for Completion:	1 year
Potential Fund Sources:	Grants, Local tax effort dollars, bonds and capital project funds would be utilized for the projects, HMPG Grant, HMA Grants
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	New
Report of Progress:	

ACTION WORKSHEET	
Name of Jurisdiction:	Ash Grove Schools
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Earthquakes, Drought and Extreme Temperatures
Problem being Mitigated:	Extreme weather conditions such as flooding, earthquakes, drought and extreme temperatures, both heatwaves and cold snaps, pose significant risks to public health, safety and infrastructure. Flooding and earthquakes can compromise infrastructure while posing public safety concerns. As an agricultural community, drought can lead to strain on local resources as well as water shortages impacting the quality and availability of drinking water. High temperatures can lead to heat-related illnesses, intensify existing health conditions, and increase energy demand. Extremely cold temperatures can result in hypothermia, frostbite, and infrastructure failures like waterline breaks and power outages.
Action or Project	
Applicable Goal Statement:	The goal of this mitigation plan is to reduce the risks associated with flooding, earthquakes, drought and extreme temperatures by providing public awareness, enhancing preparedness, and ensuring community resilience. This will include access to resources and services that protect vulnerable populations during extreme weather events.
Action/Project Number:	Ash Grove Schools Goal 3.3
Name of Action or Project:	Ash Grove Hazard Education
Mitigation Category:	Education and Outreach
Action or Project Description:	Launch a comprehensive public awareness campaign focused on educating the community about the risks of flooding, earthquakes, drought and extreme temperatures. This will include informational materials, and social media outreach. 1. Develop a social media campaign educating the school families and the community about these hazardous conditions, including tips on staying safe and connected to local services. 2. Partner with local health and social service organizations to create a registry of individuals who may require assistance during extreme temperature events. 3. Establish cooling and warming centers equipped with essential supplies (water, blankets, medical kits) that can be rapidly deployed during extreme heat and cold events. 4. Train and educate the community to check in on at-risk residents via phone calls or home visits during extreme temperature events or in the event of flooding, earthquake or drought. 5. Encourage students to build a Family Safety Plan for what to do in the event of a flood or earthquake.
Estimated Cost:	Minimal due to school positioning in the district and community partnerships.

Benefits:	Increased public awareness can lead to early recognition and response to flooding, earthquakes, drought and extreme temperatures can help reduce heat-related illnesses, cold weather injuries quicker response times in the event of an earthquake leading to reduced hospital visits and fatalities. Enhanced preparedness will foster a culture of resilience, where community members are better equipped or prepared to handle a variety of hazardous conditions.
Plan for Implementation	
Responsible Organization/Department:	The Ash Grove Schools Director of Operations will be responsible for organizing and tracking the progress of this project.
Supporting Organization/Department:	The Ash Grove Schools Director of Operations will be supported by the superintendent and Board of Education, National Weather Service, student service organizations, and the local Ash Grove City Council as needed.
Action/Project Priority:	
Timeline for Completion:	Approximately 1 year
Potential Fund Sources:	No funding needed.
Local Planning Mechanisms to be Used in Implementation, if any:	None should be needed, but partnerships with City Government, the Sunshine Center (senior citizen community center) and the Care to Learn Program could be utilized if needs arise.
Progress Report	
Action Status:	New
Report of Progress:	New

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	**Ash Grove School District**	
Action or Project		
Action/Project Number:	**Ash Grove Schools Goal 3.1**	
Name of Action or Project:	**Ash Grove School Shelters**	
Mitigation Category:	**Prevention; Structure and Infrastructure Projects**	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		**3**
T: Is it **Technically** feasible and potentially successful?		**3**
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		**3**
P: Is it **Politically** acceptable?		**3**
L: Is there **Legal** authority to implement?		**3**
E: Is it **Economically** beneficial?		**1**
E: Will the project have either a neutral or positive impact on the natural **Environment**?		**2**
Will historic structures be saved or protected?		**3**
Could it be implemented quickly?		**2**
	STAPLEE SCORE	**23**
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	**10**
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	**6**
MITIGATION EFFECTIVENESS SCORE		**16**
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		**39**

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	**Ash Grove School District**	
Action or Project		
Action/Project Number:	**Ash Grove Schools Goal 3.2**	
Name of Action or Project:	Ash Grove School Resource Officers and Emergency Response Team	
Mitigation Category:	Prevention; Emergency Services, Education	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		**3**
T: Is it **Technically** feasible and potentially successful?		**3**
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		**3**
P: Is it **Politically** acceptable?		**3**
L: Is there **Legal** authority to implement?		**3**
E: Is it **Economically** beneficial?		**1**
E: Will the project have either a neutral or positive impact on the natural **Environment**?		**2**
Will historic structures be saved or protected?		**3**
Could it be implemented quickly?		**3**
STAPLEE SCORE		**24**
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	**7**
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	**7**
MITIGATION EFFECTIVENESS SCORE		**14**
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		**38**

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	**Ash Grove School District**	
Action or Project		
Action/Project Number:	**Ash Grove Schools Goal 3.3**	
Name of Action or Project:	Ash Grove Hazard Education	
Mitigation Category:	Education and Outreach	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		**3**
T: Is it **Technically** feasible and potentially successful?		**3**
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		**2**
P: Is it **Politically** acceptable?		**3**
L: Is there **Legal** authority to implement?		**3**
E: Is it **Economically** beneficial?		**3**
E: Will the project have either a neutral or positive impact on the natural **Environment**?		**3**
Will historic structures be saved or protected?		**2**
Could it be implemented quickly?		**3**
STAPLEE SCORE		**25**
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	**8**
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	**7**
MITIGATION EFFECTIVENESS SCORE		**15**
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		**40**

ACTION WORKSHEET	
Name of Jurisdiction:	Battlefield Fire Protection District
Risk / Vulnerability	
Hazard(s) Addressed:	Earthquakes, Sinkholes, Tornadoes (Damaged Roadways or heavy debris)
Problem being Mitigated:	Better signage for our apparatus to mitigate motor vehicle accidents in heavy traffic conditions.
Action or Project	
Applicable Goal Statement:	Better visibility for motorist of emergency scene on the highway
Action/Project Number:	BFPD 3
Name of Action or Project:	Emergency Scene Warning
Mitigation Category:	Emergency Scene/ Safety
Action or Project Description:	Higher visibility collapsible signs and cones for roadway emergency scene setup during vehicle accidents
Estimated Cost:	$ 1500
Benefits:	We basically have outdated cones and small signage that works ok for small farm road incidents, but we respond to a few miles of James River Freeway and on occasion we have to shut down a large portion of the highway and could use newer and more visible signs warning motorist of the emergency ahead to mitigate further motor vehicle accidents.
Plan for Implementation	
Responsible Organization/Department:	BFPD.
Supporting Organization/Department:	Department of Transportation
Action/Project Priority:	37
Timeline for Completion:	As soon as funds are available in 2025.
Potential Fund Sources:	HMPG, HMA, AFG
Local Planning Mechanisms to be Used in Implementation, if any:	Local training with our on duty crews for proper usage and education to the public via media on what they can expect to see when traveling through our district to mitigate further accidents.
Progress Report	
Action Status:	New
Report of Progress:	For Continuing actions only, indicate the report on progress. If the action is not started, indicate any barriers encountered to initiate the action. If the action is in progress, indicate the activity that has occurred to date.

Action Worksheet	
Name of Jurisdiction:	Battlefield Fire Protection District
Risk / Vulnerability	
Hazard(s) Addressed:	Flash Flooding, severe thunderstorms (secondary effects), Dam Failure (Subsequent flooding),
Problem being Mitigated:	Wide spread flooding and flash flooding causes certain roadways to become flooded making driving conditions hazardous and cars become swept off the roadway.
Action or Project	
Applicable Goal Statement:	Closing the roadway during flooding
Action/Project Number:	BFPD 2
Name of Action or Project:	Road Closed Gate for Flooding
Mitigation Category:	Prevention
Action or Project Description:	Single gate installed that can be closed and opened with locks during roadway flooding to mitigate and prevent car from being able to attempt flood crossing.
Estimated Cost:	$5,000
Benefits:	This area is a high traffic area off Farm Road 141 between Battlefield and Nixa on the James River. Life and property are at constant risk in this area during flooding. We have had multiple vehicles attempt to move around single road closed signs and either be swept off the road or pinned against the bridge railing. Access for rescue is not great here so preventing vehicle entry with full road closures during flooding would mitigate several incidents from occurring.
Plan for Implementation	
Responsible Organization/Department:	BFPD. We would notify dispatch of road closure due to expected flooding conditions and reopen as soon as conditions improve and road is marked safe by Road and Bridge.
Supporting Organization/Department:	Greene county road and bridge.
Action/Project Priority:	35
Timeline for Completion:	As soon as funds are available in 2025.
Potential Fund Sources:	HMPG, HMA, AFG
Local Planning Mechanisms to be Used in Implementation, if any:	SRT team between LR, Battlefield and Cox would be notified and trained on the use and location of the gates. Public would be educated via media on the installation and implementation of the system and reminded of turn around don’t drown.
Progress Report	
Action Status:	New
Report of Progress:	For Continuing actions only, indicate the report on progress. If the action is not started, indicate any barriers encountered to initiate the action. If the action is in progress, indicate the activity that has occurred to date.

ACTION WORKSHEET	
Name of Jurisdiction:	Battlefield Fire Protection District
Risk / Vulnerability	
Hazard(s) Addressed:	Drought, Extreme Temperatures (cold), Wildfire, Severe Winter Weather
Problem being Mitigated:	Properly equipping Firefighters to safely work in all environments that can be dangerous to life and health will allow for a safer response to disaster events to help mitigate the loss of life and property in a crisis.
Action or Project	
Applicable Goal Statement:	Ensure the safety of individuals and the community through coordinated action.
Action/Project Number:	BFPD 3
Name of Action or Project:	Turn Out Gear
Mitigation Category:	Emergency Services
Action or Project Description:	To have Firefighters custom fitted for new turnout gear to ensure personal safety on emergency scenes. Battlefield has noticed a lack of gear for different than normal situations.
Estimated Cost:	20,000
Benefits:	Providing proper Personal Protective Equipment (PPE) to firefighters enables them to safely and efficiently mitigate emergencies, ultimately saving more lives and protecting personal property. Proper PPE also plays a critical role in reducing the risk of injury or loss of life within the fire department itself. Access to a diverse range of equipment further allows the Battlefield Fire Protection District to assist neighboring communities more effectively, while minimizing personal risk to responders. The Battlefield Fire Protection District is seeking to acquire Wildland Fire Gear. Although wildfires are not common within their jurisdiction, the department frequently provides mutual aid to other areas affected by such incidents. Without this specialized gear, firefighters are often forced to operate in less-than-ideal equipment, which can increase risks and hinder response effectiveness. Drought increases the dangers of wildfires and extreme temperatures can make the response harder without proper gear. Similarly, severe winter weather presents its own unique challenges. Ice and snow can significantly complicate emergency responses, making movement more hazardous and increasing the potential for slips, falls, and frostbite. Cold-weather gear is crucial in ensuring firefighters can work in freezing temperatures without compromising dexterity, mobility, or overall health. Icy conditions can also lead to an increase in residential fires due to alternative heating methods, requiring a rapid and sustained response under physically demanding circumstances.

Plan for Implementation	
Responsible Organization/Department:	Battlefield Fire Protection District, the Operations Chief
Supporting Organization/Department:	None
Action/Project Priority:	High
Timeline for Completion:	3-12 Months
Potential Fund Sources:	HMPG Funding, HMA Funding, Annual Budget, Local Grants (Still being researched)
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	New
Report of Progress:	New

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	Battlefield Fire Protection District	
Action or Project		
Action/Project Number:	BFPD Safety	
Name of Action or Project:	Emergency Scene Warning	
Mitigation Category:	Emergency Services	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		2
E: Will the project have either a neutral or positive impact on the natural **Environment**?		1
Will historic structures be saved or protected?		0
Could it be implemented quickly?		3
	STAPLEE SCORE	
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	8
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	8
	MITIGATION EFFECTIVENESS SCORE	16
	TOTAL SCORE (STAPLEE + Mitigation Effectiveness)	37

■ **High Priority (30+ points)**	☐ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by
(Name, Title, Phone Number) Josh Dukewits

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	Battlefield Fire Protection District	
Action or Project		
Action/Project Number:	BFPD Flood Gate	
Name of Action or Project:	Road Closed Gate for Flooding	
Mitigation Category:	Prevention	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		2
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		2
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		3
E: Will the project have either a neutral or positive impact on the natural **Environment**?		3
Will historic structures be saved or protected?		0
Could it be implemented quickly?		2
STAPLEE SCORE		
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	9
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
MITIGATION EFFECTIVENESS SCORE		14
TOTAL SCORE **(STAPLEE + Mitigation Effectiveness)**		35

■ **High Priority (30+ points)**	☐ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by
(Name, Title, Phone Number) Josh Dukewits

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	Battlefield Fire Protection District	
Action or Project		
Action/Project Number:	BFPD 3	
Name of Action or Project:	Turn Out Gear	
Mitigation Category:	Emergency Services	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		2
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		2
E: Will the project have either a neutral or positive impact on the natural **Environment**?		3
Will historic structures be saved or protected?		0
Could it be implemented quickly?		2
	STAPLEE SCORE	22
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	8
	MITIGATION EFFECTIVENESS SCORE	18
	TOTAL SCORE (STAPLEE + Mitigation Effectiveness)	40

☐ **High Priority (30+ points)**	☐ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by
(Name, Title, Phone Number) _____

Action Worksheet	
Name of Jurisdiction:	Brookline Fire Protection District
Risk / Vulnerability	
Hazard(s) Addressed:	Tornado; Severe Thunderstorms
Problem being Mitigated:	The geographical area is faced with a high probability (4 out of 4) of natural hazards such as Tornados, Damaging Winds, and Lightning to occur. The Fire District encompasses 2 Mobile Home Parks with over 150 mobile homes in the district and is immediately adjacent to 5 additional Trailer Home Parks that house over 690 additional mobile homes. With a high probability of such events to occur on a continual and annual basis, the region is not properly prepared with storm shelters/safe rooms for residents who are endangered to seek shelter in as necessary. This project seeks to mitigate loss of life and property.
Action or Project	
Applicable Goal Statement:	To protect the lives of the residents, and surrounding community members, of the Brookline Fire Protection District during natural, or otherwise, emergencies.
Action/Project Number:	Brookline Fire 24.001
Name of Action or Project:	Fire Station 3 with Community Storm Shelter/Tornado Safe Room
Mitigation Category:	Structure and Infrastructure Projects
Action or Project Description:	Construct a third and additional Fire Station in the northeastern region of the district boundary that includes a community storm shelter/tornado safe room.
Estimated Cost:	$1,750,000-$2,500,000

Benefits:	The U.S. experiences an average of 800 tornadoes per year, producing an average of 80 deaths and 1500 injuries nationally. According to the National Weather Service, Greene and Christian counties experience an average of 10 tornadoes per year. An average household in both counties is currently 2.20 people, estimating over 1,750 people in the Brookline Fire District or immediately surrounding area are without proper safe locations during events such as tornadoes, damaging winds, or lightning conditions. The Federal Emergency Management Agency (FEMA) estimates the value of a life to be $7,500,000. According to the U.S. statistics, it is expected to see 1 death annually in our region due to tornadoes, damaging wind, or lightning. Completion of such a project resulting in the protection of residents and local community members that would otherwise have been injured or killed during such an event would result in an estimated benefit of $7,500,000 in life value being protected for each individual involved. Additionally, the placement of such a Fire Station will place fire personnel, fire apparatus, and fire equipment closer to residents of Brookline FPD, decreasing response times during such emergencies, overall mitigating loss of life and property, protection/preservation occurring quicker, increasing the chances of such actions being successful.
Plan for Implementation	
Responsible Organization/Department:	The Operations Division will be responsible for carrying out this project and ensuring completion of such actions.
Supporting Organization/Department:	The Board of Directors, Community Risk Reduction division, and Station Builds Work Group would be immediate departments that will directly support the completion of such a project.
Action/Project Priority:	STAPLEE score of 38 and High priority
Timeline for Completion:	12-18 months from project start date.
Potential Fund Sources:	HMA, HMPG, AFG, SAFER and Brookline Fire Protection District's annual budget
Local Planning Mechanisms to be Used in Implementation, if any:	National standards for such shelters, local building codes, applicable NFPA standards, and industry standards.
Progress Report	
Action Status:	Not Started
Report of Progress:	Cost of the project is the primary barrier of starting such project

Action Worksheet	
Name of Jurisdiction:	Brookline Fire Protection District
Risk / Vulnerability	
Hazard(s) Addressed:	Tornado; Severe Thunderstorms
Problem being Mitigated:	The geographical area is faced with a high probability (4 out of 4) of natural hazards such as Tornados, Damaging Winds, and Lightning to occur. The Fire District encompasses 2 Mobile Home Parks with over 150 mobile homes in the district and is immediately adjacent to 5 additional Trailer Home Parks that house over 690 additional mobile homes. With a high probability of such events occurring on a continual and annual basis, the region is not properly prepared with storm shelters/safe rooms for residents who are endangered to seek shelter in as necessary. This project seeks to mitigate loss of life and property.
Action or Project	
Applicable Goal Statement:	To protect and mitigate the loss of lives of the residents, and surrounding community members, of the Brookline Fire Protection District during natural emergencies, or otherwise.
Action/Project Number:	Brookline Fire 24.002
Name of Action or Project:	Fire Station 2 Relocation with Community Storm Shelter/Tornado Safe Room
Mitigation Category:	Structure and Infrastructure Projects
Action or Project Description:	Relocate and reconstruct Fire Station 2 in the southern central region of the district boundary that includes a community storm shelter/tornado safe room.
Estimated Cost:	$1,250,000-$2,250,000

Benefits:	The U.S. experiences an average of 800 tornadoes per year, producing an average of 80 deaths and 1500 injuries nationally. According to the National Weather Service, Greene and Christian counties experience an average of 10 tornadoes per year. An average household in both counties is currently 2.20 people, estimating over 1,750 people in the Brookline Fire District or immediately surrounding area are without proper safe locations during events such as tornadoes, damaging winds, or lightning conditions. The Federal Emergency Management Agency (FEMA) estimates the value of a life to be $7,500,000. According to the U.S. statistics, it is expected to see 1 death annually in our region due to tornadoes, damaging wind, or lightning. Completion of such a project resulting in the protection of residents and local community members that would otherwise have been injured or killed during such an event would result in an estimated benefit of $7,500,000 in life value being protected for each individual involved. Additionally, the placement of such a Fire Station will place fire personnel, fire apparatus, and fire equipment closer to residents of Brookline FPD, decreasing response times during such emergencies, overall mitigating loss of life and property, protection/preservation occurring quicker, increasing the chances of such actions being successful.
Plan for Implementation	
Responsible Organization/Department:	The Operations Division will be responsible for carrying out this project and ensuring completion of such actions.
Supporting Organization/Department:	The Board of Directors, Community Risk Reduction division, and Station Builds Work Group would be immediate departments that will directly support the completion of such a project.
Action/Project Priority:	STAPLEE score of 36 and High priority
Timeline for Completion:	12-18 months from project start date.
Potential Fund Sources:	HMA, HMPG, AFG, SAFER and Brookline Fire Protection District's annual budget
Local Planning Mechanisms to be Used in Implementation, if any:	National standards for such shelters, local building codes, applicable NFPA standards, and industry standards.
Progress Report	
Action Status:	Not Started
Report of Progress:	Cost of the project is the primary barrier of starting such project

APPENDIX B

ACTION WORKSHEET	
Name of Jurisdiction:	Brookline Fire Protection District
Risk / Vulnerability	
Hazard(s) Addressed:	Flood; Severe Winter Weather
Problem being Mitigated:	The geographical area is faced with a high probability (4 out of 4) of natural hazards such as Flooding and Snow and Ice (Severe winter weather) events to occur. The Fire District encompasses many waterways such as rivers and creeks that are surrounded by low terrain. Such areas have historical flooding events, resulting in stranded residents and motorists that are in need of rescue operations. The region is prone to winter conditions that bring record-setting snow and ice accumulation. Such conditions increase life safety dangers to all residents and transients with increased chances of vehicle accidents, structure fires, and power outages as well as decreasing response times of emergency services. Such conditions also increase the dangers of responses for emergency service personnel that are tasked with responding to such emergencies. This project seeks to mitigate the loss of life and property during these events.
Action or Project	
Applicable Goal Statement:	To protect and mitigate loss of the lives of the residents, and transients, of the Brookline Fire Protection District during natural emergencies, or otherwise.
Action/Project Number:	Brookline Fire 24.003
Name of Action or Project:	Construction of Fire Station 3
Mitigation Category:	Structure and Infrastructure Projects
Action or Project Description:	Construct Fire Station 3, a third and additional Fire Station to the District, in the northeast region of the district boundaries with appropriate emergency apparatus improvements.
Estimated Cost:	$2,500,000-$5,000,000

Benefits:	Brookline FPD encompasses many waterways that continually flow water year-round. Historically, these areas have raised to a level that has threatened and flooded low terrain that has surrounded the water ways. This has created continual need for water rescues to occur annually within the District. Additional equipment acquisition and replacement to provide equipment such as water rescue boats, rescue apparatus, and specialized equipment will contribute to the successful rescue during such emergencies. Brookline FPD protects approximately 7.5 miles of Interstate 44, a Tier 1, high priority corridor for the Mid-America Freight Coalition. This corridor sees an express of 65,000 vehicles per day that travel through the area with 27% of all traffic labeled as commercial trucks. MODOT estimates a value of $3.7 billion of freight is transported via I- 44. An adequately placed Fire Station in the northeast region of the District will contribute to faster response times, allowing crews to provide lifesaving interventions that contribute to the life preservation of residents and transients of the District. Such response times will also allow crews to contain and suppress fire conditions of vehicle fires quicker, reducing the scene times and dangers of such incidents. Additionally, the Fire District has had 54 structure fires in the last 3 years. This project will mitigate loss of life and property due to severe winter weather and flooding.
Plan for Implementation	
Responsible Organization/Department:	The Operations Division will be responsible for carrying out this project and ensuring completion of such actions.
Supporting Organization/Department:	The Board of Directors, Community Risk Reduction division, and Station Builds Work Group would be immediate departments that will directly support the completion of such a project.
Action/Project Priority:	STAPLEE score of 39 and High priority
Timeline for Completion:	12-18 months from project start date.
Potential Fund Sources:	HMA, HMPG, AFG, SAFER and Brookline Fire Protection District's annual budget
Local Planning Mechanisms to be Used in Implementation, if any:	Local building codes, applicable NFPA standards, and industry standards.
Progress Report	
Action Status:	Not Started
Report of Progress:	Cost of the project is the primary barrier of starting such project

Action Worksheet	
Name of Jurisdiction:	Brookline Fire Protection District
Risk / Vulnerability	
Hazard(s) Addressed:	Extreme Temperatures, Severe Winter Weather
Problem being Mitigated:	The geographical area is faced with a high probability (4 out of 4) of natural hazards such as Extreme Temperature events to occur. The Fire District, being located in southwest Missouri, is exposed to hot and humid Summer temperatures that have reached 112 degrees. Additionally, our region is also faced with cold winters that have experienced temperatures as low as -29 degrees. The wide range of temperatures that this region faces produces a unique issue which forces the region to attempt to prepare for both issues. Where other regions can modify equipment to handle hot OR cold temperatures, we are faced with the challenge of our equipment handling both. This project seeks to mitigate issues to equipment due to extreme temperatures to further mitigate loss of life and property.
Action or Project	
Applicable Goal Statement:	To protect and mitigate loss of the lives of the residents by upgrading apparatus to better handle the climate that our region presents.
Action/Project Number:	Brookline Fire 24.004
Name of Action or Project:	Apparatus Upgrade and Replacement Project
Mitigation Category:	Prevention
Action or Project Description:	Purchase new apparatus with equipment, such as pump heaters, that are better suited to handle the climate conditions of the region.
Estimated Cost:	$1,500,000-$7,500,000
Benefits:	Brookline FPD was faced with a 48-hour period of time in 2023 that temperatures remained below 0 degrees. During this time Brookline FPD units were dispatched to 9 structure fires. Due to the weather conditions, (11) 2,000-gallon water tenders, (4) 1,000-gallon fire engines, (1) 750-gallon fire engine, and 2 additional fire apparatus were frozen or other received damage during the weather conditions. Due to such damage, many apparatus were declared unusable on scene, and rendered useless, extending the time spent on scene of the incident, as well as increasing the damage to the structure. Such replacements of these apparatus would mitigate such damages from occurring in the future, protecting the equipment, fire personnel, and residents of the District, further mitigating loss of life and property.
Plan for Implementation	
Responsible Organization/Department:	The Operations Division will be responsible for carrying out this project and ensuring completion of such actions.
Supporting Organization/Department:	The Board of Directors, and Apparatus Work Group would be immediate departments that will directly support the completion of such a project.

Action/Project Priority:	STAPLEE score of 38 and High priority
Timeline for Completion:	12-36 months from project start date.
Potential Fund Sources:	HMA, HMPG, AFG, and Brookline Fire Protection District's annual budget
Local Planning Mechanisms to be Used in Implementation, if any:	Local building codes, applicable NFPA standards, and industry standards.
Progress Report	
Action Status:	Not Started
Report of Progress:	Cost of the project is the primary barrier of starting such project

Action Worksheet	
Name of Jurisdiction:	Brookline Fire Protection District
Risk / Vulnerability	
Hazard(s) Addressed:	Hazardous Materials
Problem being Mitigated:	The geographical area is faced with a high probability (3 out of 4) of events with hazardous materials involved occurring. The Fire District encompasses 7.5 miles of Interstate 44 that sees $3.7 billion in freight transport annually. In addition, Brookline FPD services 2 train lines that sees an average of 26 trains per day. The District has an increased opportunity for incidents that involve Hazardous Materials. The District does not currently have a dedicated Hazardous Materials Response Team, Equipment, nor any automatic aid agreements with a dedicated Hazardous Materials Response Team.
Action or Project	
Applicable Goal Statement:	To protect and mitigate loss of the lives of the residents, and transients, of the Brookline Fire Protection District during incidents involving Hazardous Materials with apparatus better equipped for the incidents.
Action/Project Number:	Brookline Fire 24.005
Name of Action or Project:	Construction of Fire Station 3 and Apparatus Acquisition
Mitigation Category:	Structure and Infrastructure Projects
Action or Project Description:	Construct Fire Station 3, a third and additional Fire Station to the District, in the northeast region of the district boundaries and acquire apparatus better suited for Hazardous Materials responses.
Estimated Cost:	$2,500,000-$5,000,000
Benefits:	Brookline FPD protects approximately 7.5 miles of Interstate 44, a Tier 1, high priority corridor for the Mid-America Freight Coalition. This corridor sees an express of 65,000 vehicles per day that travel through the area with 27% of all traffic labeled as commercial trucks. MODOT estimates a value of $3.7 billion of freight is transported via I-44. An adequately placed Fire Station in the northeast region of the District will contribute to faster response times, allowing crews to provide lifesaving interventions that contribute to the life preservation of residents and transients of the District. Such response times will also allow crews to contain and suppress fire conditions of hazardous materials involved incidents. Acquisition of apparatus that is better equipped and designed to handle incidents that involve Hazardous Materials allows fire personnel to successfully handle such incidents while being safer. Such apparatus will allow the District to develop a dedicated team to specialize in such incident responses, ultimately contributing to safer responses and quicker mitigation strategies.

Plan for Implementation	
Responsible Organization/Department:	The Operations Division will be responsible for carrying out this project and ensuring completion of such actions.
Supporting Organization/Department:	The Board of Directors, Community Risk Reduction division, Apparatus Work Group, and Station Builds Work Group would be immediate departments that will directly support the completion of such a project.
Action/Project Priority:	STAPLEE score of 32 and High priority
Timeline for Completion:	12-36 months from project start date.
Potential Fund Sources:	HMA, HMPG, AFG, SAFER and Brookline Fire Protection District's annual budget
Local Planning Mechanisms to be Used in Implementation, if any:	Local building codes, applicable NFPA standards, and industry standards.
Progress Report	
Action Status:	Not Started
Report of Progress:	Cost of the project is the primary barrier of starting such project

Action Worksheet	
Name of Jurisdiction:	Brookline Fire Protection District
Risk / Vulnerability	
Hazard(s) Addressed:	Drought; Wildfire
Problem being Mitigated:	The geographical area is faced with a high probability (3 out of 4) of natural hazards such as Droughts and Wildfires to occur. The Fire District encompasses 36 square miles with a mixture of rural and urban interface. The U.S. Drought Monitor estimates a drought for the region annually and has reported the Greene and Christian Counties to have had at least a D1 or higher drought rating for the last 20 of 23 years. With a high probability of such events to occur on a continual and annual basis, the district is not properly equipped to mitigate effects of drought and wildfire with outdated apparatus and inadequate station placement.
Action or Project	
Applicable Goal Statement:	To mitigate the loss of property of residents of the Brookline Fire Protection District during such natural events, or otherwise.
Action/Project Number:	Brookline Fire 24.006
Name of Action or Project:	Relocation of Fire Station 2 and Apparatus Acquisition
Mitigation Category:	Structure and Infrastructure Projects
Action or Project Description:	Relocation of Station 2 to better accommodate the service area with acquisition of apparatus better equipped to mitigate such incidents.
Estimated Cost:	$2,000,000-$3,000,000
Benefits:	According to the U.S. Drought Monitor, the Brookline, MO region has been classified under a D1 or higher drought in 20 or the previous 23 years. The high drought conditions have caused a loss of crop lands with an increase of wildfires and other general fires outside. Acquisition of new apparatus better equipped to mitigate such fires in remote areas and/or areas with tough terrain with increased fire suppression efforts and success. Placement of Station 2 to better respond to its service area would reduce response times, placing personnel, apparatus, and equipment on scene earlier in the incident, reducing fire spread and overall fire damage, overall mitigating loss of life and property.
Plan for Implementation	
Responsible Organization/Department:	The Operations Division will be responsible for carrying out this project and ensuring completion of such actions.
Supporting Organization/Department:	The Board of Directors, Community Risk Reduction division, Apparatus Work Group, and Station Builds Work Group would be immediate departments that will directly support the completion of such a project.
Action/Project Priority:	STAPLEE score of 37 and High priority
Timeline for Completion:	12-24 months from project start date.

Potential Fund Sources:	HMA, HMPG, AFG, SAFER and Brookline Fire Protection District's annual budget
Local Planning Mechanisms to be Used in Implementation, if any:	Local building codes, applicable NFPA standards, and industry standards.
Progress Report	
Action Status:	Not Started
Report of Progress:	Cost of the project is the primary barrier of starting such project

Action Worksheet	
Name of Jurisdiction:	Brookline Fire Protection District
Risk / Vulnerability	
Hazard(s) Addressed:	Urban Fire
Problem being Mitigated:	The geographical area is faced with a moderate probability (2 out of 4) of hazards such as Urban Fires to occur. The Fire District encompasses 36 square miles with a mixture of rural and urban interface. Brookline Fire Protection District responded to 54 structure fires within the district in the last 3 years. This equates to 1.5 structure fires per month, which is approximately 5.4% of the State of Missouri's annual average of 1,000 structure fires according to the U.S. Fire Administration.
Action or Project	
Applicable Goal Statement:	To contribute to the property preservation of residents of the Brookline Fire Protection District during such events.
Action/Project Number:	Brookline Fire 24.007
Name of Action or Project:	Construction of Fire Station 3
Mitigation Category:	Structure and Infrastructure Projects
Action or Project Description:	Construction of Fire Station 3
Estimated Cost:	$1,750,000-$2,500,000
Benefits:	According to the U.S. Fire Administration, Missouri averages 1,000 structure fires per year. Brookline Fire responded to 54 structure fires in the District over the last 3 years, averaging 1.5 fires per month, or 5.4% of the annual average of the State. This abnormally high volume of Structure fires has equated to an approximate loss value of $5,342,322 during this time frame. This loss value is contributed to current station placement with delayed responses on all structure fires associated. Adequate Station placement in the northeast region of the District boundaries would result in reduced response times, placing personnel, apparatus, and equipment on scene of these incidents in less than 5 minutes, becoming NFPA compliant and contributing to the property preservation of the residents of Brookline FPD.
Plan for Implementation	
Responsible Organization/Department:	The Operations Division will be responsible for carrying out this project and ensuring completion of such actions.
Supporting Organization/Department:	The Board of Directors, Community Risk Reduction division, and Station Builds Work Group would be immediate departments that will directly support the completion of such a project.
Action/Project Priority:	STAPLEE score of 39 and High priority

Timeline for Completion:	12-24 months from project start date.
Potential Fund Sources:	HMA, HMPG, AFG, SAFER and Brookline Fire Protection District's annual budget
Local Planning Mechanisms to be Used in Implementation, if any:	Local building codes, applicable NFPA standards, and industry standards.
Progress Report	
Action Status:	Not Started
Report of Progress:	Cost of the project is the primary barrier of starting such project

Action Worksheet	
Name of Jurisdiction:	Brookline Fire Protection District
Risk / Vulnerability	
Hazard(s) Addressed:	Airplane Crash
Problem being Mitigated:	Brookline FPD borders the Springfield-Branson National Airport with an estimated 130 flights daily. Brookline FPD remains in direct flight of aircraft departing the airport. The anticipation of an Airplane crash within the District boundaries is higher than the low probability rating for the region (1 out of 4). Brookline FPD does not have access to proper PPE for Aircraft Fires, Rescues, or associated trainings to be prepared for such incidents.
Action or Project	
Applicable Goal Statement:	To prepare firefighters for safe operation within such incidents by providing proper training, training equipment, and PPE.
Action/Project Number:	Brookline Fire 24.008
Name of Action or Project:	Acquisition of Training Equipment and PPE for Aircraft Firefighting
Mitigation Category:	Prevention
Action or Project Description:	Acquire training, training props, and PPE for Aircraft Firefighting.
Estimated Cost:	$150,000-$1,000,000
Benefits:	According to the Springfield-Branson National Airport, they experience over 130 flights per day. Such air traffic directly impacts the dangers of airplane crashes within the Brookline FPD. Proper PPE, Training, and Training Props would prepare fire personnel to properly intervene during such incidents. This will ultimately keep personnel safe, protecting the lives of our fire personnel.
Plan for Implementation	
Responsible Organization/Department:	The Training Division will be responsible for carrying out this project and ensuring completion of such actions.
Supporting Organization/Department:	The Board of Directors, Community Risk Reduction division, Operations Division, and Administrative Team would be immediate departments that will directly support the completion of such a project.
Action/Project Priority:	STAPLEE score of 31 and High priority
Timeline for Completion:	12-24 months from project start date.
Potential Fund Sources:	HMA, HMPG, AFG and Brookline Fire Protection District's annual budget
Local Planning Mechanisms to be Used in Implementation, if any:	NFPA Standards for Aircraft Firefighting and Rescue and associated Training, Local FAA authorities and training requirements
Progress Report	
Action Status:	Not Started
Report of Progress:	Cost of the project is the primary barrier of starting such project

Action Worksheet	
Name of Jurisdiction:	Brookline Fire Protection District
Risk / Vulnerability	
Hazard(s) Addressed:	Power Failure, Earthquakes, Extreme Temperature, Thunderstorms, Severe Winter Weather and Tornado
Problem being Mitigated:	Brookline Fire Stations 1 and 2 have experienced multiple power outages due to inclement weather and other circumstances that have delayed responses of emergency services to the residents of the Fire District.
Action or Project	
Applicable Goal Statement:	To secure quick and effective emergency service capability to the residents of Brookline FPD, despite regional power outages.
Action/Project Number:	Brookline Fire 24.009
Name of Action or Project:	Generators for Station 1 and 2
Mitigation Category:	Prevention
Action or Project Description:	Install backup power supply generators at Brookline Fire Stations 1 and 2.
Estimated Cost:	$10,000-$75,000
Benefits:	Ensures fire personnel can receive alarms for emergency incidents and respond appropriate apparatus and equipment during regional power outages. Continued response times during these incidents are vital for reduction of losses of the community during conditions that cause such outages.
Plan for Implementation	
Responsible Organization/Department:	The Operations Division will be responsible for carrying out this project and ensuring completion of such actions.
Supporting Organization/Department:	The Board of Directors and Administrative Team would be immediate departments that will directly support the completion of such a project.
Action/Project Priority:	STAPLEE score of 35 and High priority
Timeline for Completion:	1-6 months from project start date.
Potential Fund Sources:	HMA, HMPG, AFG, and Brookline Fire Protection District's annual budget
Local Planning Mechanisms to be Used in Implementation, if any:	Station Generator applicable NFPA Standards
Progress Report	
Action Status:	Not Started
Report of Progress:	Cost of the project is the primary barrier of starting such project

Action Worksheet	
Name of Jurisdiction:	Brookline Fire Protection District
Risk / Vulnerability	
Hazard(s) Addressed:	Train Derailment
Problem being Mitigated:	Brookline FPD encompasses two main railroads that see a daily average of 26 trains. This daily traffic increases the odds of such an incident to occur over the low regional probability (1 out of 4). Brookline FPD does not have access to proper PPE for Train derailment responses such as fires, rescues, or hazardous materials responses to be prepared for such incidents.
Action or Project	
Applicable Goal Statement:	To prepare firefighters for safe operation within such incidents by providing proper training, training equipment, and PPE.
Action/Project Number:	Brookline Fire 24.010
Name of Action or Project:	Acquisition of Training Equipment and PPE for Train Derailments
Mitigation Category:	Prevention
Action or Project Description:	Acquire training, training props, and PPE for Train Derailments
Estimated Cost:	$150,000-$1,000,000
Benefits:	According to BNSF, Brookline Fire District sees an average of 26 trains per day. This exposure increases the District's risk to such incidents occurring, increasing the risk to residents of the district. Proper training, training props, and PPE to outfit firefighters to respond appropriately increases the safe responses of personnel. Such responses will positively impact the district with safe fire personnel being able to successfully contribute lifesaving interventions during such an incident.
Plan for Implementation	
Responsible Organization/Department:	The Training Division will be responsible for carrying out this project and ensuring completion of such actions.
Supporting Organization/Department:	The Board of Directors, Community Risk Reduction division, Operations Division, and Administrative Team would be immediate departments that will directly support the completion of such a project.
Action/Project Priority:	STAPLEE score of 31 and High priority
Timeline for Completion:	12-24 months from project start date.
Potential Fund Sources:	HMA, HMPG, AFG, and Brookline Fire Protection District's annual budget
Local Planning Mechanisms to be Used in Implementation, if any:	NFPA Standards for Aircraft Firefighting and Rescue and associated Training, Local FAA authorities and training requirements

Progress Report	
Action Status:	Not Started
Report of Progress:	Cost of the project is the primary barrier of starting such project

Action Worksheet	
Name of Jurisdiction:	Brookline Fire Protection District
Risk / Vulnerability	
Hazard(s) Addressed:	Communicable Disease
Problem being Mitigated:	The geographical region is faced with Communicable Disease exposure, much like the rest of the U.S. with a high probability (3 out of 4) rating of likelihood for such an event to occur. The Greene County/Christian County region was devastated with Covid-19 exposures and the Fire Service was not exempt. Being faced with Fire Station shutdowns, personnel shortages, and inadequate safety devices the Fire Service in the region struggled to stay afloat amidst such an issue.
Action or Project	
Applicable Goal Statement:	To prepare the agency for future communicable disease outbreaks and to protect fire personnel from unnecessary exposures.
Action/Project Number:	Brookline Fire 24.011
Name of Action or Project:	Acquisition of Safety Equipment and Funds for Adequate Staffing
Mitigation Category:	Emergency Services
Action or Project Description:	Acquire safety equipment and PPE to be distributed to personnel during such incidents while securing funding for potential staffing issues and shortages of personnel that may have been exposed during such events.
Estimated Cost:	$250,000-$2,500,000
Benefits:	The Greene County/Christian County region was devastated with Covid-19 exposures and the Fire Service was not exempt. Being faced with Fire Station shutdowns, personnel shortages, and inadequate safety devices, the Fire Service in the region struggled to stay afloat amidst such an issue. Adequate safety equipment and PPE will provide personnel with protection from unnecessary exposures, keeping personnel from becoming ill in the line of duty. Securing funding for staffing issues during such incidents would provide for vacancies caused by exposures, as well as providing possible benefits to personnel that were exposed or became ill during such incidents.
Plan for Implementation	
Responsible Organization/Department:	The Operations Division will be responsible for carrying out this project and ensuring completion of such actions.
Supporting Organization/Department:	The Board of Directors, Community Risk Reduction division, EMS Division, and Administrative Team would be immediate departments that will directly support the completion of such a project.
Action/Project Priority:	STAPLEE score of 38 and High priority
Timeline for Completion:	12-24 months from project start date.

Potential Fund Sources:	HMA, HMPG, AFG and Brookline Fire Protection District's annual budget
Local Planning Mechanisms to be Used in Implementation, if any:	Local and federal safety guidelines as well as local and federal employment laws
Progress Report	
Action Status:	Not Started
Report of Progress:	Cost of the project is the primary barrier of starting such project

Action Worksheet	
Name of Jurisdiction:	Brookline Fire Protection District
Risk / Vulnerability	
Hazard(s) Addressed:	Cyber; Explosives; Land Subsidence; Civil Unrest; Cave/Mine Collapse; Dam Failure; Animal Disease; Targeted Violence; Biological; Chemical; Radiological; Earthquake; Sabotage; Nuclear; Waste; Dam Failure
Problem being Mitigated:	The geographical region has an overall low exposure to all listed hazards (1 out of 4) with the exception of Cyber (4 out of 4) and Land Subsidence (3 out of 4). These items are best suited to be addressed within our District with public education on such matters and how to navigate such incidents.
Action or Project	
Applicable Goal Statement:	To prepare the residents for such incidents through a public education program.
Action/Project Number:	Brookline Fire 24.012
Name of Action or Project:	Further the CRR Program with a Public Education/Outreach Plan
Mitigation Category:	Education and Outreach
Action or Project Description:	The Brookline Fire Protection District recognizes the importance of proactive community education in addressing both traditional and emerging threats to public safety. To serve its residents effectively, the district is implementing a comprehensive Education and Outreach Plan that targets key hazard topics relevant to its demographic. This includes raising awareness about cyberbullying, particularly among youth and families, through school partnerships, digital campaigns, and community presentations that promote safe online behavior and reporting resources. The plan also addresses the dangers of recreational explosives and fireworks, especially around holidays, by providing safety demonstrations, distributing educational materials, and advocating for safer alternatives. In light of political protest overspill from nearby Springfield and Republic, the district will offer guidance to residents and local businesses on how to stay safe during periods of civil unrest, while also improving communication during such events through real-time alerts and community briefings. With unknown cave collapse threats near the Wilson Creek National Battlefield, the district will collaborate with the National Park Service to install warning signage, distribute educational brochures, and incorporate geological safety information into public programming. Additionally, the district will work with agricultural partners to inform the public about animal diseases that impact food products, helping local farmers and consumers recognize and respond to early signs of zoonotic outbreaks. Recognizing the evolving global landscape, the plan includes efforts to prepare residents for potential warfare or national security threats by offering emergency preparedness resources, shelter-in-place guidance, and Community Emergency Response Team (CERT) training. The district also acknowledges the risk of dam failure, which can result in rapid and severe flooding, posing significant threats to life and property. Outreach efforts will include flood risk education, evacuation planning, and

	coordination with emergency management agencies to ensure timely alerts and public instructions in the event of a structural breach. These initiatives will be delivered through newsletters, social media, public events, school outreach, and partnerships with regional agencies. By prioritizing these diverse risks, the Brookline Fire Protection District aims to enhance public awareness, build resilience, and ensure the safety and preparedness of its entire community.
Estimated Cost:	$1,500-$100,000
Benefits:	Public outreach programs are financially beneficial as they tend to be the most cost effective. Limited budgets can survive public outreach programs better than physical projects. Such programs are also beneficial to the public image of the agency as they tend to promote safety and positive agency image for the District.
Plan for Implementation	
Responsible Organization/Department:	The Community Risk Reduction Division will be responsible for carrying out this project and ensuring completion of such actions.
Supporting Organization/Department:	The Board of Directors, Operations Division, and Administrative Team would be immediate departments that will directly support the completion of such a project.
Action/Project Priority:	STAPLEE score of 32 and High priority
Timeline for Completion:	16-18 months from project start date.
Potential Fund Sources:	HMA, HMPG, AFG and Brookline Fire Protection District's annual budget
Local Planning Mechanisms to be Used in Implementation, if any:	None
Progress Report	
Action Status:	Not Started
Report of Progress:	Cost of the project is the primary barrier of starting such project

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	Brookline Fire Protection District	
Action or Project		
Action/Project Number:	Brookline Fire 24.001	
Name of Action or Project:	Fire Station 3 with Community Storm Shelter/Tornado Safe Room	
Mitigation Category:	Structure and Infrastructure Projects	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		3
E: Will the project have either a neutral or positive impact on the natural **Environment**?		3
Will historic structures be saved or protected?		1
Could it be implemented quickly?		1
STAPLEE SCORE		23
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	9
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	6
MITIGATION EFFECTIVENESS SCORE		15
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		38

STAPLEE Worksheet		
Name of Jurisdiction:	Brookline Fire Protection District	
Action or Project		
Action/Project Number:	Brookline Fire 24.002	
Name of Action or Project:	Fire Station 2 Relocation with Community Storm Shelter/Tornado Safe Room	
Mitigation Category:	Structure and Infrastructure Projects	
STAPLEE Criteria Evaluation Rating Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		2
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		2
E: Will the project have either a neutral or positive impact on the natural **Environment**?		3
Will historic structures be saved or protected?		1
Could it be implemented quickly?		1
STAPLEE SCORE		21
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	9
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	6
MITIGATION EFFECTIVENESS SCORE		15
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		36

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	Brookline Fire Protection District	
Action or Project		
Action/Project Number:	Brookline Fire 24.003	
Name of Action or Project:	Construction of Fire Station 3	
Mitigation Category:	Prevention; Structure and Infrastructure Projects; Natural Systems Protection; Education and Outreach; Emergency Services	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		2
E: Will the project have either a neutral or positive impact on the natural **Environment**?		3
Will historic structures be saved or protected?		1
Could it be implemented quickly?		1
STAPLEE SCORE		22
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	7
MITIGATION EFFECTIVENESS SCORE		17
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		39

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STAPLEE Worksheet		
Name of Jurisdiction:	Brookline Fire Protection District	
Action or Project		
Action/Project Number:	Brookline Fire 24.004	
Name of Action or Project:	Apparatus Upgrade and Replacement Project	
Mitigation Category:	Prevention	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		2
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		2
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		2
E: Will the project have either a neutral or positive impact on the natural **Environment**?		3
Will historic structures be saved or protected?		2
Could it be implemented quickly?		1
	STAPLEE SCORE	21
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	8
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	9
MITIGATION EFFECTIVENESS SCORE		17
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		38

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STAPLEE Worksheet		
Name of Jurisdiction:	Brookline Fire Protection District	
Action or Project		
Action/Project Number:	Brookline Fire 24.005	
Name of Action or Project:	Construction of Fire Station 3 and Apparatus Acquisition	
Mitigation Category:	Prevention	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		2
T: Is it **Technically** feasible and potentially successful?		2
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		2
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		2
E: Will the project have either a neutral or positive impact on the natural **Environment**?		3
Will historic structures be saved or protected?		1
Could it be implemented quickly?		1
	STAPLEE SCORE	19
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	6
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	7
MITIGATION EFFECTIVENESS SCORE		13
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		32

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	Brookline Fire Protection District	
Action or Project		
Action/Project Number:	Brookline Fire 24.06	
Name of Action or Project:	Relocation of Fire Station 2 and Apparatus Acquisition	
Mitigation Category:	Structure and Infrastructure Projects	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		2
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		2
E: Will the project have either a neutral or positive impact on the natural **Environment**?		3
Will historic structures be saved or protected?		3
Could it be implemented quickly?		1
	STAPLEE SCORE	23
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	6
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	8
MITIGATION EFFECTIVENESS SCORE		14
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		37

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STAPLEE Worksheet		
Name of Jurisdiction:	Brookline Fire Protection District	
Action or Project		
Action/Project Number:	Brookline Fire 24.07	
Name of Action or Project:	Construction of Station 3	
Mitigation Category:	Structure and Infrastructure Projects	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		3
E: Will the project have either a neutral or positive impact on the natural **Environment**?		3
Will historic structures be saved or protected?		1
Could it be implemented quickly?		2
	STAPLEE SCORE	23
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	9
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	6
MITIGATION EFFECTIVENESS SCORE		15
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		39

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STAPLEE Worksheet		
Name of Jurisdiction:	Brookline Fire Protection District	
Action or Project		
Action/Project Number:	Brookline Fire 24.08	
Name of Action or Project:	Acquisitions of Training and Equipment for Aircraft Firefighting	
Mitigation Category:	Prevention	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		1
T: Is it **Technically** feasible and potentially successful?		2
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		2
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		2
E: Is it **Economically** beneficial?		1
E: Will the project have either a neutral or positive impact on the natural **Environment**?		3
Will historic structures be saved or protected?		1
Could it be implemented quickly?		2
STAPLEE SCORE		17
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	7
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	7
MITIGATION EFFECTIVENESS SCORE		14
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		31

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STAPLEE Worksheet		
Name of Jurisdiction:	Brookline Fire Protection District	
Action or Project		
Action/Project Number:	Brookline Fire 24.009	
Name of Action or Project:	Generator for Stations 1 and 2	
Mitigation Category:	Prevention	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		3
E: Will the project have either a neutral or positive impact on the natural **Environment**?		3
Will historic structures be saved or protected?		0
Could it be implemented quickly?		3
	STAPLEE SCORE	24
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	5
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	6
MITIGATION EFFECTIVENESS SCORE		11
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		35

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STAPLEE Worksheet		
Name of Jurisdiction:	Brookline Fire Protection District	
Action or Project		
Action/Project Number:	Brookline Fire 24.010	
Name of Action or Project:	Acquisition of Training Equipment and PPE for Train Derailments	
Mitigation Category:	Prevention	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		2
T: Is it **Technically** feasible and potentially successful?		1
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		1
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		2
E: Is it **Economically** beneficial?		2
E: Will the project have either a neutral or positive impact on the natural **Environment**?		3
Will historic structures be saved or protected?		2
Could it be implemented quickly?		1
STAPLEE SCORE		18
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	5
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	7
MITIGATION EFFECTIVENESS SCORE		12
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		30

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STAPLEE Worksheet		
Name of Jurisdiction:	Brookline Fire Protection District	
Action or Project		
Action/Project Number:	Brookline Fire 24.011	
Name of Action or Project:	Acquisition of Safety Equipment and Funds for Adequate Staffing	
Mitigation Category:	Prevention	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		2
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		2
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		3
E: Will the project have either a neutral or positive impact on the natural **Environment**?		3
Will historic structures be saved or protected?		0
Could it be implemented quickly?		2
STAPLEE SCORE		21
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	9
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	8
MITIGATION EFFECTIVENESS SCORE		17
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		38

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STAPLEE Worksheet		
Name of Jurisdiction:	Brookline Fire Protection District	
Action or Project		
Action/Project Number:	Brookline Fire 24.012	
Name of Action or Project:	Further the CRR Program with a Public Education/Outreach Plan	
Mitigation Category:	Prevention	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		2
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		3
E: Will the project have either a neutral or positive impact on the natural **Environment**?		3
Will historic structures be saved or protected?		0
Could it be implemented quickly?		1
	STAPLEE SCORE	21
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	5
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	6
MITIGATION EFFECTIVENESS SCORE		11
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		32

Action Worksheet	
Name of Jurisdiction:	City of Ash Grove
Risk / Vulnerability	
Hazard(s) Addressed:	Severe Storms and Tornadoes
Problem being Mitigated:	The outdoor warning siren in ash grove is currently out dated and needs to be replaced. The city is also at the point where more sirens should be considered for citizen notification.
Action or Project	
Applicable Goal Statement:	Reduce the City of Ash Grove's vulnerability to tornadoes/Severe thunderstorms, and other disasters
Action/Project Number:	City of Ash Grove 1
Name of Action or Project:	Ash Grove Sirens
Mitigation Category:	Emergency Services; Structure and Infrastructure
Action or Project Description:	Action 1: Develop a plan to replace existing 30+ year old outdoor warning siren with all hazard devices. Action 2: Add units for larger coverage area and maintain standard of warning in areas of new development. Reach and implement alternative notification systems. Action 3: Install generators at siren sites to provide reliable warning system in power outage situations. Action 4: Monitor annexations process to stay informed as to upcoming and potential annexations to ensure warning siren coverage remains consistent with current standard Action 5: Equip new sirens with radio technology to enable Greene County the ability to activate and monitor sirens. Action 6: Develop the ability to broadcast emergency and public education material to the public. Action 7: Promote NOAA weather Radios with annual city sponsored purchase campaign. Action 8: Develop a plan to install cameras at sites that routinely host large special events and that also have good vantage points to monitor incoming weather. Install cameras at chosen sites and link them to the Emergency Operation Center. Action 9: Work with the Springfield-Greene County Office of Emergency Management on proper placement of warning sirens and cameras.
Estimated Cost:	$50,000-150,000
Benefits:	Ensure timely notification to all citizens during sever weather events and emergencies; and prevent loss of lives

Plan for Implementation	
Responsible Organization/Department:	City of Ash Grove-EMD
Supporting Organization/Department:	Springfield-Greene County Office of Emergency Management
Action/Project Priority:	High
Timeline for Completion:	1-3 Years
Potential Fund Sources:	Internal, HMPG Grant Funding, , Private Funding
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	New and On Going
Report of Progress:	Conducting research. Submitted HMGP NOI

Action Worksheet	
Name of Jurisdiction:	City of Ash Grove
Risk / Vulnerability	
Hazard(s) Addressed:	Severe Storms and Tornadoes
Problem being Mitigated:	The community of Ash Grove is lacking a community shelter and safe room to be used in any emergency.
Action or Project	
Applicable Goal Statement:	Reduce the City of Ash Grove's vulnerability to tornadoes/Severe thunderstorms, and other disasters
Action/Project Number:	City of Ash Grove 2
Name of Action or Project:	Ash Grove Shelters
Mitigation Category:	Emergency Services; Structure and Infrastructure
Action or Project Description:	Action 1: Secure funding and build a community safe room and hardened structure for Emergency Management and Public Safety Operations. Action 2: Research grants and other funding sources to build emergency community safe rooms, large enough to temporarily house citizens. Action 3: Build FEMA approved emergency safe rooms for citizens to take protective cover in, and provide temporary sheltering during any emergency. Action 4: Incorporate local public safety department and emergency operations center into hardened facilities connected of the community safe room. Action 5: Ensure adequate water, equipment and supplies are stored in facilities that will sustain first responders and citizens during and immediately after a disaster. Action 6: Develop backup systems for utilities and communications, ensuring facilities capability during a disaster and public safety responders can continue to offer life assisting/saving services to the citizens of the city.
Estimated Cost:	$2,000,000
Benefits:	Save lives of first responders and citizens. Ensure emergency services and Emergency Operations Center capabilities can safely be maintained.
Plan for Implementation	
Responsible Organization/Department:	City of Ash Grove-EMD
Supporting Organization/Department:	None
Action/Project Priority:	High
Timeline for Completion:	1-5 Years
Potential Fund Sources:	Internal, HMA and HMPG Program Funding, Private Funding

Local Planning Mechanisms to be Used in Implementation, if any:	None
Progress Report	
Action Status:	New and On Going
Report of Progress:	Conducting initial research. Submitted HMGP Notice of Interest

Action Worksheet	
Name of Jurisdiction:	City of Ash Grove
Risk / Vulnerability	
Hazard(s) Addressed:	Severe Storms and Tornadoes, Earthquakes, Sinkholes, Drought, Severe Winter Weather
Problem being Mitigated:	The City of Ash Grove currently lacks public education that can be extremely useful in times of disasters
Action or Project	
Applicable Goal Statement:	Reduce the City of Ash Grove's vulnerability to disasters by 50% over the next 5 years.
Action/Project Number:	City of Ash Grove 3
Name of Action or Project:	City of Ash Grove Education
Mitigation Category:	Education; Outreach
Action or Project Description:	Action 1: Develop and implement public education and awareness programs and activities that focus on the prevention and mitigation of natural and manmade hazards their consequences, and the steps that can be taken to reduce risk. Action 2: Distribute brochures and related materials to inform property owners about projects they can accomplish to make their residential and commercial properties disaster resistant. Action 3: Promote hazard mitigation awareness and education. Action 4: Promote an awareness campaign regarding safety measures and preparation actions for specific hazards to target populations; severe winter storms, heat, tornadoes. Action 5: Develop comprehensive workshops to be conducted for elected officials, business owners, and other community leaders on hazard mitigation programs and activities. Action 6: Increase local business ability to expedite business resumption following a disaster. Action 7: Develop incentive programs for citizens, business and industry to pursue hazards mitigation projects.
Estimated Cost:	$5,000
Benefits:	Increase public education and survivability from disasters.
Plan for Implementation	
Responsible Organization/Department:	City of Ash Grove-EMD
Supporting Organization/Department:	None
Action/Project Priority:	High

Timeline for Completion:	1-5 Years
Potential Fund Sources:	Internal, HMPG Grant Funding, Private Funding
Local Planning Mechanisms to be Used in Implementation, if any:	None
Progress Report	
Action Status:	New and On Going
Report of Progress:	Started with FEMA Produced literature

Action Worksheet	
Name of Jurisdiction:	City of Ash Grove
Risk / Vulnerability	
Hazard(s) Addressed:	Human Caused Hazards, Earthquakes
Problem being Mitigated:	Infrastructure Security
Action or Project	
Applicable Goal Statement:	Reduce the City of Ash Grove's Vulnerability of Human-Caused Hazards and disasters by 50% over the next 5 years.
Action/Project Number:	City of Ash Grove 4
Name of Action or Project:	City of Ash Grove Human Caused Vulnerability
Mitigation Category:	Structure and Infrastructure
Action or Project Description:	Action 1: Develop and implement mitigation measures focusing on governmental infrastructure improvements, retrofits, and additions. Action 2: Develop and implement policies and training programs regarding infrastructure security and safety. Action 3: Install locking, alarm, and security devices to improve physical security of municipal facilities and structures. Action 4: Retrofit municipal buildings with structural components to prevent unapproved entry. Action 5: Continue to develop procedural systems to reduce risk of targeted violence, cyber, and other human caused hazards to municipal facilities.
Estimated Cost:	$150,000
Benefits:	Protect lives, maintain municipal services and utilities. Safeguard private personal information of citizens.
Plan for Implementation	
Responsible Organization/Department:	City of Ash Grove-EMD
Supporting Organization/Department:	None
Action/Project Priority:	High
Timeline for Completion:	1-5 Years
Potential Fund Sources:	Internal, HMA and HMPG Program Funding, Private Funding
Local Planning Mechanisms to be Used in Implementation, if any:	None

APPENDIX B

Progress Report	
Action Status:	New and On Going
Report of Progress:	Researching

Action Worksheet	
Name of Jurisdiction:	City of Ash Grove
Risk / Vulnerability	
Hazard(s) Addressed:	Tornadoes, Severe Thunderstorms, Severe Winter Weather, Earthquakes, Sinkholes, Targeted Violence, Hazardous Materials
Problem being Mitigated:	Lack of trained personnel, equipment needs.
Action or Project	
Applicable Goal Statement:	Enhance and strengthen emergency services preparedness and response by the development and linking emergency services with hazard mitigation programs.
Action/Project Number:	City of Ash Grove 5
Name of Action or Project:	Ash Grove Training
Mitigation Category:	Emergency Services
Action or Project Description:	Action 1: Develop a local Community Emergency Response Team (CERT) for Ash Grove and promote the CERT concept. Action 2: Work with neighborhood groups, non-profit organizations, business and industry to establish response teams. Action 3: Improve the efficiency, timing and effectiveness of response and recover efforts during times of disaster. Action 4: Improve communication capabilities with all Ash Grove municipal departments and emergency services departments. Improve communication capabilities throughout the region and mutual aid area. Action 5: Establish a mobile Emergency Communications Center/Command Post with necessary communication equipment.
Estimated Cost:	$75,000
Benefits:	Protect life and property
Plan for Implementation	
Responsible Organization/Department:	City of Ash Grove-EMD
Supporting Organization/Department:	None
Action/Project Priority:	Medium
Timeline for Completion:	1-5 Years
Potential Fund Sources:	Internal, HMPG Grant Funding, Private Funding
Local Planning Mechanisms to be Used in Implementation, if any:	None

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Progress Report	
Action Status:	New and On Going
Report of Progress:	Researching

Action Worksheet	
Name of Jurisdiction:	City of Ash Grove
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding
Problem being Mitigated:	Infrastructures issue due to stormwater and flooding.
Action or Project	
Applicable Goal Statement:	Reduce the potential damage caused by flooding likely to strike the local area by 50%.
Action/Project Number:	City of Ash Grove 6
Name of Action or Project:	Ash Grove Flooding
Mitigation Category:	Structure and Infrastructure projects
Action or Project Description:	Action 1: Identify and designate primary and secondary emergency snow routes critical for life safety and essential services. Develop and implement a comprehensive snow and ice control policy that prioritizes these routes, incorporating preventive maintenance strategies, pre-treatment protocols, and resource allocation plans to ensure continued accessibility during severe winter weather events. Action 2: Establish a resilient, interoperable interdepartmental communications system linking Ash Grove Emergency Management, Police Department, Fire Protection District, Public Works, and City Hall. This system will support coordinated planning, rapid information sharing, and unified response during emergencies, reducing the likelihood of communication breakdowns that can hinder effective mitigation and response efforts. Action 3: Develop and implement a debris management plan that outlines proactive strategies for debris clearance, staging, and disposal following disasters. This plan should include pre-identified temporary debris storage locations, contracts with debris removal vendors, and public education components. These efforts will minimize recovery time, reduce health and safety hazards, and lower long-term environmental and financial impacts. Action 4: Strengthen the operational resilience of city departments by identifying critical functions, infrastructure vulnerabilities, and staffing needs during emergencies. Implement cross-training, invest in backup systems and supplies, and develop continuity of operations plans (COOP) to ensure essential city services can be maintained or rapidly restored, reducing disruptions and protecting public welfare.
Estimated Cost:	$75,000
Benefits:	Reduce sanitary sewer overflows caused by flooding and water infiltration
Plan for Implementation	
Responsible Organization/Department:	City of Ash Grove-EMD
Supporting Organization/Department:	None

Action/Project Priority:	Medium
Timeline for Completion:	1-5 Years
Potential Fund Sources:	Internal, HMPG Grant Funding, Private Funding
Local Planning Mechanisms to be Used in Implementation, if any:	None
Progress Report	
Action Status:	New and On Going
Report of Progress:	Smoke testing and camera reviews of system are underway

Action Worksheet	
Name of Jurisdiction:	City of Ash Grove
Risk / Vulnerability	
Hazard(s) Addressed:	Extreme Temperatures
Problem being Mitigated:	Heath related illnesses and issued related to extreme heat are constant issues during the Greene County summers
Action or Project	
Applicable Goal Statement:	Reduce the City of Ash Grove's vulnerability to extreme heat by 50% over the next 1-3 Years.
Action/Project Number:	City of Ash Grove 7
Name of Action or Project:	Ash Grove Extreme Temperatures
Mitigation Category:	Prevention
Action or Project Description:	Action 1: Reduce vulnerability of population with increased risk to medical complications secondary to extreme temperatures. Action 2: Search and identify all local citizens that have an increased risk factor for medical complications. Action 3: Identify adequate locations to develop Community Shelters to be used during extreme heat and cooling centers, and similar emergencies. Action 4: Create a volunteer program that can assist in monitoring the vulnerable population identified, provide assistance with opening and monitoring shelters. Action 5: Consult with local office of the American Red Cross and other organizations to help research and organize shelter needs, and operational guidelines. Action 6: Support annual campaign advertisement for Extreme Temperatures awareness.
Estimated Cost:	$5,000
Benefits:	Increase life safety for medically compromised citizens
Plan for Implementation	
Responsible Organization/Department:	City of Ash Grove-EMD
Supporting Organization/Department:	None
Action/Project Priority:	High
Timeline for Completion:	1-3 Years
Potential Fund Sources:	Internal, HMPG Grant Funding, Private Funding
Local Planning Mechanisms to be Used in Implementation, if any:	None

APPENDIX B

Progress Report	
Action Status:	New
Report of Progress:	Researching

Action Worksheet	
Name of Jurisdiction:	City of Ash Grove
Risk / Vulnerability	
Hazard(s) Addressed:	Extreme Temperatures, Severe Winter Weather, Earthquakes, Sinkholes, Drought
Problem being Mitigated:	Infrastructure issues related to Ash Grove Public Works
Action or Project	
Applicable Goal Statement:	Reduce the City of Ash Grove's vulnerability to disasters by 50% over the next 5 years.
Action/Project Number:	City of Ash Grove 8
Name of Action or Project:	Ash Grove Public Works
Mitigation Category:	Infrastructure Improvements
Action or Project Description:	Action 1: Identify primary and secondary emergency snow routes to be maintained during sever weather conditions. Establish policy and procedures for maintaining these routes. Action 2: Establish an interdepartmental communications system for Ash Grove Emergency Management, Ash Grove Police Department, Ash Grove Fire Protection District, Ash Grove Public Works, and Ash Grove City Hall. Action 3: Enhance strategies for post-disaster debris management. Action 4: Increase the ability of city staff to maintain operative during emergencies.
Estimated Cost:	$5,000
Benefits:	Reduce risk to personnel and citizens and decrease recovery time.
Plan for Implementation	
Responsible Organization/Department:	City of Ash Grove-EMD
Supporting Organization/Department:	None
Action/Project Priority:	Medium
Timeline for Completion:	1-3 Years
Potential Fund Sources:	Internal, HMPG Grant Funding, Private Funding
Local Planning Mechanisms to be Used in Implementation, if any:	None
Progress Report	
Action Status:	New
Report of Progress:	Researching

Action Worksheet	
Name of Jurisdiction:	City of Ash Grove
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding
Problem being Mitigated:	Development in floodplain areas
Action or Project	
Applicable Goal Statement:	Protect the health, safety, and welfare of residents.
Action/Project Number:	City of Ash Grove 9
Name of Action or Project:	NFIP Participation
Mitigation Category:	Prevention
Action or Project Description:	Action: Enforce floodplain management ordinances, regulate new construction in SFHA and work with residents to identify flood prone areas.
Estimated Cost:	$25,000-$50,000
Benefits:	Reduce development in SFHA, protect floodplains
Plan for Implementation	
Responsible Organization/Department:	City of Ash Grove-EMD
Supporting Organization/Department:	None
Action/Project Priority:	High
Timeline for Completion:	1-3 Years
Potential Fund Sources:	Internal, HMPG Grant Funding, Private Funding
Local Planning Mechanisms to be Used in Implementation, if any:	Floodplain ordinances
Progress Report	
Action Status:	Ongoing
Report of Progress:	Continued efforts to prevent growth in these areas.

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	City of Ash Grove	
Action or Project		
Action/Project Number:	City of Ash Grove Goal 1	
Name of Action or Project:	City of Ash Grove Sirens	
Mitigation Category:	Structure and Infrastructure Projects; Prevention	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		3
E: Will the project have either a neutral or positive impact on the natural **Environment**?		Positive
Will historic structures be saved or protected?		0
Could it be implemented quickly?		3
STAPLEE SCORE		
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
MITIGATION EFFECTIVENESS SCORE		15
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		36

■ **High Priority (30+ points)**	☐ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by
(Name, Title, Phone Number) John Davis, EMD 417-751-2333

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	City of Ash Grove	
Action or Project		
Action/Project Number:	City of Ash Grove Goal 2	
Name of Action or Project:	City of Ash Grove Shelter	
Mitigation Category:	Emergency Services; Structure and Infrastructure	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		3
E: Will the project have either a neutral or positive impact on the natural **Environment**?		Positive
Will historic structures be saved or protected?		0
Could it be implemented quickly?		3
STAPLEE SCORE		
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
MITIGATION EFFECTIVENESS SCORE		
		36

■ **High Priority (30+ points)**	☐ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by
(Name, Title, Phone Number) John Davis, EMD 417-751-2333

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	City of Ash Grove	
Action or Project		
Action/Project Number:	City of Ash Grove Goal 3	
Name of Action or Project:	City of Ash Grove Education	
Mitigation Category:	Education; Outreach	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		3
E: Will the project have either a neutral or positive impact on the natural **Environment**?		Positive
Will historic structures be saved or protected?		0
Could it be implemented quickly?		3
	STAPLEE SCORE	21
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
	MITIGATION EFFECTIVENESS SCORE	15
	TOTAL SCORE (STAPLEE + Mitigation Effectiveness)	36

■ **High Priority (30+ points)**	☐ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by
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APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	City of Ash Grove	
Action or Project		
Action/Project Number:	City of Ash Grove Goal 4	
Name of Action or Project:	City of Ash Gove Human Caused Vulnerability	
Mitigation Category:	Structure and Infrastructure	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		3
E: Will the project have either a neutral or positive impact on the natural **Environment**?		Positive
Will historic structures be saved or protected?		0
Could it be implemented quickly?		3
	STAPLEE SCORE	
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
	MITIGATION EFFECTIVENESS SCORE	
	TOTAL SCORE (STAPLEE + Mitigation Effectiveness)	36

■ **High Priority (30+ points)**	☐ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by
(Name, Title, Phone Number) John Davis, EMD 417-751-2333

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	City of Ash Grove	
Action or Project		
Action/Project Number:	City of Ash Grove Goal 5	
Name of Action or Project:	City of Ash Grove Training	
Mitigation Category:	Emergency Services	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		3
E: Will the project have either a neutral or positive impact on the natural **Environment**?		Positive
Will historic structures be saved or protected?		0
Could it be implemented quickly?		3
STAPLEE SCORE		
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
MITIGATION EFFECTIVENESS SCORE		
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		36

■ **High Priority (30+ points)**	☐ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by
(Name, Title, Phone Number) John Davis, EMD 417-751-2333

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	City of Ash Grove	
Action or Project		
Action/Project Number:	City of Ash Grove Goal 6	
Name of Action or Project:	City of Ash Grove Flooding	
Mitigation Category:	Structure and Infrastructure projects	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		3
E: Will the project have either a neutral or positive impact on the natural **Environment**?		Positive
Will historic structures be saved or protected?		0
Could it be implemented quickly?		3
STAPLEE SCORE		
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
MITIGATION EFFECTIVENESS SCORE		
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		36

■ **High Priority (30+ points)**	☐ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by
(Name, Title, Phone Number) John Davis, EMD 417-751-2333

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	City of Ash Grove	
Action or Project		
Action/Project Number:	City of Ash Grove Goal 7	
Name of Action or Project:	City of Ash Grove Heat	
Mitigation Category:	Prevention	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		3
E: Will the project have either a neutral or positive impact on the natural **Environment**?		Positive
Will historic structures be saved or protected?		0
Could it be implemented quickly?		3
STAPLEE SCORE		
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
MITIGATION EFFECTIVENESS SCORE		
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		36

☐ **High Priority (30+ points)**	☐ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by
(Name, Title, Phone Number) John Davis, EMD 417-751-2333

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	City of Ash Grove	
Action or Project		
Action/Project Number:	City of Ash Grove Goal 8	
Name of Action or Project:	City of Ash Grove Public Works	
Mitigation Category:	Infrastructure Improvements	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		3
E: Will the project have either a neutral or positive impact on the natural **Environment**?		Positive
Will historic structures be saved or protected?		0
Could it be implemented quickly?		3
STAPLEE SCORE		
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
MITIGATION EFFECTIVENESS SCORE		
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		36

☐ **High Priority (30+ points)**	☐ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by
(Name, Title, Phone Number) John Davis, EMD 417-751-2333

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	City of Ash Grove	
Action or Project		
Action/Project Number:	City of Ash Grove Goal 9	
Name of Action or Project:	City of Ash Grove NFIP Participation	
Mitigation Category:	Prevention	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		3
E: Will the project have either a neutral or positive impact on the natural **Environment**?		Positive
Will historic structures be saved or protected?		0
Could it be implemented quickly?		3
STAPLEE SCORE		
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
MITIGATION EFFECTIVENESS SCORE		
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		36

■ **High Priority (30+ points)**	☐ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by
(Name, Title, Phone Number) John Davis, EMD 417-751-2333

Action Worksheet	
Name of Jurisdiction:	City of Battlefield
Risk / Vulnerability	
Hazard(s) Addressed:	Severe Thunderstorms, Severe Winter Weather, Tornado (Secondary), Extreme Temperatures (Secondary to heat related power loss), Earthquakes (Secondary), Drought
Problem being Mitigated:	Lack of backup power at critical facilities
Action or Project	
Applicable Goal Statement:	Back up power generators
Action/Project Number:	COB 001
Name of Action or Project:	Battlefield Critical Facilities Generators
Mitigation Category:	Prevention; Multiple Hazard Protection, Critical facilities Projects;
Action or Project Description:	Install backup generators for critical facilities Battlefield Police department and Battlefield City Hall.
Estimated Cost:	$200,000
Benefits:	Provide operational control before and during an event.
Plan for Implementation	
Responsible Organization/Department:	City of Battlefield EMD
Supporting Organization/Department:	N/A
Action/Project Priority:	High
Timeline for Completion:	3-5 Years
Potential Fund Sources:	Internal operational Funding, HMPG Grant Funding
Local Planning Mechanisms to be Used in Implementation, if any:	None
Progress Report	
Action Status:	Not Started
Report of Progress:	Not Budgeted, Researching grant funding opportunities

Action Worksheet	
Name of Jurisdiction:	City of Battlefield
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Dam Failure, Sinkholes, Tornado, Severe Thunderstorms, Drought, Severe Winter Weather
Problem being Mitigated:	Lack of trained personnel, equipment needs
Action or Project	
Applicable Goal Statement:	Enhance & Strengthen emergency services preparedness and response
Action/Project Number:	COB 002
Name of Action or Project:	Training of personnel effectiveness in response and recovery efforts during times of disaster
Mitigation Category:	Prevention; Multiple Hazard Protection
Action or Project Description:	In the event of disaster ALL staff understand their role. Before During and After an event, Fundamentals of NIMS, Credential Staff in IS-100.c, IS-200.c, IS-700.b, IS-800.d With local officials having this information, it will allow them to better educate the public before, during and after disaster on ways.
Estimated Cost:	$2,500-5000
Benefits:	Provide operational control before and during an event.
Plan for Implementation	
Responsible Organization/Department:	City of Battlefield EMD
Supporting Organization/Department:	N/A
Action/Project Priority:	High
Timeline for Completion:	3-5 Years
Potential Fund Sources:	Internal operational Funding, HMPG Grant, HMA Grant, Local Grants (researching)
Local Planning Mechanisms to be Used in Implementation, if any:	None
Progress Report	
Action Status:	Not Started
Report of Progress:	Not Budgeted, Researching grant funding opportunities

Action Worksheet	
Name of Jurisdiction:	City of Battlefield
Risk / Vulnerability	
Hazard(s) Addressed:	Severe Weather, Tornados
Problem being Mitigated:	Lack of shelters in Battlefield during inclement weather
Action or Project	
Applicable Goal Statement:	Improve community readiness for inclement weather
Action/Project Number:	COB 003
Name of Action or Project:	Constructing residential shelters in tornado-prone areas
Mitigation Category:	Prevention; Severe wind, Tornados
Action or Project Description:	Educating community of funding opportunities are available for individuals wishing to build a residential safe room. Having education on different safety measures before a tornado can reduce the risk of loss of life to citizens. Shelters are one option but proper education on the safest place in existing homes is also important.
Estimated Cost:	$10,000 each
Benefits:	Reduce loss of life during inclement weather
Plan for Implementation	
Responsible Organization/Department:	City of Battlefield EMD
Supporting Organization/Department:	N/A
Action/Project Priority:	High
Timeline for Completion:	5-10
Potential Fund Sources:	Grant Programs, HMPG Grants, HMA Grants, Local Funding, Taxes, Local Grants (researching)
Local Planning Mechanisms to be Used in Implementation, if any:	None
Progress Report	
Action Status:	Not Started
Report of Progress:	Not Budgeted, researching Funding opportunities

Action Worksheet	
Name of Jurisdiction:	City of Battlefield
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Severe Thunderstorms,
Problem being Mitigated:	Local flooding
Action or Project	
Applicable Goal Statement:	Enhance stormwater management by improving flood control programs
Action/Project Number:	COB 004
Name of Action or Project:	Battlefield flood control measures
Mitigation Category:	Prevention, Infrastructure
Action or Project Description:	Improve storm water infrastructure in Cloverdale estates and gold Subdivisions. 1. Research ways to improve this area 2. 2. Conduct a land study 3. Purchase any land required for improvements
Estimated Cost:	$1,000,000
Benefits:	Reduce risk of flooding in Battlefield. Improve control of storm water run off
Plan for Implementation	
Responsible Organization/Department:	City of Battlefield EMD
Supporting Organization/Department:	N/A
Action/Project Priority:	High
Timeline for Completion:	5-10
Potential Fund Sources:	County Tax, local funding, HMA and HMPG Grant Programs
Local Planning Mechanisms to be Used in Implementation, if any:	None
Progress Report	
Action Status:	Starting & continuing
Report of Progress:	Awarded 604b grant, developing strategies to remedy

Action Worksheet	
Name of Jurisdiction:	City of Battlefield
Risk / Vulnerability	
Hazard(s) Addressed:	Dam failure and sinkholes
Problem being Mitigated:	Sinkholes and dam failures pose significant threats to public safety, infrastructure, and community resilience. Sudden ground collapses caused by sinkholes can destroy homes, disrupt transportation networks, and endanger lives with little to no warning. Similarly, dam failures can result in catastrophic flooding, leading to widespread property damage, environmental harm, displacement of residents, and loss of life. Vulnerable populations — including the elderly, people with medical conditions, and low-income families — are especially at risk during these emergencies due to limited mobility, access to resources, or awareness of early warning signs. Without proactive education, preparedness, and response systems, the impacts of these hazards can be severe and far-reaching.
Action or Project	
Applicable Goal Statement:	The goal of this mitigation plan is to reduce the risks associated with dam failure and sinkholes by providing public awareness, enhancing preparedness, and ensuring community resilience. This will include access to resources and services that protect vulnerable populations during extreme weather events.
Action/Project Number:	COB 005
Name of Action or Project:	Public Education to Reduce Harm
Mitigation Category:	Education and Outreach
Action or Project Description:	• Launch a comprehensive public awareness campaign focused on educating the community about the risks of sinkholes and dam failure. This will include informational materials, public service announcements, and a strong social media outreach strategy. • Develop a real-time social media and communication campaign to provide timely updates during potential or active sinkhole incidents or dam-related emergencies, including evacuation alerts, road closures, and safety guidance. • Implement targeted preparedness programs to protect vulnerable populations—including the elderly, individuals with medical conditions, and low-income families—who may be disproportionately affected by sudden sinkhole activity or dam failure. • Partner with local emergency management, health, and social service organizations to create a registry of individuals who may require evacuation assistance or other support during a dam breach or sinkhole emergency. • Establish emergency shelters and staging areas, pre-stocked with essential supplies (clean water, food, blankets, first-aid kits), that can be rapidly activated and accessed in the event of dam failure or sinkhole-induced displacement. Train and mobilize community response teams to check in on at-risk residents via phone or in-

	person visits during and after such events, ensuring their safety and access to critical services..
Estimated Cost:	5,000 dollars
Benefits:	Increased public awareness can lead to earlier recognition of the warning signs of dam failure or sinkhole formation, allowing for quicker response and evacuation, ultimately reducing injuries, property damage, and loss of life. Enhanced preparedness will foster a culture of resilience, where community members understand the risks, know evacuation routes, and are equipped to respond rapidly in the event of sudden ground collapse or dam breach. Targeted programs will focus on the most vulnerable populations — those living near high-risk dams or in areas prone to ground instability — ensuring they receive timely alerts, education, and access to essential resources and emergency support.
Plan for Implementation	
Responsible Organization/Department:	Public Works
Supporting Organization/Department:	National Weather Service
Action/Project Priority:	Medium
Timeline for Completion:	12 months
Potential Fund Sources:	N/a
Local Planning Mechanisms to be Used in Implementation, if any:	None
Progress Report	
Action Status:	New
Report of Progress:	New

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	City of Battlefield	
Action or Project		
Action/Project Number:	COB 001	
Name of Action or Project:	Battlefield Critical Facilities Generators	
Mitigation Category:	Prevention; Multiple Hazard Protection, Critical facilities projects	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		2
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		2
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		3
E: Will the project have either a neutral or positive impact on the natural **Environment**?		3
Will historic structures be saved or protected?		0
Could it be implemented quickly?		2
STAPLEE SCORE		21
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	7
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	7
MITIGATION EFFECTIVENESS SCORE		14
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		35

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	City of Battlefield	
Action or Project		
Action/Project Number:	COB 002	
Name of Action or Project:	Lack of trained personnel, equipment needs	
Mitigation Category:	Prevention; Multiple Hazard Protection	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		2
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		2
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		3
E: Will the project have either a neutral or positive impact on the natural **Environment**?		3
Will historic structures be saved or protected?		0
Could it be implemented quickly?		2
STAPLEE SCORE		21
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	7
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	7
MITIGATION EFFECTIVENESS SCORE		14
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		35

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	City of Battlefield	
Action or Project		
Action/Project Number:	COB 003	
Name of Action or Project:	Improve community readiness for inclement weather	
Mitigation Category:	Prevention; Severe wind, Tornados	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		2
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		2
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		2
E: Will the project have either a neutral or positive impact on the natural **Environment**?		2
Will historic structures be saved or protected?		0
Could it be implemented quickly?		0
STAPLEE SCORE		17
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	5
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
MITIGATION EFFECTIVENESS SCORE		10
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		27

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	City of Battlefield	
Action or Project		
Action/Project Number:	COB 004	
Name of Action or Project:	Improve community readiness for inclement weather	
Mitigation Category:	Prevention; Severe wind, Tornados	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		2
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		2
E: Will the project have either a neutral or positive impact on the natural **Environment**?		3
Will historic structures be saved or protected?		0
Could it be implemented quickly?		0
STAPLEE SCORE		19
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	5
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
MITIGATION EFFECTIVENESS SCORE		10
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		29

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	City of Battlefield	
Action or Project		
Action/Project Number:	COB 005	
Name of Action or Project:	Public Education to Reduce Harm	
Mitigation Category:	Education and Outreach	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		2
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		3
E: Will the project have either a neutral or positive impact on the natural **Environment**?		3
Will historic structures be saved or protected?		0
Could it be implemented quickly?		3
STAPLEE SCORE		23
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	7
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	7
MITIGATION EFFECTIVENESS SCORE		14
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		37

Action Worksheet	
Name of Jurisdiction:	City of Fair Grove
Risk / Vulnerability	
Hazard(s) Addressed:	Tornado and/or Severe Thunderstorm (With winds excess 70 mph)
Problem being Mitigated:	The primary problem that a tornado siren mitigates is the risk of injury or loss of life during severe weather events specifically tornadoes. Tornadoes can develop rapidly often with little warning. This creates an urgent threat to public safety. Fair Grove historically has been prone to tornado activity making it essential to have a healthy and effective alert system in place.
Action or Project	
Applicable Goal Statement:	The goal of updating and implementing a tornado siren system in our community is to enhance public safety by providing timely and effective alerts for imminent tornado threats. By establishing a reliable and audible warning system we aim to: 1. Increase awareness of tornado warnings among residents and visitors ensuring that individuals receive immediate notification of severe weather events. 2. Reduce the risk of injury and loss of life by providing residents with critical time to seek safe shelter during tornado occurrences. 3. Promote community preparedness by educating citizens on appropriate responses to tornado sirens and developing a culture of safety and readiness 4. Ensure accessibility and inclusivity of warnings reaching all members of the community regardless of their access to technology or media.
Action/Project Number:	FG-1
Name of Action or Project:	Tornado Siren Replacement
Mitigation Category:	Prevention and outreach
Action or Project Description:	Replace siren at Delaina as the siren is showing age of wear and is in danger of not operating. The pole also needs to be replaced as it is showing signs of aging and weakening due to outdoor weather elements.
Estimated Cost:	The estimated cost of replacement is $15-20 thousand.
Benefits:	The replacement of the siren will ensure the ongoing increase of awareness to the community in the event of a tornado warning or severe weather incident. This will reduce the risk of injury or loss of life by providing residents with critical time to seek safe shelter during these occurrences. There is no value that can replace the loss of life that this would save.
Plan for Implementation	
Responsible Organization/Department:	Fair Grove Office of Emergency Management Director
Supporting Organization/Department:	Fair Grove Public Works

Action/Project Priority:	Include the STAPLEE score and Priority (H, M, L)
Timeline for Completion:	How many months/years to complete.
Potential Fund Sources:	HMPG Funding, HMA Grants, Local Funds, Local Grants (researching)
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	Continuing Not Started
Report of Progress:	Financial constraints is the roadblock on this project.

Action Worksheet	
Name of Jurisdiction:	City of Fair Grove
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding
Problem being Mitigated:	Main Street consistently floods during heavy rain resulting in unsafe conditions/disruptions/and economic losses. The elevation of the road is a necessary step to protect residents and businesses.
Action or Project	
Applicable Goal Statement:	Create a plan to raise the level of Main Street at Saddle Club to prevent flooding and road closures within the City of Fair Grove
Action/Project Number:	FG-2
Name of Action or Project:	Raising Main Street at Saddle Club Road
Mitigation Category:	Prevention; Infrastructure Projects; Natural Systems Protection; Emergency Services
Action or Project Description:	Raise the level of Main Street at Saddle Club Road by a height designated by engineers based on hydrological data and flood frequency. Ensure the new road elevation connects smoothly with surrounding streets to maintain traffic flow. Upgrade existing storm water drainage systems adjacent to Main Street. Install additional drainage features to manage rainfall runoff effective. Implement green infrastructure practices such as a rain garden to absorb storm water and reduce runoff which may also help with CC Highway as well.
Estimated Cost:	20,000
Benefits:	This will open Main Street at Saddle Club Road which is one of the main arteries into the city from the south. Along with opening the roadway if we can redirect or absorb this runoff it may also assist with flooding the frequents State Highway CC which is a main artery to the city from the west. The financial impact is huge and will also assist in life saving measures that make the impact of this plan an unmeasurable dollar amount.
Plan for Implementation	
Responsible Organization/Department:	Public Works
Supporting Organization/Department:	Emergency Management
Action/Project Priority:	Include the STAPLEE score and Priority (H, M, L)
Timeline for Completion:	Unknown
Potential Fund Sources:	Grants as well as Road Tax or General Revenue
Progress Report	
Action Status:	New
Report of Progress:	

Action Worksheet	
Name of Jurisdiction:	City of Fair Grove
Risk / Vulnerability	
Hazard(s) Addressed:	Earthquake, sinkholes
Problem being Mitigated:	This plan is aims to enhance the public awareness and understanding of earthquake and sinkhole hazards, preparedness, and response strategies to reduce vulnerability and increase resilience in our community
Action or Project	
Applicable Goal Statement:	The goal of updating and implementing and educational plan in regards to earthquakes is to: 1. Increase community awareness of earthquake and sinkhole risks. 2. To provide residents with the knowledge of how to prepare for an earthquake 3. Provide residents with the knowledge to safely interact with sinkholes 4. To develop effective communication channels for disseminating earthquake preparedness education. 5. To build community resilience through education.
Action/Project Number:	FG-3
Name of Action or Project:	Earthquake and Sinkhole Education
Mitigation Category:	Education and Outreach
Action or Project Description:	Utilize social media platforms to share safety tips, preparedness checklists, and earthquake facts. Create or share engaging content such as videos and infographics.
Estimated Cost:	The estimated cost for this project is relatively minimal, 5,000
Benefits:	The educational effort will provide the community with ideas that they may choose to follow that will help reduce the potential impacts of loss of life and property. Having good mitigation strategies to reduce harm and loss, it makes response efforts easier.
Plan for Implementation	
Responsible Organization/Department:	Fair Grove Office of Emergency Management Director
Supporting Organization/Department:	US Geological Survey
Action/Project Priority:	STAPLEE Score 29 (Medium Priority)
Timeline for Completion:	12 months
Potential Fund Sources:	Local budget, HMPG Grants, HMA Grants, Local Grants (Researching)
Progress Report	
Action Status:	New
Report of Progress:	New

Action Worksheet	
Name of Jurisdiction:	City of Fair Grove
Risk / Vulnerability	
Hazard(s) Addressed:	Extreme Temperatures, Severe Winter Weather, drought (secondary effect)
Problem being Mitigated:	Extreme temperatures, both heatwaves and cold snaps, pose significant risks to public health, safety and infrastructure. High temperatures can lead to heat-related illnesses, intensify existing health conditions, increase energy demand, and strain local resources. Extremely cold temperatures can result in hypothermia, frostbite, and infrastructure failures like waterline breaks and power outages.
Action or Project	
Applicable Goal Statement:	The goal of this mitigation plan is to reduce the risks associated with extreme temperatures by providing public awareness, enhancing preparedness, and ensuring community resilience. This will include access to resources and services that protect vulnerable populations during extreme weather events.
Action/Project Number:	FG-4
Name of Action or Project:	Educate Extreme Temperatures
Mitigation Category:	Education and Outreach
Action or Project Description:	Launch a comprehensive public awareness campaign focused on educating the community about the risks about extreme temperatures. This will include informational materials, and social media outreach. 1. Develop a social media campaign for real-time updates during extreme temperature events, including tips on staying safe and connected to local services. 2. Implement targeted programs to protect vulnerable populations including: elderly, those with medical conditions, and low income families from the dangers of extreme temperatures. 3. Partner with local health and social service organizations to create a registry of individuals who may require assistance during extreme temperature events. 4. Establish cooling and warming centers equipped with essential supplies (water, blankets, medical kits) that can be rapidly deployed during extreme heat and cold events. 5. Train and educate community to check in on at-risk residents via phone calls or home visits during extreme temperature events.
Estimated Cost:	The estimated cost for this project is relatively minimal, 5,000

Benefits:	Increased public awareness can lead to early recognition and response to heat-related illnesses or cold weather injuries, reducing hospital visits and fatalities. Enhanced preparedness will foster a culture of resilience, where community members are better equipped or prepared to handle extreme temperature events. Targeted programs will directly address the needs of the most vulnerable community members, ensuring they have access to vital information, resources, and support during extreme temperatures.
Plan for Implementation	
Responsible Organization/Department:	Fair Grove Office of Emergency Management Director
Supporting Organization/Department:	National Weather Service
Action/Project Priority:	STAPLEE Score 30 (High Priority)
Timeline for Completion:	12 months
Potential Fund Sources:	Local funding, Local grants (Researching), HMA and HMPG Grant Opportunities
Progress Report	
Action Status:	New
Report of Progress:	New

Action Worksheet	
Name of Jurisdiction:	Fair Grove
Risk / Vulnerability	
Hazard(s) Addressed:	Communicable Disease
Problem being Mitigated:	Communicable diseases represent a significant public health threat that can cause illness, death, and economic disruption. A lack of awareness and understanding of these diseases and their transmission modes can speed the spread within communities. Education is crucial to empowering individuals to take preventative actions and reduce fear of the unknown which can reduce the spread of such diseases.
Action or Project	
Applicable Goal Statement:	The goal of this plan is to educate the community about communicable diseases, their transmission and preventive strategies. By increasing awareness, the plan is designed to reduce anxiety and enhance community resilience against future outbreaks.
Action/Project Number:	FG-5
Name of Action or Project:	Fear No More
Mitigation Category:	Education and Outreach
Action or Project Description:	Develop a comprehensive educational outreach program targeting various segments of the community to raise awareness of communicable diseases. This may be done by way of a digital platform to disseminate information about communicable diseases and effective preventative measures using various digital channels.
Estimated Cost:	The cost of the program could be relatively low with computer and internet unless there is a creation of material which could run into a few thousand dollars.
Benefits:	This plan aims to significantly increase the community's understanding of communicable diseases and prevention strategies, resulting in informed decision making. Educated individuals are more likely to adopt healthier lifestyles including proper hygiene, awareness of symptoms, etc. leading to a reduction in the spread of the disease. Increasing health literacy contributes to a more resilient community which is better equipped to respond to future outbreaks.
Plan for Implementation	
Responsible Organization/Department:	Fair Grove Emergency Management
Supporting Organization/Department:	Greene County Health Department
Action/Project Priority:	28 (Medium)
Timeline for Completion:	12 months
Potential Fund Sources:	General Fund, HMPG Grants, HMA Grants, Taxes, Local Grants (researching)

APPENDIX B

Progress Report	
Action Status:	New
Report of Progress:	New

APPENDIX B

Action Worksheet	
Name of Jurisdiction:	Fair Grove
Risk / Vulnerability	
Hazard(s) Addressed:	Urban Fire, Wildfire
Problem being Mitigated:	Urban and wild fires pose a significant threat to life, property, and community safety, particularly in densely populated areas. These fires can result from various causes, including electrical failures, cooking accidents, natural like lightning and arson. A lack of awareness and education about fire risks, safety measures, and effective response strategies can increase the impact of these incidents
Action or Project	
Applicable Goal Statement:	The goal of this mitigation plan is to educate the community about fire prevention, safety practices, and emergency response procedures. By increasing awareness and preparedness, the plan aims to reduce the incidence and severity of urban fires and enhance overall community resilience.
Action/Project Number:	FG-6
Name of Action or Project:	Remember the Ember
Mitigation Category:	Education and Outreach
Action or Project Description:	Digital Awareness Campaign Launch a digital campaign to spread vital information about fire safety and prevention across various online platforms. Use social media platforms to disseminate fire safety tips, share success stories, promote monthly safety challenges, and engage the community through quizzes and polls. Develop a digital campaign service that sends regular fire safety tips, seasonal reminders (e.g., using heaters safely in winter), and updates on local fire incidents or hazards.
Estimated Cost:	The cost of the program could be relatively low with computer and internet unless there is a creation of material which could run into a few thousand dollars.
Benefits:	The plan aims to significantly improve the community's understanding of fire risks and safety measures, leading to smarter choices that can prevent fires. Educated individuals are more likely to implement fire safety practices, such as installing smoke detectors, creating family escape plans, and conducting regular fire drills. By fostering a culture of prevention, the plan can help decrease the occurrences of fires and associated injuries or fatalities.

Plan for Implementation	
Responsible Organization/Department:	Fair Grove Fire Protection District
Supporting Organization/Department:	Fair Grove Office of Emergency Management
Action/Project Priority:	38 (High)
Timeline for Completion:	12 months
Potential Fund Sources:	General Fund, HMPG Grants, HMA Grants, Local Grants (researching)
Progress Report	
Action Status:	New
Report of Progress:	New

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	City of Fair Grove	
Action or Project		
Action/Project Number:	FG-1	
Name of Action or Project:	Tornado Siren Replacement	
Mitigation Category:	Prevention and Outreach	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		0
E: Is it **Economically** beneficial?		1
E: Will the project have either a neutral or positive impact on the natural **Environment**?		0
Will historic structures be saved or protected?		0
Could it be implemented quickly?		3
	STAPLEE SCORE	16
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
	MITIGATION EFFECTIVENESS SCORE	15
	TOTAL SCORE (STAPLEE + Mitigation Effectiveness)	31

[X] **High Priority (30+ points)**	[ ] **Medium Priority (25 - 29 points)**	[ ] **Low Priority (<25 points)**

Completed by
(Name, Title, Phone Number) Greg Porter/OEM Director/417-759-2353

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	City of Fair Grove	
Action or Project		
Action/Project Number:	FG-2	
Name of Action or Project:	Raising Main Street at Saddle Club	
Mitigation Category:	Prevention/Infrastructure Project/Natural Systems Protection/Emergency Services	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		2
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		2
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		0
E: Is it **Economically** beneficial?		3
E: Will the project have either a neutral or positive impact on the natural **Environment**?		2
Will historic structures be saved or protected?		2
Could it be implemented quickly?		1
	STAPLEE SCORE	18
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	10
	MITIGATION EFFECTIVENESS SCORE	20
	TOTAL SCORE (STAPLEE + Mitigation Effectiveness)	38

☒ **High Priority (30+ points)**	☐ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by
(Name, Title, Phone Number) Greg Porter/OEM Director/417-759-2353

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	City of Fair Grove	
Action or Project		
Action/Project Number:	FG-3	
Name of Action or Project:	Education Earthquake	
Mitigation Category:	Education and Outreach	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		2
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		1
E: Is it **Economically** beneficial?		2
E: Will the project have either a neutral or positive impact on the natural **Environment**?		0
Will historic structures be saved or protected?		2
Could it be implemented quickly?		3
STAPLEE SCORE		19
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	5
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
MITIGATION EFFECTIVENESS SCORE		10
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		29

☐ **High Priority (30+ points)**	☒ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by (Name, Title, Phone Number): Greg Porter, Director of Emergency Management (417) 759-2353

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	City of Fair Grove	
Action or Project		
Action/Project Number:	FG-4	
Name of Action or Project:	Education Extreme Temperatures	
Mitigation Category:	Education and Outreach	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		2
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		1
E: Is it **Economically** beneficial?		2
E: Will the project have either a neutral or positive impact on the natural **Environment**?		0
Will historic structures be saved or protected?		0
Could it be implemented quickly?		3
	STAPLEE SCORE	17
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	8
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
	MITIGATION EFFECTIVENESS SCORE	13
	TOTAL SCORE (STAPLEE + Mitigation Effectiveness)	30

☒ **High Priority (30+ points)**	☒ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by (Name, Title, Phone Number): Greg Porter, Director of Emergency Management (417) 759-2353

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	Fair Grove	
Action or Project		
Action/Project Number:	FG-5	
Name of Action or Project:	Fear No More	
Mitigation Category:	Education Outreach	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		2
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		2
L: Is there **Legal** authority to implement?		1
E: Is it **Economically** beneficial?		2
E: Will the project have either a neutral or positive impact on the natural **Environment**?		0
Will historic structures be saved or protected?		0
Could it be implemented quickly?		3
	STAPLEE SCORE	16
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	7
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
	MITIGATION EFFECTIVENESS SCORE	12
	TOTAL SCORE (STAPLEE + Mitigation Effectiveness)	28

☐ **High Priority (30+ points)**		**X**	**Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by (Name, Title, Phone Number) Greg Porter/ Director of Emergency Management/ 417-759-2353

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	Fair Grove	
Action or Project		
Action/Project Number:	FG-6	
Name of Action or Project:	Remember the Ember	
Mitigation Category:	Education Outreach	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		1
E: Is it **Economically** beneficial?		3
E: Will the project have either a neutral or positive impact on the natural **Environment**?		2
Will historic structures be saved or protected?		2
Could it be implemented quickly?		3
	STAPLEE SCORE	23
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	8
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	7
	MITIGATION EFFECTIVENESS SCORE	15
	TOTAL SCORE (STAPLEE + Mitigation Effectiveness)	38

	[X] **High Priority (30+ points)**			**Medium Priority (25 - 29 points)**	[ ] **Low Priority (<25 points)**

Completed by (Name, Title, Phone Number): Greg Porter/ Director of Emergency Management/ 417-759-2353

Action Worksheet	
Name of Jurisdiction:	City of Republic
Risk / Vulnerability	
Hazard(s) Addressed:	Dam Failure, Earthquakes, Sinkholes, severe thunderstorms (Secondary flooding), Severe Winter Weather (Secondary to snow and ice), Tornado (Secondary effect of redirected traffic)
Problem being Mitigated:	Currently traffic flow on Highway ZZ can be dangerous. There are multiple traffic accidents that occur at all times of the days.
Action or Project	
Applicable Goal Statement:	Prevent accidents or loss of life at multiple intersection by improving intersection traffic flow. First goal is to improve Hines & ZZ.
Action/Project Number:	City of Republic Goal 1
Name of Action or Project:	City of Republic MO ZZ
Mitigation Category:	Prevention and Improvement
Action or Project Description:	Improve roadway safety and reduce traffic-related hazards at Hines St and MO ZZ by implementing a comprehensive traffic mitigation strategy that includes the installation of clear and durable signage, traffic control devices, and civil engineering improvements. This may involve redesigning intersections, improving sightlines, adding guardrails or traffic-calming measures, and enhancing pedestrian crossings. By proactively redirecting traffic flow and modifying hazardous roadway conditions, the city can reduce the likelihood of accidents during both normal and emergency conditions, improve access for emergency vehicles, and protect vulnerable road users. These measures not only enhance everyday transportation safety but also support emergency evacuation, disaster response, and long-term community resilience.
Estimated Cost:	$350,000 – Engineering Design and Permitting $2,500,000 – Construction of Roadway Improvement
Benefits:	Improve traffic congestion at Hines St and MO ZZ
Plan for Implementation	
Responsible Organization/Department:	City of Republic – EMD
Supporting Organization/Department:	None
Action/Project Priority:	Medium
Timeline for Completion:	2 years
Potential Fund Sources:	HMA, HMPG Highway Safety (HS), SS4A Grants, Cost-Share, Capital Improvement; TBD
Local Planning Mechanisms to be Used in Implementation, if any:	None

APPENDIX B

Progress Report	
Action Status:	Continuing
Report of Progress:	We've recently posted a request for qualification, and have notified one engineering firm to provide a cost proposal for engineering consulting services. This action item is still ongoing.

Action Worksheet	
Name of Jurisdiction:	City of Republic
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Drought (Secondary effect to increasing dangers of flash flooding), Extreme Temperatures (Secondary effect to severe weather occurring at extreme temperature changes)
Problem being Mitigated:	Mitigating floodwaters over roadway by providing stormwater drainage.
Action or Project	
Applicable Goal Statement:	The goal of this project is to relieve flooding in the area of W. Logan Street.
Action/Project Number:	City of Republic Goal 2
Name of Action or Project:	Logan Street Mitigation
Mitigation Category:	Structure and Infrastructure Projects
Action or Project Description:	The project consists of adding stormwater infrastructure in the area of W. Logan Street to relieve flooding of roadways and residential properties. The project is located in a floodplain.
Estimated Cost:	$325,000
Benefits:	The project will prevent losses to private yards and structures. Additionally, it will prevent the ongoing damage to a City road due to significant erosion from overland flow.
Plan for Implementation	
Responsible Organization/Department:	The City of Republic BUILDS Department will be responsible for project management.
Supporting Organization/Department:	The City of Republic Finance Department will assist with financial related aspects.
Action/Project Priority:	High, 33
Timeline for Completion:	3 Years
Potential Fund Sources:	City of Republic Capital Improvement Money
Local Planning Mechanisms to be Used in Implementation, if any:	None
Progress Report	
Action Status:	Continuing Not Started
Report of Progress:	Preliminary plans and cost estimates have been prepared, but there has not been appropriate funding to implement the improvements. The City also replaced a culvert along the street in 2023.

Action Worksheet	
Name of Jurisdiction:	City of Republic
Risk / Vulnerability	
Hazard(s) Addressed:	Roadway damage due to flooding and limited emergency access during possible floods.
Problem being Mitigated:	Flood mitigation and prevention, potential loss or damaged of infrastructure, and provision for adequate emergency access. Iron Grain Lane storm culvert and street improvements. The reference street has at times been flooded over during heavy rainstorms as described by few city employees.
Action or Project	
Applicable Goal Statement:	Construct roadway and stormwater improvements
Action/Project Number:	City of Republic Goal 3
Name of Action or Project:	Iron Grain Lane Public Improvements
Mitigation Category:	Flood Prevention; Structure and Infrastructure Project; Emergency Services
Action or Project Description:	Iron Grain Ln will serve as the only access point to several multi-family residential apartments undergoing construction. The street and stormwater improvements will help provide sufficient road width for emergency access and will also provide infrastructure (storm culverts) designed to convey the stormwater runoff from various on-site and off-site properties to prevent roadway flooding.
Estimated Cost:	$15,000 – Engineering Design and Permitting $165,000 – Stormwater Improvements $275,000 – Roadway/ROW Improvements, i.e., widening, sidewalk; curb and gutter
Benefits:	Possible losses would be costs associated with road repairs after flooding and erosion; loss of life if emergency access is unavailable during road flooding conditions; prevention of upstream flooding issues (Republic Fire Station 2 is in close proximity upstream of the culvert).
Plan for Implementation	
Responsible Organization/Department:	BUILDS (Plan Development) and Public Works Department (Portion of Construction).
Supporting Organization/Department:	City of Republic
Action/Project Priority:	Schedule construction. Funding for the project must be assessed and approved by City Administration and then City Council. We currently have design plans for the improvement.
Timeline for Completion:	Proposed start could be as late as 2025 or 2026. Dependent on Public Works schedule/availability.
Potential Fund Sources:	Local Funds: Street and Stormwater
Progress Report	
Action Status:	Continuing in Progress

Report of Progress:	We've contracted an Engineering firm to design the improvements and prepare permit documents. We currently have a set of design plans for the improvement and will be evaluating source of funding, as well as Public Works Schedule closer to the end of this fiscal year (2024).

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	City of Republic	
Action or Project		
Action/Project Number:	City of Republic Goal 1	
Name of Action or Project:	City of Republic MO ZZ	
Mitigation Category:	Life safety and accident prevention	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		2
T: Is it **Technically** feasible and potentially successful?		2
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		2
P: Is it **Politically** acceptable?		2
L: Is there **Legal** authority to implement?		2
E: Is it **Economically** beneficial?		2
E: Will the project have either a neutral or positive impact on the natural **Environment**?		3
Will historic structures be saved or protected?		0
Could it be implemented quickly?		0
STAPLEE SCORE		15
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	6
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	6
MITIGATION EFFECTIVENESS SCORE		12
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		27

☐ **High Priority (30+ points)**	☒ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by
(Name, Title, Phone Number) Angel Falig, City Engineer (417) 732-3415

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	City of Republic	
Action or Project		
Action/Project Number:	City of Republic Goal 2	
Name of Action or Project:	Logan Street Mitigation	
Mitigation Category:	Structure and Infrastructure Projects	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		2
E: Will the project have either a neutral or positive impact on the natural **Environment**?		2
Will historic structures be saved or protected?		0
Could it be implemented quickly?		2
	STAPLEE SCORE	**21**
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	5
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	8
	MITIGATION EFFECTIVENESS SCORE	**12**
	TOTAL SCORE (STAPLEE + Mitigation Effectiveness)	**33**

☒ **High Priority (30+ points)**	☐ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by
(Name, Title, Phone Number) Stefani Fitzpatrick-Duncan, Engineer (E.I.), (417) 732-3423

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	City of Republic	
Action or Project		
Action/Project Number:	City of Republic Goal 3	
Name of Action or Project:	Iron Grain Lane Public Improvements	
Mitigation Category:	Flood Prevention; Structure and Infrastructure Project; Emergency Services	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		2
E: Will the project have either a neutral or positive impact on the natural **Environment**?		2
Will historic structures be saved or protected?		0
Could it be implemented quickly?		2
	STAPLEE SCORE	**21**
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	5
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	8
	MITIGATION EFFECTIVENESS SCORE	**12**
	TOTAL SCORE (STAPLEE + Mitigation Effectiveness)	**33**

☒ **High Priority (30+ points)**	☐ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by
(Name, Title, Phone Number) Stefani Fitzpatrick-Duncan, Engineer (E.I.), (417) 732-3423

Action Worksheet	
Name of Jurisdiction:	Springfield-Greene County 9-1-1
Risk / Vulnerability	
Hazard(s) Addressed:	Human Caused Hazards – Cyber and Sabotage
Problem being Mitigated:	The mitigation of risk of the 9-1-1 center being overwhelmed with calls from a Telephone Denial of Service (TDoS) attack and/or swatting attacks, leading to the need for emergency backup from neighboring jurisdictions to maintain critical emergency response operations and perform re-routing functions while the attack is ongoing and for recovery.
Action or Project	
Applicable Goal Statement:	To protect the lives and property of those individuals in and traveling throughout all of Greene County.
Action/Project Number:	Springfield-Greene County 9-1-1 #2025-5
Name of Action or Project:	Cyber and Sabotage
Mitigation Category:	Prevention / Response
Action or Project Description:	This project involves implementing a scalable emergency PSAP backup plan, including a group of neighboring jurisdictions that can assist our agency with emergency re-routes and can handle surges in calls and radio traffic without compromising emergency response operations with shared CAD data through a CAD-to-CAD interface.
Estimated Cost:	$200,000 CAD to CAD interfacing for neighboring PSAPs that can share in a call and radio traffic load during a cyber or sabotage attack to help maintain critical operations.
Benefits:	Ensuring uninterrupted 9-1-1 services and effective emergency response by maintaining adequate interoperability and CAD interfacing during surges in calls and radio traffic.
Plan for Implementation	
Responsible Organization/Department:	Springfield-Greene County 9-1-1
Supporting Organization/Department:	Neighboring PSAP (JASCO, Lawrence Co 9-1-1, Christian Co 9-1-1, Mercy Communications, and Cox Communications for interfacing)
Action/Project Priority:	High
Timeline for Completion:	1–3 Years
Potential Fund Sources:	Local Funds, Budget, Grants
Local Planning Mechanisms to be Used in Implementation, if any:	The Continuity of Operations Plan (COOP) which will be updated through collaboration with OEM.
Progress Report	
Action Status:	New
Report of Progress:	Conceptual at this time.

Action Worksheet	
Name of Jurisdiction:	Springfield-Greene County 9-1-1
Risk / Vulnerability	
Hazard(s) Addressed:	Human Caused Hazards – Temporary Employment / Emergency Staffing
Problem being Mitigated:	The mitigation of risk of the 9-1-1 center being overwhelmed with calls and radio traffic, leading to the need for temporary staffing to maintain critical emergency response operations.
Action or Project	
Applicable Goal Statement:	To protect the lives and property of those individuals in and traveling throughout all of Greene County.
Action/Project Number:	Springfield-Greene County 9-1-1 #2025-4
Name of Action or Project:	Temporary Employment / Emergency Staffing
Mitigation Category:	Prevention / Response
Action or Project Description:	This project involves implementing a scalable emergency staffing plan, including a pool of trained temporary staff and a streamlined onboarding processes to ensure the 9-1-1 center can handle surges in calls and radio traffic without compromising emergency response operations.
Estimated Cost:	$40,000 possibly if planning for 2 weeks with 10 personnel
Benefits:	Ensuring uninterrupted 9-1-1 services and effective emergency response by maintaining adequate staffing levels during surges in calls and radio traffic.
Plan for Implementation	
Responsible Organization/Department:	Springfield-Greene County 9-1-1, administrative staff, and Springfield Human Resources would have to assist with temporary staff hiring and onboarding if they would approve this process.
Supporting Organization/Department:	Neighboring PSAP (possibly JASCO or another PSAP close), as well as City of Springfield Human Resources Department.
Action/Project Priority:	High
Timeline for Completion:	1–3 Years
Potential Fund Sources:	Local Funds, Budget, Grants
Local Planning Mechanisms to be Used in Implementation, if any:	The Continuity of Operations Plan (COOP) which will be updated through collaboration with OEM.
Progress Report	
Action Status:	New
Report of Progress:	Conceptual at this time.

Action Worksheet	
Name of Jurisdiction:	Springfield-Greene County 9-1-1
Risk / Vulnerability	
Hazard(s) Addressed:	Natural Hazards : Dam failures, earthquakes (Severe), Extreme Temperatures (Prolonged events + mass causalities), Severe Thunderstorms, Tornadoes, Severe Winter Weather,– Temporary Employment / Emergency Staffing
Problem being Mitigated:	The mitigation of risk of the 9-1-1 center being overwhelmed with calls and radio traffic, leading to the need for temporary staffing to maintain critical emergency response operations.
Action or Project	
Applicable Goal Statement:	To protect the lives and property of those individuals in and traveling throughout all of Greene County.
Action/Project Number:	Springfield-Greene County 9-1-1 #2025-3
Name of Action or Project:	Temporary Employment / Emergency Staffing
Mitigation Category:	Prevention / Response
Action or Project Description:	Develop and implement a scalable emergency staffing resilience plan for the 9-1-1 communications center. This project will establish a pre-identified pool of cross-trained temporary personnel and create streamlined onboarding and credentialing procedures to ensure operational continuity during periods of increased demand. By proactively addressing potential staffing shortages during disasters, large-scale emergencies, or extreme weather events, this initiative will reduce the risk of delayed emergency response, maintain critical communication capabilities, and enhance the overall resilience of public safety operations. Step 1: Assessment & Planning Conduct a comprehensive assessment of the 9-1-1 center's current staffing model, peak demand periods, and vulnerabilities during emergencies. Identify critical staffing thresholds and define the required skill sets for temporary support personnel. Develop an emergency staffing framework tailored to surge conditions such as natural disasters, severe weather, or multi-agency incidents. Step 2: Develop a Trained Staffing Pool Recruit and maintain a pool of pre-qualified, cross-trained temporary staff—including retired dispatchers, part-time personnel, or trained volunteers—who can be activated during emergencies. Provide periodic refresher training and conduct tabletop exercises to ensure readiness and familiarity with center operations and technology. Step 3: Streamline Onboarding and Activation Protocols Create a streamlined, pre-approved onboarding process that includes background checks, credential verification, and access authorization. Develop a rapid activation protocol with clear roles, deployment timelines, and support logistics to ensure that additional staff can be brought online quickly and efficiently when needed.

	Step 4: Integrate and Test the System Incorporate the emergency staffing plan into the center's Continuity of Operations Plan (COOP) and conduct regular drills to test scalability and response capacity. Review performance after each exercise or real-world activation to make improvements and ensure long-term viability. Coordinate closely with local emergency management and mutual aid partners for seamless integration.
Estimated Cost:	$40,000 possibly if planning for 2 weeks with 10 personnel
Benefits:	Ensuring uninterrupted 9-1-1 services and effective emergency response by maintaining adequate staffing levels during surges in calls and radio traffic.
Plan for Implementation	
Responsible Organization/Department:	Springfield-Greene County 9-1-1, administrative staff, and Springfield Human Resources would have to assist with temporary staff hiring and onboarding if they would approve this process.
Supporting Organization/Department:	Neighboring PSAP (possibly JASCO or another PSAP close), as well as City of Springfield Human Resources Department.
Action/Project Priority:	High
Timeline for Completion:	1–3 Years
Potential Fund Sources:	Local Funds, Budget, Grants
Local Planning Mechanisms to be Used in Implementation, if any:	The Continuity of Operations Plan (COOP) which will be updated through collaboration with OEM.
Progress Report	
Action Status:	New
Report of Progress:	Conceptual at this time.

APPENDIX B

Action Worksheet	
Name of Jurisdiction:	Springfield-Greene County 9-1-1
Risk / Vulnerability	
Hazard(s) Addressed:	Technological Hazards – Temporary Employment / Emergency Staffing
Problem being Mitigated:	The mitigation of risk of the 9-1-1 center being overwhelmed with calls and radio traffic, leading to the need for temporary staffing to maintain critical emergency response operations.
Action or Project	
Applicable Goal Statement:	To protect the lives and property of those individuals in and traveling throughout all of Greene County.
Action/Project Number:	Springfield-Greene County 9-1-1 #2025-2
Name of Action or Project:	Temporary Employment / Emergency Staffing
Mitigation Category:	Prevention
Action or Project Description:	This project involves implementing a scalable emergency staffing plan, including a pool of trained temporary staff and a streamlined onboarding processes to ensure the 9-1-1 center can handle surges in calls and radio traffic without compromising emergency response operations.
Estimated Cost:	$40,000 possibly if planning for 2 weeks with 10 personnel
Benefits:	Ensuring uninterrupted 9-1-1 services and effective emergency response by maintaining adequate staffing levels during surges in calls and radio traffic.
Plan for Implementation	
Responsible Organization/Department:	Springfield-Greene County 9-1-1, administrative staff, and Springfield Human Resources would have to assist with temporary staff hiring and onboarding if they would approve this process.
Supporting Organization/Department:	Neighboring PSAP (possibly JASCO or another PSAP close), as well as City of Springfield Human Resources Department.
Action/Project Priority:	High
Timeline for Completion:	1–3 Years
Potential Fund Sources:	Local Funds, Budget, Grants
Local Planning Mechanisms to be Used in Implementation, if any:	The Continuity of Operations Plan (COOP) which will be updated through collaboration with OEM.
Progress Report	
Action Status:	New
Report of Progress:	Conceptual at this time.

Action Worksheet	
Name of Jurisdiction:	Springfield-Greene County Health Department
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Communicable Disease, Animal Disease
Problem being Mitigated:	Currently, flooding at the animal shelter causes a huge threat to animal shelter staff and animals being held at the shelter. The road leading to the shelter becomes unpassable during heavy rains and water enters the shelter and causes unsafe conditions for the animals. Staff are unable to access the shelter safely. The water is easily contaminated and can cause communicable disease among staff, potential animal disease among the animals, and even potential zoonotic transmission between animals and staff.
Action or Project	
Applicable Goal Statement:	To provide a safe, clean shelter that promotes animal welfare, responsible pet ownership, and rabies reduction for the citizens and animals of Greene County.
Action/Project Number:	Springfield-Greene County Animal Shelter 1.0
Name of Action or Project:	Springfield-Greene County Project 1
Mitigation Category:	Prevention Structure and Infrastructure Projects
Action or Project Description:	Design and construct a new, flood-resilient animal shelter to serve the Springfield-Greene County Animal Control program, providing safe and secure temporary housing for loose dogs, aggressive dogs, animals under investigation or quarantine, and injured animals. The facility will be designed to accommodate approximately 125 animals (100 dogs and 25 cats) and will include specialized medical isolation and quarantine pens, ensuring the containment and treatment of infectious diseases without risking cross-contamination. In addition to expanding animal housing capacity, the shelter will feature designated staff office space, a public receiving area, and secure intake and holding zones. As part of the site selection and construction process, the project will incorporate floodplain avoidance measures, utilizing updated flood maps and hazard assessments to ensure the facility is located outside of high-risk flood zones. If elevation within a flood-prone area is unavoidable, the shelter will be elevated above base flood elevation and constructed using flood-resistant materials to mitigate water intrusion and minimize potential damage. Stormwater management systems—such as permeable pavement, bioswales, and retention basins—will be integrated into the site design to reduce localized flooding risk. Backup power systems and redundant drainage infrastructure will also be installed to ensure the shelter can remain fully operational during and after severe weather events, including flash floods or prolonged heavy rainfall. This project not only addresses the critical need for animal care infrastructure but also

	strengthens the community's disaster preparedness and continuity of operations during emergency events that may displace both residents and their pets.
Estimated Cost:	Cost will vary, but it is estimated to cost ~ $4 - 4.5 million.
Benefits:	The current animal shelter has served its purpose to the community; however the frequent floods and limited space compromise the safety of the animals and staff. Benefits from the construction of a new animal shelter include: - Animal safety: the most immediate loss avoided by constructing a new shelter is the potential loss of animal lives and ensuring safety. - Resource stewardship: the current shelter requires frequent repair and attention which consumes time, money, and manpower. Construction of a new shelter can improve resource allocation to provide the care and support of the animals in care. - Health and Welfare Standards: overcrowding and difficult conditions at the current shelter may lead to health issues. These factors may contribute to an outbreak of illness, risking the lives of the animals and staff. A new shelter will provide dedicated medical isolation kennels as well as more space to house the animals and reduce overcrowding. Enhancing these standards will protect the animals but may also prevent potential outbreaks of illness.
Plan for Implementation	
Responsible Organization/Department:	City of Springfield Springfield-Greene County Health Department Greene County
Supporting Organization/Department:	City of Springfield (various department) Greene County (various departments)
Action/Project Priority:	33 – High priority
Timeline for Completion:	2 – 4 years
Potential Fund Sources:	Department budgets (City and County) Grants, HMPG Grants, HMA Grants, Local Funding
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	In progress
Report of Progress:	Meetings with architects, COS Public Works, and Greene County completed. The bid for the project will be posted and bids solicited by end of 2024.

Action Worksheet	
Name of Jurisdiction:	Springfield-Greene County Health Department
Risk / Vulnerability	
Hazard(s) Addressed:	Tornado, Communicable Disease, Severe Winter Weather, Sinkholes, Earthquakes, Drought
Problem being Mitigated:	Alternate care sites (ACS) are crucial for effectively managing disasters and public health emergencies by providing additional capacity when healthcare systems become overwhelmed. ACS also help to enhance community resilience by ensuring timely access to medical services, isolating contagious patients to reduce transmission, and facilitating rapid responses to surges. During the COVID-19 response, the Greene County community would have benefited from an ACS when the Delta variant hit (summer 2021) and hospitals were once again overwhelmed with patients. Additionally, an ACS could provide additional space for supplemental staff to work out if City or County services needed to hire an influx of staff (or utilize volunteers).
Action or Project	
Applicable Goal Statement:	The goal of establishing an alternate care site is to enhance Greene County's healthcare capacity and resilience during public health emergencies and disasters.
Action/Project Number:	Springfield-Greene County ACS 1.0
Name of Action or Project:	Springfield-Greene County Project 2
Mitigation Category:	Structure and Infrastructure Projects Emergency Services
Action or Project Description:	This project involves the identification, renovation, or new construction of a strategically located Alternate Care Site (ACS) to enhance Greene County's healthcare surge capacity during disasters, pandemics, or public health emergencies. The ACS will serve as a critical supplemental facility capable of providing medical care to non-critical patients, thereby relieving pressure on hospitals and ensuring that essential health services remain accessible during crisis events. As part of the mitigation focus, the project will prioritize selecting a site outside of known hazard areas, such as floodplains, seismic zones, and locations vulnerable to severe weather impacts, minimizing the risk of facility damage and service interruption. If renovation of an existing facility is selected, upgrades will include flood-resistant construction methods, backup power generation, reinforced structural elements, and redundant communication systems to maintain operational continuity. The design will incorporate resilient infrastructure features such as elevated electrical systems, water-resistant materials, and robust HVAC systems with filtration capabilities to protect occupants from environmental hazards. The ACS will be equipped with scalable medical supplies and modular equipment setups to adapt quickly to varying levels of demand, including isolation areas for infectious patients.

	Additionally, the project will develop detailed operational protocols for rapid activation, staffing, and resource coordination, integrating with local emergency management and healthcare systems to facilitate a coordinated regional response. Training and exercises will be conducted regularly to ensure readiness. By proactively establishing a durable, well-equipped Alternate Care Site, Greene County will significantly reduce the risk of healthcare system overload during emergencies, improving public health outcomes and community resilience in the face of disasters.
Estimated Cost:	The cost of the ACS will vary widely depending on several factors (i.e., infrastructure, equipment and supplies, operation expenses, regulatory compliance, and technology). Cost to build a structure to serve as an ACS: $3-7 million Cost to renovate existing structure to serve as an ACS: $1-3 million
Benefits:	An ACS can provide benefits to the Greene County community through several methods: - Increased capacity: ACSs can provide additional patient care space, reducing overcrowding in hospitals. - Specialized care: ACS can be tailored to specific health needs, depending on the situation. - Accessibility: establishing ACS in various locations can enhance the healthcare services offered in a community that may face barriers to access of other healthcare facilities. - Resource optimization: ACS allow hospitals to focus their resources on the most severe cases while managing the less critical cases. This leads to improved health outcomes and patient care. - Rapid response capability: ACS can be quickly established in responses to sudden surges in healthcare demand, resulting in better community preparedness and response.

	- Community resilience: strengthen the overall resilience of the healthcare system, which helps communities better withstand future crises. ACS play a vital role in enhancing healthcare delivery during emergencies. As evidenced by COVID-19, having a site or dedicated facility which could serve as an ACS would greatly improve the medical readiness and response of the Greene County community.
Plan for Implementation	
Responsible Organization/Department:	City of Springfield Greene County Springfield-Greene County Health Department
Supporting Organization/Department:	City of Springfield Greene County Healthcare Systems (Mercy, CoxHealth)
Action/Project Priority:	39 – High priority
Timeline for Completion:	Time to build a structure to serve as an ACS: 1 – 4 years Time to renovate existing structure to serve as an ACS: 6 – 18 months
Potential Fund Sources:	Department budgets (City and County), HMA, HMPG and HHS Grant Programs
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	New
Report of Progress:	N/A

APPENDIX B

Action Worksheet	
Name of Jurisdiction:	City of Springfield
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding
Problem being Mitigated:	Many residents across the City deal with flooding on a routine basis due to lack of infrastructure, poor development standards, and building practices in the past.
Action or Project	
Applicable Goal Statement:	To reduce flooding of streets, businesses, and private property to improve safety and quality of life for citizens.
Action/Project Number:	City of Springfield Goal 1
Name of Action or Project:	Storm Water Management
Mitigation Category:	Structure and Infrastructure
Action or Project Description:	Fassnight Creek-Jefferson Ave. to Holland Ave. North Branch Jordan Creek Regional Detention Basin Renew Jordan Creek Phase II from Robberson to Washington Stormwater Improvements from Jefferson/Loren to Grand/Holland South Creek Stormwater Improvements between Sunset and Crestview Willard Road Stormwater Improvements near Springfield Airport Patterson and Mimosa Subdivision Stormwater Improvements Stormwater Improvements along Nichols St. from Park to Wabash Stormwater Improvements along Pratt Ave., Swallow St., and Cardinal St. Stormwater Improvements near Stewart Ave. and Smith St. Stormwater Improvements along Kimbrough Ave. and Harrison St. Stormwater Improvements along Yates Ave. from Blaine to Atlantic Woodbine Subdivision Stormwater Improvements between Seminole and Lindberg Other areas identified from the City's Stormwater Condition Assessment Program
Estimated Cost:	Individual estimates for each location; approx. estimate to completion: $66 million.
Benefits:	Elimination or reduction in flooding streets and private property.
Plan for Implementation	
Responsible Organization/Department:	Public Works Stormwater Engineering Division
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	5 years
Potential Fund Sources:	City's ¼ Cent Capital Improvement Sales Tax, General Fund Sales Tax, Level Property Tax, private donations, and HMA, HMPG, FMA, CDBG grant funds
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	Continuing/In Progress
Report of Progress:	Significant progress has been made since the last plan with the completion of several projects previously listed as well as several more currently under construction.

APPENDIX B

Action Worksheet	
Name of Jurisdiction:	City of Springfield
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding
Problem being Mitigated:	Flooding to homes and businesses due to poor development standards and building practices in the past.
Action or Project	
Applicable Goal Statement:	Reduce flooding of homes and businesses to improve safety and quality of life for citizens.
Action/Project Number:	City of Springfield Goal 2
Name of Action or Project:	Voluntary Floodplain Acquisition Program in the City of Springfield
Mitigation Category:	Prevention
Action or Project Description:	1. 532 S. Villa Rose Ave 2. 713 S. Oak Grove Ave. 3. McCoy Property 4. All repetitive loss properties as identified by the City of Springfield
Estimated Cost:	Individual estimates for each location
Benefits:	Elimination or reduction in flooding to homes and businesses.
Plan for Implementation	
Responsible Organization/Department:	Public Works Stormwater Engineering Division
Supporting Organization/Department:	
Action/Project Priority:	Medium
Timeline for Completion:	5 years
Potential Fund Sources:	City's ¼ Cent Capital Improvement Sales Tax, Level Property Tax, and grant funds
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	Ongoing (no end date)
Report of Progress:	Significant progress has been made since the last plan with the completion of several projects previously listed as well as several more currently under construction.

APPENDIX B

Action Worksheet	
Name of Jurisdiction	Greene County
RISK / VULNERABILITY	
Hazard(s) Addressed:	Flooding
Problem being Mitigated:	There are many properties located in Unincorporated Greene County that need to be purchased from their owners.
ACTION OR PROJECT	
Applicable Goal Statement	To enhance flood prevention by improving flood buyout programs and purchasing more properties located within Unincorporated Green County.
Action/Project Number:	Greene County Goal 1
Name of Action or Project:	High
Mitigation Category:	Prevention; Infrastructure Projects
Action or Project Description	Continue to purchase properties located within Unincorporated Greene County. These locations have been redacted from the public, but are available upon official request.
Estimated Cost:	Cost varies per property,
Benefits:	Prevention of property damage, prevent loss of life and injury due to flooding
PLAN FOR IMPLEMENTATION	
Responsible Organization/Department:	Greene County- Engineering
Supporting Organization/Department:	Springfield-Greene County Office of Emergency Management
Action/Project Priority:	High
Timeline for Completion:	1-5 Years
Potential Fund Sources:	Local Funds, Budget, HMA, HMPG and CDBG Grants
Local Planning Mechanisms to be Used in Implementation, if any:	None
PROGRESS REPORT	
Action Status:	Continuous
Report of Progress:	See list below of properties that have been purchased

APPENDIX B

Action Worksheet	
Name of Jurisdiction	Greene County
RISK / VULNERABILITY	
Hazard(s) Addressed:	Tornado, Severe Thunderstorms
Problem being Mitigated:	Greene County currently has areas of the county that are lacking storm sirens that are used to notify the public when a tornado warning is in effect. The county sirens are also lacking support systems that make the sirens more efficient.
ACTION OR PROJECT	
Applicable Goal Statement:	To provide the county with more sirens that have added support systems to help notify citizens when severe weather is present in the area.
Action/Project Number:	Greene County Goal 2
Name of Action or Project:	Greene County Sirens
Mitigation Category:	Prevention; Emergency Services
Action or Project Description:	Purchase and place sirens in the areas for the county that are not in the current coverage and update all sirens with support systems.
Estimated Cost:	$20,000-$100,000
Benefits:	Citizens are alerted quicker when tornados are present, prevention of injury or loss of life of citizens
PLAN FOR IMPLEMENTATION	
Responsible Organization/Department:	Various Greene County Departments
Supporting Organization/Department:	Greene County Office of Emergency Management
Action/Project Priority:	High
Timeline for Completion:	1-3 Years
Potential Fund Sources:	Department Budgets, HMA, HMPG Grants
Local Planning Mechanisms to be Used in Implementation, if any:	None
PROGRESS REPORT	
Action Status:	New
Report of Progress:	Researching potential locations

APPENDIX B

Action Worksheet	
Name of Jurisdiction	Greene County
RISK / VULNERABILITY	
Hazard(s) Addressed:	Tornado, Severe Storms
Problem being Mitigated:	There are many locations in Greene County that are in need of adequate shelter for people to use during severe storms.
ACTION OR PROJECT	
Applicable Goal Statement:	To provide the Greene County citizens and staff with adequate shelter to use during severe storms and tornadoes.
Action/Project Number:	Greene County Goal 3
Name of Action or Project:	Greene County Shelters
Mitigation Category:	Prevention; Infrastructure and structure projects
Action or Project Description:	Build shelters across the county to provide appropriate shelter for the citizens and staff of Greene County during tornadoes.
Estimated Cost:	Cost varies per shelter due to size requirements; $1-$5 Million
Benefits:	Protect the lives of the citizens of Greene County and the staff who work for the county.
PLAN FOR IMPLEMENTATION	
Responsible Organization/Department:	Various Greene County Departments
Supporting Organization/Department:	Greene County Office of Emergency Management
Action/Project Priority:	Medium
Timeline for Completion:	2-5 Years
Potential Fund Sources:	Department Budgets, HMA, HMPG Grants
Local Planning Mechanisms to be Used in Implementation, if any:	None
PROGRESS REPORT	
Action Status:	New
Report of Progress:	Research

APPENDIX B

Action Worksheet	
Name of Jurisdiction	Greene County
RISK / VULNERABILITY	
Hazard(s) Addressed:	Flooding
Problem being Mitigated:	There are many roads and areas across the county that are dangerous during flash flooding and other flooding events.
ACTION OR PROJECT	
Action/Project Number:	Greene County Goal 4
Applicable Goal Statement:	To protect the lives of the citizens in Greene County during flooding events by creating flood warning systems.
Name of Action or Project:	Greene County Flood Warning Systems
Mitigation Category:	Prevention;
Action or Project Description:	Create flood warning systems for flood prone roads using various methods including railroad crossing signs.
Estimated Cost:	Estimate of $30,000
Benefits:	Bring awareness to dangerous roads and areas that flood frequently in the county, prevention of injury and possibly death, less water rescues from local fire protection districts
PLAN FOR IMPLEMENTATION	
Responsible Organization/Department:	Public Works, Parks Department
Supporting Organization/Department:	Greene County Office of Emergency Management
Action/Project Priority:	High
Timeline for Completion:	1-2 Years
Potential Fund Sources:	Department Budget, HMPG, HMA, FMA Grants
Local Planning Mechanisms to be Used in Implementation, if any:	None
PROGRESS REPORT	
Action Status:	Continuous
Report of Progress:	Waiting on Funding

APPENDIX B

Action Worksheet	
Name of Jurisdiction	Greene County
RISK / VULNERABILITY	
Hazard(s) Addressed:	Dam Failure, Earthquakes, Sinkholes, Drought, Extreme Temperatures. Severe Winter Weather, Wildfire
Hazard(s) Addressed:	All Hazards
Problem being Mitigated:	Public education is a growing need for our community. Interest in Emergency Management from the citizens is growing.
ACTION OR PROJECT	
Action/Project Number:	Greene County Goal 5
Applicable Goal Statement:	To provide the public with various education opportunities to learn more about Mitigation and other mission areas of Emergency Management.
Name of Action or Project:	Emergency Management Education
Mitigation Category:	Public Awareness
Action or Project Description:	1. Update the Springfield-Greene County Office of Emergency Management's Website to prominently feature the most current version of the Hazard Mitigation Plan, ensuring it includes comprehensive information on all relevant hazards including dam failure, earthquakes, sinkholes, drought, extreme temperatures, severe winter weather, and wildfire. The site will also provide easy access to supporting resources and guidance for residents. 2. Promote educational content from trusted partners such as NOAA, the National Weather Service (NWS), and the U.S. Geological Survey (USGS) across all social media platforms. This will include tailored messaging and alerts about specific hazards like dam failure risks, earthquake preparedness, sinkhole awareness, drought conditions, wildfire prevention, and extreme temperature safety. 3. Develop and offer targeted local training programs and workshops for the public focused on less commonly discussed but high-impact hazards such as earthquakes and sinkholes, alongside more familiar threats like severe winter weather and wildfires. These sessions will include practical preparedness tips, mitigation actions homeowners can take, and how to respond during an event. 4. Engage actively with community leaders, neighborhood associations, schools, and faith-based organizations to increase awareness and ensure the Hazard Mitigation Plan is readily accessible and understood by all community members. Special emphasis will be placed on communicating the risks and mitigation strategies for dam failure, drought management, and extreme temperature events. 5. Create multi-hazard outreach campaigns that highlight seasonal risks such as wildfire risk during dry periods, flood risks associated with potential dam failure, and health risks related to extreme heat or cold. These campaigns will use multiple media formats, including newsletters, videos, infographics, and public service announcements to reach diverse audiences. 6. Collaborate with local media outlets to regularly broadcast hazard-specific preparedness information, especially during peak risk periods like wildfire season, winter storms, or drought conditions, ensuring continuous public engagement and awareness.

	7. Leverage partnerships with schools and educational institutions to incorporate hazard awareness, including drought, sinkholes, earthquakes, and extreme weather, into science and health curricula, fostering a culture of preparedness from a young age. 8. Implement a feedback and evaluation mechanism via surveys and community forums to assess the effectiveness of outreach efforts and adjust strategies to better address community needs regarding the full spectrum of hazards.
Estimated Cost:	Limited Cost is Needed, 5,000 dollars
Benefits:	Public involvement, increased disaster resilience for the community, information for our partners to use.
PLAN FOR IMPLEMENTATION	
Responsible Organization/Department:	Springfield-Greene County Office of Emergency Management
Supporting Organization/Department:	None
Action/Project Priority:	Medium
Timeline for Completion:	2-6 Months
Potential Fund Sources:	Budget, HMA, HMPG Grants
Local Planning Mechanisms to be Used in Implementation, if any:	None
PROGRESS REPORT	
Action Status:	Continuous
Report of Progress:	Website is created just needs updated

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	Springfield-Greene County 9-1-1	
Action or Project		
Action/Project Number:	Springfield-Greene County 9-1-1 #2025-05	
Name of Action or Project:	Human Caused Hazard – Cyber and Sabotage	
Mitigation Category:	Response: Human Hazards	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		3
E: Will the project have either a neutral or positive impact on the natural **Environment**?		1
Will historic structures be saved or protected?		0
Could it be implemented quickly?		2
	STAPLEE SCORE	21
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	9
	MITIGATION EFFECTIVENESS SCORE	40
	TOTAL SCORE (STAPLEE + Mitigation Effectiveness)	40

☒ **High Priority (30+ points)**	☐ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by (Name, Title, Phone Number): April Ford, Director at Springfield-Greene Co 9-1-1 417—829-6208

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	Springfield-Greene County 9-1-1	
Action or Project		
Action/Project Number:	Springfield-Greene County 9-1-1 #2025-05	
Name of Action or Project:	Human Caused Hazard – Cyber and Sabotage	
Mitigation Category:	Response: Human Hazards	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		3
E: Will the project have either a neutral or positive impact on the natural **Environment**?		1
Will historic structures be saved or protected?		0
Could it be implemented quickly?		2
	STAPLEE SCORE	21
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	9
	MITIGATION EFFECTIVENESS SCORE	40
	TOTAL SCORE (STAPLEE + Mitigation Effectiveness)	40

☒ **High Priority (30+ points)**	☐ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by (Name, Title, Phone Number): April Ford, Director at Springfield-Greene Co 9-1-1 417—829-6208

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	Springfield-Greene County 9-1-1	
Action or Project		
Action/Project Number:	Springfield-Greene County 9-1-1 #2025-02	
Name of Action or Project:	Technological Hazard – Temporary Employment / Emergency Staffing	
Mitigation Category:	Response: Technological Hazards	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		2
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		3
E: Will the project have either a neutral or positive impact on the natural **Environment**?		1
Will historic structures be saved or protected?		0
Could it be implemented quickly?		2
	STAPLEE SCORE	20
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	9
	MITIGATION EFFECTIVENESS SCORE	39
	TOTAL SCORE (STAPLEE + Mitigation Effectiveness)	39

☒ **High Priority (30+ points)**	☐ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by (Name, Title, Phone Number): April Ford, Director at Springfield-Greene Co 9-1-1 417—829-6208

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	Springfield-Greene County 9-1-1	
Action or Project		
Action/Project Number:	Springfield-Greene County 9-1-1 #2025-01	
Name of Action or Project:	Disaster Recovery CAD	
Mitigation Category:	Prevention: Technology Hazards	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		3
E: Will the project have either a neutral or positive impact on the natural **Environment**?		1
Will historic structures be saved or protected?		0
Could it be implemented quickly?		1
	STAPLEE SCORE	20
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	6
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	10
	MITIGATION EFFECTIVENESS SCORE	36
	TOTAL SCORE (STAPLEE + Mitigation Effectiveness)	36

☒ **High Priority (30+ points)**	☐ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by (Name, Title, Phone Number): April Ford, Director at Springfield-Greene Co 9-1-1 417—829-6208

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	Springfield-Greene County Health Department	
Action or Project		
Action/Project Number:	Springfield-Greene County Animal Shelter 1.0	
Name of Action or Project:	Springfield-Greene County Project 1	
Mitigation Category:	Prevention Structure and Infrastructure Projects	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		3
E: Will the project have either a neutral or positive impact on the natural **Environment**?		2
Will historic structures be saved or protected?		0
Could it be implemented quickly?		1
	STAPLEE SCORE	**21**
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	6
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	6
MITIGATION EFFECTIVENESS SCORE		**12**
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		**33**
[X] **High Priority (30+ points)**	[ ] **Medium Priority (25 - 29 points)**	[ ] **Low Priority (<25 points)**
Completed by (Name, Title, Phone Number)	Maggie Rogers, Health Planner, 417-864-1573	

APPENDIX B

STAPLEE Worksheet	
Name of Jurisdiction:	Springfield-Greene County Health Department
Action or Project	
Action/Project Number:	Springfield-Greene County ACS 1.0
Name of Action or Project:	Springfield-Greene County Project 2
Mitigation Category:	Structure and Infrastructure Projects Emergency Services

STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	**Score**
S: Is it **Socially** Acceptable	3
T: Is it **Technically** feasible and potentially successful?	3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?	3
P: Is it **Politically** acceptable?	3
L: Is there **Legal** authority to implement?	2
E: Is it **Economically** beneficial?	3
E: Will the project have either a neutral or positive impact on the natural **Environment**?	1
Will historic structures be saved or protected?	1
Could it be implemented quickly?	2
STAPLEE SCORE	**21**

Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	8
MITIGATION EFFECTIVENESS SCORE		**18**
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		**39**

☒ **High Priority (30+ points)**	☐ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**
Completed by (Name, Title, Phone Number)	Maggie Rogers, Health Planner, 417-864-1573	

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	City of Springfield	
Action or Project		
Action/Project Number:	City of Springfield Goal 1	
Name of Action or Project:	Storm Water Management (Repetitive loss)	
Mitigation Category:	Structure and Infrastructure	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		3
E: Will the project have either a neutral or positive impact on the natural **Environment**?		2
Will historic structures be saved or protected?		2
Could it be implemented quickly?		1
	STAPLEE SCORE	**22**
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	7
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	9
MITIGATION EFFECTIVENESS SCORE		**16**
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		**38**

[X] **High Priority (30+ points)**	[ ] **Medium Priority (25 - 29 points)**	[ ] **Low Priority (<25 points)**
Completed by (Name, Title, Phone Number)		

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	City of Springfield	
Action or Project		
Action/Project Number:	City of Springfield Goal 2	
Name of Action or Project:	Voluntary Floodplain Acquisition Program in the City of Springfield	
Mitigation Category:	Prevention	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		2
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		3
E: Will the project have either a neutral or positive impact on the natural **Environment**?		2
Will historic structures be saved or protected?		2
Could it be implemented quickly?		2
	STAPLEE SCORE	**23**
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	5
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	8
MITIGATION EFFECTIVENESS SCORE		**15**
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		**38**

[X] **High Priority (30+ points)**	[ ] **Medium Priority (25 - 29 points)**	[ ] **Low Priority (<25 points)**
Completed by (Name, Title, Phone Number)		

APPENDIX B

ACTION WORKSHEET	
Name of Jurisdiction:	CITY OF STRAFFORD
Risk / Vulnerability	
Hazard(s) Addressed:	Tornadoes and Severe Thunderstorms
Problem being Mitigated:	Citizen notification for preservation of life
Action or Project	
Applicable Goal Statement:	Increased public awareness of the risk of the natural risks of tornadoes and winds.
Action/Project Number:	Strafford 1.0
Name of Action or Project:	STORM SIRENS
Mitigation Category:	Structure and Infrastructure Projects
Action or Project Description:	Northeast Strafford (North of I-44/East of Hwy 125 N) – Need to do a land survey before construction. Southwest Strafford (South of I-44/East of Hwy 125 S) – Need to do a land survey before construction.
Estimated Cost:	$120,000
Benefits:	Loss of life to be mitigated.
Plan for Implementation	
Responsible Organization/Department:	City of Strafford
Supporting Organization/Department:	Greene County Office of Emergency Management (OEM)
Action/Project Priority:	H
Timeline for Completion:	6-12 months
Potential Fund Sources:	General Fund, Capital Improvements Sales Tax, HMPG Grants, HMA Grants
Local Planning Mechanisms to be Used in Implementation, if any:	City Administrator and Public Works
Progress Report	
Action Status:	New (Research)
Report of Progress:	

Action Worksheet	
Name of Jurisdiction:	CITY OF STRAFFORD
Risk / Vulnerability	
Hazard(s) Addressed:	Tornadoes and Severe Thunderstorms
Problem being Mitigated:	Preservation of life and mitigating lack of shelters in residential dwellings
Action or Project	
Applicable Goal Statement:	Enhances local capabilities to ensure individual safety as well as create a safer and more sustainable community.
Action/Project Number:	Strafford 2.0
Name of Action or Project:	COMMUNITY SAFE ROOM
Mitigation Category:	Structure and Infrastructure Projects
Action or Project Description:	North Strafford (North of I-44) – Need to do a land survey before construction. South Strafford (South of Hwy OO/Old Route 66) – Need to do a land survey before construction.
Estimated Cost:	$15,000,000
Benefits:	Loss of life to be mitigated.
Plan for Implementation	
Responsible Organization/Department:	City of Strafford
Supporting Organization/Department:	
Action/Project Priority:	H
Timeline for Completion:	36 months
Potential Fund Sources:	General Fund, Capital Improvements Sales Tax, HMPG Grant, HMA Grants
Local Planning Mechanisms to be Used in Implementation, if any:	City Administrator and Public Works
Progress Report	
Action Status:	New (Research)
Report of Progress:	

ACTION WORKSHEET	
Name of Jurisdiction:	CITY OF STRAFFORD
Risk / Vulnerability	
Hazard(s) Addressed:	Tornadoes and Severe Thunderstorms; Flooding; Train Derailment; Severe Winter Weather, Dam Failure, Severe Earthquakes, Sinkholes (Road disturbances) Drought (Water supply impact), Extreme Temperatures (Heat and cold advisories),
Problem being Mitigated:	Preservation of life and improved communication with citizens during increased risk events.
Action or Project	
Applicable Goal Statement:	Improve coordination and communication between local government and the community. Enhances local capabilities to ensure individual safety as well as create a safer and more sustainable community.
Action/Project Number:	Strafford 3.0
Name of Action or Project:	COMMUNITY NOTIFICATION SYSTEM
Mitigation Category:	Education and Outreach
Action or Project Description:	To strengthen emergency communication and enhance public safety, the City of Strafford will purchase and implement a modern notification software module that automates outbound calls, text messages, and email alerts to residents regarding imminent hazards and emergencies. This system will facilitate rapid dissemination of critical information about threats such as dam failure, flooding, earthquakes, sinkholes, drought, extreme temperatures, severe winter weather, and wildfires. Automating these notifications will minimize delays and ensure consistent, accurate, and geographically targeted messaging to residents, enabling them to take timely protective actions. The system will be integrated with the City's existing emergency management infrastructure and configured to support multi-language alerts to effectively reach all community members. Regular testing and training exercises will be conducted to maintain the system's reliability and ensure that city staff are proficient in its use. This project represents a key mitigation strategy aimed at improving community preparedness and resilience by enhancing the City of Strafford's ability to communicate hazards swiftly and effectively.
Estimated Cost:	$5,000
Benefits:	Loss of life and property to be mitigated.
Plan for Implementation	
Responsible Organization/Department:	City of Strafford
Supporting Organization/Department:	
Action/Project Priority:	H

Timeline for Completion:	4 months
Potential Fund Sources:	General Fund, HMA, HMPG
Local Planning Mechanisms to be Used in Implementation, if any:	City Administrator and Finance Director/Utility Administration
Progress Report	
Action Status:	New (Research)
Report of Progress:	

ACTION WORKSHEET	
Name of Jurisdiction:	CITY OF STRAFFORD
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding; Train Derailment; Sanitary Waste Spillage
Problem being Mitigated:	Preservation of life.
Action or Project	
Applicable Goal Statement:	Improve coordination and communication between local government and the community. Increase public awareness of risks.
Action/Project Number:	Strafford 4.0
Name of Action or Project:	PORTABLE CHANGEABLE MESSAGE SIGNS (3), TRAILER-MOUNTED
Mitigation Category:	Education and Outreach; Prevention
Action or Project Description:	The City of Strafford will purchase portable changeable message signs (PCMS) as a proactive hazard mitigation measure to improve public safety and emergency communication in high-risk areas, particularly flood-prone locations such as segments of Old Route 66. These electronic message boards will be deployed to provide real-time warnings, detour information, and safety instructions to motorists and pedestrians during flood events and other hazard-related emergencies. Flooding along roadways can occur rapidly, creating dangerous conditions that may trap vehicles, damage infrastructure, and obstruct emergency response efforts. The portable signs will serve as a highly visible tool to quickly alert the public about road closures, hazardous conditions, or evacuation routes. Their mobility allows for flexible deployment not only in flood-prone zones but also during other emergencies, such as winter storms, wildfire evacuations, extreme heat advisories, or special events that may involve public safety concerns.
Estimated Cost:	$60,000
Benefits:	Loss of life and property to be mitigated.
Plan for Implementation	
Responsible Organization/Department:	City of Strafford
Supporting Organization/Department:	
Action/Project Priority:	H
Timeline for Completion:	4 months
Potential Fund Sources:	General Fund, Utility Fund

Local Planning Mechanisms to be Used in Implementation, if any:	City Administrator and Public Works
Progress Report	
Action Status:	New (Research)
Report of Progress:	

ACTION WORKSHEET	
Name of Jurisdiction:	CITY OF STRAFFORD
Risk / Vulnerability	
Hazard(s) Addressed:	Severe Winter Weather
Problem being Mitigated:	Preservation of life and property.
Action or Project	
Applicable Goal Statement:	Improve coordination between local government and citizens. Enhance local capabilities to ensure individual safety and reduce damage to the public.
Action/Project Number:	Strafford 5.0
Name of Action or Project:	SALT SPREADERS (3), PLOWS (3), TANKER TRUCK FOR BRINE TREATMENT OF ICY ROADS
Mitigation Category:	Prevention
Action or Project Description:	Purchase Of salt spreaders (3), plows (3), tanker truck for brine treatment of icy roads along arterial and collector roads such as Bumgarner, Madison, N. Old Orchard, Stan Harriman Blvd.
Estimated Cost:	$165,000
Benefits:	Loss of life and property to be mitigated.
Plan for Implementation	
Responsible Organization/Department:	City of Strafford
Supporting Organization/Department:	
Action/Project Priority:	H
Timeline for Completion:	3-6 months
Potential Fund Sources:	General Fund, Capital Improvement Sales Tax, HMPG Grants, HMA Grants
Local Planning Mechanisms to be Used in Implementation, if any:	City Administrator and Public Works
Progress Report	
Action Status:	New (Research)
Report of Progress:	

APPENDIX B

ACTION WORKSHEET	
Name of Jurisdiction:	CITY OF STRAFFORD
Risk / Vulnerability	
Hazard(s) Addressed:	Sanitary Waste Spillage
Problem being Mitigated:	Preservation of the environment, property, and public health.
Action or Project	
Applicable Goal Statement:	Strengthen and protect critical facilities from hazards to create a safer and more sustainable community.
Action/Project Number:	Strafford 6.0
Name of Action or Project:	SEWER VACUUM COMBINATION TRUCK WITH JETTER AND HYDRO-EXCAVATOR
Mitigation Category:	Emergency Services
Action or Project Description:	Purchase of Sewer Vac Truck with Jetter and Hydro-Excavator for vacuuming up sanitary waste spills due to sewer main breaks and perform emergency vacuum removal of waste from lift station wet wells when an emergency or malfunction occurs.
Estimated Cost:	$500,000
Benefits:	Loss of life and property to be mitigated.
Plan for Implementation	
Responsible Organization/Department:	City of Strafford
Supporting Organization/Department:	
Action/Project Priority:	H
Timeline for Completion:	6 months
Potential Fund Sources:	Utility Funds, General Fund, Capital Improvement Sales Tax
Local Planning Mechanisms to be Used in Implementation, if any:	City Administrator and Public Works
Progress Report	
Action Status:	New (Research)
Report of Progress:	

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	CITY OF STRAFFORD	
Action or Project		
Action/Project Number:	Strafford 1.0	
Name of Action or Project:	STORM SIRENS	
Mitigation Category:	Structure and Infrastructure Projects	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		3
E: Will the project have either a neutral or positive impact on the natural **Environment**?		2
Will historic structures be saved or protected?		1
Could it be implemented quickly?		3
	STAPLEE SCORE	24
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
	MITIGATION EFFECTIVENESS SCORE	15
	TOTAL SCORE (STAPLEE + Mitigation Effectiveness)	39

☐ **High Priority (30+ points)**	☐ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by
(Name, Title, Phone Number) _____

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	CITY OF STRAFFORD	
Action or Project		
Action/Project Number:	Strafford 2.0	
Name of Action or Project:	COMMUNITY SAFE ROOM	
Mitigation Category:	Structure and Infrastructure Projects	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		2
E: Will the project have either a neutral or positive impact on the natural **Environment**?		1
Will historic structures be saved or protected?		0
Could it be implemented quickly?		1
	STAPLEE SCORE	19
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
	MITIGATION EFFECTIVENESS SCORE	15
	TOTAL SCORE (STAPLEE + Mitigation Effectiveness)	34

☑ **High Priority (30+ points)**	☐ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by
(Name, Title, Phone Number) _____

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	CITY OF STRAFFORD	
Action or Project		
Action/Project Number:	Strafford 3.0	
Name of Action or Project:	COMMUNITY NOTIFICATION SYSTEM	
Mitigation Category:	Education and Outreach	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		2
E: Will the project have either a neutral or positive impact on the natural **Environment**?		2
Will historic structures be saved or protected?		0
Could it be implemented quickly?		3
	STAPLEE SCORE	22
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	7
	MITIGATION EFFECTIVENESS SCORE	15
	TOTAL SCORE (STAPLEE + Mitigation Effectiveness)	37

☐ **High Priority (30+ points)**	☐ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by
(Name, Title, Phone Number) _____

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	CITY OF STRAFFORD	
Action or Project		
Action/Project Number:	Strafford 4.0	
Name of Action or Project:	PORTABLE CHANGEABLE MESSAGE SIGNS (3), TRAILER-MOUNTED	
Mitigation Category:	Education and Outreach; Prevention	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		3
E: Will the project have either a neutral or positive impact on the natural **Environment**?		3
Will historic structures be saved or protected?		0
Could it be implemented quickly?		3
	STAPLEE SCORE	24
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	10
	MITIGATION EFFECTIVENESS SCORE	20
	TOTAL SCORE (STAPLEE + Mitigation Effectiveness)	44

☐ **High Priority (30+ points)**	☐ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by
(Name, Title, Phone Number) _____

APPENDIX B

STAPLEE Worksheet	
Name of Jurisdiction:	CITY OF STRAFFORD
Action or Project	
Action/Project Number:	Strafford 5.0
Name of Action or Project:	SALT SPREADERS (3), PLOWS (3), TANKER TRUCK FOR BRINE TREATMENT OF ICY ROADS
Mitigation Category:	Prevention

STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	**Score**
S: Is it **Socially** Acceptable	3
T: Is it **Technically** feasible and potentially successful?	3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?	3
P: Is it **Politically** acceptable?	3
L: Is there **Legal** authority to implement?	3
E: Is it **Economically** beneficial?	3
E: Will the project have either a neutral or positive impact on the natural **Environment**?	1
Will historic structures be saved or protected?	2
Could it be implemented quickly?	3
STAPLEE SCORE	24

Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	10
MITIGATION EFFECTIVENESS SCORE		20
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		44

☐ **High Priority (30+ points)**	☐ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by
(Name, Title, Phone Number) _____

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	CITY OF STRAFFORD	
Action or Project		
Action/Project Number:	Strafford 6.0	
Name of Action or Project:	SEWER VACUUM COMBINATION TRUCK WITH JETTER AND HYDRO-EXCAVATOR	
Mitigation Category:	Emergency Services	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		3
E: Will the project have either a neutral or positive impact on the natural **Environment**?		3
Will historic structures be saved or protected?		0
Could it be implemented quickly?		3
STAPLEE SCORE		24
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	8
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	7
MITIGATION EFFECTIVENESS SCORE		15
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		39

☐ **High Priority (30+ points)**	☐ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by
(Name, Title, Phone Number) _____

APPENDIX B

ACTION WORKSHEET	
Name of Jurisdiction:	Logan-Rogersville R-VIII School District
Risk / Vulnerability	
Hazard(s) Addressed:	Earthquake, Severe Weather, Power Outages, Severe Temperatures, Tornadoes, Severe Thunderstorms,
Problem being Mitigated:	Loss of power, water, facilities or other resources due to earthquake or other severe weather event through generators.
Action or Project	
Applicable Goal Statement:	To restore power with generators, water and to replace facilities or lost resources due to earthquake or severe weather so that education can continue.
Action/Project Number:	Logan-Rogersville-1
Name of Action or Project:	Logan-Rogersville Schools Earthquake/Weather Restoration
Mitigation Category:	Structure and Infrastructure Projects; Emergency Services
Action or Project Description:	The Logan-Rogersville School District is undertaking a critical mitigation project to ensure the continuity of essential services, specifically power and water, during and after earthquakes and severe weather events. The project aims to restore, replace, and harden vulnerable utility infrastructure and school facilities, ensuring that educational operations, emergency sheltering, and student safety are not compromised during disasters. During severe events such as ice storms, tornadoes, high winds, or earthquakes, the loss of electricity and potable water can disrupt educational services, create unsafe learning environments, and delay emergency response efforts. This project will proactively mitigate those risks through targeted upgrades, retrofits, and redundancy measures across school district campuses and support buildings. Key mitigation components include: 1. Installation of permanent backup generators at all school buildings designated as emergency shelters, as well as administrative offices and transportation hubs, to ensure uninterrupted power for lighting, heating/cooling, communication systems, and food storage. 2. Seismic retrofitting of water systems including water lines, pumps, and mechanical infrastructure to reduce vulnerability to earthquake damage and minimize service interruptions. 3. Hardening of critical electrical systems, including elevating electrical panels in flood-prone areas and securing external power connections against wind or impact damage. 4. Replacement of aged or exposed utility infrastructure with more resilient materials and systems capable of withstanding high winds, freezing temperatures, and seismic shocks. In addition to physical upgrades, the project includes the development of an Emergency Utility Continuity Plan for the district, outlining procedures for restoring services, coordinating with utility providers, and deploying emergency resources during outages. Staff will receive training on emergency utility response protocols to ensure safety and

	preparedness across all buildings. By investing in the restoration and hardening of critical infrastructure, the Logan-Rogersville School District will significantly reduce the risk of prolonged disruptions, protect student and staff safety, and enhance the district's role as a community resource during regional emergencies.
Estimated Cost:	Cost varies dependent on location and severity of event. Range $200,000 - $5,000,000.
Benefits:	Continuation of services when earthquake/severe weather causes disruption.
Plan for Implementation	
Responsible Organization/Department:	Logan-Rogersville R-VIII School District – Assistant Superintendent/Maintenance Department
Supporting Organization/Department:	None
Action/Project Priority:	High
Timeline for Completion:	1 – 5 Years
Potential Fund Sources:	Tax, Budget, HMA, HMPG Grant
Local Planning Mechanisms to be Used in Implementation, if any:	None
Progress Report	
Action Status:	Not Started
Report of Progress:	

APPENDIX B

ACTION WORKSHEET	
Name of Jurisdiction:	Logan-Rogersville R-VIII School District
Risk / Vulnerability	
Hazard(s) Addressed:	Targeted violence
Problem being Mitigated:	Provide “Stop the Bleed” kits for each campus for the event of targeted violence.
Action or Project	
Applicable Goal Statement:	Purchase multiple “Stop the Bleed” kits for each campus.
Action/Project Number:	Logan-Rogersville-3
Name of Action or Project:	Logan-Rogersville Stop the Bleed
Mitigation Category:	Prevention; Emergency Services
Action or Project Description:	Provide multiple Stop the Bleed kits to have readily available to staff if needed.
Estimated Cost:	$1,000 - $5,000
Benefits:	Providing these kits could reduce the loss of life in the event of targeted violence.
Plan for Implementation	
Responsible Organization/Department:	Logan-Rogersville School District; Health Services Department; Assistant Superintendent
Supporting Organization/Department:	None
Action/Project Priority:	High
Timeline for Completion:	1 – 3 years
Potential Fund Sources:	Tax, Budget, HMA, HMPG Grants
Local Planning Mechanisms to be Used in Implementation, if any:	None
Progress Report	
Action Status:	Continuing in Progress
Report of Progress:	Each building currently has at least one Stop the Bleed kit in place in the nurses’ office.

ACTION WORKSHEET	
Name of Jurisdiction:	Logan-Rogersville R-VIII School District
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Target Violence, Sinkholes, Wildfire
Problem being Mitigated:	Each school bus will be equipped with WiFi to enable GPS location which will aide in transportation needed during hazards and day to day operation.
Action or Project	
Applicable Goal Statement:	Each school bus would be equipped with WiFi to enable GPS location and real time camera accessibility
Action/Project Number:	Logan-Rogersville – 4
Name of Action or Project:	Logan-Rogersville Bus WiFi
Mitigation Category:	Prevention; Emergency Services
Action or Project Description:	WiFi on the school buses would enable GPS real-time location and camera accessibility.
Estimated Cost:	$10,000 - $50,000
Benefits:	During a hazardous event, this would aide transportation efficiency
Plan for Implementation	
Responsible Organization/Department:	Logan-Rogersville School District; Transportation Department; Technology Department; Assistant Superintendent
Supporting Organization/Department:	None
Action/Project Priority:	Medium
Timeline for Completion:	1 – 3 years
Potential Fund Sources:	Tax, Budget, HMA, HMPG Grants
Local Planning Mechanisms to be Used in Implementation, if any:	None
Progress Report	
Action Status:	New
Report of Progress:	

APPENDIX B

ACTION WORKSHEET	
Name of Jurisdiction:	Logan-Rogersville R-VIII School District
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Earthquakes, Drought, Extreme Temperatures, Severe Thunderstorms, Severe Winter Weather, Tornado
Problem being Mitigated:	Extreme weather conditions such as flooding, earthquakes, drought and extreme temperatures, both heatwaves and cold snaps, Severe winter weather, tornadoes, pose significant risks to public health, safety and infrastructure. Flooding and earthquakes can compromise infrastructure while posing public safety concerns. As an agricultural community, drought can lead to strain on local resources as well as water shortages impacting the quality and availability of drinking water. High temperatures can lead to heat-related illnesses, intensify existing health conditions, and increase energy demand. Extremely cold temperatures can result in hypothermia, frostbite, and infrastructure failures like waterline breaks and power outages. In all of these hazards having access to information about the safest thing to do can save lives. The goal is to provide this information to the school district, including students, parents and teachers to help protect the community.
Action or Project	
Applicable Goal Statement:	The goal of this mitigation plan is to reduce the risks associated with flooding, earthquakes, drought and extreme temperatures by providing public awareness, enhancing preparedness, and ensuring community resilience. This will include access to resources and services that protect vulnerable populations during extreme weather events
Action/Project Number:	Logan-Rogersville-5
Name of Action or Project:	LR Hazard Education
Mitigation Category:	Education and Outreach
Action or Project Description:	Launch a comprehensive public awareness campaign focused on educating the community about the risks of flooding, earthquakes, drought and extreme temperatures. This will include informational materials, and social media outreach. 1. Develop a social media campaign educating the school families and the community about these hazardous conditions, including tips on staying safe and connected to local services. 2. Partner with local health and social service organizations to create a registry of individuals who may require assistance during extreme temperature events.

	3. Establish cooling and warming centers equipped with essential supplies (water, blankets, medical kits) that can be rapidly deployed during extreme heat and cold events. 4. Train and educate the community to check in on at-risk residents via phone calls or home visits during extreme temperature events or in the event of flooding, earthquake or drought. 5. Encourage students to build a Family Safety Plan for what to do in the event of a flood or earthquake.
Estimated Cost:	Minimal due to school positioning in the district and community partnerships. Estimated 5,000 dollars
Benefits:	Increased public awareness can lead to early recognition and response to flooding, earthquakes, drought and extreme temperatures can help reduce heat-related illnesses, cold weather injuries quicker response times in the event of an earthquake leading to reduced hospital visits and fatalities. Enhanced preparedness will foster a culture of resilience, where community members are better equipped or prepared to handle a variety of hazardous conditions.
Plan for Implementation	
Responsible Organization/Department:	Logan-Rogersville School District; Transportation Department; Technology Department; Assistant Superintendent
Supporting Organization/Department:	None
Action/Project Priority:	High
Timeline for Completion:	3-12 Months
Potential Fund Sources:	HMPG Funding, HMA Funding, Annual Budget, Local Grants (Still being researched)
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	New
Report of Progress:	New

APPENDIX B

STAPLEE Worksheet	
Name of Jurisdiction:	Logan-Rogersville R-VIII School District
Action or Project	
Action/Project Number:	Logan-Rogersville-1
Name of Action or Project:	Logan-Rogersville Schools Earthquake/Weather Restoration
Mitigation Category:	Structure and Infrastructure Projects; Emergency Services

STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	**Score**
S: Is it **Socially** Acceptable	3
T: Is it **Technically** feasible and potentially successful?	3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?	2
P: Is it **Politically** acceptable?	3
L: Is there **Legal** authority to implement?	3
E: Is it **Economically** beneficial?	2
E: Will the project have either a neutral or positive impact on the natural **Environment**?	1
Will historic structures be saved or protected?	0
Could it be implemented quickly?	1
STAPLEE SCORE	18

Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
	MITIGATION EFFECTIVENESS SCORE	15
	TOTAL SCORE (STAPLEE + Mitigation Effectiveness)	33

☐ **High Priority (30+ points)**	☐ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by
(Name, Title, Phone Number) _____

APPENDIX B

STAPLEE Worksheet	
Name of Jurisdiction:	Logan-Rogersville R-VIII School District
Action or Project	
Action/Project Number:	Logan-Rogersville-2
Name of Action or Project:	Logan-Rogersville School District Generators
Mitigation Category:	Prevention; Emergency Services

STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	**Score**
S: Is it **Socially** Acceptable	3
T: Is it **Technically** feasible and potentially successful?	2
A: Does the jurisdiction have the **Administrative** capacity to execute this action?	3
P: Is it **Politically** acceptable?	3
L: Is there **Legal** authority to implement?	2
E: Is it **Economically** beneficial?	2
E: Will the project have either a neutral or positive impact on the natural **Environment**?	1
Will historic structures be saved or protected?	0
Could it be implemented quickly?	1
STAPLEE SCORE	17

Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	5
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
	MITIGATION EFFECTIVENESS SCORE	10
	TOTAL SCORE (STAPLEE + Mitigation Effectiveness)	27

☐ **High Priority (30+ points)**	■ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by
(Name, Title, Phone Number) _____

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	Logan-Rogersville R-VIII School District	
Action or Project		
Action/Project Number:	Logan-Rogersville-3	
Name of Action or Project:	Logan-Rogersville Stop the Bleed	
Mitigation Category:	Prevention; Emergency Services	

STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	**Score**
S: Is it **Socially** Acceptable	3
T: Is it **Technically** feasible and potentially successful?	3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?	3
P: Is it **Politically** acceptable?	3
L: Is there **Legal** authority to implement?	3
E: Is it **Economically** beneficial?	2
E: Will the project have either a neutral or positive impact on the natural **Environment**?	1
Will historic structures be saved or protected?	0
Could it be implemented quickly?	1
STAPLEE SCORE	19

Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
	MITIGATION EFFECTIVENESS SCORE	15
	TOTAL SCORE (STAPLEE + Mitigation Effectiveness)	34

☐ **High Priority (30+ points)**	☐ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by
(Name, Title, Phone Number) _____

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	Logan-Rogersville R-VIII School District	
Action or Project		
Action/Project Number:	Logan-Rogersville – 4	
Name of Action or Project:	Logan-Rogersville Bus WiFi	
Mitigation Category:	Prevention; Emergency Services	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		2
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		2
E: Is it **Economically** beneficial?		2
E: Will the project have either a neutral or positive impact on the natural **Environment**?		1
Will historic structures be saved or protected?		0
Could it be implemented quickly?		1
STAPLEE SCORE		17
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	5
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
MITIGATION EFFECTIVENESS SCORE		10
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		27

☐ **High Priority (30+ points)**	■ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by
(Name, Title, Phone Number) _____

APPENDIX B

ACTION WORKSHEET	
Name of Jurisdiction:	Ozarks Technical Community College
Risk / Vulnerability	
Hazard(s) Addressed:	Power failures, Severe Thunderstorms, Tornadoes, Severe Winter Weather, Extreme Temperatures
Problem being Mitigated:	Provide power to specific buildings during power outages to prevent damage to and loss of crucial operating systems.
Action or Project	
Applicable Goal Statement:	To provide power to our buildings for safety during power outages.
Action/Project Number:	OTC 1.0
Name of Action or Project:	Generators for: Information Commons/ Information Commons East; Information Commons West; and Norman K. Myers Buildings
Mitigation Category:	Prevention; Structure and Infrastructure Projects; Emergency Services
Action or Project Description:	Describe the action or project. Install generators for specific buildings on the Springfield campus to provide power during outages.
Estimated Cost:	$150,000-$250,000/ generator
Benefits:	When power is disrupted, the generator will make it possible to maintain control of crucial operating systems which include IT, HVAC, and our Life Safety Systems and communications.
Plan for Implementation	
Responsible Organization/Department:	The Executive Vice Chancellor for Administrative Services, the Facility Operations Director, and the Environmental Safety & Compliance Coordinator.
Supporting Organization/Department:	The Facility Operations Dept., Safety and Security Dept., and Information Technology Dept.
Action/Project Priority:	51, High Priority
Timeline for Completion:	2 years
Potential Fund Sources:	HMA, HMPG Grants and Infrastructure Fees
Local Planning Mechanisms to be Used in Implementation, if any:	None.
Progress Report	
Action Status:	New
Report of Progress:	N/A

ACTION WORKSHEET	
Name of Jurisdiction:	Ozarks Technical Community College
Risk / Vulnerability	
Hazard(s) Addressed:	All emergencies that need prompt communication to individuals not in an OTC building at that moment.
Problem being Mitigated:	When an emergency occurs, we can use the high decibel speakers to make announcements outside. This will help us to relay the same emergency information outside on our campus as we do inside our buildings.
Action or Project	
Applicable Goal Statement:	To provide emergency information outdoors, campus wide.
Action/Project Number:	OTC 2.0
Name of Action or Project:	HyperSpike® Speakers for the Springfield Campus and for the Republic Center
Mitigation Category:	Prevention; Emergency Services
Action or Project Description:	Install high decibel speakers outdoors to be able to communicate to students and employees during campus emergencies.
Estimated Cost:	$30,000-$60,000/ speaker
Benefits:	When an emergency occurs, having the ability to provide mass notification outside to all students, staff, and the general public will prevent the loss of life.
Plan for Implementation	
Responsible Organization/Department:	The Executive Vice Chancellor for Administrative Services, the Facility Operations Director, and the Environmental Safety & Compliance Coordinator.
Supporting Organization/Department:	The Facility Operations Dept., Safety and Security Dept., and Information Technology Dept.
Action/Project Priority:	38, High Priority
Timeline for Completion:	1 year
Potential Fund Sources:	HMA, HMPG Grants and Infrastructure Fees
Local Planning Mechanisms to be Used in Implementation, if any:	None.
Progress Report	
Action Status:	New
Report of Progress:	N/A

APPENDIX B

Action Worksheet	
Name of Jurisdiction:	Ozarks Technical Community College
Risk / Vulnerability	
Hazard(s) Addressed:	The hazard of spreading communicable diseases.
Problem being Mitigated:	Education on the spread and transfer of communicable diseases can help lessen the number of people affected by those diseases.
Action or Project	
Applicable Goal Statement:	Provide campus wide education through literacy to prevent the spread of communicable diseases.
Action/Project Number:	OTC 3.0
Name of Action or Project:	Campus Wide Education about Communicable Diseases through Literacy
Mitigation Category:	Education and Outreach
Action or Project Description:	Publish CDC approved information campus wide about communicable diseases and how to prevent spreading them.
Estimated Cost:	$10,000-$15,000
Benefits:	Educating our students and staff about deterring the spread of communicable diseases will help to keep everyone in better health.
Plan for Implementation	
Responsible Organization/Department:	The Executive Vice Chancellor for Administrative Services, the Facility Operations Director, and the Environmental Safety & Compliance Coordinator.
Supporting Organization/Department:	The Facility Operations Dept. and the OTC Print Shop
Action/Project Priority:	32, High Priority
Timeline for Completion:	6-9 months
Potential Fund Sources:	HMA, HMPG grant, Departmental Budgets
Local Planning Mechanisms to be Used in Implementation, if any:	None.
Progress Report	
Action Status:	New
Report of Progress:	N/A

APPENDIX B

ACTION WORKSHEET	
Name of Jurisdiction:	Ozarks Technical Community College
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Earthquakes, Drought, Extreme Temperatures, Severe Thunderstorms, Severe Winter Weather, Tornado
Problem being Mitigated:	Extreme weather conditions such as flooding, earthquakes, drought and extreme temperatures, both heatwaves and cold snaps, Severe winter weather, tornadoes, pose significant risks to public health, safety and infrastructure. Flooding and earthquakes can compromise infrastructure while posing public safety concerns. As an agricultural community, drought can lead to strain on local resources as well as water shortages impacting the quality and availability of drinking water. High temperatures can lead to heat-related illnesses, intensify existing health conditions, and increase energy demand. Extremely cold temperatures can result in hypothermia, frostbite, and infrastructure failures like waterline breaks and power outages. In all of these hazards having access to information about the safest thing to do can save lives. The goal is to provide this information to the school district, including students, parents and teachers to help protect the community.
Action or Project	
Applicable Goal Statement:	The goal of this mitigation plan is to reduce the risks associated with flooding, earthquakes, drought and extreme temperatures by providing public awareness, enhancing preparedness, and ensuring community resilience. This will include access to resources and services that protect vulnerable populations during extreme weather events
Action/Project Number:	OTC 4.0
Name of Action or Project:	OTC Hazard Education
Mitigation Category:	Education and Outreach
Action or Project Description:	Launch a comprehensive public awareness campaign focused on educating the community about the risks of flooding, earthquakes, drought and extreme temperatures. This will include informational materials, and social media outreach. 1. Develop a social media campaign educating the school families and the community about these hazardous conditions, including tips on staying safe and connected to local services. 2. Partner with local health and social service organizations to create a registry of individuals who may require assistance during extreme temperature events.

	3. Establish cooling and warming centers equipped with essential supplies (water, blankets, medical kits) that can be rapidly deployed during extreme heat and cold events. 4. Train and educate the community to check in on at-risk residents via phone calls or home visits during extreme temperature events or in the event of flooding, earthquake or drought. 5. Encourage students to build a Family Safety Plan for what to do in the event of a flood or earthquake.
Estimated Cost:	Minimal due to school positioning in the district and community partnerships. Estimated 5,000 dollars
Benefits:	Increased public awareness can lead to early recognition and response to flooding, earthquakes, drought and extreme temperatures can help reduce heat-related illnesses, cold weather injuries quicker response times in the event of an earthquake leading to reduced hospital visits and fatalities. Enhanced preparedness will foster a culture of resilience, where community members are better equipped or prepared to handle a variety of hazardous conditions.
Plan for Implementation	
Responsible Organization/Department:	The Executive Vice Chancellor for Administrative Services, the Facility Operations Director, and the Environmental Safety & Compliance Coordinator.
Supporting Organization/Department:	The Facility Operations Dept. and the OTC Print Shop
Action/Project Priority:	High
Timeline for Completion:	3-12 Months
Potential Fund Sources:	HMPG Funding, HMA Funding, Annual Budget, Local Grants (Still being researched)
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	New
Report of Progress:	New

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	Ozarks Technical Community College	
Action or Project		
Action/Project Number:	OTC 1.0	
Name of Action or Project:	Generators for Information Commons/ Information Commons East Building; Information Commons West; and Norman K. Myers Buildings	
Mitigation Category:	Prevention; Structure and Infrastructure Projects; Emergency Services	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		3
E: Will the project have either a neutral or positive impact on the natural **Environment**?		1
Will historic structures be saved or protected?		0
Could it be implemented quickly?		3
STAPLEE SCORE		22
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	9
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	10
MITIGATION EFFECTIVENESS SCORE		29
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		51

[X] **High Priority (30+ points)**	☐ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by (Name, Title, Phone Number): Kathleen Kingry, Environmental Safety and Compliance Coordinator (417-512-6725), and Raymond Wade, Director of Facility Operations (417-447-4818)

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	Ozarks Technical Community College	
Action or Project		
Action/Project Number:	OTC 2.0	
Name of Action or Project:	HyperSpike® Speakers for the Springfield Campus and for the Republic Center	
Mitigation Category:	Emergency Services	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		1
E: Will the project have either a neutral or positive impact on the natural **Environment**?		3
Will historic structures be saved or protected?		0
Could it be implemented quickly?		3
	STAPLEE SCORE	22
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	9
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	7
	MITIGATION EFFECTIVENESS SCORE	16
	TOTAL SCORE (STAPLEE + Mitigation Effectiveness)	38

[X] **High Priority (30+ points)**	[ ] **Medium Priority (25 - 29 points)**	[ ] **Low Priority (<25 points)**

Completed by
(Name, Title, Phone Number)

Kathleen Kingry, Environmental Safety and Compliance Coordinator (417-512-6725), and Raymond Wade, Director of Facility Operations (417-447-4818)

APPENDIX B

STAPLEE Worksheet	
Name of Jurisdiction:	Ozarks Technical Community College
Action or Project	
Action/Project Number:	OTC 3.0
Name of Action or Project:	Campus wide education about communicable diseases through literacy
Mitigation Category:	Education and Outreach

STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	**Score**
S: Is it **Socially** Acceptable	3
T: Is it **Technically** feasible and potentially successful?	3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?	3
P: Is it **Politically** acceptable?	2
L: Is there **Legal** authority to implement?	3
E: Is it **Economically** beneficial?	2
E: Will the project have either a neutral or positive impact on the natural **Environment**?	0
Will historic structures be saved or protected?	0
Could it be implemented quickly?	2
STAPLEE SCORE	18

Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	9
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
	MITIGATION EFFECTIVENESS SCORE	14
	TOTAL SCORE (STAPLEE + Mitigation Effectiveness)	32

[X] **High Priority (30+ points)**	☐ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by
(Name, Title, Phone Number)

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	Ozarks Technical Community College	
Action or Project		
Action/Project Number:	OTC 4.0	
Name of Action or Project:	OTC Hazard Education	
Mitigation Category:	Education and Outreach	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		3
E: Will the project have either a neutral or positive impact on the natural **Environment**?		1
Will historic structures be saved or protected?		0
Could it be implemented quickly?		3
STAPLEE SCORE		22
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	9
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	10
MITIGATION EFFECTIVENESS SCORE		29
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		51

[X] **High Priority (30+ points)**	[ ] **Medium Priority (25 - 29 points)**	[ ] **Low Priority (<25 points)**

ACTION WORKSHEET	
Name of Jurisdiction:	Springfield Public Schools
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Severe Winter weather, Tornadoes, Dam Failure, Earthquakes, Drought, Extreme Temperatures
Problem being Mitigated:	SW MO is prone to severe weather to include tornados Reduction of loss of life and protections from severe weather
Action or Project	
Applicable Goal Statement:	Building of these new school buildings with storm rooms will reduce loss of life and help provide a safe educational space for students and a safe place for staff to work
Action/Project Number:	SPS 1
Name of Action or Project:	Build a new Pershing Middle School with a storm safe room at 2120 S. Ventura Ave. Springfield MO 65804
Mitigation Category:	Structure and Infrastructure Projects
Action or Project Description:	Springfield Public Schools proposes the construction of a new middle school that includes an integrated storm safe room to enhance the district's preparedness and protect students, staff, and the surrounding community during severe weather events. Located in a region prone to tornadoes and high-wind storms, this new facility will serve as both an educational center and a critical asset for hazard mitigation and emergency sheltering. The project addresses two core priorities: expanding and modernizing educational infrastructure to meet growing enrollment needs and reducing the district's vulnerability to natural hazards. The planned storm safe room will be a reinforced, structurally hardened space designed to provide near-immediate refuge during extreme weather, reducing the risk of injury or loss of life. Key components of the mitigation project include: 1. Construction of a hardened storm safe room built with impact-resistant materials to withstand high winds and airborne debris, ensuring the safety of students and staff during tornadoes or windstorms. 2. Multi-functional design, allowing the safe room to serve a daily use as a gymnasium, cafeteria, or large classroom space, maximizing its utility while maintaining its protective capabilities during emergencies. 3. Inclusion of emergency supplies and infrastructure, such as independent lighting, ventilation, and basic provisions, to support short-term sheltering during severe weather events. 4. Accessible design features to ensure that all individuals, including those with mobility challenges, can safely access and remain in the shelter during an emergency. 5. Potential community use, offering protection to nearby residents after school hours during declared emergencies, contributing to broader local preparedness efforts.

	By investing in this storm-safe school construction project, Springfield Public Schools will enhance its ability to protect its students and staff, minimize disruptions during hazard events, and contribute to the long-term safety and resilience of the broader community.
Estimated Cost:	$55 – $72 million dollars for project completion
Benefits:	With the construction of a new school campus, it will provide a safer and more secure learning environment for students and staff. This would reduce the loss of life and some personal property in the event of a severe weather event. New buildings are also considered more secure in the event of targeted violence incidents.
Plan for Implementation	
Responsible Organization/Department:	Springfield Public Schools
Supporting Organization/Department:	Which organization/department will assist in implementation of this action?
Action/Project Priority:	H
Timeline for Completion:	3 years from start to completion of project
Potential Fund Sources:	HMA, HMPG Grants, Discretionary Construction Grants by OESE for Modernization of School Buildings, Renew America's Schools by DOE General Budget, Tax Revenue
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	New
Report of Progress:	

ACTION WORKSHEET	
Name of Jurisdiction:	Springfield Public Schools
Risk / Vulnerability	
Hazard(s) Addressed:	Tornadoes, Severe Wind, and Targeted Violence Incidents
Problem being Mitigated:	SW MO is prone to severe weather to include tornados
Action or Project	
Applicable Goal Statement:	Building of these new school buildings with storm rooms that will reduce loss of life and help provide a safe educational space for students and a safe place for staff to work
Action/Project Number:	SPS 2
Name of Action or Project:	Build a new Pipkin Middle School with a storm safe room on the property north of Lyon, west of Campbell and south of Division in Springfield MO 65802. (Official numeric address has not been provided yet)
Mitigation Category:	Structure and Infrastructure Projects
Action or Project Description:	Springfield Public Schools proposes the construction of a new middle school that includes an integrated storm safe room to enhance the district's preparedness and protect students, staff, and the surrounding community during severe weather events. Located in a region prone to tornadoes and high-wind storms, this new facility will serve as both an educational center and a critical asset for hazard mitigation and emergency sheltering. The project addresses two core priorities: expanding and modernizing educational infrastructure to meet growing enrollment needs and reducing the district's vulnerability to natural hazards. The planned storm safe room will be a reinforced, structurally hardened space designed to provide near-immediate refuge during extreme weather, reducing the risk of injury or loss of life. Key components of the mitigation project include: 6. Construction of a hardened storm safe room built with impact-resistant materials to withstand high winds and airborne debris, ensuring the safety of students and staff during tornadoes or windstorms. 7. Multi-functional design, allowing the safe room to serve a daily use as a gymnasium, cafeteria, or large classroom space, maximizing its utility while maintaining its protective capabilities during emergencies. 8. Inclusion of emergency supplies and infrastructure, such as independent lighting, ventilation, and basic provisions, to support short-term sheltering during severe weather events. 9. Accessible design features to ensure that all individuals, including those with mobility challenges, can safely access and remain in the shelter during an emergency. 10. Potential community use, offering protection to nearby residents after school hours during declared emergencies, contributing to broader local preparedness efforts.

	By investing in this storm-safe school construction project, Springfield Public Schools will enhance its ability to protect its students and staff, minimize disruptions during hazard events, and contribute to the long-term safety and resilience of the broader community.
Estimated Cost:	$55 – $72 million dollars for project completion
Benefits:	With the construction of a new school campus, it will provide a safer and more secure learning environment for students and staff. This would reduce the loss of life and some personal property in the event of a severe weather event. New buildings are also considered more secure in the event of targeted violence incidents.
Plan for Implementation	
Responsible Organization/Department:	Springfield Public Schools
Supporting Organization/Department:	Which organization/department will assist in implementation of this action?
Action/Project Priority:	H
Timeline for Completion:	3 years for project completion from start
Potential Fund Sources:	HMA, HMPG Grants, Discretionary Construction Grants by OESE for Modernization of School Buildings, Renew America's Schools by DOE General Budget, Tax Revenue
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	New
Report of Progress:	

ACTION WORKSHEET	
Name of Jurisdiction:	Springfield Public Schools
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding, Severe Winter weather, Tornadoes, Dam Failure, Earthquakes, Drought, Extreme Temperatures
Problem being Mitigated:	SW MO is prone to severe weather to include tornados
Action or Project	
Applicable Goal Statement:	Building of these new school buildings with storm rooms will reduce loss of life and help provide a safe educational space for students and a safe place for staff to work
Action/Project Number:	SPS 3
Name of Action or Project:	Build a new Reed Middle School with a storm safe room at 2000 N. Lyon Ave . Springfield MO 65803
Mitigation Category:	Structure and Infrastructure
Action or Project Description:	Springfield Public Schools proposes the construction of a new middle school that includes an integrated storm safe room to enhance the district's preparedness and protect students, staff, and the surrounding community during severe weather events. Located in a region prone to tornadoes and high-wind storms, this new facility will serve as both an educational center and a critical asset for hazard mitigation and emergency sheltering. The project addresses two core priorities: expanding and modernizing educational infrastructure to meet growing enrollment needs and reducing the district's vulnerability to natural hazards. The planned storm safe room will be a reinforced, structurally hardened space designed to provide near-immediate refuge during extreme weather, reducing the risk of injury or loss of life. Key components of the mitigation project include: 11. Construction of a hardened storm safe room built with impact-resistant materials to withstand high winds and airborne debris, ensuring the safety of students and staff during tornadoes or windstorms. 12. Multi-functional design, allowing the safe room to serve a daily use as a gymnasium, cafeteria, or large classroom space, maximizing its utility while maintaining its protective capabilities during emergencies. 13. Inclusion of emergency supplies and infrastructure, such as independent lighting, ventilation, and basic provisions, to support short-term sheltering during severe weather events. 14. Accessible design features to ensure that all individuals, including those with mobility challenges, can safely access and remain in the shelter during an emergency. 15. Potential community use, offering protection to nearby residents after school hours during declared emergencies, contributing to broader local preparedness efforts.

	By investing in this storm-safe school construction project, Springfield Public Schools will enhance its ability to protect its students and staff, minimize disruptions during hazard events, and contribute to the long-term safety and resilience of the broader community.
Estimated Cost:	$55 – $72 million dollars for project completion
Benefits:	With the construction of a new school campus, it will provide a safer and more secure learning environment for students and staff. This would reduce the loss of life and some personal property in the event of a severe weather event. New buildings are also considered more secure in the event of targeted violence incidents.
Plan for Implementation	
Responsible Organization/Department:	Springfield Public Schools
Supporting Organization/Department:	Which organization/department will assist in implementation of this action?
Action/Project Priority:	H
Timeline for Completion:	3 years for project completion
Potential Fund Sources:	HMA, HMPG Grants, Discretionary Construction Grants by OESE for Modernization of School Buildings, Renew America's Schools by DOE General Budget, Tax Revenue
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	New
Report of Progress:	

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	Springfield Public Schools	
Action or Project		
Action/Project Number:	SPS 1	
Name of Action or Project:	Build a new Pershing Middle School with a storm safe room at 2120 S. Ventura Ave. Springfield MO 65804	
Mitigation Category:	Structure and Infrastructure Projects	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		2
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		2
E: Will the project have either a neutral or positive impact on the natural **Environment**?		1
Will historic structures be saved or protected?		0
Could it be implemented quickly?		1
STAPLEE SCORE		18
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
MITIGATION EFFECTIVENESS SCORE		15
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		33

☑ **High Priority (30+ points)**	☐ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by
(Name, Title, Phone Number) _____

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	Springfield Public Schools	
Action or Project		
Action/Project Number:	SPS 2	
Name of Action or Project:	Build a new Pipkin Middle School with a storm safe room on the property north of Lyon, west of Campbell and south of Division in Springfield MO 65802. (Official numeric address has not been provided yet)	
Mitigation Category:	Structure and Infrastructure Projects	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		2
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		2
E: Will the project have either a neutral or positive impact on the natural **Environment**?		1
Will historic structures be saved or protected?		0
Could it be implemented quickly?		1
	STAPLEE SCORE	18
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
	MITIGATION EFFECTIVENESS SCORE	15
	TOTAL SCORE (STAPLEE + Mitigation Effectiveness)	33

☐ **High Priority (30+ points)**	☐ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by
(Name, Title, Phone Number) _____

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	Springfield Public Schools	
Action or Project		
Action/Project Number:	SPS 3	
Name of Action or Project:	Build a new Reed Middle School with a storm safe room at 2000 N. Lyon Ave . Springfield MO 65803	
Mitigation Category:	Structure and Infrastructure	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		2
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		2
E: Will the project have either a neutral or positive impact on the natural **Environment**?		1
Will historic structures be saved or protected?		0
Could it be implemented quickly?		1
STAPLEE SCORE		18
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	5
MITIGATION EFFECTIVENESS SCORE		15
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		33

☐ **High Priority (30+ points)**	☐ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by
(Name, Title, Phone Number) _____

APPENDIX B

ACTION WORKSHEET	
Name of Jurisdiction:	Willard Fire Protection District
Risk / Vulnerability	
Hazard(s) Addressed:	Targeted Violence, Airplane Crash, Hazardous Materials, Train Derailment, Urban Fire, Damaging Winds, Tornadoes, Earthquakes, Sinkholes, Wildfire, Severe Thunderstorms, Severe Winter Weather, Extreme Temperatures, Drought (Increased fire risk)
Problem being Mitigated:	Properly equipping Firefighters to safely work in all environments that can be dangerous to life and health will allow for a safer response to disaster events to help mitigate the loss of life and property in a crisis.
Action or Project	
Applicable Goal Statement:	Ensure the safety of individuals and the community through coordinated action.
Action/Project Number:	Willard 24-1
Name of Action or Project:	Turn Out Gear Willard
Mitigation Category:	Emergency Services
Action or Project Description:	To have Firefighters custom fitted for new turnout gear to ensure personal safety on emergency scenes.
Estimated Cost:	20,000
Benefits:	Providing proper Personal Protective Equipment (PPE) to firefighters enables them to safely and efficiently mitigate emergencies, ultimately saving more lives and protecting personal property. Proper PPE also plays a critical role in reducing the risk of injury or loss of life within the fire department itself. Access to a diverse range of equipment further allows the Willard Fire Department to assist neighboring communities, and their own, more effectively, while minimizing personal risk to responders.
Plan for Implementation	
Responsible Organization/Department:	Willard Fire Protection District, the Operations Chief
Supporting Organization/Department:	
Action/Project Priority:	High
Timeline for Completion:	3 Months
Potential Fund Sources:	BONO
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	Continuing/In Progress
Report of Progress:	Firefighters and begun being custom fitted for gear.

ACTION WORKSHEET	
Name of Jurisdiction:	Willard Fire Protection District
Risk / Vulnerability	
Hazard(s) Addressed:	Targeted Violence, Airplane Crash, Hazardous Materials, Train Derailment, Urban Fire, Damaging Winds, Tornadoes, Earthquake
Problem being Mitigated:	The existing 1986 Hahn aerial apparatus is beyond its service life, unreliable, and no longer supported for routine maintenance or safety upgrades. Its failure to perform during emergencies increases the community's vulnerability to fire spread, delayed rescues, and ineffective response to disaster-related structural hazards. Without a functional aerial truck, firefighters are unable to access elevated structures, perform safe rescues, or conduct rapid suppression operations—placing residents, property, and responders at heightened risk.
Action or Project	
Applicable Goal Statement:	Ensure the safety of individuals and the community through coordinated action and proactive hazard mitigation.
Action/Project Number:	Willard 24-2
Name of Action or Project:	Rosenbauer Aerial Apparatus Acquisition
Mitigation Category:	Emergency Services
Action or Project Description:	The Willard Fire Protection District proposes the acquisition of a 2025 Rosenbauer aerial apparatus to replace the outdated 1986 Hahn aerial truck. This mitigation action will significantly improve the district's capability to suppress urban and structural fires, conduct elevated rescues, and respond to disaster-related hazards such as tornado damage, hazardous materials incidents, and structural collapse. Replacing the current apparatus reduces operational failures, enhances firefighter safety, and ensures reliable vertical access and water delivery systems during emergencies. This investment directly reduces vulnerability by providing critical emergency service capacity for Willard and surrounding mutual aid jurisdictions, contributing to a more resilient Greene County. Mitigation Benefits and Project Components: 1. Fire Spread Reduction: Improved water delivery systems and reach minimize loss of life and property by containing fire in densely developed or high-risk areas. 2. Rescue Support: Provides reliable access for evacuations and victim recovery during multi-story structure fires, tornado aftermath, and severe weather damage. 3. Disaster Response: Ensures operational capacity during high-wind, tornado, or earthquake-related incidents where elevated or obstructed access is critical. 4. Equipment Reliability: Replaces obsolete, failure-prone equipment with a modern apparatus that meets NFPA and safety standards. 5. Regional Resilience: Strengthens Greene County's overall emergency response capacity through improved mutual aid support. By replacing aging and unreliable equipment with a modern, versatile

	aerial truck, the Willard Fire Protection District will improve its mitigation efforts, operational effectiveness, reduce community vulnerability to fire-related hazards, and ensure safer, faster, and more reliable emergency services for residents and mutual aid partners alike. This project is a forward-looking investment in disaster mitigation, community safety, and emergency preparedness.
Estimated Cost:	$1,561,169
Benefits:	To insure, mitigate, and to provide coverage to our district and mutual aid partners with updated equipment.
Plan for Implementation	
Responsible Organization/Department:	Willard Fire Protection District, the Administration – Chief Scott
Supporting Organization/Department:	Assistant Fire Chief Samsel
Action/Project Priority:	High
Timeline for Completion:	10 months
Potential Fund Sources:	Bond money, HMA, HMPG, AFG grants
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	Continuing/In Progress
Report of Progress:	The truck model has been identified and quoted for price

ACTION WORKSHEET	
Name of Jurisdiction:	Willard Fire Protection District
Risk / Vulnerability	
Hazard(s) Addressed:	Flooding
Problem being Mitigated:	Flooding around and beneath the Willard Fire Protection District's primary fire station is causing drainage issues that threaten the structural integrity of the facility and create health hazards from standing water and potential mold growth. These conditions undermine the readiness of firefighters, reduce building safety, and jeopardize the district's ability to respond during emergencies.
Action or Project	
Applicable Goal Statement:	Complete rerouting of water runoff to protect building structure and mitigate risk to the staff's health from standing water.
Action/Project Number:	Willard 24-3
Name of Action or Project:	Drainage Issues
Mitigation Category:	Prevention; Structure and Infrastructure; Emergency Services
Action or Project Description:	The Willard Fire Protection District proposes drainage improvements at the main fire station to mitigate recurrent flooding issues. The project will involve excavation, installation of French drains, culverts, and concrete drive improvements, as well as regrading soil around the building to divert runoff away from the structure. This mitigation action will prevent water intrusion, reduce long-term facility damage, and eliminate environmental health risks for firefighters living and working in the building. By protecting the fire station—a critical facility for life safety and disaster response—this project ensures the district maintains full operational capacity during severe weather events and flood hazards, mitigating loss of life and property.
Estimated Cost:	$18,000
Benefits:	**Critical Facility Protection:** Prevents water damage to the fire station, safeguarding essential infrastructure that supports 24/7 emergency services. **Health and Safety of Personnel:** Reduces risk of mold growth and standing water, preserving the health of firefighters who occupy the station. **Operational Continuity:** Ensures reliable access to the tornado shelter and prevents disruptions to fire and rescue services caused by facility flooding. **Cost Avoidance:** Reduces long-term repair and maintenance costs associated with repeated water damage to the building. **Resiliency Enhancement:** Strengthens district readiness to respond during flooding or severe weather events, mitigating loss of facility functionality.
Plan for Implementation	
Responsible Organization/Department:	Willard Fire Protection District, the Administration – Chief Scott
Supporting Organization/Department:	Assistant Fire Chief Samsel

Action/Project Priority:	Medium
Timeline for Completion:	1 month
Potential Fund Sources:	Bond money, HMA, HMPG, AFG grants
Local Planning Mechanisms to be Used in Implementation, if any:	
Progress Report	
Action Status:	Continuing/In Progress
Report of Progress:	Excavation has already begun on site

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	Willard Fire Protection District	
Action or Project		
Action/Project Number:	Willard 24-1	
Name of Action or Project:	Turn Out Gear Willard	
Mitigation Category:	Emergency Services	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		2
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		2
E: Will the project have either a neutral or positive impact on the natural **Environment**?		3
Will historic structures be saved or protected?		0
Could it be implemented quickly?		2
STAPLEE SCORE		22
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	8
MITIGATION EFFECTIVENESS SCORE		18
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		40

☐ **High Priority (30+ points)**	☐ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by
(Name, Title, Phone Number) _____

APPENDIX B

STAPLEE Worksheet		
Name of Jurisdiction:	Willard Fire Protection District	
Action or Project		
Action/Project Number:	Willard 24-2	
Name of Action or Project:	Rosenbauer Aerial Apparatus Acquisition	
Mitigation Category:	Emergency Services	
STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0		**Score**
S: Is it **Socially** Acceptable		3
T: Is it **Technically** feasible and potentially successful?		3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?		3
P: Is it **Politically** acceptable?		3
L: Is there **Legal** authority to implement?		3
E: Is it **Economically** beneficial?		3
E: Will the project have either a neutral or positive impact on the natural **Environment**?		3
Will historic structures be saved or protected?		0
Could it be implemented quickly?		0
	STAPLEE SCORE	21
Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	10
	MITIGATION EFFECTIVENESS SCORE	20
	TOTAL SCORE (STAPLEE + Mitigation Effectiveness)	41

☐ **High Priority (30+ points)**	☐ **Medium Priority (25 - 29 points)**	☐ **Low Priority (<25 points)**

Completed by
(Name, Title, Phone Number) _____

APPENDIX B

STAPLEE Worksheet	
Name of Jurisdiction:	Willard Fire Protection District
Action or Project	
Action/Project Number:	Willard 24-3
Name of Action or Project:	Drainage Issues
Mitigation Category:	Prevention; Structure and Infrastructure; Emergency Services

STAPLEE Criteria **Evaluation Rating** Definitely YES = 3 Maybe YES = 2 Probably NO = 1 Definitely NO = 0	**Score**
S: Is it **Socially** Acceptable	3
T: Is it **Technically** feasible and potentially successful?	3
A: Does the jurisdiction have the **Administrative** capacity to execute this action?	3
P: Is it **Politically** acceptable?	3
L: Is there **Legal** authority to implement?	3
E: Is it **Economically** beneficial?	3
E: Will the project have either a neutral or positive impact on the natural **Environment**?	3
Will historic structures be saved or protected?	0
Could it be implemented quickly?	0
STAPLEE SCORE	21

Mitigation Effectiveness Criteria	**Evaluation Rating**	**Score**
Will the implemented action result in lives saved?	Assign from 5-10 points based on the likelihood that lives will be saved.	10
Will the implemented action result in a reduction of disaster damages?	Assign from 5-10 points based on the relative reduction of disaster damages.	10
MITIGATION EFFECTIVENESS SCORE		20
TOTAL SCORE (STAPLEE + Mitigation Effectiveness)		41

☐ **High Priority (30+ points)**	☐ **Medium Priority (25 - 29 points)**	■ **Low Priority (<25 points)**

Completed by
(Name, Title, Phone Number) _____

APPENDIX C

Adoptions

APPENDIX D

Sign-In Sheets

Enforced 11/4/24

Springfield-Greene County Office of Emergency Management
911-Emergency Communications Center

Policy Room	3/27/2024	CODE: First Floor	
Event Name : GCOEM - Mitigation Meeting			Time: 8:00 AM - 9:00 AM

	Print Name	PSC Badge #	Agency	Phone	Signature	Time In	Time Out
1	Gretchen Ruffa	—	DEM	EX 6554	Gretchen Ruffa	7:45	8:54
2	Hannah James		CoxHealth	417-414-2838	Hannah James	745	8:54
3	Ashley Stanley	—	OEM	417-353-8168	Ashley Stanley	7:45	8:54
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Entered 11/4/24

Springfield-Greene County Office of Emergency Management
911-Emergency Communications Center

	4/9/24	**CODE:** Policy Room	
Event Name : Admin Meeting			**Time:** 2:00pm

	Print Name	PSC Badge #	Agency	Phone	Signature	Time In	Time Out
1	Ashley Stanley	—	OEM	417-353-8168		2:00	2:45
2	Robbin Sawyer	—	OEm	—		2:00	2:45
3	Gretchen Ruffa	—	DEM	—		2:00	2:45
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Entered into spreadsheet for reimbursement 11/1/24

(29)

Springfield-Greene County Office of Emergency Management
911-Emergency Communications Center

Training Room	4/26/2024	CODE: First Floor	
Event Name : GCOEM - Mitigation Kick Off Meeting #1			Time: 10:00 AM - 11:00 AM

	Print Name	PSC Badge #	Agency	Phone	Signature	Time In	Time Out
1	Gretchen Ruffa	—	OEM	Ex:16554	Gretchen Ruffa	9:39	
2	James Kilburn	1	Brookline FPD	417-343-4183		9:39	
3	Josh Dulcewicz	3	Battlefield	417 881 9018		9:45	
4	Martha	4	Strafford	417-402-4302	Martha Stewart	9:47	
5	James Stewart	7	MSU	941-268-4316		9:47	
6	Mark Fox	10	SPD	417-813-3866		952	
7	Maggie Rogers	11	SGCHD	417-459-7184		0953	
8	Jason Perkins	13	Republic School	417-529-6274		9:56	
9	Beth West	14	Battlefield	417 334 5847	Beth West	9:59	
10	Jennifer Katzin	16	Logan-Rogersville Schools	(417) 496-0112	Jennifer Katzin	9:59	
11	Kevin Stamsel	17	Willard Fire	(417)(987-7323)		959	
12	Ashley Stanley	—	—	417-353-8168			
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Springfield-Greene County Office of Emergency Management
911-Emergency Communications Center

Training Room	4/26/2024	CODE: First Floor	
Event Name : GCOEM - Mitigation Kick Off Meeting #1			Time: 10:00 AM - 11:00 AM

	Print Name	PSC Badge #	Agency	Phone	Signature	Time In	Time Out
1	Sandy Strecker	5	City of Strafford	(417)736-2154		9:47	
2	Kris Bone	8	Fair Grove City	469-662-9629		9:48	
3	STEFANIE SHELL	12	FAIR GROVE FIRE	417-872-5375		9:54	
4	Tommy VanHorn	15	City of Battlefield	4178835840		9:59	
5	Bradley Green	18	Willard Fire	417-763-8904		9:59	
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Springfield-Greene County Office of Emergency Management
911-Emergency Communications Center

Training Room	4/26/2024	CODE: First Floor	
Event Name : GCOEM - Mitigation Kick Off Meeting #1			Time: 10:00 AM - 11:00 AM

	Print Name	PSC Badge #	Agency	Phone	Signature	Time In	Time Out
1	Cathy Shaw	6	Willard Schools	417 425 5703		9:47	
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Springfield-Greene County Office of Emergency Management
911-Emergency Communications Center

Training Room	4/26/2024	CODE: First Floor	
Event Name : GCOEM - Mitigation Kick Off Meeting #1			Time: 10:00 AM - 11:00 AM

	Print Name	PSC Badge #	Agency	Phone	Signature	Time In	Time Out
1	Lyzeth Hollandsworth	#2	Republic OEM	417-234-4450		0944	
2	John Davis	#9	Ash Grove OGM	417-262-0423		0945	
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Springfield-Greene County Office of Emergency Management
911-Emergency Communications Center

Training Room	4/26/2024	CODE: First Floor	
Event Name : GCOEM - Mitigation Kick Off Meeting #2			Time: 1:00 PM - 2:00 PM

	Print Name	PSC Badge #	Agency	Phone	Signature	Time In	Time Out
1	Kip Mathena		CU	417.831.8640		12:36	
2	Sydney Allen	7	PTZ (GC)	417-300-8435		12:51	
3	Joanna Wheeler	14	Mercy	417-254-1984		13:18	
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Springfield-Greene County Office of Emergency Management
911-Emergency Communications Center

Training Room	4/26/2024	CODE: First Floor	
Event Name : GCOEM - Mitigation Kick Off Meeting #2			Time: 1:00 PM - 2:00 PM

	Print Name	PSC Badge #	Agency	Phone	Signature	Time In	Time Out
1	Adrienne Jenkins	1	CU	919-920-0588			
2	CHRIS BRUMETT	3	SAL ARMY	417 894 2067		1238	
3	Brian Weiler	4	Airport	417-414-2468		12:49	
4	Hannah James	6	COX	417-414-2838		1251	
5	ERIC CLAUSSEN	8	CITY	417-864-1960		12:55	
6	Jon Carver	10	PARKS	417-864-1345		12:58	
7	Amanda Ohlensehlen	11	City	417 864 1022		1302	
8	Austin Arnold	12	Red Cross	417-229-6151		1305	
9	Bob Hosmer	13	City of Spfd	417-864-1853		1309	
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Springfield-Greene County Office of Emergency Management
911-Emergency Communications Center

Training Room	4/26/2024	CODE: First Floor	
Event Name : GCOEM - Mitigation Kick Off Meeting #2			Time: 1:00 PM - 2:00 PM

	Print Name	PSC Badge #	Agency	Phone	Signature	Time In	Time Out
1	Allen Busick	5	City of Springfield	417-874-2853	Allen Busick	12:50	
2	Derek Jones	—	GCSO	402-968		1:25	
3	Nathan Hagen	9	City of Springfield	417-864-6471		12:57	
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already logged with all attendees of Kickoff meeting

Springfield-Greene County Office of Emergency Management
Multi-Jurisdictional Hazard Mitigation Plan
VOLUNTEER TIME SHEET

Staff Name (Last, First)			Job Title		Hourly Rate		Jurisdiction	
Lynn Holland-Smith			EMD				City of Republic	
Week #1	**Sun.**	**Mon.**	**Tues.**	**Wed.**	**Thurs.**	**Fri.**	**Sat.**	
Date	04/14/24							**Total Hours**
Hours Worked								0.00
Week #2	**Sun.**	**Mon.**	**Tues.**	**Wed.**	**Thurs.**	**Fri.**	**Sat.**	
Date							04/26/24	**Total Hours**
Hours Worked							1.00	1.00

Description of work completed:
Kick off meeting with Greene County OEM

Please remember to complete the top section of the timesheet with your name, job title, and jurisdiction.

Office Use Only

Total Hours Worked on Mitigation Plan 1.00

Total Dollar Value of In-kind Grant Match #VALUE!

_____ _____

OEM Mitigation Supervisor **Municipal Volunteer**

Logged in Spreadsheet _____ **by** _____

Entered 11/4/24

Springfield-Greene County Office of Emergency Management
Multi-Jurisdictional Hazard Mitigation Plan
VOLUNTEER TIME SHEET

Staff Name (Last, First)		Job Title		Hourly Rate		Jurisdiction	
Lynn Hollandworth		EMD				City of Republic	

Week #1	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date	04/28/24							Total Hours
Hours Worked								0.00

Week #2	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date		05/06/24	05/07/24				05/11/24	Total Hours
Hours Worked		0.50	1.00					1.50

Description of work completed:

5-6 Met with technical review team at Builds (Public Works Community Development) to make aware of Mitigaiton plan

5-7 Completed pre survey and information for mitigation plan

Please remember to complete the top section of the timesheet with your name, job title, and jurisdiction.

Office Use Only

Total Hours Worked on Mitigation Plan 1.50

Total Dollar Value of In-kind Grant Match #VALUE!

OEM Mitigation Supervisor

Municipal Volunteer

Logged in Spreadsheet _____ by _____

Entered 11/6/24

Springfield-Greene County Office of Emergency Management
Multi-Jurisdictional Hazard Mitigation Plan
VOLUNTEER TIME SHEET

Staff Name (Last, First)		Job Title	Hourly Rate	Jurisdiction
Lynn Hollandworth		EMD		City of Republic

Week #1	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date	05/12/24	05/13/24		05/15/24	05/16/24			Total Hours
Hours Worked		1.00		0.50	0.50			2.00

Week #2	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date							05/25/24	Total Hours
Hours Worked								0.00

Description of work completed:
5-13 Met with Chris Tabor Community Development (Builds) to discuss mitigtion and possible projects
5-15 Met with Angel Falig (Builds Engineer) about mitigation projects
5-16 Met with Ashley Stanley to review previous projects and their status

Please remember to complete the top section of the timesheet with your name, job title, and jurisdiction.

Office Use Only

Total Hours Worked on Mitigation Plan 2.00

Total Dollar Value of In-kind Grant Match #VALUE!

OEM Mitigation Supervisor

Lynn Hollandworth
Municipal Volunteer

Logged in Spreadsheet _____ **by** _____

Entered 11/6/24

Springfield-Greene County Office of Emergency Management
Multi-Jurisdictional Hazard Mitigation Plan
VOLUNTEER TIME SHEET

Staff Name (Last, First)		Job Title		Hourly Rate		Jurisdiction	
Lynn Hollandworth		EMD				City of Republic	
Week #1	**Sun.**	**Mon.**	**Tues.**	**Wed.**	**Thurs.**	**Fri.**	**Sat.**	
Date	05/26/24					05/31/24		**Total Hours**
Hours Worked						0.50		0.50
Week #2	**Sun.**	**Mon.**	**Tues.**	**Wed.**	**Thurs.**	**Fri.**	**Sat.**	
Date							06/08/24	**Total Hours**
Hours Worked								0.00

Description of work completed:
5-31 Met with Michael Sallee of IT to discuss possible projects

Please remember to complete the top section of the timesheet with your name, job title, and jurisdiction.

Office Use Only

Total Hours Worked on Mitigation Plan 0.50

Total Dollar Value of In-kind Grant Match #VALUE!

OEM Mitigation Supervisor

Municipal Volunteer

Logged in Spreadsheet _____ by _____

Entered 11/6/24

Springfield-Greene County Office of Emergency Management
Multi-Jurisdictional Hazard Mitigation Plan
VOLUNTEER TIME SHEET

Staff Name (Last, First)		Job Title		Hourly Rate		Jurisdiction	
Lynn Hollandworth		EMD				City of Republic	

Week #1	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date	06/09/24							Total Hours
Hours Worked								0.00

Week #2	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date					06/13/24		06/15/24	Total Hours
Hours Worked					0.50			0.50

Description of work completed:

6-13 Met Angel Falig and discussed two projects from Builds (Public Works)

Please remember to complete the top section of the timesheet with your name, job title, and jurisdiction.

Office Use Only

Total Hours Worked on Mitigation Plan 0.50

Total Dollar Value of In-kind Grant Match #VALUE!

OEM Mitigation Supervisor

Municipal Volunteer

Logged in Spreadsheet _____ by _____

Entered 11/7/24

Springfield-Greene County Office of Emergency Management
911-Emergency Communications Center

Policy Room	5/31/2024	CODE: First Floor	
Event Name : NWS Mitigation Meeting			Time: 10:00 AM - 11:30 AM

	Print Name	PSC Badge #	Agency	Phone	Signature	Time In	Time Out
1	Darren White	—	OEM	—		1000	1130
2	Sam Priesendorf		NWS			1000	1130
3	Katie Korach	—	OEM	—		1000	1130
4	Steve Runnels		NWS			1000	1130
5	Gretchen Ruffa	—	OEM	—		1000	1130
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Entered 11/7/24

Springfield-Greene County Office of Emergency Management
Multi-Jurisdictional Hazard Mitigation Plan
VOLUNTEER TIME SHEET

Staff Name (Last, First)		Job Title		Hourly Rate		Jurisdiction	
Sefani Duncan		City Engineer				City of Republic	
Week #1	**Sun.**	**Mon.**	**Tues.**	**Wed.**	**Thurs.**	**Fri.**	**Sat.**	
Date	06/09/24			06/12/24	06/13/24	06/14/24		**Total Hours**
Hours Worked					1.00	0.50		1.50
Week #2	**Sun.**	**Mon.**	**Tues.**	**Wed.**	**Thurs.**	**Fri.**	**Sat.**	
Date							06/22/24	**Total Hours**
Hours Worked								0.00

Description of work completed:
6-13 Prepared Logan Street Project
6-14 Presented to EMD

Please remember to complete the top section of the timesheet with your name, job title, and jurisdiction.

Office Use Only

Total Hours Worked on Mitigation Plan 1.50

Total Dollar Value of In-kind Grant Match #VALUE!

OEM Mitigation Supervisor

Municipal Volunteer

Logged in Spreadsheet _____ by _____

Entered 11/7/24

Springfield-Greene County Office of Emergency Management
Multi-Jurisdictional Hazard Mitigation Plan
VOLUNTEER TIME SHEET

Staff Name (Last, First)			Job Title		Hourly Rate		Jurisdiction	
Angel Falig			City Engineer				City of Republic	
Week #1	**Sun.**	**Mon.**	**Tues.**	**Wed.**	**Thurs.**	**Fri.**	**Sat.**	
Date	06/09/24		06/11/24	06/12/24	06/13/24			**Total Hours**
Hours Worked			3.00	1.50	1.50			6.00
Week #2	**Sun.**	**Mon.**	**Tues.**	**Wed.**	**Thurs.**	**Fri.**	**Sat.**	
Date							06/22/24	**Total Hours**
Hours Worked								0.00

Description of work completed:
6-11 Development of Iron Grain project
6-12 Completed projects
6-13 Modified project and presented to EMD

Please remember to complete the top section of the timesheet with your name, job title, and jurisdiction.

Office Use Only

Total Hours Worked on Mitigation Plan 6.00

Total Dollar Value of In-kind Grant Match #VALUE!

OEM Mitigation Supervisor

Municipal Volunteer

Logged in Spreadsheet _____ **by** _____

Entered 7/26/24

Springfield-Greene County Office of Emergency Management
Multi-Jurisdictional Hazard Mitigation Plan
VOLUNTEER TIME SHEET

Staff Name (Last, First)		Job Title		Hourly Rate		Jurisdiction	
Lynn Hollandworth		EMD				Republic	
Week #1	**Sun.**	**Mon.**	**Tues.**	**Wed.**	**Thurs.**	**Fri.**	**Sat.**	
Date	06/30/24	07/01/24	07/02/24	07/03/24	07/04/24	07/05/24	07/06/24	**Total Hours**
Hours Worked								0.00
Week #2	**Sun.**	**Mon.**	**Tues.**	**Wed.**	**Thurs.**	**Fri.**	**Sat.**	
Date	07/07/24	07/08/24	07/09/24	07/10/24	07/11/24	07/12/24	07/13/24	**Total Hours**
Hours Worked			0.50					0.50

Description of work completed:
Quick meet with Michael Sallee about progress of IT needs

Please remember to complete the top section of the timesheet with your name, job title, and jurisdiction.

Office Use Only

Total Hours Worked on Mitigation Plan 0.50

Total Dollar Value of In-kind Grant Match #VALUE!

_____ _____

OEM Mitigation Supervisor **Municipal Volunteer**

Logged in Spreadsheet _____ **by** _____

entered 1/20/24

Springfield-Greene County Office of Emergency Management
Multi-Jurisdictional Hazard Mitigation Plan
VOLUNTEER TIME SHEET

Staff Name (Last, First)		Job Title		Hourly Rate		Jurisdiction	
Lynn Hollandworth							

Week #1	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date	06/16/24	06/17/24	06/18/24	06/19/24	06/20/24	06/21/24	06/22/24	Total Hours
Hours Worked				1.00				1.00

Week #2	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date	06/23/24	06/24/24	06/25/24	06/26/24	06/27/24	06/28/24	06/29/24	Total Hours
Hours Worked								0.00

Description of work completed:
6/19/24 Met with Chris Crosby director of IT

Please remember to complete the top section of the timesheet with your name, job title, and jurisdiction.

Office Use Only

Total Hours Worked on Mitigation Plan 1.00

Total Dollar Value of In-kind Grant Match #VALUE!

OEM Mitigation Supervisor

Municipal Volunteer

Logged in Spreadsheet _____ **by** _____

entered 4/28/24

Springfield-Greene County Office of Emergency Management
Multi-Jurisdictional Hazard Mitigation Plan
VOLUNTEER TIME SHEET

Staff Name (Last, First)		Job Title		Hourly Rate		Jurisdiction	
Chris Cosby							

Week #1	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date	06/16/24	06/17/24	06/18/24	06/19/24	06/20/24	06/21/24	06/22/24	Total Hours
Hours Worked				1.00				1.00

Week #2	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date	06/23/24	06/24/24	06/25/24	06/26/24	06/27/24	06/28/24	06/29/24	Total Hours
Hours Worked								0.00

Description of work completed:
6/19/24 Meeting with emergecy mangement to discuss perameters of possible projects

Please remember to complete the top section of the timesheet with your name, job title, and jurisdiction.

Office Use Only

Total Hours Worked on Mitigation Plan 1.00

Total Dollar Value of In-kind Grant Match #VALUE!

OEM Mitigation Supervisor

Municipal Volunteer

Logged in Spreadsheet _____ **by** _____

Entered 11/7/24

Springfield-Greene County Office of Emergency Management
911-Emergency Communications Center

Logan-Rogersville		**CODE:**	
Event Name : Hazard Mitigation Meeting			**Time:** 1:00-1:30 6/20/24

	Print Name	PSC Badge #	Agency	Phone	Signature	Time In	Time Out
1	Ashley Stanley	—	OEM	—		1:15	1:45
2	Jennifer Katzin		LR School District			1:15	1:45
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Entered 11/7/24

Springfield-Greene County Office of Emergency Management
911-Emergency Communications Center

		CODE:
Event Name : HMP Meeting - Ash Grove City		**Time: 0930 hours** 6/24/24

	Print Name	PSC Badge #	Agency	Phone	Signature	Time In	Time Out
1	Ashley Stanley	—	OEM	—		10:30	11:00
2	John Davis	—	AGPD	—		10:30	11:00
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Entered 4/7/24

Springfield-Greene County Office of Emergency Management
911-Emergency Communications Center

		CODE:	
Event Name : [redacted] City HMP - Health Department		Time: [redacted] 1:00pm	6/24/24

	Print Name	PSC Badge #	Agency	Phone	Signature	Time In	Time Out
1	Ashley Stanley	—	OEM	—	[signature]	1:00	1:30
2	Maggie Rogers	—	SGCHP	417-459-7184	[signature]	1:06	1:30
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Entered 11/7/24

Springfield-Greene County Office of Emergency Management
Multi-Jurisdictional Hazard Mitigation Plan
VOLUNTEER TIME SHEET

Staff Name (Last, First)			Job Title		Hourly Rate		Jurisdiction	
Kingry, Kathleen			Environ. Safety & Compliance Cord.		Salary		OTC	
Week #1	**Sun.**	**Mon.**	**Tues.**	**Wed.**	**Thurs.**	**Fri.**	**Sat.**	
Date	**06/23/24**	**06/24/24**	**06/25/24**	**06/26/24**	**06/27/24**	**06/28/24**	**06/29/24**	**Total Hours**
Hours Worked		1			2.5	2		5.5
Week #2	**Sun.**							
Date	**06/30/24**							**Total Hours**
Hours Worked								0

Description of work completed:
Learned the details about how the Hazard Mitigation Plan works. Met with Ashley Stanley. Emailed other departments to get their involvment in the plan.

Week #2	**Sun.**	**Mon.**	**Tues.**	**Wed.**	**Thurs.**	**Fri.**	**Sat.**	
Date	**07/07/24**	**07/08/24**	**07/09/24**	**07/10/24**	**07/11/24**	**07/12/24**	**07/13/24**	**Total Hours**
Hours Worked		1	1					2

Week #3	**Sun.**	**Mon.**	**Tues.**	**Wed.**	**Thurs.**	**Fri.**	**Sat.**	
Date	**07/14/24**	**07/15/24**	**07/16/24**	**07/17/24**	**07/18/24**	**07/19/24**	**07/20/24**	**Total Hours**
Hours Worked		1						1

Week #4	**Sun.**	**Mon.**	**Tues.**	**Wed.**	**Thurs.**	**Fri.**	**Sat.**	
Date	**07/21/24**	**07/22/24**	**07/23/24**	**07/24/24**	**07/25/24**	**07/26/24**	**07/27/24**	**Total Hours**
Hours Worked								0

Week #5	**Sun.**	**Mon.**	**Tues.**	**Wed.**	**Thurs.**	**Fri.**	**Sat.**	
Date	**07/28/24**	**07/29/24**	**07/30/24**	**07/31/24**				**Total Hours**
Hours Worked								0

Description of work completed:
Compiled action worksheet, timesheets, and STAPLEE worksheet into Google Sheets to make working between departments easier.

Entered 4/12/24 included on Kathleen's timesheet

Springfield-Greene County Office of Emergency Management
911-Emergency Communications Center

Room: Media	Date:	CODE: 2025 MITIGATION REWRITE	
Event Name: HMP Meeting - OTC		Operational Period:	Op Time: 9:00-9:30 6/27/24

	Print Name	PSC Badge #	Agency	Phone	Signature	Time In	Time Out
1	Ashley Stanley	—	OEM	—		9:00	9:30
2	Kathleen Kingry		OTC			9:00	9:30
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entered 11/26/24

Springfield-Greene County Office of Emergency Management
Multi-Jurisdictional Hazard Mitigation Plan
VOLUNTEER TIME SHEET

Staff Name (Last, First)			Job Title		Hourly Rate		Jurisdiction	
Michael Sallee			IT technicion				Republic	
Week #1	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date	06/30/24	07/01/24	07/02/24	07/03/24	07/04/24	07/05/24	07/06/24	Total Hours
Hours Worked								0.00
Week #2	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date	07/07/24	07/08/24	07/09/24	07/10/24	07/11/24	07/12/24	07/13/24	Total Hours
Hours Worked			0.50					0.50

Description of work completed:
Quick meet with Michael Sallee about progress of IT needs

Please remember to complete the top section of the timesheet with your name, job title, and jurisdiction.

Office Use Only

Total Hours Worked on Mitigation Plan 0.50

Total Dollar Value of In-kind Grant Match #VALUE!

OEM Mitigation Supervisor

Municipal Volunteer

Logged in Spreadsheet _____ **by** _____

Entered 7/12/24

Springfield-Greene County Office of Emergency Management
911-Emergency Communications Center

Policy Room	7/11/2024	CODE: First Floor	
Event Name : Mitigation Meeting			Time: 10:00AM - 11:00 AM 7/11/24

	Print Name	PSC Badge #	Agency	Phone	Signature	Time In	Time Out
1	Ashley Stanley	—	OEM	—	Ashley Stanley	10:00	10:30
2	Timothy Clarkson		LR Fire	417-844-5855	Timothy Clarkson	10:00	10:30
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Entered 11/7/24

Springfield-Greene County Office of Emergency Management
911-Emergency Communications Center

Policy Room	7/12/2024	CODE: First Floor	
Event Name : GCOEM - Mitigation Meeting			Time: 11:30AM - 12:30 PM 7/12/24

	Print Name	PSC Badge #	Agency	Phone	Signature	Time In	Time Out
1	Ashley Stanley	—	OEM	—		11:30	12:00
2	Eddie Castleberry		Fair Grove Schools			11:30	12:00
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Entered 11/12/24

Springfield-Greene County Office of Emergency Management
911-Emergency Communications Center

Room: Brookline Fire Station 1	Date: 7/19	CODE: 2025 MITIGATION REWRITE	
Event Name: HMP Meeting		Operational Period:	Op Time: 09:00

	Print Name	PSC Badge #	Agency	Phone	Signature	Time In	Time Out
1	Ashley Stanley	—	OEM	—		9:00	10:00
2	Will Glenn		Brookline FPD			9:00	10:00
3	James Kilburn		Brookline FPD			09:00	10:00
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Entered 8/12/24

Springfield-Greene County Office of Emergency Management
911-Emergency Communications Center

Room: Policy	Date: 7/24/24	CODE: 2025 MITIGATION REWRITE	
Event Name: Fair Grove HMP Meeting		Operational Period:	Op Time: 10:00

	Print Name	PSC Badge #	Agency	Phone	Signature	Time In	Time Out
1	Ashley Stanley	—	OEM	—		10:00	10:30
2	Greg Porter		FG OEM			10:00	10:30
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Springfield-Greene County Office of Emergency Management
Multi-Jurisdictional Hazard Mitigation Plan

VOLUNTEER TIME SHEET

Staff Name (Last, First)			Job Title		Hourly Rate		Jurisdiction	
Wade, Raymond								
Week #1	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date		07/01/24	07/02/24	07/03/24	07/04/24	07/05/24	07/06/24	Total Hours
Hours Worked								0
Week #2	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date	07/07/24	07/08/24	07/09/24	07/10/24	07/11/24	07/12/24	07/13/24	Total Hours
Hours Worked								0
Week #3	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date	07/14/24	07/15/24	07/16/24	07/17/24	07/18/24	07/19/24	07/20/24	Total Hours
Hours Worked								0
Week #4	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date	07/21/24	07/22/24	07/23/24	07/24/24	07/25/24	07/26/24	07/27/24	Total Hours
Hours Worked				1.5				1.5
Week #5	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date	07/28/24	07/29/24	07/30/24	07/31/24				Total Hours
Hours Worked								0

Description of work completed:
Helped with completing the Questionaire.

Please remember to complete the top section of the timesheet with your name, job title, and jurisdiction.

Office Use Only

Total Hours Worked on Mitigation Plan 1.5

Total Dollar Value of In-kind Grant Match _____

_____ _____

OEM Mitigation Supervisor **Municipal Volunteer**

Logged in Spreadsheet _____ **by** _____

entered 11/12/24

Springfield-Greene County Office of Emergency Management
911-Emergency Communications Center

Room: Policy	25-Jul-24	CODE: 2025 MITIGATION REWRITE	
Event Name: HMP Meeting Ebenezer Fire Protection District		Operational Period:	Op Time: 10:00

	Print Name	PSC Badge #	Agency	Phone	Signature	Time In	Time Out
1	Ashley Stanley	—	OEM	—		10:00	11:00
2	Ashlee Parker		Ebenezer Fire		Ashlee Parker	10:02	11:00
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returned 11/08/24

Springfield-Greene County Office of Emergency Management
Multi-Jurisdictional Hazard Mitigation Plan
VOLUNTEER TIME SHEET

Staff Name (Last, First)		Job Title		Hourly Rate		Jurisdiction	

Week #1	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date					08/01/24	08/02/24	08/03/24	Total Hours
Hours Worked								0

Week #2	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date	08/04/24	08/05/24	08/06/24	08/07/24	08/08/24	08/09/24	08/10/24	Total Hours
Hours Worked								0

Week #3	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date	08/11/24	08/12/24	08/13/24	08/14/24	08/15/24	08/16/24	08/17/24	Total Hours
Hours Worked			2		1	1		4

Week #4	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date	08/18/24	08/19/24	08/20/24	08/21/24	08/22/24	08/23/24	08/24/24	Total Hours
Hours Worked		1						1

Week #5	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date	08/25/24	08/26/24	08/27/24	08/28/24	08/29/24	08/30/24	08/31/24	Total Hours
Hours Worked								0

Description of work completed: Worked on completing the Questionaire.

Please remember to complete the top section of the timesheet with your name, job title, and jurisdiction.

Office Use Only

Total Hours Worked on Mitigation Plan 5

Total Dollar Value of In-kind Grant Match _____

_____ _____

OEM Mitigation Supervisor **Municipal Volunteer**

Logged in Spreadsheet _____ **by** Kathleen Kling

Raymond Wade

Springfield-Greene County Office of Emergency Management
Multi-Jurisdictional Hazard Mitigation Plan

VOLUNTEER TIME SHEET

Staff Name (Last, First)		Job Title		Hourly Rate		Jurisdiction	

Week #1	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date					08/01/24	08/02/24	08/03/24	Total Hours
Hours Worked								0

Week #2	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date	08/04/24	08/05/24	08/06/24	08/07/24	08/08/24	08/09/24	08/10/24	Total Hours
Hours Worked								0

Week #3	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date	08/11/24	08/12/24	08/13/24	08/14/24	08/15/24	08/16/24	08/17/24	Total Hours
Hours Worked			1		1	2		4

Week #4	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date	08/18/24	08/19/24	08/20/24	08/21/24	08/22/24	08/23/24	08/24/24	Total Hours
Hours Worked								0

Week #5	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date	08/25/24	08/26/24	08/27/24	08/28/24	08/29/24	08/30/24	08/31/24	Total Hours
Hours Worked								0

Description of work completed: Helped with completing the Questionaire.

Please remember to complete the top section of the timesheet with your name, job title, and jurisdiction.

Office Use Only

Total Hours Worked on Mitigation Plan 4

Total Dollar Value of In-kind Grant Match _____

_____ _____

OEM Mitigation Supervisor **Municipal Volunteer**

Logged in Spreadsheet _____ **by** _____

Entered 9/4/24

Springfield-Greene County Office of Emergency Management
911-Emergency Communications Center

Room: SPS Police Department	Date: 8/28/24	CODE: 2025 MITIGATION REWRITE	
Event Name: Hazard Mitigation Meeting		Operational Period:	Op Time: 10:00

	Print Name	PSC Badge #	Agency	Phone	Signature	Time In	Time Out
1	Ashley Stank	—	OEM	—		9:45	10:30
2	Jim Farrell					10:30	10:30
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Entered 10/14/24

Springfield-Greene County Office of Emergency Management
911-Emergency Communications Center

Room: Ash Grove School District	Date: 10/4/24	CODE: 2025 MITIGATION REWRITE	
Event Name: Hazard Mitigation Meeting		Operational Period:	Op Time: 1:00 pm

	Print Name	PSC Badge #	Agency	Phone	Signature	Time In	Time Out
1	Ashley Stanley	—	OEM	—		1:00	2:00
2	Shane Medlin		Ash Grove Schools		Shane Medlin	1:00	2:00
3	Brian Bagley		Ash Grove Schools		Brian Bagley	1:00	2:00
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Entered 11/12/24

Springfield-Greene County Office of Emergency Management
911-Emergency Communications Center

Room:	Date: 10/4/24	CODE: 2025 MITIGATION REWRITE	
Event Name:		Operational Period:	Op Time:

	Print Name	PSC Badge #	Agency	Phone	Signature	Time In	Time Out
1	Ashley Stanley	—	OEM	—		1:00	1:30
2	Josh Dulewits		BFPD	417-881-9018		1:00	1:30
3	Nathan Lander		BFPD	417-881-9018		1:00	130
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Entered 11/20/24

Springfield-Greene County Office of Emergency Management
Multi-Jurisdictional Hazard Mitigation Plan

VOLUNTEER TIME SHEET

Staff Name (Last, First)		Job Title		Hourly Rate		Jurisdiction	

Week #1	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date			10/01/24	10/02/24	10/03/24	10/04/24	10/05/24	Total Hours
Hours Worked								0

Week #2	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date	10/06/24	10/07/24	10/08/24	10/09/24	10/10/24	10/11/24	10/12/24	Total Hours
Hours Worked				2	3	1		6

Week #3	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date	10/13/24	10/14/24	10/15/24	10/16/24	10/17/24	10/18/24	10/19/24	Total Hours
Hours Worked			1			2		3

Week #4	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date	10/20/24	10/21/24	10/22/24	10/23/24	10/24/24	10/25/24	10/26/24	Total Hours
Hours Worked		1						1

Week #5	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date	10/27/24	10/28/24	10/29/24	10/30/24	10/31/24			Total Hours
Hours Worked			1		2			3

Description of work completed: Completed Questionaire. Determined projects that could mitigate hazards based on the hazards that apply to our district.

Please remember to complete the top section of the timesheet with your name, job title, and jurisdiction.

Office Use Only

Total Hours Worked on Mitigation Plan 13

Total Dollar Value of In-kind Grant Match _____

_____ _____

OEM Mitigation Supervisor **Municipal Volunteer**

Logged in Spreadsheet _____ **by** Kathleen Kenny

Springfield-Greene County Office of Emergency Management
Multi-Jurisdictional Hazard Mitigation Plan
VOLUNTEER TIME SHEET

Volunteer Name (Last, First)		Job Title	Hourly Rate	Jurisdiction
Strecker, Sandy		City Clerk		City of Strafford

Week #1	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date			6/4					Total Hours
Hours Worked			.17					0.00

Week #2	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date								Total Hours
Hours Worked								0.00

Description of work completed:

6/4/24 Discussed w/ City Admin scheduling and logistics of 4/1 .25
Meeting with Ashley Stanley

6/24/24 " " 5 mins

6/25/24 Meeting One on One with Ashley Stanley 1.0

10/4/24 Meeting w/ Martha & David 1.5 hr

Please remember to complete the top section of the timesheet with your name, job title, and jurisdiction.

Office Use Only

Total Hours Worked on Mitigation Plan _____

Total Dollar Value of In-kind Grant Match _____

_____ _____

OEM Mitigation Supervisor **Municipal Volunteer**

Logged on Spreadsheet _____ **by** _____

Springfield-Greene County Office of Emergency Management
Multi-Jurisdictional Hazard Mitigation Plan
VOLUNTEER TIME SHEET

Volunteer Name (Last, First)		Job Title	Hourly Rate	Jurisdiction
Smartt, Martha		City Administrator		City of Strafford

Week #1	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date			6/4					Total Hours
Hours Worked			.17					0.00

Week #2	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date								Total Hours
Hours Worked								0.00

Description of work completed:	
6/4/24 - Discussion of schedules	.25
6/24/24 - " " " ~ 5 mins	.25
6/24/25 Meeting with Ashley, Stanley One on One	1.0 hr
10/4/25 Meeting with David Gardner & Sandy Strecker	1.5 hr

Please remember to complete the top section of the timesheet with your name, job title, and jurisdiction.

Office Use Only

Total Hours Worked on Mitigation Plan _____

Total Dollar Value of In-kind Grant Match _____

_____ _____

OEM Mitigation Supervisor **Municipal Volunteer**

Logged on Spreadsheet _____ **by** _____

Springfield-Greene County Office of Emergency Management
Multi-Jurisdictional Hazard Mitigation Plan
VOLUNTEER TIME SHEET

Volunteer Name (Last, First)		Job Title	Hourly Rate	Jurisdiction
David Gardener		EMT		Strafford

Week #1	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date						10/4		Total Hours
Hours Worked								0.00

Week #2	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date								Total Hours
Hours Worked								0.00

Description of work completed:	
10/4/24 Meeting w/ Martha Smartt and Sandy	1.5 hr

Please remember to complete the top section of the timesheet with your name, job title, and jurisdiction.

Office Use Only

Total Hours Worked on Mitigation Plan _____

Total Dollar Value of In-kind Grant Match _____

_____ _____

OEM Mitigation Supervisor **Municipal Volunteer**

Logged on Spreadsheet _____ **by** _____

Springfield-Greene County Office of Emergency Management
Multi-Jurisdictional Hazard Mitigation Plan
VOLUNTEER TIME SHEET

Staff Name (Last, First)		Job Title		Hourly Rate		Jurisdiction	
Katzin, Jennifer		Asst. Superintendent				gan-Rogersville School Distr	
Week #1	**Sun.**	**Mon.**	**Tues.**	**Wed.**	**Thurs.**	**Fri.**	**Sat.**	
Date					06/27/24			**Total Hours**
Hours Worked					0.75			0.75
Week #2	**Sun.**	**Mon.**	**Tues.**	**Wed.**	**Thurs.**	**Fri.**	**Sat.**	
Date				10/24/24				**Total Hours**
Hours Worked				2.00				2.00

Description of work completed:
~~6/20/24 - 1:30-1:45 , Meeting with Ashley Stanley regarding plan~~ on Ashley's timesheet
6/27/24 - 3:30 - 3:45, Paperwork regarding plan development
10/23/24 - 1:00 - 3:00 pm, Completing action worksheet 1, 2, 3 & 4

Please remember to complete the top section of the timesheet with your name, job title, and jurisdiction.

Office Use Only

Total Hours Worked on Mitigation Plan 2.75

Total Dollar Value of In-kind Grant Match #VALUE!

OEM Mitigation Supervisor _____ **Municipal Volunteer** _____

Logged in Spreadsheet _____ **by** _____

Raymond Wade

Springfield-Greene County Office of Emergency Management
Multi-Jurisdictional Hazard Mitigation Plan

VOLUNTEER TIME SHEET

Staff Name (Last, First)		Job Title		Hourly Rate		Jurisdiction	

Week #1	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date	09/01/24	09/02/24	09/03/24	09/04/24	09/05/24	09/06/24	09/07/24	Total Hours
Hours Worked								0

Week #2	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date	09/08/24	09/09/24	09/10/24	09/11/24	09/12/24	09/13/24	09/14/24	Total Hours
Hours Worked								0

Week #3	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date	09/15/24	09/16/24	09/17/24	09/18/24	09/19/24	09/20/24	09/21/24	Total Hours
Hours Worked								0

Week #4	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date	09/22/24	09/23/24	09/24/24	09/25/24	09/26/24	09/27/24	09/28/24	Total Hours
Hours Worked						2		2

Week #5	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date	09/29/24	09/30/24						Total Hours
Hours Worked								0

Description of work completed: Helped with completing the Questionaire.

Please remember to complete the top section of the timesheet with your name, job title, and jurisdiction.

Office Use Only

Total Hours Worked on Mitigation Plan 2

Total Dollar Value of In-kind Grant Match _____

_____ _____

OEM Mitigation Supervisor **Municipal Volunteer**

Logged in Spreadsheet _____ **by** _____

Raymond Wade

Springfield-Greene County Office of Emergency Management
Multi-Jurisdictional Hazard Mitigation Plan

VOLUNTEER TIME SHEET

Staff Name (Last, First)		Job Title		Hourly Rate		Jurisdiction	

Week #1	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date			10/01/24	10/02/24	10/03/24	10/04/24	10/05/24	Total Hours
Hours Worked								0

Week #2	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date	10/06/24	10/07/24	10/08/24	10/09/24	10/10/24	10/11/24	10/12/24	Total Hours
Hours Worked				2	2			4

Week #3	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date	10/13/24	10/14/24	10/15/24	10/16/24	10/17/24	10/18/24	10/19/24	Total Hours
Hours Worked		1	1					2

Week #4	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date	10/20/24	10/21/24	10/22/24	10/23/24	10/24/24	10/25/24	10/26/24	Total Hours
Hours Worked						1		1

Week #5	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date	10/27/24	10/28/24	10/29/24	10/30/24	10/31/24			Total Hours
Hours Worked					1			1

Description of work completed: Helped with completing the Questionaire. Helped to determine feasible mitigation projects.

Please remember to complete the top section of the timesheet with your name, job title, and jurisdiction.

Office Use Only

Total Hours Worked on Mitigation Plan 8

Total Dollar Value of In-kind Grant Match _____

_____ _____

OEM Mitigation Supervisor **Municipal Volunteer**

Logged in Spreadsheet _____ **by** _____

Springfield-Greene County Office of Emergency Management
Multi-Jurisdictional Hazard Mitigation Plan
VOLUNTEER TIME SHEET

Staff Name (Last, First)		Job Title	Hourly Rate	Jurisdiction
Rogers, Maggie		Public Health Planner	$31.23	Greene County

Week #1	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date	09/01/24	09/02/24	09/03/24	09/04/24	09/05/24	09/06/24	09/07/24	Total Hours
Hours Worked								0.00

Week #2	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date	09/08/24	09/09/24	09/10/24	09/11/24	09/12/24	09/13/24	09/14/24	Total Hours
Hours Worked			2.00					2.00

Description of work completed:
9/10: Reviewed how-to documentation and began completion action worksheets for both projects from the SGCHD.

Please remember to complete the top section of the timesheet with your name, job title, and jurisdiction.

Office Use Only

Total Hours Worked on Mitigation Plan 2.00

Total Dollar Value of In-kind Grant Match 62.46

OEM Mitigation Supervisor _____ **Municipal Volunteer** _____

Logged in Spreadsheet _____ **by** _____

Springfield-Greene County Office of Emergency Management
Multi-Jurisdictional Hazard Mitigation Plan
VOLUNTEER TIME SHEET

Volunteer Name (Last, First)		Job Title	Hourly Rate	Jurisdiction
Porter, Gregory		EMD		Fair Grove

Week #1	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date				09/11/24	09/12/24			Total Hours
Hours Worked				2.00	4.00			6.00

Week #2	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	
Date	09/22/24	09/23/24	09/24/24					Total Hours
Hours Worked	3.00	6.00	5.00					14.00

Description of work completed: Writing plans for all hazards listed in the hazard mitigation plan.

Please remember to complete the top section of the timesheet with your name, job title, and jurisdiction.

Office Use Only

Total Hours Worked on Mitigation Plan _____

Total Dollar Value of In-kind Grant Match _____

_____
OEM Mitigation Supervisor

Gregory Porter
Municipal Volunteer

Logged on Spreadsheet 9/24/2024 **by** Gregory Porter

Local Match Summary #1 - Greene County

Name	Title	Employer	Activity Date	Activity	Hourly Rate	Hrs	Total Wage	Miles	Mileage Rate	Total Mileage
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	3/25/2024	Introduction to the project and discussion of the process	21.35	1	21.35	-	0.6555	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	3/27/2024	Initial Mitigation Meeting	21.35	1.1	23.49	-	0.655	-
Hannah James	Emergency Management	Cox Health	3/27/2024	Initial Mitigation Meeting	28.66	1.1	31.53	12.6	0.655	8.25
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	4/1/2024	Set Ashley up in her office and get tech equipment ready	21.35	1	21.35	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	4/2/2024	Speak with supervisor regarding planning timeline for Mitigation Plan	21.35	0.75	16.01	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	4/3/2024	Discussion of the CPRI Index and updating it to the EPRI. Creation of the Survey Social Media Post and QR Code, brainstorming ideas of	21.35	2	42.70	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	4/4/2024	Speak with supervisor regarding planning timeline for Mitigation Plan	21.35	0.5	10.675	-	0.655	-
Larry Woods	Director	Springfield-Greene County OEM	4/4/2024	Interview with KY3 to discuss the Public Mitigation Survey	56.32	0.5	28.16	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	4/5/2024	Create contact lists, planning guidelines, and Kickoff Meetings content	21.35	8	170.80	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	4/9/2024	Work on contact list and discuss NRI/CPRI with Larry Woods	21.35	1	21.35	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	4/9/2024	HMP update and Zoom meeting with Courtney Zimmerman	21.35	0.5	10.68	-	0.655	-
Robbin Sawyer	Administrative Manager	Springfield-Greene County OEM	4/9/2024	Administrative Mitigation Meeting	25.22	0.75	18.92	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	4/9/2024	Administrative Mitigation Meeting	21.35	0.75	16.01	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	4/9/2024	SEMA Lunch and Learn	21.35	1	21.35	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	4/9/2024	Edit email invitation regarding Kickoff Meetings	21.35	1	21.35	-	0.655	-
Robbin Sawyer	Administrative Manager	Springfield-Greene County OEM	4/9/2024	Create timesheets, employment contract, meet with Ashley Stanley	25.22	4	100.88	-	0.655	-
Larry Woods	Director	Springfield-Greene County OEM	4/9/2024	NRI/CPRI meeting with Larry and Gretchen	56.32	1	56.32	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	4/10/2024	Print and cut flyers, search for locations to place them in community	21.35	1.5	32.03	-	0.655	-
Darren White	Deputy Director	Springfield-Greene County OEM	4/10/2024	Create digital signage for community outreach project	34.38	1	34.38	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	4/11/2024	Assist with creating contact list for invitation to the Kickoff Meetings	21.35	0.5	10.675	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	4/16/2024	Edit the Kickoff Meeting Presentations and Materials	21.35	0.25	5.3375	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	4/24/2024	Email contacts regarding Kickoff Meetings and Community Outreach	21.35	1	21.35	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	4/25/2024	Review Hazard Mitigation Presentations, email contacts regarding Kickoff Meeting	21.35	3	64.05	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	4/26/2024	Kick Off Meeting #1	21.35	1	21.35	-	0.655	-
James Kilburn	Fire Chief	Brookline Fire Dept	4/26/2024	Kick Off Meeting #1	31.16	1	31.16	20.8	0.655	13.62
Josh Dukewits	Battalion Chief	Battlefield Fire Dept	4/26/2024	Kick Off Meeting #1	31.16	1	31.16	12.8	0.655	8.38

Martha Smartt	EMD/City Administrator	City of Strafford	4/26/2024	Kick Off Meeting #1	31.16	1	31.16	16.4	0.655	10.74
James Stewart	Emergency Preparedness Manager	Missouri State University	4/26/2024	Kick Off Meeting #1	31.16	1	31.16	4.4	0.655	2.88
Mark Foos	Captain	Springfield Police Department	4/26/2024	Kick Off Meeting #1	31.16	1	31.16	2	0.655	1.31
Maggie Rogers	Health Planner	Spfld-Greene Health Department	4/26/2024	Kick Off Meeting #1	31.16	1	31.16	2	0.655	1.31
Jason Perkins	Assistant Superintendent	Republic Schools	4/26/2024	Kick Off Meeting #1	31.16	1	31.16	31.8	0.655	20.83
Beth West	City Clerk	City of Battlefield	4/26/2024	Kick Off Meeting #1	31.16	1	31.16	12.8	0.655	8.38
Jennifer Katzin	Assistant Superintendent	Logan-Rogersville Schools	4/26/2024	Kick Off Meeting #1	31.16	1	31.16	41.6	0.655	27.25
Kevin Samsel	Battalion Chief	Willard Fire Department	4/26/2024	Kick Off Meeting #1	31.16	1	31.16	12.4	0.655	8.12
Sandy Strecker	City Clerk	City of Strafford	4/26/2024	Kick Off Meeting #1	31.16	1	31.16	16.4	0.655	10.74
Kris Bone	Emergency Management Director	City of Fair Grove	4/26/2024	Kick Off Meeting #1	31.16	1	31.16	34.6	0.655	22.66
Stefanie Shell	Dept Secretary	Fair Grove Fire Department	4/26/2024	Kick Off Meeting #1	31.16	1	31.16	34.6	0.655	22.66
Tommy VanHorn	Emergency Management Director	City of Battlefield	4/26/2024	Kick Off Meeting #1	31.16	1	31.16	12.8	0.655	8.38
Bradley Greer	Firefighter	Willard Fire Department	4/26/2024	Kick Off Meeting #1	31.16	1	31.16	12.4	0.655	8.12
Cathy Shoup	Assistant Superintendent of Operations	Willard Schools	4/26/2024	Kick Off Meeting #1	31.16	1	31.16	24.8	0.655	16.24
Lynn Hollandworth	Emergency Management Director	Republic Emergency Mgmt	4/26/2024	Kick Off Meeting #1	31.16	1	31.16	31.4	0.655	20.57
John Davis	EMD/Chief of Police	Ash Grove Emergency Mgmt	4/26/2024	Kick Off Meeting #1	31.16	1	31.16	42.8	0.655	28.03
Kip Mathena	Risk Manager	City Utilities	4/26/2024	Kick Off Meeting #2	31.16	1	31.16	2	0.655	1.31
Sydney Allen	Planning Director	Greene County Planning/Zoning	4/26/2024	Kick Off Meeting #2	31.16	1	31.16	1	0.655	0.66
Joanna Whetstine	Emergency Management	Mercy Health Systems	4/26/2024	Kick Off Meeting #2	31.16	1	31.16	8.2	0.655	5.37
Adrienne Jenkins	Operational Resiliency	City Utilities	4/26/2024	Kick Off Meeting #2	31.16	1	31.16	2	0.655	1.31
Chris Brumett	Social Services Director	Salvation Army	4/26/2024	Kick Off Meeting #2	31.16	1	31.16	3	0.655	1.97
Brian Weiler	Director of Aviation	Springfield-Branson Airport	4/26/2024	Kick Off Meeting #2	31.16	1	31.16	13.8	0.655	9.04
Hannah James	Emergency Management	Cox Health Systems	4/26/2024	Kick Off Meeting #2	31.16	1	31.16	12.6	0.655	8.25
Eric Claussen	Assistant Director	City of Springfield	4/26/2024	Kick Off Meeting #2	31.16	1	31.16	2	0.655	1.31
Jon Carney	Superintendent of General Services	Springfield-Greene County Parks	4/26/2024	Kick Off Meeting #2	31.16	1	31.16	2	0.655	1.31
Amanda Ohlensehlen	Director of Economic Vitality	City of Springfield	4/26/2024	Kick Off Meeting #2	31.16	1	31.16	2	0.655	1.31
Austin Arnold	Disaster Program Specialist	Red Cross	4/26/2024	Kick Off Meeting #2	31.16	1	31.16	7.4	0.655	4.85
Bob Hosmer	Planning Manager	City of Springfield	4/26/2024	Kick Off Meeting #2	31.16	1	31.16	2	0.655	1.31
Allen Busick	Project Engineer	City of Springfield	4/26/2024	Kick Off Meeting #2	31.16	1	31.16	2	0.655	1.31
Derek James	Public Information Officer	Greene County Sheriff's Office	4/26/2024	Kick Off Meeting #2	31.16	1	31.16	11.6	0.655	7.60
Nathan Huggins	GIS Asset Systems Manager	City of Springfield	4/26/2024	Kick Off Meeting #2	31.16	1	31.16	2	0.655	1.31
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	4/26/2024	Edit follow-up emails for jurisdictions who attended the Kickoff	21.35	6.5	138.78	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	4/29/2024	Update contact list for missing contacts	21.35	1.5	32.03	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	4/30/2024	Reply/send emails, Community Outreach Project, organize the	21.35	3	64.05	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	5/1/2024	Weekly meeting regarding HMP update on progress and expectations for the following week	21.35	0.75	16.0125	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	5/6/2024	Weekly meeting regarding HMP update on progress and expectations for the following week	21.35	0.75	16.0125	-	0.655	-
Lynn Hollandworth	EMD	City of Republic	5/6/2024	Meet with technical review team at Builds (Public Works Community Development) to make aware of Mitigation Plan.	31.16	0.5	15.58	-	0.655	-
Lynn Hollandworth	EMD	City of Republic	5/7/2024	Completed Pre-Survey and information for Mitigation Plan	31.16	1	31.16	-	0.655	-
Lynn Hollandworth	EMD	City of Republic	5/13/2024	Met with Chris Tabor Community Development (Builds) to discuss	31.16	1	31.16	-	0.655	-
Lynn Hollandworth	EMD	City of Republic	5/15/2024	Met with Angel Falig (Builds Engineer) about mitigation projects.	31.16	0.5	15.58	-	0.655	-
Lynn Hollandworth	EMD	City of Republic	5/16/2024	Met with Ashley Stanley to review previous projects and their status	31.16	0.5	15.58	-	0.655	-
Lynn Hollandworth	EMD	City of Republic	5/31/2024	Met with Michael Sallee of IT to discuss possible projects	31.16	0.5	15.58	-	0.655	-
Lynn Hollandworth	EMD	City of Republic	6/13/2024	Met with Angel Falig and discussed two projects from Builds (Public Works)	31.16	0.50	15.58	-	0.655	-

Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	5/15/2024	Weekly meeting regarding HMP update on progress and expectations for the following week	21.35	0.75	16.01	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	5/22/2024	Weekly HMP update on progress and expectations of the following week	21.35	0.75	16.01	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	5/22/2024	Help establish contact with City Utilities for Outage Data in the Springfield Area	21.35	0.25	5.34	-	0.655	-
Darren White	Deputy Director	Greene County OEM	5/31/2024	National Weather Service Mitigation Meeting	34.38	1.5	51.57	-	0.655	-
Sam Priesendorf	Intern	National Weather Service	5/31/2024	National Weather Service Mitigation Meeting	31.16	1.5	46.74	14.6	0.655	9.56
Katie Kovach	Planning Specialist	Greene County OEM	5/31/2024	National Weather Service Mitigation Meeting	21.35	1.5	32.03	-	0.655	-
Steve Runnels	Meteorologist	National Weather Service	5/31/2024	National Weather Service Mitigation Meeting	31.16	1.5	46.74	14.6	0.655	9.56
Gretchen Ruffa	Planning Specialist	Greene County OEM	5/31/2024	National Weather Service Mitigation Meeting	21.35	1.5	32.03	-	0.655	-
Martha Smartt	City Administrator	City of Strafford	6/4/2024	Discussion of Schedules	31.16	0.25	7.79	-	0.655	-
Sandy Strecker	City Clerk	City of Strafford	6/4/2024	Discussed with City Administrator scheduling and logistics of meeting with Ashley Stanley	31.16	0.25	7.79	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	6/5/2024	Weekly meeting regarding HMP update on progress and expectations for the following week	21.35	0.75	16.01	-	0.655	-
Angel Falig	City Engineer	City of Republic	6/11/2024	Development of Iron Grain Project	31.16	3.00	93.48	-	0.655	-
Angel Falig	City Engineer	City of Republic	6/12/2024	Completed projects	31.16	1.50	46.74	-	0.655	-
Angel Falig	City Engineer	City of Republic	6/13/2024	Modified project and presented to EMD	31.16	1.50	46.74	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	6/12/2024	Weekly meeting regarding HMP update on progress and expectations for the following week	21.35	0.75	16.01	-	0.655	-
Sefani Duncan	City Engineer	City of Republic	6/13/2024	Prepared Logan Street Project	31.16	1.00	31.16	-	0.655	-
Sefani Duncan	City Engineer	City of Republic	6/14/2024	Presented to EMD	31.16	0.50	15.58	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	6/14/2024	Edit and forward emails in attempt to reach jurisdictions that have not responded at this time to previous contact efforts	21.35	0.25	5.3375	-	0.655	-
Larry Woods	Director	Springfield-Greene County OEM	6/14/2024	Discussed with Ashley and Gretchen changes to format of plan and how that would reflect in changes to the Greene County plan	56.32	0.50	28.16	-	0.655	-
Darren White	Deputy Director	Springfield-Greene County OEM	6/14/2024	Discussed with Ashley and Gretchen changes to format of plan and how that would reflect in changes to the Greene County plan	34.38	0.50	17.19	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	6/18/2024	Trip to Jefferson City for Session 1 of the Format Guidance Workshop	21.35	12.00	256.20	269.2	0.655	176.33
Chris Cosby	Director of IT	City of Republic	6/19/2024	Meeting with Emergency Management fo discuss parameters of possible projects.	31.16	1.00	31.16	-	0.655	-
Lynn Hollandworth	Emergency Management Director	City of Republic	6/19/2024	Meeting with Chris Crosby, Director of IT	31.16	1.00	31.16	-	0.655	-
Jennifer Katzin	Assistant Superintendent	Logan-Rogersville School District	6/20/2024	Hazard Mitigation Meeting with Ashley Stanley	31.16	0.5	15.58	-	0.655	-

Martha Smartt	City Administrator	City of Strafford	6/24/2024	Discussion of Schedules, Meet with Ashley Stanley	31.16	1.25	38.95	-	0.655	-
Sandy Strecker	City Clerk	City of Strafford	6/24/2024	Discussed with City Administrator scheduling and logistics of meeting with Ashley Stanley	31.16	0.25	7.79	-	0.655	-
Kathleen Kingry	Environmental Safety & Compliance Coordinator	Ozarks Technical Community College	6/24/2024	Learned the details about how the Hazard Mitigation Plan works. Met with Ashley Stanley. Emailed other departments to get their involvement in the plan.	31.16	1.00	31.16	-	0.655	-
John Davis	Chief of Police	City of Ash Grove	6/24/2024	Hazard Mitigation Meeting with Ashley Stanley	31.16	0.5	15.58	-	0.655	-
Maggie Rogers	Health Planner	Spfld - Greene County Health Dept.	6/24/2024	Hazard Mitigation Meeting with Ashley Stanley	31.16	0.5	15.58	-	0.655	-
Sandy Strecker	City Clerk	City of Strafford	6/25/2024	Meeting with Ashley Stanley one-on-one	31.16	1	31.16	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	6/26/2024	Weekly HMP Update on progress and expectations for the following week	21.35	0.75	16.01	-	0.655	-
Jennifer Katzin	Assistant Superintendent	Logan-Rogersville School District	6/27/2024	Paperwork regarding plan development	31.16	0.25	7.79	-	0.655	-
Kathleen Kingry	Environmental Safety & Compliance Coordinator	Ozarks Technical Community College	6/27/2024	Learned the details about how the Hazard Mitigation Plan works. Met with Ashley Stanley. Emailed other departments to get their involvement in the plan.	31.16	2.5	77.90	-	0.655	-
Kathleen Kingry	Environmental Safety & Compliance Coordinator	Ozarks Technical Community College	6/28/2024	Learned the details about how the Hazard Mitigation Plan works. Met with Ashley Stanley. Emailed other departments to get their involvement in the plan.	31.16	2	62.32	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	7/3/2024	Weekly HMP Update on progress and expectations for the following week	21.35	0.75	16.01	-	0.655	-
Kathleen Kingry	Environmental Safety & Compliance Coordinator	Ozarks Technical Community College	7/1/2024	Compiled Action Worksheet, timesheets, and STAPLEE worksheet into Google Sheets to make working between departments easier.	31.16	3	93.48	-	0.655	-
Kathleen Kingry	Environmental Safety & Compliance Coordinator	Ozarks Technical Community College	7/8/2024	Compiled Action Worksheet, timesheets, and STAPLEE worksheet into Google Sheets to make working between departments easier.	31.16	1	31.16	-	0.655	-
Kathleen Kingry	Environmental Safety & Compliance Coordinator	Ozarks Technical Community College	7/9/2024	Compiled Action Worksheet, timesheets, and STAPLEE worksheet into Google Sheets to make working between departments easier.	31.16	1	31.16	-	0.655	-
Lynn Hollandworth	Emergency Management Director	City of Republic	7/9/2024	Quick meeting with Michael Sallee about progress of IT needs.	31.16	0.5	15.58	-	0.655	-
Michael Sallee	IT Technician	City of Republic	7/9/2024	Quick meeting with Lynn Hollandworth about progress of IT needs.	31.16	0.5	15.58	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	7/10/2024	Weekly HMP Update on progress and expectations for the following	21.35	0.75	16.01	-	0.655	-
Timothy Clarkson	Assistant Fire Chief	Logan-Rogersville Fire Department	7/11/2024	Hazard Mitigation Meeting with Ashley Stanley	31.16	0.5	15.58	-	0.655	-
Eddie Castleberry	School Resource Officer	Fair Grove Schools	7/12/2024	Hazard Mitigation Meeting with Ashley Stanley	31.16	0.5	15.58	-	0.655	-

Kathleen Kingry	Environmental Safety & Compliance Coordinator	Ozarks Technical Community College	7/15/2024	Compiled Action Worksheet, timesheets, and STAPLEE worksheet into Google Sheets to make working between departments easier.	31.16	1	31.16	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	7/17/2024	Weekly HMP Update on progress and expectations for the following week	21.35	0.75	16.01	-	0.655	-
Will Glenn	Battalion Chief	Brookline Fire Department	7/19/2024	2025 Mitigation Meeting with Ashley Stanley	31.16	1	31.16	-	0.655	-
James Kilburn	Fire Chief	Brookline Fire Department	7/19/2024	2025 Mitigation Meeting with Ashley Stanley	31.16	1	31.16	-	0.655	-
Greg Porter	Emergency Management Director	City of Fair Grove	7/24/2024	2025 Mitigation Meeting with Ashley Stanley	31.16	0.5	15.58	-	0.655	-
Ashlee Parker	Assistant Fire Chief	Ebenezer Fire Department	7/24/2024	2025 Mitigation Meeting with Ashley Stanley	31.16	1	31.16	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	7/24/2024	Weekly HMP Update on progress and expectations for the following week	21.35	0.75	16.01	-	0.655	-
Raymond Wade	Director of Facilities and Grounds	Ozarks Technical Community College	7/24/2024	Help complete the questionaire	31.16	1.5	46.74	-	0.655	-
Ronnie Bell	Community Engagement Specialist	Springfield-Greene County OEM	7/25/2024	Discussed potential contacts for the jurisdictions still not responding	21.35	0.25	5.34	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	7/31/2024	Weekly HMP Update on progress and expectations for the following week	21.35	0.75	16.01	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	8/7/2024	Weekly HMP Update on progress and expectations for the following week	21.35	0.75	16.01	-	0.655	-
Kathleen Kingry	Environmental Safety & Compliance Coordinator	Ozarks Technical Community College	8/13/2024	Work on completing the questionaire.	31.16	2	62.32	-	0.655	-
Raymond Wade	Director of Facilities and Grounds	Ozarks Technical Community College	8/13/2024	Helped with completing the questionaire.	31.16	1	31.16	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	8/14/2024	Weekly HMP Update on progress and expectations for the following week	21.35	0.75	16.01	-	0.655	-
Larry Woods	Director	Springfield-Greene County OEM	8/14/2024	Discussed with Ashley and Gretchen what the updated projects in the county look like so far and the participation of shareholders within the county	56.79	0.5	28.40	-	0.655	-
Kathleen Kingry	Environmental Safety & Compliance Coordinator	Ozarks Technical Community College	8/15/2024	Work on completing the questionaire.	31.16	1	31.16	-	0.655	-
Raymond Wade	Director of Facilities and Grounds	Ozarks Technical Community College	8/15/2024	Helped with completing the questionaire.	31.16	1	31.16	-	0.655	-
Kathleen Kingry	Environmental Safety & Compliance Coordinator	Ozarks Technical Community College	8/16/2024	Work on completing the questionaire.	31.16	1	31.16	-	0.655	-
Raymond Wade	Director of Facilities and Grounds	Ozarks Technical Community College	8/16/2024	Helped with completing the questionaire.	31.16	1	31.16	-	0.655	-

Kathleen Kingry	Environmental Safety & Compliance Coordinator	Ozarks Technical Community College	8/19/2024	Work on completing the questionaire.	31.16	1	31.16	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	8/21/2024	Weekly HMP Update on progress and expectations for the following week	21.35	0.75	16.01	-	0.655	-
Jim Farrell	Director of School Police	SPS Police Department	8/28/2024	2025 Mitigation Meeting with Ashley Stanley	31.16	0.75	23.37	-	0.655	-
Aubrey Johnson	Training and Exercise Speciaist	Springfield-Greene County OEM	9/3/2024	Collaborated with Ashley and Gretchen on contacts for jurisdictions that have not yet responded to inquiries about participation	26.8	1	26.8	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	9/4/2024	Weekly HMP Update on progress and expectations for the following week	21.35	0.75	16.01	-	0.655	-
Maggie Rogers	Public Health Planner	Springfield-Greene County Health Department	9/10/2024	Review how-to documentation and begin completion action worksheets for both projects from the SGCHD.	31.16	2	62.32	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	9/11/2024	Weekly HMP Update on progress and expectations for the following week	21.35	0.75	16.01	-	0.655	-
Darren White	Deputy Director	Springfield-Greene County OEM	9/11/2024	Worked with planning specialist to find missing contact information for unparticipating jurisdictions	34.89	0.5	17.45	-	0.655	-
Greg Porter	Emergency Management Director	City of Fair Grove	9/11/2024	Writing plans for all hazards listed in the hazard mitigation plan.	31.16	2	62.32	-	0.655	-
Greg Porter	Emergency Management Director	City of Fair Grove	9/11/2024	Writing plans for all hazards listed in the hazard mitigation plan.	31.16	4	124.64	-	0.655	-
Greg Porter	Emergency Management Director	City of Fair Grove	9/22/2024	Writing plans for all hazards listed in the hazard mitigation plan.	31.16	3	93.48	-	0.655	-
Greg Porter	Emergency Management Director	City of Fair Grove	9/23/2024	Writing plans for all hazards listed in the hazard mitigation plan.	31.16	6	186.96	-	0.655	-
Greg Porter	Emergency Management Director	City of Fair Grove	9/24/2024	Writing plans for all hazards listed in the hazard mitigation plan.	31.16	5	155.80	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	9/25/2024	Weekly HMP Update on progress and expectations for the following week	21.35	0.75	16.01	-	0.655	-
Raymond Wade	Director of Facilities and Grounds	Ozarks Technical Community College	9/27/2024	Help with completion of questionaire.	31.16	2	62.32	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	10/2/2024	Weekly HMP Update on progress and expectations for the following week	21.35	0.75	16.01	-	0.655	-
Shane Medlin	Superintendent	Ash Grove Schools	10/4/2024	2025 Mitigation Meeting with Ashley Stanley	31.16	1	31.16	-	0.655	-
Brian Bagley	Director of Operations	Ash Grove Schools	10/4/2024	2025 Mitigation Meeting with Ashley Stanley	31.16	1	31.16	-	0.655	-
Josh Dukewits	Battalion Chief	Battefield Fire Department	10/4/2024	2025 Mitgation Meeting with Ashley Stanley	31.16	0.5	15.58	-	0.655	-
Nathan Lander	Firefighter	Battefield Fire Department	10/4/2024	2025 Mitgation Meeting with Ashley Stanley	31.16	0.5	15.58	-	0.655	-
Martha Smartt	City Administrator	City of Strafford	10/4/2024	Meeting with David Gardner and Sandy Strecker	31.16	1.5	46.74	-	0.655	-

David Gardener	Emergency Management Director	City of Strafford	10/4/2024	Meeting with Martha Smartt and Sandy Strecker	31.16	1.5	46.74	-	0.655	-
Sandy Strecker	City Clerk	City of Strafford	10/4/2024	Meeting with Martha Smartt and David Gardener	31.16	1.5	46.74	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	10/9/2024	Weekly HMP Update on progress and expectations for the following week	21.35	0.75	16.01	-	0.655	-
Kathleen Kingry	Environmental Safety & Compliance Coordinator	Ozarks Technical Community College	10/9/2024	Completed questionaire. Determined projects that could mitigate hazards based on the hazards that apply to our district.	31.16	2	62.32	-	0.655	-
Raymond Wade	Director of Facilities and Grounds	Ozarks Technical Community College	10/9/2024	Help with completion of questionaire.	31.16	2	62.32	-	0.655	-
Kathleen Kingry	Environmental Safety & Compliance Coordinator	Ozarks Technical Community College	10/10/2024	Completed questionaire. Determined projects that could mitigate hazards based on the hazards that apply to our district.	31.16	3	93.48	-	0.655	-
Raymond Wade	Director of Facilities and Grounds	Ozarks Technical Community College	10/10/2024	Help with completion of questionaire.	31.16	2	62.32	-	0.655	-
Kathleen Kingry	Environmental Safety & Compliance Coordinator	Ozarks Technical Community College	10/11/2024	Completed questionaire. Determined projects that could mitigate hazards based on the hazards that apply to our district.	31.16	1	31.16	-	0.655	-
Raymond Wade	Director of Facilities and Grounds	Ozarks Technical Community College	10/14/2024	Help with completion of questionaire.	31.16	1	31.16	-	0.655	-
Kathleen Kingry	Environmental Safety & Compliance Coordinator	Ozarks Technical Community College	10/15/2024	Completed questionaire. Determined projects that could mitigate hazards based on the hazards that apply to our district.	31.16	1	31.16	-	0.655	-
Raymond Wade	Director of Facilities and Grounds	Ozarks Technical Community College	10/15/2024	Help with completion of questionaire.	31.16	1	31.16	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	10/16/2024	Weekly HMP Update on progress and expectations for the following week	21.35	0.75	16.01	-	0.655	-
Kathleen Kingry	Environmental Safety & Compliance Coordinator	Ozarks Technical Community College	10/18/2024	Completed questionaire. Determined projects that could mitigate hazards based on the hazards that apply to our district.	31.16	2	62.32	-	0.655	-
Kathleen Kingry	Environmental Safety & Compliance Coordinator	Ozarks Technical Community College	10/21/2024	Completed questionaire. Determined projects that could mitigate hazards based on the hazards that apply to our district.	31.16	1	31.16	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	10/23/2024	Weekly HMP Update on progress and expectations for the following week	21.35	0.75	16.01	-	0.655	-
Jennifer Katzin	Assistant Superintendent	Logan-Rogersville School District	10/23/2024	Complete Action Worksheet 1, 2, 3, & 4	31.16	2	62.32	-	0.655	-
Raymond Wade	Director of Facilities and Grounds	Ozarks Technical Community College	10/25/2024	Help with completion of questionaire.	31.16	1	31.16	-	0.655	-
Aubrey Johnson	Training and Exercise Specialist	Springfield-Greene County OEM	10/27/2024	Discussed Mitigation initiatives in Greene County with Scott Moore	26.80	0.5	13.40	-	0.655	-
Sarah Hansell	Administrative Coordinator	Springfield-Greene County OEM	10/28/2024	Discussed with Ashley and Gretchen Tier II information in Greene County for the mitigation plan	17.70	0.25	4.43	-	0.655	-

Kathleen Kingry	Environmental Safety & Compliance Coordinator	Ozarks Technical Community College	10/29/2024	Completed questionaire. Determined projects that could mitigate hazards based on the hazards that apply to our district.	31.16	1	31.16	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	10/30/2024	Weekly HMP Update on progress and expectations for the following week	21.35	0.75	16.01	-	0.655	-
Kathleen Kingry	Environmental Safety & Compliance Coordinator	Ozarks Technical Community College	10/31/2024	Completed questionaire. Determined projects that could mitigate hazards based on the hazards that apply to our district.	31.16	2	62.32	-	0.655	-
Raymond Wade	Director of Facilities and Grounds	Ozarks Technical Community College	10/31/2024	Help with completion of questionaire.	31.16	1	31.16	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	11/6/2024	Weekly HMP Update on progress and expectations for the following week	21.35	0.75	16.01	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	11/8/2024	Weekly HMP Update on progress and expectations for the following week	21.35	0.5	10.675	-	0.655	-
Larry Woods	Director	Springfield-Greene County OEM	11/8/2024	Discussed the racist text messages national trend and where it belonged in the Mitiation Plan after the information was shared by the Missouri Terrorism Liasion Officer	56.79	0.5	28.40	-	0.655	-
Gretchen Ruffa	Planning Specialist	Springfield-Greene County OEM	11/13/2024	Weekly HMP Update on progress and expectations for the following week	21.35	0.75	16.01	-	0.655	-
Sarah Hansell	Administrative Coordinator	Springfield-Greene County OEM	11/13/2024	Data Entry - research titles, agencies, and names	17.71	2	35.42	-	0.655	-
Robbin Sawyer	Administrative Manager	Springfield-Greene County OEM	11/14/2024	Create spreadsheets and enter time for OEM employees and partnering agencies.	25.58	3.5	89.53	-	0.655	-
Robbin Sawyer	Administrative Manager	Springfield-Greene County OEM	11/15/2024	Enter time for OEM employees and partnering agencies.	25.58	2.5	63.95	-	0.655	-
Robbin Sawyer	Administrative Manager	Springfield-Greene County OEM	11/19/2024	Scan timesheets, meeting sign-ins, and ensure information in spreadsheet is correct.	25.58	3	76.74	-	0.655	-
Robbin Sawyer	Administrative Manager	Springfield-Greene County OEM	11/20/2024	Enter time for OEM employees and partnering agencies	25.58	4	102.32	-	0.655	-
Robbin Sawyer	Administrative Manager	Springfield-Greene County OEM	11/21/2024	Prepare paperwork for grant submission	25.58	4	102.32	-	0.655	-
Robbin Sawyer	Administrative Manager	Springfield-Greene County OEM	11/22/2024	create reinbursement invoice, make sure all attachments are attached, complete time keeping for OEM employees	25.58	4	102.32	-	0.655	-
							6845.90	751.4		492.17

Date	Invoice Number	Vendor	Check Number	Description			Amount			
3/29/2024	113-2174887-7306661	Amazon	280000	4TB Portable External Hard Drive	-	-	94.99	-	-	-
4/27/2024	10745413395	Dell Technologies	280704	Dell Latitude Laptop Computer and Docking Station	-	-	1330.95	-	-	-
4/30/2024	114-0874296-8421869	Amazon	281314	Label Tape Replacement	-	-	12.98	-	-	-
4/30/2024	114-0874296-8421869	Amazon	281314	24 pcs Expanding Pocket File Folder Jackets	-	-	23.99	-	-	-
6/24/2024	49088	Spfld-Greene County OEM	JE	Ashley Stanley Business Cards	-	-	14.70	-	-	-
7/31/2024	3540609	Spfld-Greene County OEM	JE	Windows Volume License	-	-	113.77	-	-	-
							1591.38			

APPENDIX E

Community Engagement

COMMUNITY ENGAGEMENT

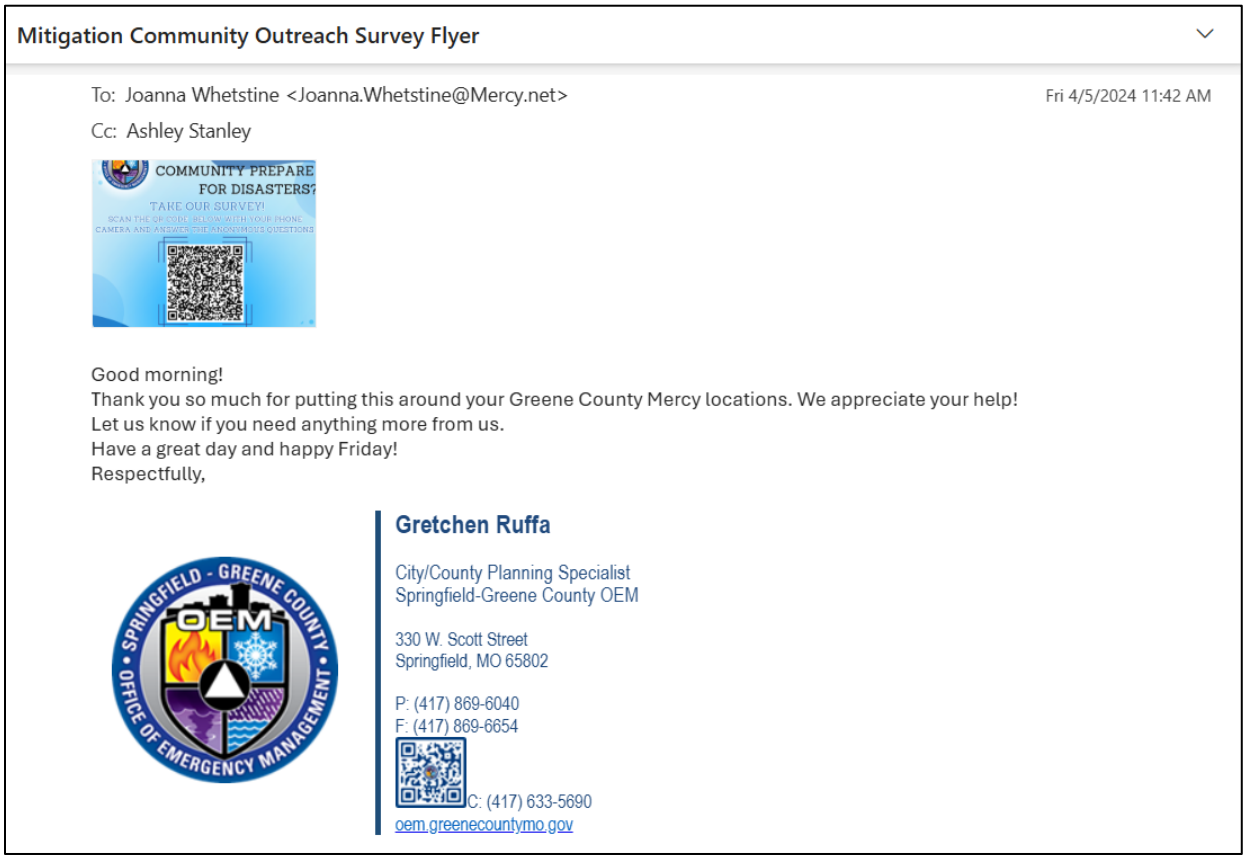
Effective hazard mitigation requires not only planning but also the active involvement of the community. The Springfield-Greene County All Hazards Mitigation Plan recognizes the importance of engaging local residents, businesses, organizations, and community leaders in shaping strategies to reduce risks from disasters and improve overall resilience. Through a series of outreach efforts, including public meetings, surveys, social media engagement, and community events, valuable input has been gathered from the public.

This section of the plan highlights the community engagement efforts undertaken throughout Springfield and Greene County, showcasing how the voices of residents have been integrated into the decision-making process. The following screenshots illustrate key moments of interaction, feedback, and collaboration with the community, emphasizing how public input has directly influenced the mitigation strategies and priorities outlined in this plan. By including these images, we aim to demonstrate the commitment to building a safer, more resilient community through active participation and collaboration.

COMMUNITY SURVEY

The Mitigation Planning Committee (MPC) designed an outreach survey to assess the community's experiences of hazards in Greene County. In support of this initiative, the MPC collaborated with three local agencies, each of which agreed to distribute the survey flyer to their respective organizations. The survey was available to the public from April 3, 2024, through January 1, 2025. Below are screenshots of the emails sent, along with the names and agencies of the individuals who assisted with this outreach effort. Also included is a screenshot of the survey itself.

Joanna Whetstine, Mercy, Environmental Safety/Emergency Management



Kim Flores, Springfield-Greene County Library District, Public Information Officer

Ashley Stanley

Reply Reply all Forward

To: (lst) Kim Flores <kimf@thelibrary.org>

Thu 4/4/2024 1:51 PM

I could provide some printed copies and then collect anything completed at a set date, or we could go more of a QR code direction and I can provide a flyer that has a scan able link to the survey. I know a lack of a cell phone could potentially keep some people from being able to participate so I could also do both methods if you think that would be better. The online survey closes October 25th 2024, so it has a good amount of time to work through the community. I could pick up physical copies obviously much sooner than that so you all wouldn't have to hold on to them. I think me picking them up will create the most access to the survey as the Public Safety Building doesn't have a drop off and postage stamps could be another potential barrier for participants. Let me know what you think!

Thanks,
Ashley Stanley
Hazard Mitigation Plan Contractor

Accomplishments 4/4/24

Ashley Stanley

Reply Reply all Forward

To: Gretchen Ruffa

Thu 4/4/2024 3:05 PM

Hello,

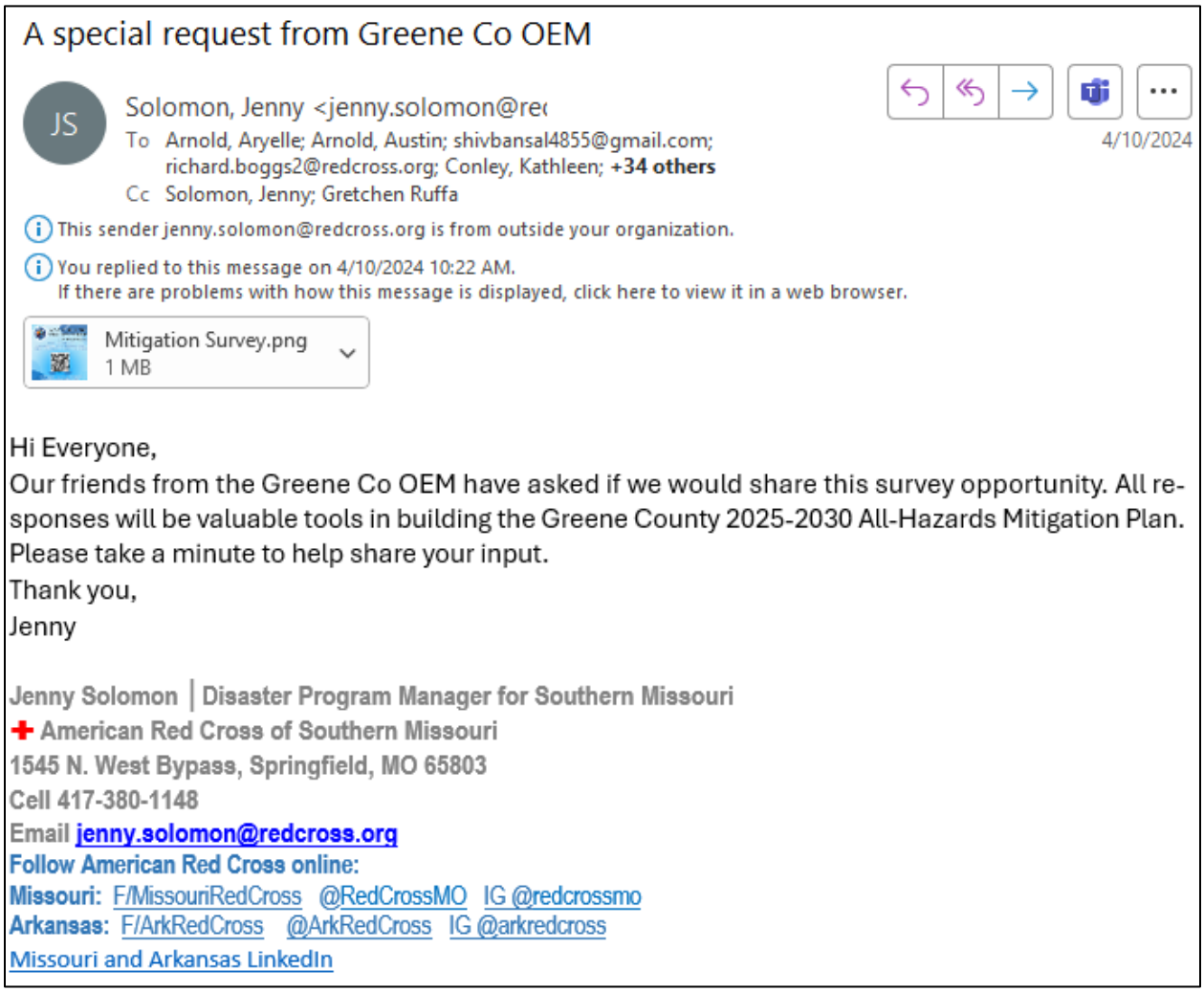
I hope your class went well! Today I worked on the Planning Areas and Profiles section, I have almost completed the geography, geology, and topography sections. I am missing some information about soil composition and hope to find that at some point tomorrow so I can check it off the list. Additionally I started the Climate section which SEMA would like to be much larger this year than previous years so I am gathering all the appropriate data and then hope to have it fully typed out by early next week. I've finished census data, I am now doing agricultural data which is kind of tedious to find but I think I found a good resource on the USDA so I will keep chipping away at that data in between other tasks.

Additionally, I have been in contact today with the Library District trying to work out the best way to put the survey into all the branches and they discussed the need for maybe a small stack of physical surveys for citizens that do not have access to a cell phone. What do you think of maybe I distribute 10-20 at each location? The library said they could hold completed surveys for me and I could pick all of them up at a scheduled date at one library building. They still want to put up the QR code, there was just a concern about access for the public so I said I would run it by you. I wouldn't mind both collecting the papers at the end of the survey or typing out the responses into the data sheet, I honestly don't think there would be a crazy amount of responses anyway. But again, up to you on what you think is best there!

Finally, I am going to start putting all my Kick Off Meeting notes into a nice slide show format that I will email to you when I finish it! Hopefully I can do that Friday morning so you have next week to look over it and let me know what you think. Also did you get a chance to talk to Larry about what date we want to have the Kick off Meeting on?

Thank you,
Ashley Stanley

Jenny Solomon, American Red Cross, Disaster Program Manager for Southern Missouri



A special request from Greene Co OEM

JS

Solomon, Jenny <jenny.solomon@re(

To Arnold, Aryelle; Arnold, Austin; shivbansal4855@gmail.com; richard.boggs2@redcross.org; Conley, Kathleen; **+34 others**

Cc Solomon, Jenny; Gretchen Ruffa

4/10/2024

This sender jenny.solomon@redcross.org is from outside your organization.

You replied to this message on 4/10/2024 10:22 AM.
If there are problems with how this message is displayed, click here to view it in a web browser.

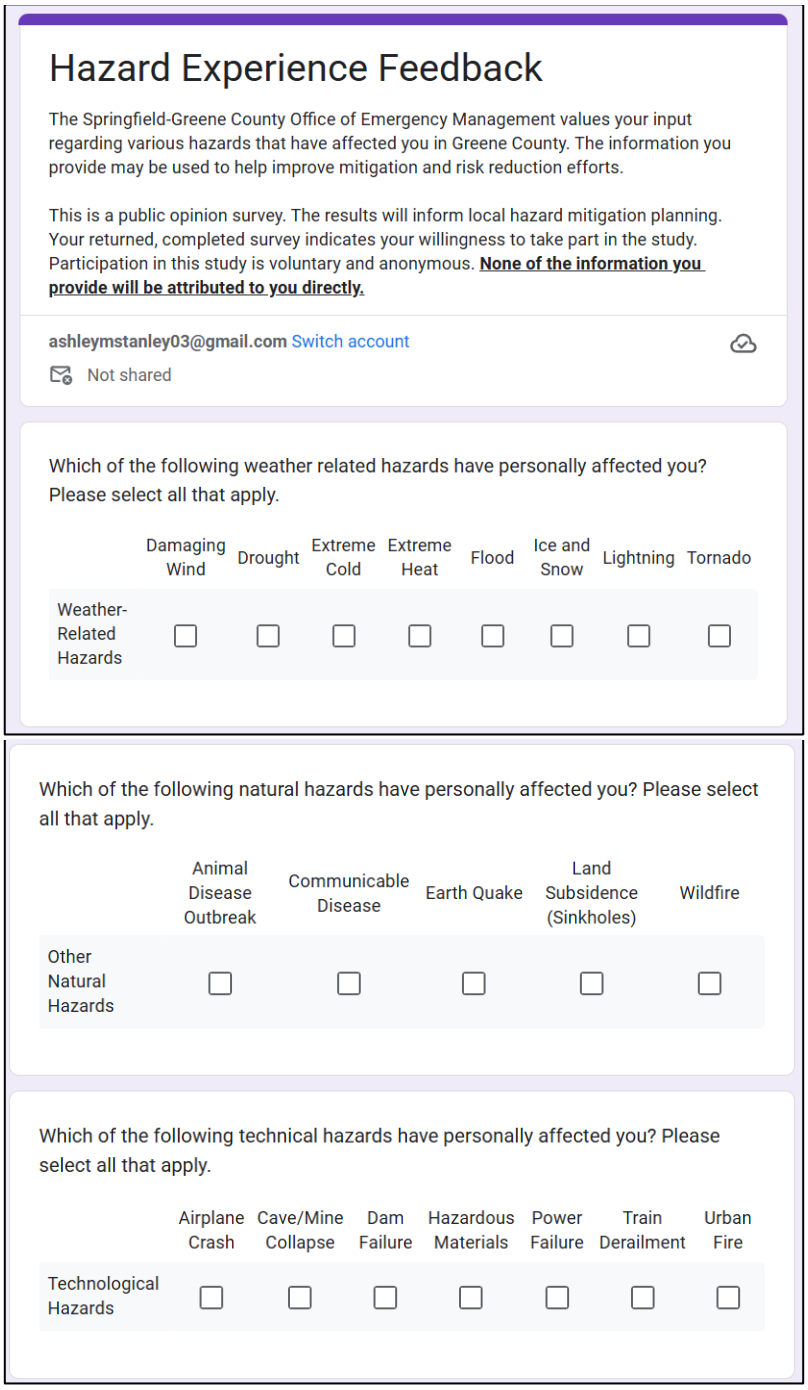
Mitigation Survey.png
1 MB

Hi Everyone,
Our friends from the Greene Co OEM have asked if we would share this survey opportunity. All responses will be valuable tools in building the Greene County 2025-2030 All-Hazards Mitigation Plan. Please take a minute to help share your input.
Thank you,
Jenny

Jenny Solomon | Disaster Program Manager for Southern Missouri
American Red Cross of Southern Missouri
1545 N. West Bypass, Springfield, MO 65803
Cell 417-380-1148
Email jenny.solomon@redcross.org
Follow American Red Cross online:
Missouri: F/MissouriRedCross @RedCrossMO IG @redcrossmo
Arkansas: F/ArkRedCross @ArkRedCross IG @arkredcross
Missouri and Arkansas LinkedIn

In conjunction with these efforts, the Springfield-Greene County Office of Emergency Management featured the survey on its rotating lobby display (BrightSign Digital Signage) for the entire time the survey was open.

Hazard Experience Feedback Community Survey



Hazard Experience Feedback

The Springfield-Greene County Office of Emergency Management values your input regarding various hazards that have affected you in Greene County. The information you provide may be used to help improve mitigation and risk reduction efforts.

This is a public opinion survey. The results will inform local hazard mitigation planning. Your returned, completed survey indicates your willingness to take part in the study. Participation in this study is voluntary and anonymous. **None of the information you provide will be attributed to you directly.**

ashleymstanley03@gmail.com Switch account

Not shared

Which of the following weather related hazards have personally affected you? Please select all that apply.

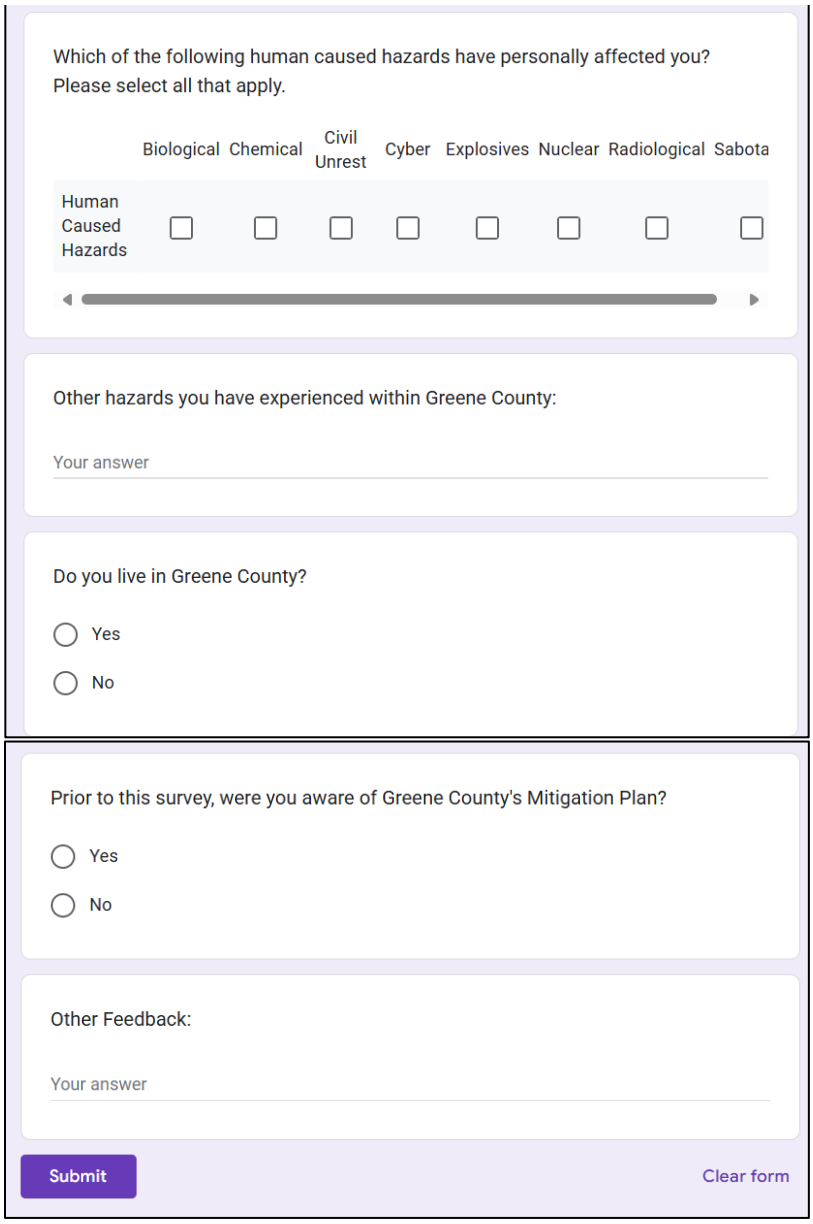
	Damaging Wind	Drought	Extreme Cold	Extreme Heat	Flood	Ice and Snow	Lightning	Tornado
Weather-Related Hazards	☐	☐	☐	☐	☐	☐	☐	☐

Which of the following natural hazards have personally affected you? Please select all that apply.

	Animal Disease Outbreak	Communicable Disease	Earth Quake	Land Subsidence (Sinkholes)	Wildfire
Other Natural Hazards	☐	☐	☐	☐	☐

Which of the following technical hazards have personally affected you? Please select all that apply.

	Airplane Crash	Cave/Mine Collapse	Dam Failure	Hazardous Materials	Power Failure	Train Derailment	Urban Fire
Technological Hazards	☐	☐	☐	☐	☐	☐	☐



Which of the following human caused hazards have personally affected you? Please select all that apply.

	Biological	Chemical	Civil Unrest	Cyber	Explosives	Nuclear	Radiological	Sabota
Human Caused Hazards	☐	☐	☐	☐	☐	☐	☐	☐

Other hazards you have experienced within Greene County:

Your answer

Do you live in Greene County?

- ◯ Yes
- ◯ No

Prior to this survey, were you aware of Greene County's Mitigation Plan?

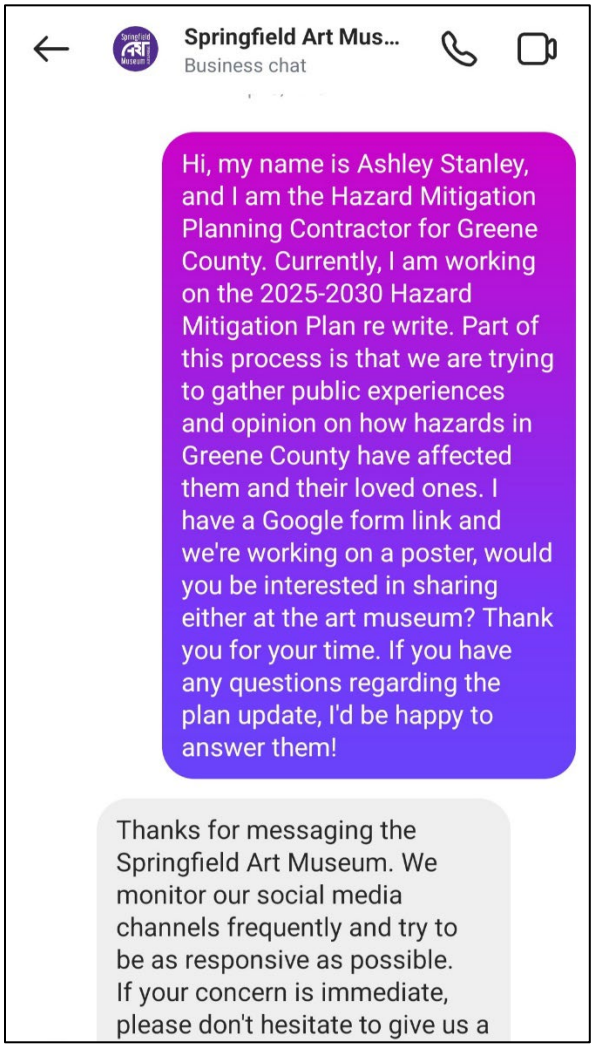
- ◯ Yes
- ◯ No

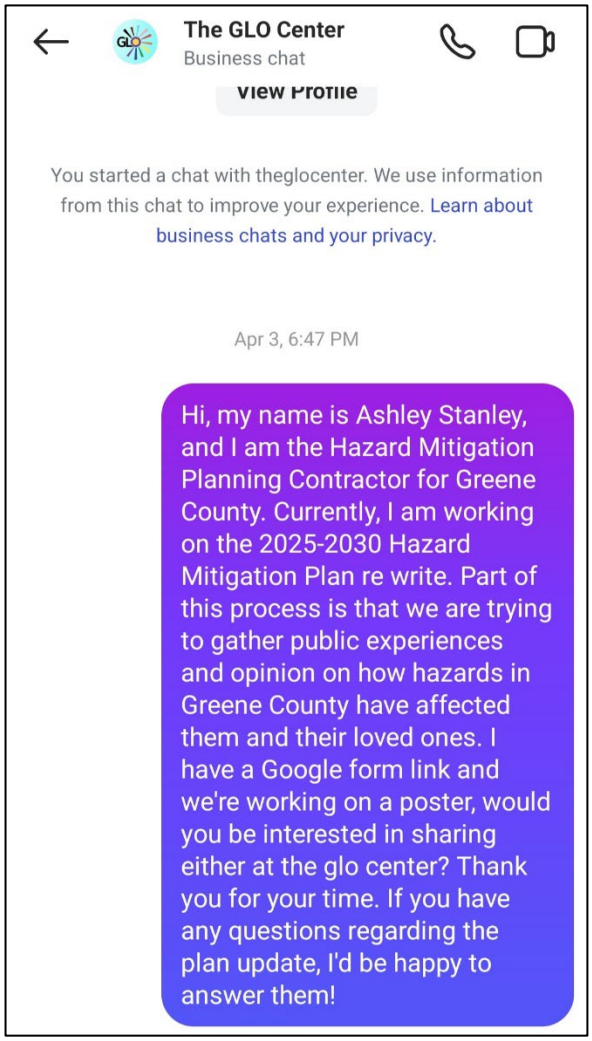
Other Feedback:

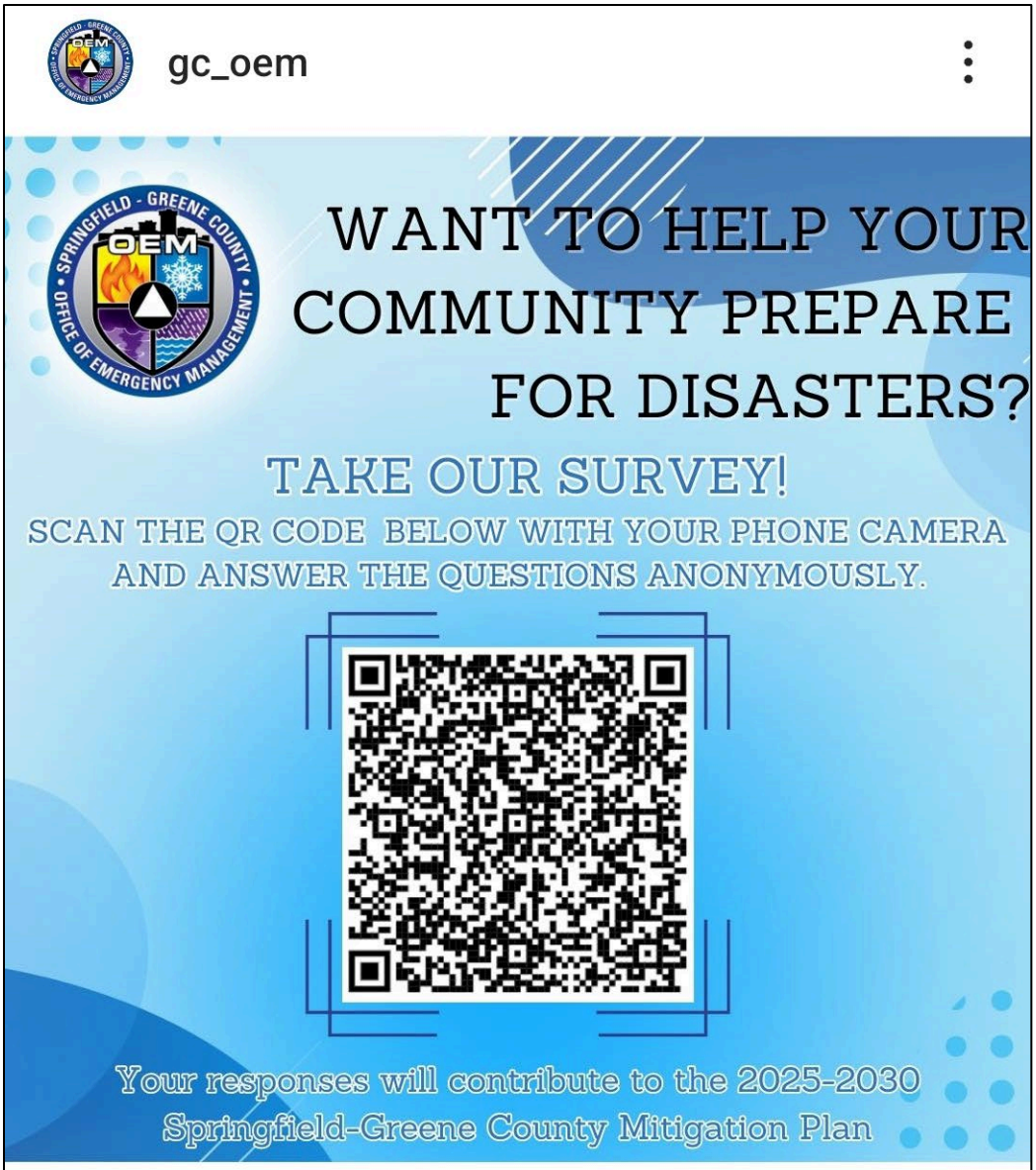
Your answer

Submit Clear form

SOCIAL MEDIA OUTREACH

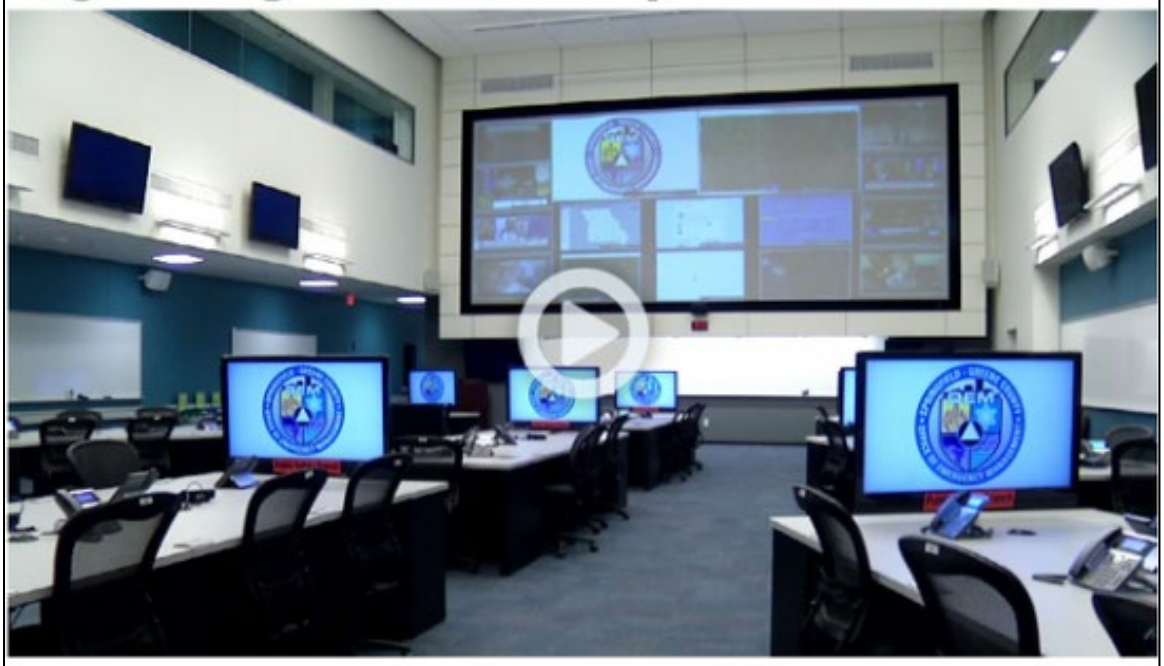





gc_oem
WANT TO HELP YOUR COMMUNITY PREPARE FOR DISASTERS?
TAKE OUR SURVEY!
SCAN THE QR CODE BELOW WITH YOUR PHONE CAMERA AND ANSWER THE QUESTIONS ANONYMOUSLY.
Your responses will contribute to the 2025-2030 Springfield-Greene County Mitigation Plan
10
gc_oem Attention all Greene County residents! We need your help. We are in the process of rewriting our All-Hazards Mitigation Plan for Springfield-Greene County. By filling out this survey, you are giving us a valuable look into your experience as a Greene County resident. In turn, this will allow us to better prepare our beloved community for disasters through the Mitigation Plan. Thank you for your time!

NEWS REPORT

Greene County's Office of Emergency Management seeks your help regarding disaster response



By KY3 Staff

Published: Apr. 4, 2024 at 5:36 PM CDT

SPRINGFIELD, Mo. (KY3) - The Springfield-Greene County Office of Emergency Management seeks your help to better respond to disasters.

The survey features seven questions, including what natural, technical, or human-caused hazards have affected you, explaining your experience. You can fill out anonymously. It will help them make a new disaster plan.

The survey features seven questions, including what natural, technical, or human-caused hazards have affected you.

"It's very important because the more data that we have that we can capture and place into the plan, then the higher the probability and the potential is that we can capture funding to help to mitigate some of the hazards that we identify," said Larry Woods of the Greene County Office of Emergency Management.

To fill out the survey, you can scan the QR code below.



Attention all Greene County residents! We need your help. We are in the process of rewriting our All-Hazards Mitigation Plan for Springfield-Greene County. By filling out this survey, you are giving us a valuable look into your experience as a Greene County resident. In turn, this will allow us to better prepare our beloved community for disasters through the Mitigation Plan. Thank you for your time!

https://docs.google.com/.../1FAIpQLScA4IZfqRgnnNs4v.../viewform...

#greenecountymo #emergencymanagement #hometownready #springfieldmo #mitigation

4 Comment 7

To report a correction or typo, please email digitalnews@ky3.com

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YouTube Video KY3 Link: https://youtu.be/NAkqSsK5a2U?si=90pwJqiUJELeVGIV



KICKOFF MEETING INVITATIONS

Of the two emails below, one was sent as a jurisdiction-specific email to each jurisdiction, and the other was sent to community stakeholders, individually. Two Kickoff Meetings were held back-to-back, one for each of these groups. The following screenshots are examples of these outreach efforts.

Jurisdictional Invitation To Kickoff Meeting – Group Delivery:

Hazard Mitigation Plan - Kick Off Meeting

Gretchen Ruffa

Reply | Reply all | Forward

To: cjohns@drury.edu; revellt@evangel.edu; jfisher@springfieldmo.gov; **+29 others**

Thu 4/11/2024 9:07 AM

Cc: Ashley Stanley

Good morning, everyone!
Please see the attached email from our Mitigation Contractor, Ashley Stanley, inviting you to our Mitigation Kickoff Meeting for the 2025-2030 edition of OEM's Hazard Mitigation Plan! This will be accompanied by an email invitation shortly.
Thank you, and I hope to see you all there!
Respectfully,

Gretchen Ruffa

City/County Planning Specialist
Springfield-Greene County OEM

330 W. Scott Street
Springfield, MO 65802

P: (417) 869-6040
F: (417) 869-6654
C: (417) 633-5690
oem.greenecountymo.gov

Ashley Stanley

Reply | Reply all | Forward

To: Gretchen Ruffa

Tue 4/9/2024 10:15 AM

Good morning,
My name is Ashley Stanley, and I am the contractor for the Greene County Multi-Jurisdictional Hazard Mitigation Plan (HMP) for 2025 – 2030. I will be hosting the HMP informational kickoff meeting from 1-2pm on April 26th, 2024, at the Greene County Public Safety Center (330 W. Scott St., Springfield, MO, 65802). The meeting will outline the process of our jurisdictions receiving Hazard Mitigation Grant Funding, and we want to hear from you! Attendance is appreciated. If you are unable to attend, please consider delegating a representative to ensure your agency's concerns are included. If you have any questions or require further information, feel free to contact me via email or phone. Your active participation is vital to shaping a resilient future for Greene County, and I look forward to meeting and working with you!

Respectfully,
Ashley Stanley
Hazard Mitigation Plan Contractor
O: 417-869-6040

*****An identical email to this was sent to the jurisdictions with different meeting information.**

Community Stakeholder Invitation To Kickoff Meeting – Individual Delivery:

Ashley Krug Out of Office - Invitation Extension

Gretchen Ruffa

Reply | Reply all | Forward

To: Laurie.Davis@springfieldmo.gov

Wed 4/24/2024 10:29 AM

Cc: Ashley Stanley

Good morning Laurie,
I am reaching out to invite your organization to our Mitigation Plan Rewrite Kickoff Meeting at the Public Safety Center this Friday from 1-2pm. Here, we will discuss needs, questions, concerns, and ideas for the growth and protection of Springfield and Greene County against hazards which will go into the Plan. I had previously invited Ashley Krug, but I see now that she will be out until Monday and I didn't want this opportunity to be lost for your organization.
Please let me know if this is something you would like to be a part of. We would love to have you!
Thank you, I'm happy to answer any questions you may have.
Have a great day!
Respectfully,

Gretchen Ruffa

City/County Planning Specialist
Springfield-Greene County OEM

330 W. Scott Street
Springfield, MO 65802

P: (417) 869-6040
F: (417) 869-6654
C: (417) 633-5690
oem.greenecountymo.gov

Two-Day Reminder Email:

Mitigation Kickoff Reminder - TWO DAYS AWAY!

Gretchen Ruffa

Reply | Reply all | Forward

To: john.davis@ashgrovemo.gov; melissa.mau@ashgrovemo.gov; **+49 others**

Wed 4/24/2024 10:20 AM

Cc: Ashley Stanley

Good morning all!
I hope everyone is having a good week so far :) This is your reminder that the Mitigation Kickoff Meeting is just two days away!
This Friday (April 26th) from 10-11am at the Public Safety Center, we hope to see all of you there. Don't miss out!
Again, if you are unable to attend, please send a representative of your agency in your stead.

Coffee and bagels will be provided.

The meeting invitation was sent out on 4/9 so please, if you have not responded to that meeting invitation, do so, that we may have an accurate headcount. If you would like, you may also reply to this email with your response.

Thank you, and respectfully,

Gretchen Ruffa

City/County Planning Specialist
Springfield-Greene County OEM

330 W. Scott Street
Springfield, MO 65802

P: (417) 869-6040
F: (417) 869-6654

Follow-Up Outreach for Kickoff:

Tim Clarkson<tclarkson@lrfire.org>

To: Gretchen Ruffa; Ashley Stanley

Thu 4/25/2024 9:05 AM

This sender tclarkson@lrfire.org is from outside your organization. Block sender

Good Morning,

I wanted to touch base with you on the Mitigation meeting set for Friday, I have had schedule change and will not be able to attend as the representative for Logan-Rogersville Fire. I was wanting to see if you had paperwork or information that needs/could be picked, prior to or something set for possibly next week to discuss what was missed. This should be my 3rd or 4th plan review so semi familiar with the process.

Thanks, and have a great day

Timothy Clarkson
Assistant Chief B-Shift
Logan Rogersville Fire Prot. Dist.
tclarkson@lrfire.org
4178445855 Cell
4177534265 Office
4177534340 Fax

Hazard Mitigation Plan - Kick Off Meeting

Gretchen Ruffa

Reply Reply all Forward

To: Tim Clarkson <tclarkson@lrfire.org>

Thu 4/25/2024 9:10 AM

Cc: Ashley Stanley

Good morning, Tim
Thank you for reaching out! We can absolutely set up a one-on-one meeting. After the meeting tomorrow, Ashley (our Mitigation contractor) will be sending emails for this exact purpose with all the needed information included. Wonderful that you are familiar with this process! Let me know if you have any questions until Ashley gets in touch with you.
Thanks again and have a great day!
Respectfully,

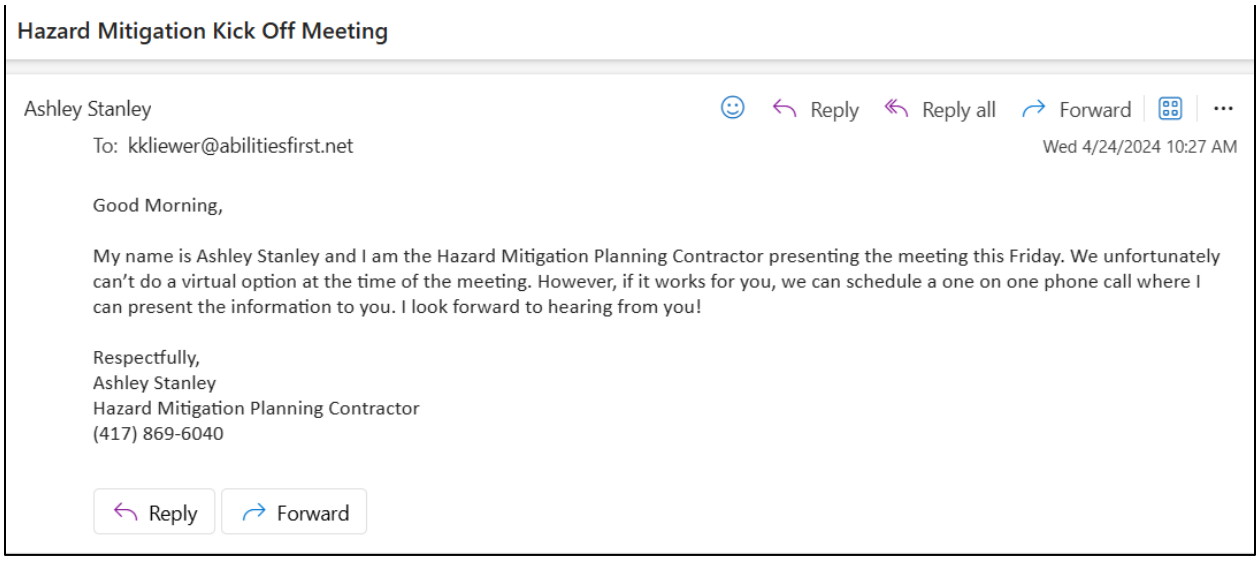
Gretchen Ruffa

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Springfield-Greene County OEM

330 W. Scott Street
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P: (417) 869-6040
F: (417) 869-6654
C: (417) 633-5690
oem.greenecountymo.gov

Reply Reply all Forward



Hazard Mitigation Kick Off Meeting

Ashley Stanley

Reply | Reply all | Forward

To: kkliewer@abilitiesfirst.net

Wed 4/24/2024 10:27 AM

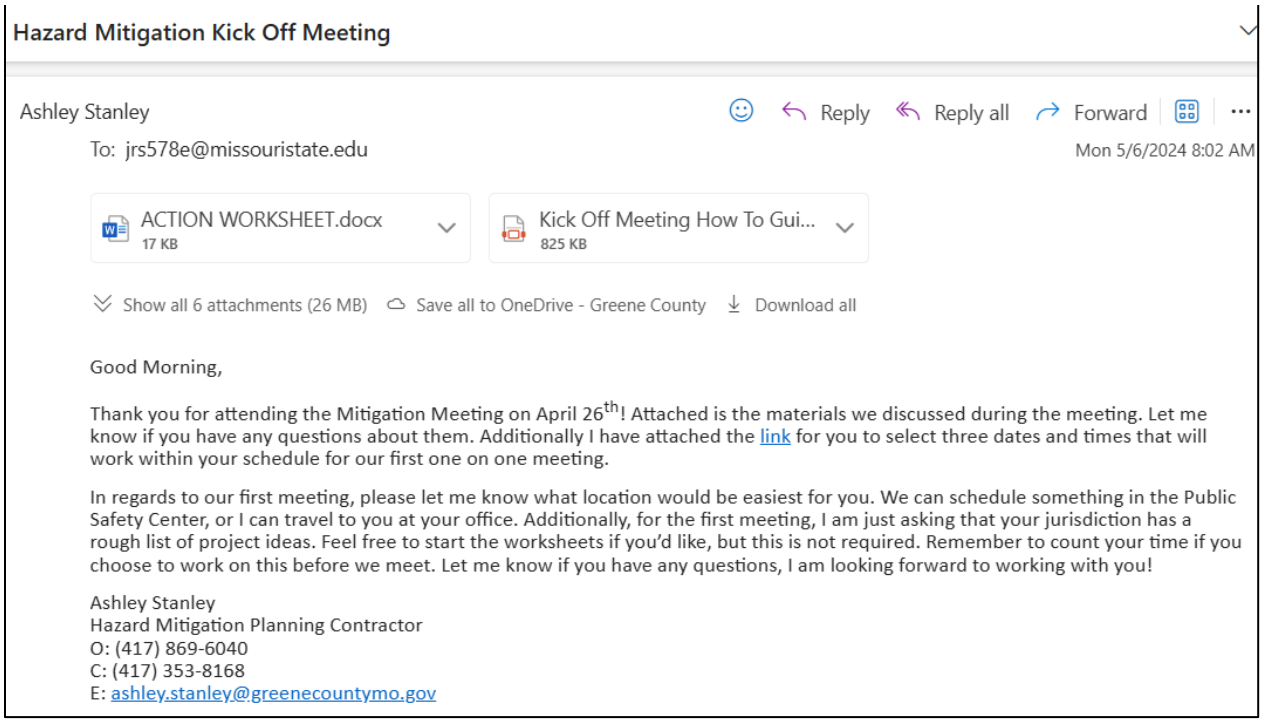
Good Morning,

My name is Ashley Stanley and I am the Hazard Mitigation Planning Contractor presenting the meeting this Friday. We unfortunately can't do a virtual option at the time of the meeting. However, if it works for you, we can schedule a one on one phone call where I can present the information to you. I look forward to hearing from you!

Respectfully,
Ashley Stanley
Hazard Mitigation Planning Contractor
(417) 869-6040

Reply | Forward

Initial Materials Sent and One-on-One Meetings Scheduled:



Hazard Mitigation Kick Off Meeting

Ashley Stanley

Reply | Reply all | Forward

To: jrs578e@missouristate.edu

Mon 5/6/2024 8:02 AM

ACTION WORKSHEET.docx 17 KB

Kick Off Meeting How To Gui... 825 KB

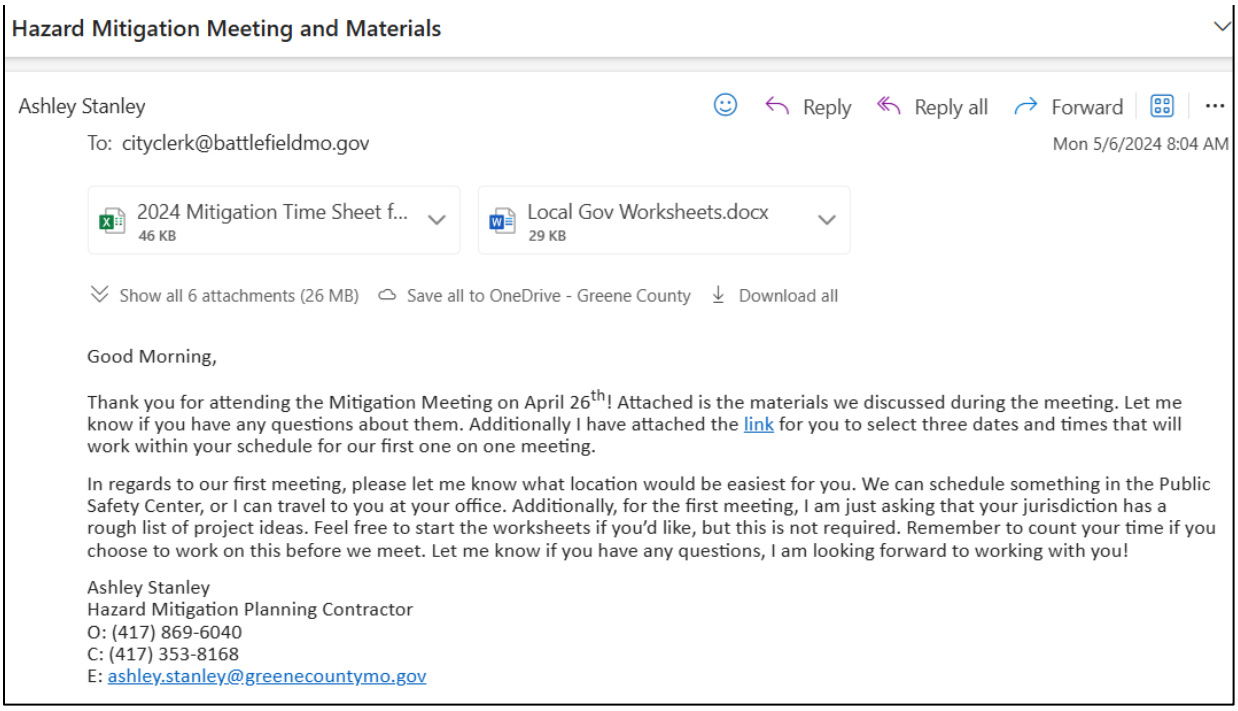
Show all 6 attachments (26 MB) | Save all to OneDrive - Greene County | Download all

Good Morning,

Thank you for attending the Mitigation Meeting on April 26th! Attached is the materials we discussed during the meeting. Let me know if you have any questions about them. Additionally I have attached the link for you to select three dates and times that will work within your schedule for our first one on one meeting.

In regards to our first meeting, please let me know what location would be easiest for you. We can schedule something in the Public Safety Center, or I can travel to you at your office. Additionally, for the first meeting, I am just asking that your jurisdiction has a rough list of project ideas. Feel free to start the worksheets if you'd like, but this is not required. Remember to count your time if you choose to work on this before we meet. Let me know if you have any questions, I am looking forward to working with you!

Ashley Stanley
Hazard Mitigation Planning Contractor
O: (417) 869-6040
C: (417) 353-8168
E: ashley.stanley@greenecountymo.gov



Hazard Mitigation Meeting and Materials

Ashley Stanley

Reply Reply all Forward

To: cityclerk@battlefieldmo.gov

Mon 5/6/2024 8:04 AM

2024 Mitigation Time Sheet f... 46 KB

Local Gov Worksheets.docx 29 KB

Show all 6 attachments (26 MB) Save all to OneDrive - Greene County Download all

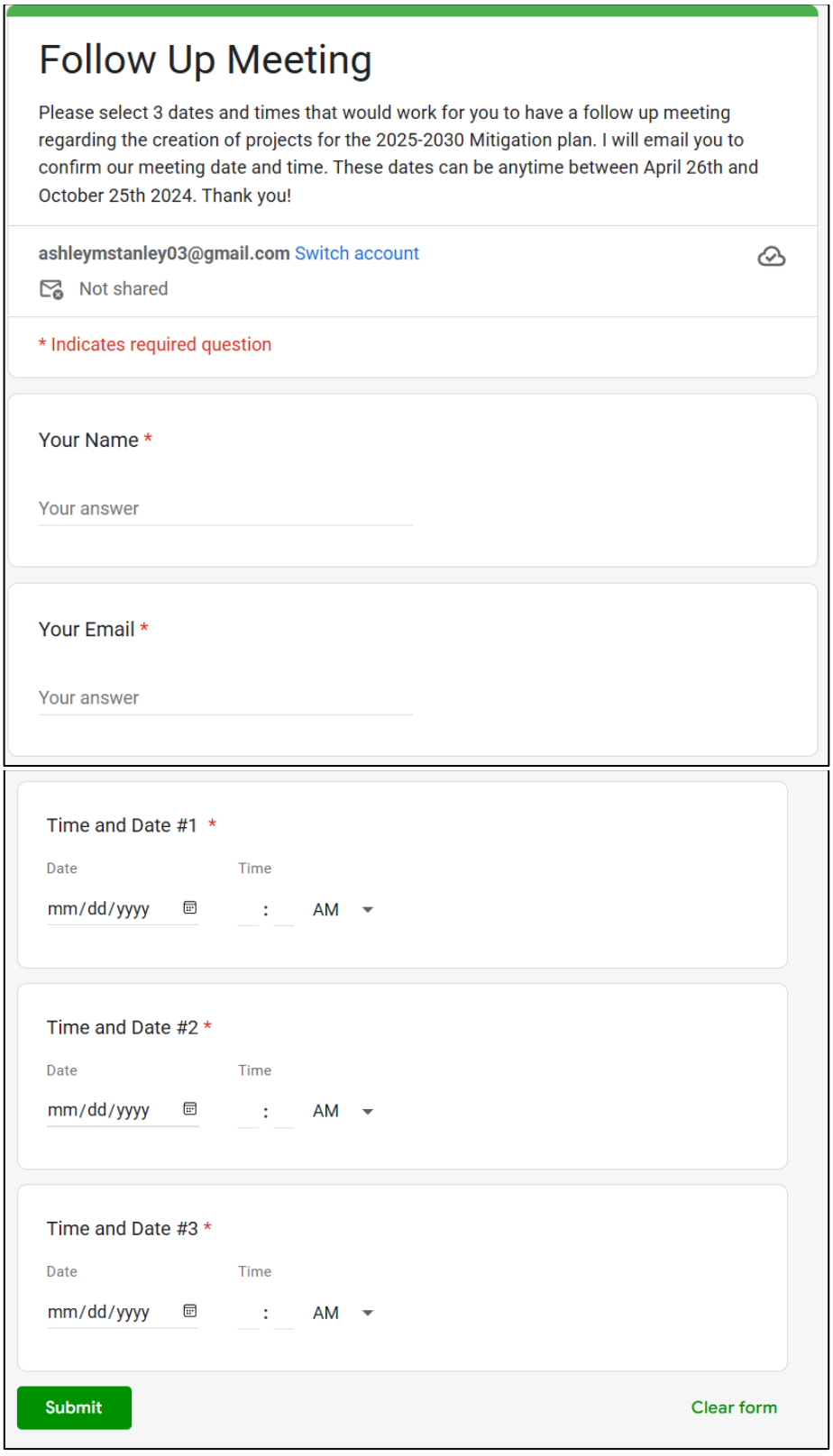
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In regards to our first meeting, please let me know what location would be easiest for you. We can schedule something in the Public Safety Center, or I can travel to you at your office. Additionally, for the first meeting, I am just asking that your jurisdiction has a rough list of project ideas. Feel free to start the worksheets if you'd like, but this is not required. Remember to count your time if you choose to work on this before we meet. Let me know if you have any questions, I am looking forward to working with you!

Ashley Stanley
Hazard Mitigation Planning Contractor
O: (417) 869-6040
C: (417) 353-8168
E: ashley.stanley@greenecountymo.gov

Follow-Up Meeting Schedule Poll:



Follow Up Meeting

Please select 3 dates and times that would work for you to have a follow up meeting regarding the creation of projects for the 2025-2030 Mitigation plan. I will email you to confirm our meeting date and time. These dates can be anytime between April 26th and October 25th 2024. Thank you!

ashleymstanley03@gmail.com Switch account

Not shared

* Indicates required question

Your Name *

Your answer

Your Email *

Your answer

Time and Date #1 *

Date Time

mm/dd/yyyy : AM

Time and Date #2 *

Date Time

mm/dd/yyyy : AM

Time and Date #3 *

Date Time

mm/dd/yyyy : AM

Submit Clear form

Scheduled Initial Meeting Email Responses:

Hazard Mitigation One on One Meeting

My apologies, I will not be available on the 30th. However I am available on the 31st. I can com... Tue 5/7/2024 8:22 AM

Ashley Stanley

Reply | Reply all | Forward

To: castleberrye@fgsmail.org

Mon 5/6/2024 11:56 AM

Good Afternoon,

Thank you for sharing your availability for our one on one meeting! Tentatively, I would like to schedule our meeting for May 30th at 8:00 am. This can be moved as needed to best fit your schedule. Thank you again for taking time out of your busy schedule to work on this project.

In regards to our first meeting, please let me know what location would be easiest for you. We can schedule something in the Public Safety Center, or I can travel to you at your office. Additionally, for the first meeting, I am just asking that your jurisdiction has a rough list of project ideas. Feel free to start the worksheets if you'd like, but this is not required. Remember to count your time if you choose to work on this before we meet. Let me know if you have any questions, I am looking forward to working with you!

Respectfully,
Ashley Stanley
Hazard Mitigation Planning Contractor
O: (417) 869-6040
C: (417) 353-8168
E: ashley.stanley@greenecountymo.gov

Hazard Mitigation One on One Meeting and Materials

Ashley Stanley

Reply | Reply all | Forward

To: John.davis@ashgrovemo.gov <john.davis@ashgrovemo.gov>

Mon 4/29/2024 7:51 AM

Local Gov Worksheets.docx 29 KB

2024 Mitigation Time Sheet f... 47 KB

Show all 6 attachments (26 MB) | Save all to OneDrive - Greene County | Download all

Good Morning,

Thank you for attending the Mitigation Meeting this last Friday! Attached is the materials we discussed during the meeting. Let me know if you have any questions about them. Tentatively, I would like to schedule our meeting to discuss projects and project ideas on June 5th, 2024 at 10am. We can adjust this as needed to fit your schedule best. Thank you again for taking time out of your busy schedule to work on this project.

In regards to our first meeting, please let me know what location would be easiest for you. We can schedule something in the Public Safety Center, or I can travel to you at your office. Additionally, for the first meeting, I am just asking that your jurisdiction has a rough list of project ideas. Feel free to start the worksheets if you'd like, but this is not required. Remember to count your time if you choose to work on this before we meet. Let me know if you have any questions, I am looking forward to working with you!

Ashley Stanley
Hazard Mitigation Planning Contractor
O: (417) 869-6040
C: (417) 353-8168
E: ashley.stanley@greenecountymo.gov

Hazard Mitigation One on One Meeting and Materials

Ashley Stanley

Reply | Reply all | Forward

To: Mfoos@springfeildmo.gov

Mon 4/29/2024 8:12 AM

STAPLEE Worksheet.docx 25 KB

Local Gov Worksheets.docx 29 KB

Show all 6 attachments (26 MB) | Save all to OneDrive - Greene County | Download all

Good Morning,

Thank you for attending the Mitigation Meeting this last Friday! Attached is the materials we discussed during the meeting. Let me know if you have any questions about them. Tentatively, I would like to schedule our meeting to discuss projects and project ideas on June 14th, 2024 at 10am. We can adjust this as needed to fit your schedule best. Thank you again for taking time out of your busy schedule to work on this project.

In regards to our first meeting, please let me know what location would be easiest for you. We can schedule something in the Public Safety Center, or I can travel to you at your office. Additionally, for the first meeting, I am just asking that your jurisdiction has a rough list of project ideas. Feel free to start the worksheets if you'd like, but this is not required. Remember to count your time if you choose to work on this before we meet. Let me know if you have any questions, I am looking forward to working with you!

Ashley Stanley
Hazard Mitigation Planning Contractor
O: (417) 869-6040
C: (417) 353-8168
E: ashley.stanley@greenecountymo.gov

Hazard Mitigation One on One Meeting and Materials

Ashley Stanley

Reply | Reply all | Forward

To: Jkatzin@logrogstudents.net

Mon 4/29/2024 8:17 AM

2024 Mitigation Time Sheet f... 46 KB

ACTION WORKSHEET.docx 17 KB

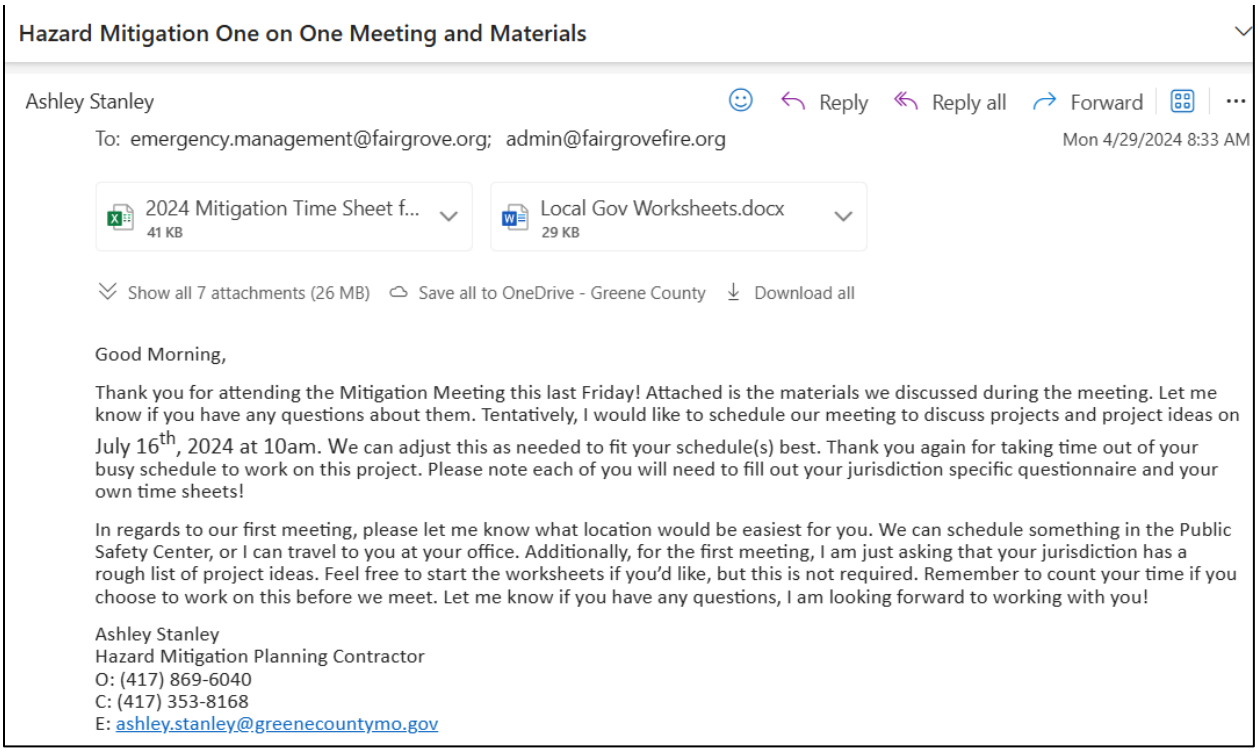
Show all 6 attachments (26 MB) | Save all to OneDrive - Greene County | Download all

Good Morning,

Thank you for attending the Mitigation Meeting this last Friday! Attached is the materials we discussed during the meeting. Let me know if you have any questions about them. Tentatively, I would like to schedule our meeting to discuss projects and project ideas on June 19th, 2024 at 10am. We can adjust this as needed to fit your schedule best. Thank you again for taking time out of your busy schedule to work on this project.

In regards to our first meeting, please let me know what location would be easiest for you. We can schedule something in the Public Safety Center, or I can travel to you at your office. Additionally, for the first meeting, I am just asking that your jurisdiction has a rough list of project ideas. Feel free to start the worksheets if you'd like, but this is not required. Remember to count your time if you choose to work on this before we meet. Let me know if you have any questions, I am looking forward to working with you!

Ashley Stanley
Hazard Mitigation Planning Contractor
O: (417) 869-6040
C: (417) 353-8168
E: ashley.stanley@greenecountymo.gov



Hazard Mitigation One on One Meeting and Materials

Ashley Stanley

Reply | Reply all | Forward

To: emergency.management@fairgrove.org; admin@fairgrovefire.org

Mon 4/29/2024 8:33 AM

2024 Mitigation Time Sheet f... 41 KB

Local Gov Worksheets.docx 29 KB

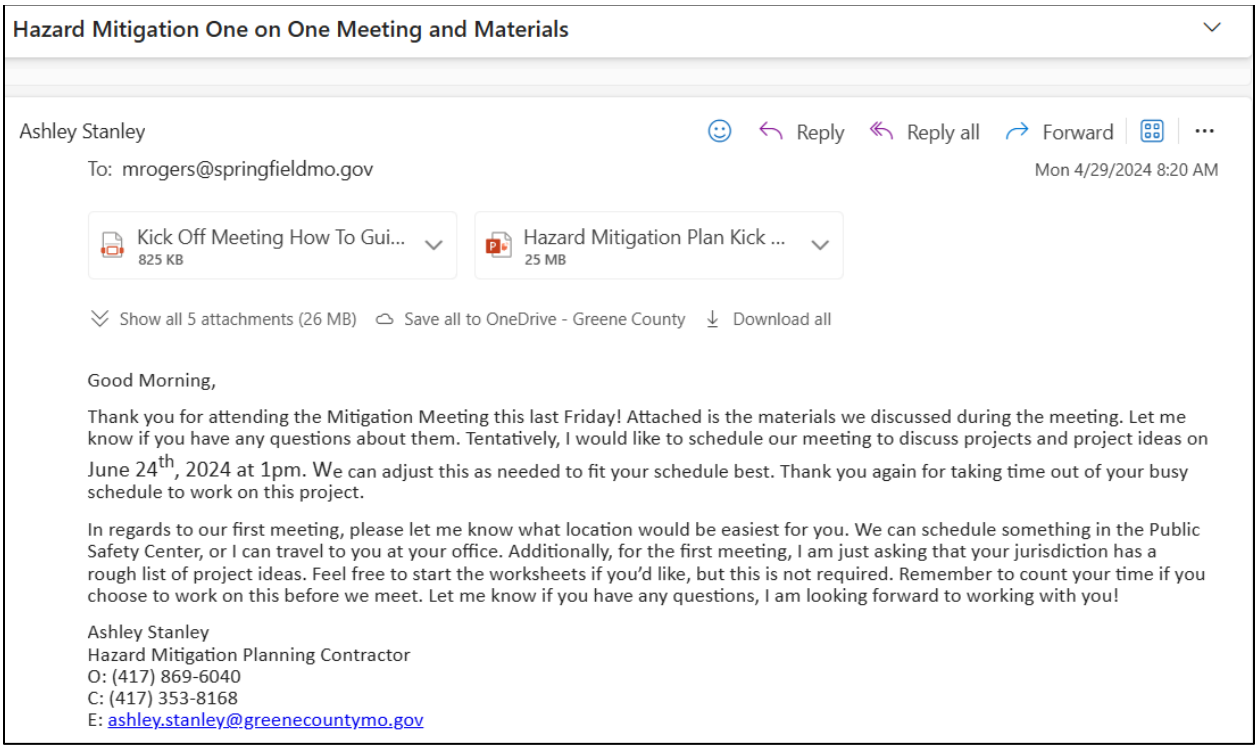
Show all 7 attachments (26 MB) | Save all to OneDrive - Greene County | Download all

Good Morning,

Thank you for attending the Mitigation Meeting this last Friday! Attached is the materials we discussed during the meeting. Let me know if you have any questions about them. Tentatively, I would like to schedule our meeting to discuss projects and project ideas on July 16th, 2024 at 10am. We can adjust this as needed to fit your schedule(s) best. Thank you again for taking time out of your busy schedule to work on this project. Please note each of you will need to fill out your jurisdiction specific questionnaire and your own time sheets!

In regards to our first meeting, please let me know what location would be easiest for you. We can schedule something in the Public Safety Center, or I can travel to you at your office. Additionally, for the first meeting, I am just asking that your jurisdiction has a rough list of project ideas. Feel free to start the worksheets if you'd like, but this is not required. Remember to count your time if you choose to work on this before we meet. Let me know if you have any questions, I am looking forward to working with you!

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Hazard Mitigation Planning Contractor
O: (417) 869-6040
C: (417) 353-8168
E: ashley.stanley@greenecountymo.gov



Hazard Mitigation One on One Meeting and Materials

Ashley Stanley

Reply | Reply all | Forward

To: mrogers@springfieldmo.gov

Mon 4/29/2024 8:20 AM

Kick Off Meeting How To Gui... 825 KB

Hazard Mitigation Plan Kick ... 25 MB

Show all 5 attachments (26 MB) | Save all to OneDrive - Greene County | Download all

Good Morning,

Thank you for attending the Mitigation Meeting this last Friday! Attached is the materials we discussed during the meeting. Let me know if you have any questions about them. Tentatively, I would like to schedule our meeting to discuss projects and project ideas on June 24th, 2024 at 1pm. We can adjust this as needed to fit your schedule best. Thank you again for taking time out of your busy schedule to work on this project.

In regards to our first meeting, please let me know what location would be easiest for you. We can schedule something in the Public Safety Center, or I can travel to you at your office. Additionally, for the first meeting, I am just asking that your jurisdiction has a rough list of project ideas. Feel free to start the worksheets if you'd like, but this is not required. Remember to count your time if you choose to work on this before we meet. Let me know if you have any questions, I am looking forward to working with you!

Ashley Stanley
Hazard Mitigation Planning Contractor
O: (417) 869-6040
C: (417) 353-8168
E: ashley.stanley@greenecountymo.gov

Email sent to all surrounding Counties to give comment on the plan

Subject Hazard Mitigation Plan Draft Review

Mitigation Plan 2025-2030 Full Final Copy - Without Projects.pdf
30 MB

Good afternoon,

Greene County has completed the latest draft of its Multi-Jurisdictional Hazard Mitigation Plan. We welcome and encourage your feedback, questions, or comments regarding the plan. Your participation is invaluable in helping us strengthen regional coordination and ensure the plan reflects a comprehensive approach to hazard mitigation across our area. Collaborative input from neighboring counties helps us create a more effective and resilient strategy for all communities involved.

Thank you for your time and support.

Ashley Stanley
Hazard Mitigation Contractor
Springfield-Greene County OEM
330 W. Scott Street
Springfield, MO 65802
P: (417) 869-6040
C: (417) 353-8168
oem.greenecountymo.gov

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SPRINGFIELD-GREENE COUNTY
OFFICE OF EMERGENCY MANAGEMENT
330 W. Scott Street
Springfield, MO 65802
(417) 869-6040
oem.greenecountymo.gov

EXPLANATION TO COUNCIL BILL 2026-110 (HORTON)

FILED: 04/30/2026

ORIGINATING DEPARTMENT: Planning and Development

TITLE: A general ordinance amending Section 1-9 of the Springfield City Code, 'City Limits,' and Section 46-1 of the Springfield City Code, 'Boundaries of wards, precincts and council zones,' for the purpose of annexing approximately 26.80 acres of private property generally located at 2707 North Farm Road 123 (Westgate Avenue) and approximately 1.10 acres of right-of-way for North Farm Road 123 (Westgate Avenue) into the City of Springfield as Annexation A-3-2026.

PURPOSE: To adopt an ordinance to annex approximately 26.80 acres of private property generally located at 2707 North Farm Road 123 (Westgate Avenue) and approximately 1.10 acres of right-of-way for North Farm Road 123 (Westgate Avenue) into the city of Springfield as Annexation A-3-2026. (Staff recommends approval.)

BACKGROUND INFORMATION: The owner(s) of the private property generally located at 2707 North Farm Road 123 (Westgate Avenue) are requesting annexation into the city of Springfield. The owner(s) of the private property have signed a petition to request annexation of approximately 26.80 acres and intends to continue and expand the existing manufacturing use of the property. Approval of this annexation will also annex approximately 1.10 acres of right-of-way for North Farm Road 123 (Westgate Avenue) into the city.

City Council is required to hold a public hearing to determine whether the annexation is reasonable and necessary for the proper development of the city and whether the City can furnish normal City services within a reasonable period. If no written objection is filed within fourteen (14) days of the public hearing, the City may annex the property by ordinance without further action.

REMARKS: The area to be annexed is contiguous to the city of Springfield. See "Exhibit B" for the location of the private property and right-of-way to be annexed.

RECOMMENDATIONS:

1. The area to be annexed is within the City's Urban Service Area and is consistent with its policies.
2. The area to be annexed is contiguous and compact to the city of Springfield.
3. The property owner(s) have petitioned the City for annexation.

4. All City services can be provided to the property.

5. The City will receive property tax revenue upon annexation of the private property.

6. Based on the subject property's location in proximity to the existing city limits and the recommendations of Chapter 6, Growth Areas, and Annexation, of the Forward SGF Comprehensive Plan, staff supports this request.

Submitted By: Alana Owen, Senior City Planner

Authorized for inclusion on the agenda pursuant to City Code section 2-33:
Maurice S. Jones, Deputy City Manager 05/13/2026

Attachments:
1. A-3-2026 - 2707 N Farm Road 123 (Westgate Avenue)
2. A-3-2026_exhA
3. A-3-2026_exhB

One-rdg. _____
P. Hrngs. X
Pgs. _____
Filed: 05-12-26

Sponsored by: Horton

First Reading: _____ Second Reading: _____

COUNCIL BILL 2026-110 GENERAL ORDINANCE _____

AN ORDINANCE

AMENDING Section 1-9 of the Springfield City Code, 'City Limits,' and Section 46-1 of the Springfield City Code, 'Boundaries of wards, precincts and council zones,' for the purpose of annexing approximately 26.80 acres of private property generally located at 2707 North Farm Road 123 (Westgate Avenue) and approximately 1.10 acres of right-of-way for North Farm Road 123 (Westgate Avenue) into the City of Springfield as Annexation A-3-2026.

_____

WHEREAS, a verified petition requesting annexation was filed by the owners of all fee interest of record in all tracts of real property located within the area proposed to be annexed, as described in "Exhibit A," attached hereto and incorporated herein by this reference, said area being generally located at 2707 North Farm Road 123 (Westgate Avenue); and

WHEREAS, approximately 1.10 acres of right-of-way for North Farm Road 123 (Westgate Avenue) is also part of this annexation, as it is located directly to the east of the property at 2707 North Farm Road 123 and to the west of the current city limits; and

WHEREAS, the subject property is within the City of Springfield's Urban Service Area and is compact and contiguous to the City, as shown in "Exhibit B," attached hereto and incorporated herein by this reference; and

WHEREAS, proper notice was published at least seven (7) days prior to the public hearing; and

WHEREAS, City Council does find and determine that: (1) said annexation is reasonable and necessary to the proper development of the City; (2) the City either already furnishes normal municipal services to the area annexes, or is able to furnish such services within a reasonable time after annexation; and (3) the area annexed herein is contiguous and compact to the existing corporate boundaries of the City.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF SPRINGFIELD, MISSOURI, as follows, that:

Section 1 – City Council, after holding a public hearing, hereby determines that annexation of the property described in "Exhibit A" is reasonable and necessary to the proper development of the City; the City either already furnishes normal municipal services to the area annexes, or is able to furnish such services within a reasonable time after annexation; and the area is contiguous and compact to the existing boundaries of the City as shown in “Exhibit B.”

Section 2 – Pursuant to the provisions of Section 71.012 RSMo., the property described in “Exhibit A” is hereby annexed into the City of Springfield, Missouri.

Section 3 – Section 1-9 of the Springfield City Code, ‘City Limits,’ is hereby amended by adding thereto the land described in "Exhibit A."

Section 4 – Section 46-1 of the Springfield City Code, ‘Boundaries of wards, precincts and council zones,’ is hereby amended by placing the property described in "Exhibit A" into the appropriate ward and precinct as determined by the County Clerk in accordance with the provisions of State law.

Section 5 – The City Clerk is directed to: (1) file certified copies of this Annexation Ordinance with the Clerk of Greene County; (2) file certified copies of this Annexation Ordinance with the Assessor of Greene County; and (3) forward to the Missouri Director of Revenue, by certified mail, certified copies of this Ordinance, and any other information that the Director of Revenue may require. The City Clerk is further authorized and empowered to perform any other administrative acts which are consistent with the intent of this Ordinance.

Section 6 – This Ordinance shall be in full force and effect from and after passage.

Passed at meeting: _____

_____
Mayor

Attest: _____, City Clerk

Filed as Ordinance: _____

Approved as to form: Laura Vales, Assistant City Attorney

Approved for Council action: _____, City Manager

EXHIBIT A
ANNEXATION A-3-2026
LEGAL DESCRIPTION

ALL OF THE NORTHEAST QUARTER (NE1/4) OF THE SOUTHEAST QUARTER (SE1/4) EXCEPT THAT PART LYING SOUTH OF THE RAILROAD RIGHT-OF-WAY AND THAT PART OF THE WEST HALF (W1/2) OF THE SOUTHEAST QUARTER (SE1/4) LYING NORTH AND EAST OF THE RIGHT-OF-WAY OF WHAT IS COMMONLY KNOWN AS THE BOLIVAR BRANCH OF THE ST. LOUIS-SANFRANCISCO RAILWAY COMPANY, ALL IN SECTION SIX (6), TOWNSHIP TWENTY-NINE (29), RANGE TWENTY-TWO (22), EXCEPT ANY PART THEREOF USED FOR PUBLIC HIGHWAY PURPOSES, ALL IN GREENE COUNTY, MISSOURI, BEING MORE PARTICULARLY DESCRIBED AS:
COMMENCING AT THE SOUTHEAST CORNER OF SECTION SIX (6), TOWNSHIP TWENTY-NINE (29), RANGE TWENTY-TWO (22); THENCE NORTH ALONG THE EAST LINE OF SAID SECTION SIX (6), ON A BEARING OF NORTH 01°47'54" WEST A DISTANCE OF 2,646.44 FEET; THENCE SOUTH 87°45'38" WEST, 12.44 FEET FOR A POINT OF BEGINNING; THENCE CONTINUING SOUTH 87°45'38" WEST, 1,636.30 FEET; THENCE THROUGH A CURVE TO THE LEFT 455.18 FEET HAVING A RADIUS OF 2,820.70 FEET, A CHORD BEARING OF SOUTH 43°49'22" EAST, AND A CHORD LENGTH OF 454.69 FEET; THENCE SOUTH 01°47'54" EAST, 23.30 FEET; THENCE THROUGH A CURVE TO THE LEFT 957.27 FEET, HAVING A RADIUS OF 2,837.70 FEET AND A CHORD BEARING OF SOUTH 58°32'44" EAST, AND A CHORD LENGTH OF 952.74 FEET; THENCE SOUTH 68°04'44"EAST, 584.50 FEET; THENCE NORTH 01°47'54" WEST PARALLEL TO THE EAST LINE OF SECTION SIX (6), 1,131.20 FEET TO THE POINT OF BEGINNING.

And the following North Farm Road 123 (Westgate Avenue) right-of-way:

A PART OF THE NORTH FARM ROAD 123 RIGHT-OF-WAY IN SECTIONS 5 AND 6, BOTH IN TOWNSHIP 29 NORTH, RANGE 22 WEST, IN GREENE COUNTY, MISSOURI, MORE PARTICULARLY DESCRIBED AS FOLLOWS:
BEGINNING AT THE NORTHWEST CORNER OF THE SOUTHWEST QUARTER OF SAID SECTION 5: THENCE EAST, ALONG THE NORTH LINE OF SAID SOUTHWEST QUARTER TO THE EAST RIGHT-OF-WAY LINE OF SAID FARM ROAD 123; THENCE SOUTH, ALONG SAID EAST LINE TO THE NORTH RIGHT-OF-WAY LINE OF THE OLD BNSF RAILWAY CORRIDOR, NOW BEING THE OZARK GREENWAYS TRAIL CORRIDOR; THENCE NORTHWESTERLY, ALONG SAID NORTH LINE, TO THE WEST RIGHT-OF-WAY LINE OF SAID FARM ROAD 123; THENCE NORTH, ALONG SAID WEST LINE, TO THE NORTH LINE OF THE SOUTHEAST QUARTER OF SAID SECTION 6; THENCE EAST, ALONG SAID NORTH LINE, TO THE POINT OF BEGINNING. CONTAINING APPROXIMATELY 1.10 ACRES OF PUBLIC RIGHT-OF-WAY.

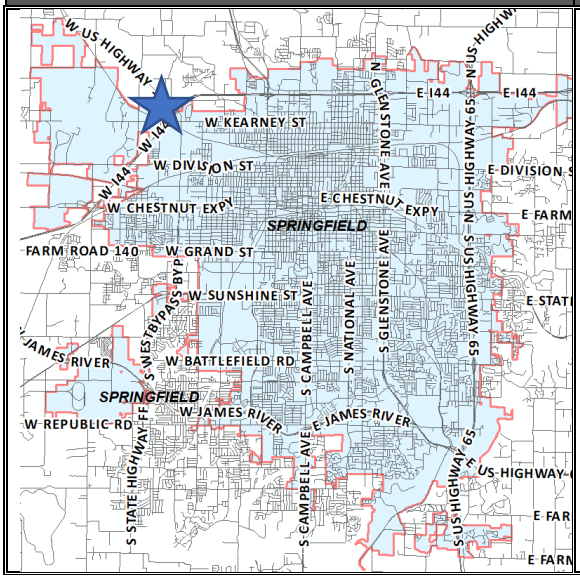
EXHIBIT B

DEVELOPMENT REVIEW STAFF REPORT

PROJECT INFORMATION	
Case Number:	A-3-2026
Location:	2707 North Farm Road 123 (Westgate Avenue)
Total Acres:	Approximately 26.80 acres
Applicant:	SRC Development Group Inc
Existing Land Use:	Manufacturing
City Council:	May 18, 2026
Public Notification:	Mail and legal in Springfield News Leader
Staff:	Alana Owen, AICP, Principal Planner
Staff recommendation:	Staff recommends approval

PROJECT SUMMARY:

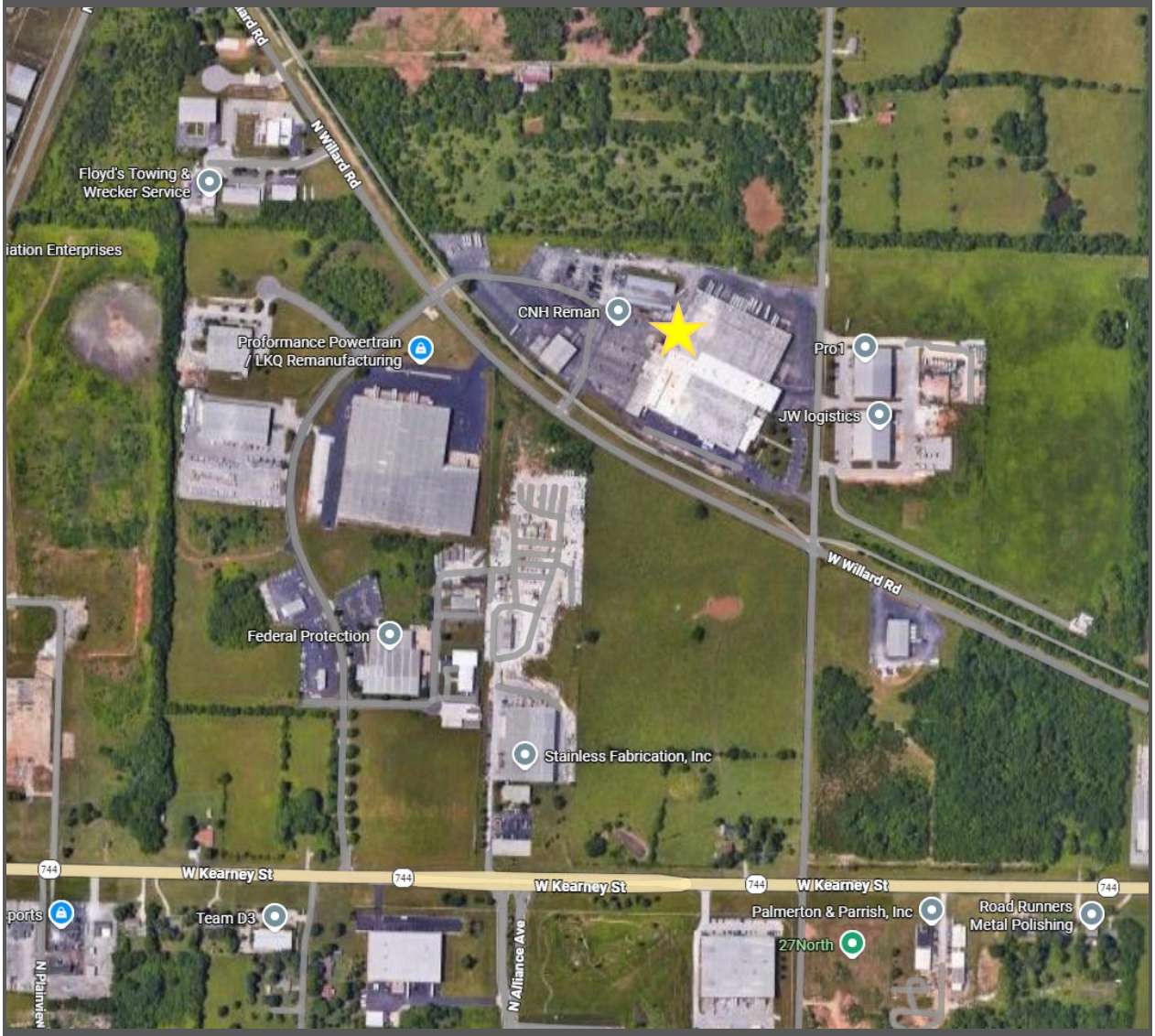
Request to annex approximately 26.80 acres of private property generally located at 2707 North Farm Road 123 (Westgate Avenue) and approximately 1.10 acres of right-of-way for North Farm Road 123 (Westgate Avenue) into the city of Springfield.

LOCATION MAP	CITY LIMIT & ZONING MAP
	

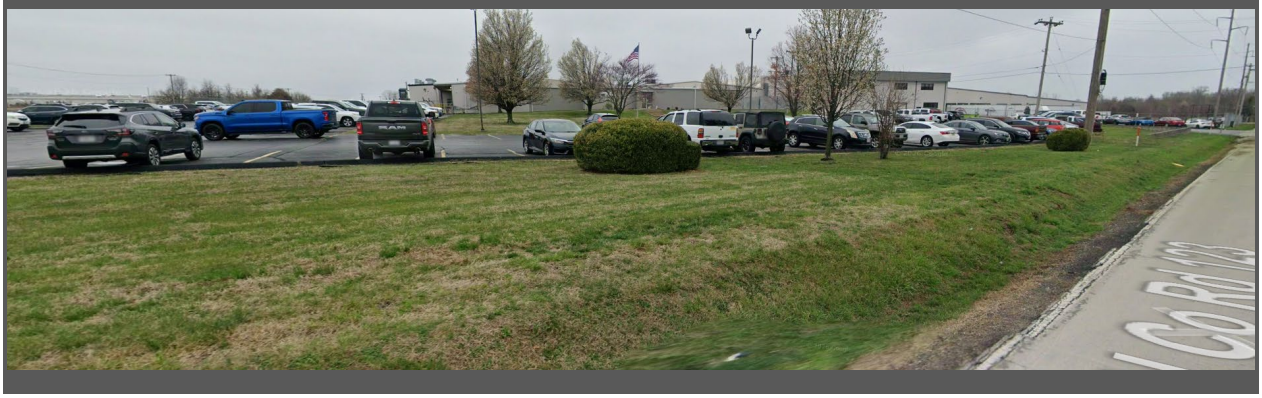
CITY OF Springfield

DEVELOPMENT REVIEW STAFF REPORT

GOOGLE AERIAL OF LANDMARKS, BUSINESSES, AND ATTRACTIONS:



GOOGLE MAPS STREET VIEW:



CITY OF Springfield

DEVELOPMENT REVIEW STAFF REPORT

PROPERTY HISTORY:

The subject property is outside the city limits in unincorporated Greene County. The subject property is zoned Greene County M-1, Light Manufacturing District. The annexation is being processed with the intent of continuing and expanding the existing manufacturing use.

COMPATIBILITY WITH COMPREHENSIVE PLAN:

The subject property is in a Priority One strategic annexation area identified in Chapter 6, Growth Areas and Annexation, of the Forward SGF Comprehensive Plan. Priority One areas represent short-term growth areas. These growth areas are primarily located on the western and southwestern sides of the city in the vicinity of the Springfield-Branson National Airport, Interstate 44, West Sunshine Corridor, and James River Freeway. While not every property identified in the Priority One can or should be annexed immediately, each represents areas where opportunities for economic and job growth are promising due to varying combinations of available infrastructure, city services, proximity to major transportation corridors, and advantageous land patterns.

Annexation Considerations

The following strategies will help to further guide the prioritization of annexations:

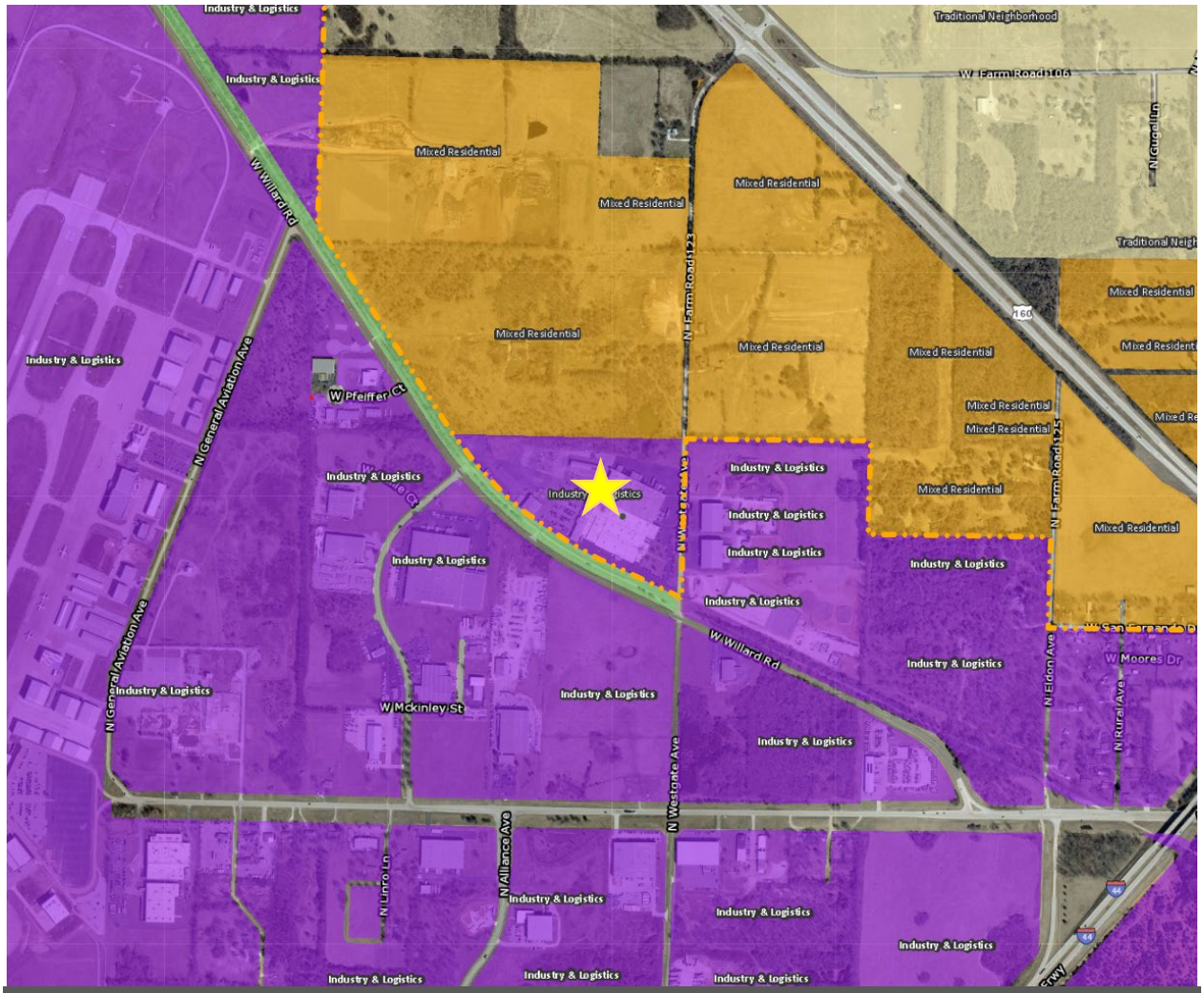
1. The City should prioritize annexation of City, City Utilities, Park Board, and Ozark Greenways-owned properties.
2. The City should prioritize annexation of properties with an “Irrevocable Petition and Consent to Annexation Agreement” that are revenue-generating and located along major corridors and areas of potential economic activity.
3. The City should evaluate annexation proposals on a property-by-property or case-by-case basis but work to coordinate annexation of multiple properties simultaneously, when possible, to maximize the time and cost efficiency involved in processing.
4. The City should engage with area Fire Protection Districts in evaluation of potential impact resulting from annexation of property by the City.
5. The City should be conscious of impractical boundary configurations created when annexing properties on only one side of a street, skipping over properties, or creating islands of unincorporated properties.
6. The City should weigh the anticipated impact of annexation on the ability to provide timely and professional emergency services, including personnel requirements, capital requirements, necessary and available infrastructure, call volume, and standards of cover.
7. The City should evaluate the age and condition of existing infrastructure in areas desired for annexation, as well as future maintenance costs.
8. The City should weigh the comprehensive advantages of both long-term revenue growth and population growth, including a variety of demographic considerations associated with providing services to new residents and property owners.
9. The City should weigh the fiscal impacts of annexation against the opportunity to grow the population base, increase resident participation in city elections, tax referendums, and expand the reach of citizens to serve on city advisory boards and committees.

10. The City should weigh the strategic value of incorporating geographic areas that facilitate growth in new areas.

If the annexation is approved, the intent is to continue and expand the manufacturing use of the property. As part of this annexation, the City will be annexing approximately 1.10 acres of North Farm Road 123 (Westgate Avenue) east of the subject property. Based upon the use of the property, it is anticipated the property tax revenue generated from this property would meet or exceed the anticipated cost to the City for services and infrastructure maintenance.

The property involved in this annexation request is identified as being within the Industry and Logistics place type in the Forward SGF Comprehensive Plan (see the Future Placetype Map on page 7).

FUTURE PLACETYPE MAP:



CITY OF Springfield

DEVELOPMENT REVIEW STAFF REPORT

SURROUNDING ZONING, LAND USES AND PLACETYPES:

	NORTH	SOUTH	EAST	WEST
ZONING	Greene County M-1 and A-1	HM	HM	HM
LAND USE	Undeveloped and manufacturing uses	Manufacturing and Industrial uses	Manufacturing and Industrial uses	Manufacturing and Industrial uses and airport
PLACETYPES	Mixed Residential	Industry and Logistics	Industry and Logistics	Industry and Logistics

DEPARTMENT COMMENTS:

1. DEPARTMENT OF BUILDING DEVELOPMENT SERVICES:
   No issues with the proposed annexation.

2. CITY UTILITIES:

   No Issues with the proposed annexation.

3. DEPARTMENT OF ENVIRONMENTAL SERVICES CLEAN WATER SERVICES DIVISION:

   No objection to the proposed annexation.

4. EMERGENCY 911:
   No concerns.

5. GREENE COUNTY HIGHWAY DEPARTMENT:
   No comments.

6. POLICE DEPARTMENT:
   No comments.

7. FIRE DEPARTMENT:

   Service – The primary Fire Station responding to this area would be Station #5 located at 2750 W Kearney St., which is approximately 2.3 miles from the southeast corner of the property. Fire Station #13 located at 1405 1900 W. College St. is the secondary station responding to this location, which is 5.4 miles from the northwest corner of the property.
   .

   ISO area – The proposed annexation is currently outside the recommended ISO 1.5-mile (ISO diamond) response distance by 0.65 miles for the 1st due unit. ***This may***

negatively impact our ISO rating. This response zone is covered by an established automatic aid agreement

Response times/Standards of Cover – Estimated response time was calculated mathematically with an assumed travel speed of 45 miles per hour by the fire apparatus then the NFPA 1710 call processing time of 64 seconds and crew turn-out time of 80 seconds is added to the total travel time. The 1st due company has an estimated total response time of 5 minutes, 28 seconds. The 2nd due company has an estimated total response time of 9 minutes, 36 seconds. It is likely the standard of coverage benchmark could be met for single company responses and unlikely the benchmark could be met for a full 1st alarm response which requires 3 engines, 2 Trucks, 1 Rescue and 1 Battalion Chief to arrive on scene within 13 minutes and 28 seconds. An automatic aid agreement for this area is in place with the Willard Fire Protection District. ***The department expects that it will meet the initial unit but not the ERF benchmarks. This will negatively impact our standard of cover***

		Estimated Total Response Time	Benchmark*	Baseline**
1st Due Company	Station 6	5-6 minutes	6 minutes 20 seconds	8 minutes 13 seconds
Total Effective Response Force	Station 6,8,9,13,1	13-14 minutes	10 minutes 20 seconds	13 minutes 18 seconds

Water Supply – Existing development in the area is served by CU water mains on an 8" dead end feed per the CU layer in Fire Viewer. The industrial site does not appear to have adequate fire hydrants to be within 400 feet of all aspects of a non-sprinklered building or 600 feet within all aspects of a sprinklered building. ***The Fire Department does not have concerns with the water supply for this proposed annexation due to the addition of water supply and fire suppression infrastructure in compliance with the adopted Fire Code.***

Impact – The area of proposed annexation is CNH Industrial remanufacturing facility (annexation request is by SRC). The existing facility does not appear to have a fire sprinkler system or hydrants located appropriately around the facility. An addition that Estimated Total Response Time Benchmark* Baseline** 1st Due Company Station 6 5 – 6 minutes 6 minutes 20 seconds 8 minutes 13 seconds Total Effective Response Force Station 6,8,9,13,1 13-14 minutes 10 minutes 20 seconds 13 minutes 18 seconds looks like it is to double the size of the facility is currently under construction. The addition has a six 2.5" test header indicating a 1500 GPM fire pump and 2.5" Siamese FDC on the southwest corner of the new addition. There are two new yellow hydrants installed on the south side of the addition, but no other hydrants are installed so the new addition does not have adequate hydrants. The addition is attached to the existing facility, but unknown if the fire sprinkler system was extended into the existing facility. ***The Fire Department does not have concerns regarding the impact on daily emergency service requirements.***

Fire Department Recommendation: ***Based upon all relevant factors, the Fire Department is supportive of this annexation under the conditions presented.***

8. DEPARTMENT OF PUBLIC WORKS STORMWATER ENGINEERING DIVISION:

SITE DESCRIPTION & DRAINAGE PATTERN

	Drainage Basin	Fee in Lieu for Flood Control	Fee in Lieu for Water Quality	Stream Buffer on Site	Sinkhole or Watershed	Floodplain and Floodway
2707 N Farm Road 123	Rainer Branch	No	No	No	Yes	No

All chapter and section references below are to the City's Flood Control and Water Quality Protection Manual Version April 2022.

DETENTION AND DISCHARGE REQUIREMENTS

Existing developed site was built under Greene County Stormwater requirements. Sinkhole S034 is used for partial flood control detention with additional basins on the sinkhole boundary. Future developments with excavation, filling, or grading will require a stormwater permit to confirm the current stormwater control measure provides required flood control volumes.

WATER QUALITY REQUIREMENTS

1. Water Quality is required for new development projects or redevelopment projects, with new or increased impervious surfacing, within the city limits of Springfield that disturb 1 acre or greater. Including projects less than 1 acre that are part of a larger common plan of development or sale that will disturb 1 or more acres over the life of the project. Chapter 10 Sec. 2.0.

2. A land disturbance permit will be required with disturbing 1 acre or greater per Chapter 4 Section 5 of the City's Flood Control and Water Quality Protection Manual.

3. Water Quality Credits are available to use in design for preserved trees and new planted trees. Landscaping and Bufferyards trees required by planning cannot be used for the water quality credits unless it is part of a SCM. Chapter 10, Section 3.1.

FLOODPLAIN

N/A

NATURAL CHANNEL & STREAM BUFFERS

N/A

SINKHOLES & KARST FEATURES

Sinkhole S034 is partially on 2707 N Farm Road 123 and majority on 4595 W Willard Rd. 25 feet wide buffer at the boundary of the sinkhole for non-disturbance. Sinkhole watershed extends outside of the property and on to adjacent properties.

9. DEPARTMENT OF PUBLIC WORKS TRAFFIC DIVISION:

TRAFFIC REPORT

	Street Name	Street Classification	Jurisdiction	ROW from Centerline (ft.)		Traffic Count (vehicles per day)	On-Street Parking	Sidewalk	
				Required	Existing			Required	Existing
Street 1	N Farm Road 123 (N. Westgate Avenue)	Secondary Arterial	County	35	15	NA	No	Yes	No
Street 2	W. Willard Road	Secondary Arterial	City	35	30	NA	No	Yes	Yes

ACCESS - All new or modified access shall comply with current City of Springfield standards for the street classification.

TRAILS, BUS STOPS, AND ADDITIONAL INFORMATION – The Frisco Highline Greenway Trail is adjacent to the property. There are no bus stops near the property.

IMPROVEMENTS – No improvements are required for this annexation. A traffic study is not required for this annexation.

STAFF ANALYSIS AND RECOMMENDATION:

1. The applicant has petitioned for the City of Springfield to annex approximately 26.80 acres of private property generally located at 2707 North Farm Road 123 (Westgate Avenue) into the city. As part of this annexation, approximately 1.10 acres of right-of-way for North Farm Road 123 (Westgate Avenue) will also be annexed into the city.

2. The *Comprehensive Plan's Land Use & Development* chapter identifies the subject property as being located within the Industry and Logistics placetype. The Industry and Logistics placetype consists of heavy and moderately intense manufacturing, distribution uses, and a range of operations that rely on proximity to the city's airport, interstate, and rail facilities.

3. There are adequate utility and sewer and water facilities existing or that can be provided to serve the property if it is annexed.

4. The area to be annexed is within the City's Urban Service Area and is consistent with its policies.

5. The area to be annexed is contiguous and compact to the City of Springfield and is bounded on two sides by the city of Springfield.

6. The City will receive property tax revenue upon annexation of the private property.

STAFF RECOMMENDATION:

1. Staff recommends approval of the annexation request based on its compatibility with the *Comprehensive Plan's* Annexation policies.

DEVELOPMENT REVIEW STAFF REPORT

ATTACHMENT 1
Annexation Schedule

ANNEXATION:

City Council public hearing..... May 18, 2026

City Council vote ..... June 8, 2026

CITY OF Springfield

EXPLANATION TO COUNCIL BILL 2026-112 (CARROLL)

FILED: 05/07/2026

ORIGINATING DEPARTMENT: Human Resources

TITLE: A special ordinance amending Special Ordinance 27857 providing benefits for certain employees under the Missouri Local Government Employees Retirement System, by reducing the retirement age for all eligible current and future telecommunicator first responders and all eligible current and future emergency medical service personnel.

PURPOSE: To transfer current and future employees who meet the statutory or regulatory definition of emergency telecommunicator or emergency medical personnel to the Public Safety actuarial department in the Missouri LAGERS (Local Government Employee Retirement System) defined benefit plan.

BACKGROUND INFORMATION:

In 2022, the Missouri Legislature and Governor approved a LAGERS Public Safety classification option which, if elected, reduced the normal retirement age for public safety personnel from 55 to 60. With SO 27857, the City of Springfield adopted the Public Safety department option in the Missouri LAGERS defined benefit plan in June 2023, for classification of 911 employees who were determined to regularly perform emergency dispatching and telecommunication work.

Under the implementing regulation for Missouri statute section 70.631, employees who are required to be certified by the Missouri Bureau of Emergency Medical Services as an Emergency Medical Technician Basic (EMT-B), Advanced Emergency Medical Technician (AEMT), an Emergency Medical Technician-Paramedic (EMT-P), or an employee who directly supervises EMT-B, AEMT and/or EMTP personnel, may also be classified as emergency medical service personnel in the LAGERS Public Safety department.

Based on a review, the City's Aircraft Rescue Firefighting (ARFF) personnel who are required to hold an EMT-B license, meet the requirements for inclusion in the LAGERS Public Safety actuarial department. The specific airport positions impacted are Aircraft Services Specialist, Aircraft Services Trainer, and Aircraft Services Coordinator. The City obtained a cost statement from LAGERS which set forth that this change would result in an estimated increase in unfunded actuarial accrued liability in the LAGERS plan of $889,745, which may be amortized over 20 years or paid with a lump sum payment. City of Springfield management supports this addition to the LAGERS Public Safety department, and funding has been approved by the Airport Board for a one-time

$889,745 payment for the increased actuarial accrued liability, to be included in the 2026-2027 fiscal budget.

Further, a review of the Springfield-Greene County 911 Emergency Communications Department determined that two additional positions, 911 Operations Manager, and 911 Training and Education Manager, meet the regulatory definition of an emergency telecommunicator and as such are also eligible to be classified into the LAGERS Public Safety actuarial department. LAGERS indicated there was no need for a cost study to move these positions.

This ordinance establishes that all current or future positions that meet the statutory or regulatory definitions of telecommunicator or emergency medical personnel will be classified into the LAGERS Public Safety actuarial department.

REMARKS: The City received the required actuarial cost study to add current ARFF emergency medical service personnel to the LAGERS Public Safety department and has followed the requirements for posting the study for 45 days with the City Clerk's office. LAGERS also sent a copy of the report to the Joint Committee on Public Employee Retirement Systems. The computed employer contribution rates (expressed as a % of active payroll) are estimated at 18.40% for LAGERS General and 18.70% for LAGERS Public Safety departments. The Public Safety contribution rate will be updated if the lump sum payment is made.

It is respectfully requested that City Council approve this change. The recommendation and explanation contained herein are consistent with Council's policies.

Submitted By: Darla Morrison, Director of Human Resources

Authorized for inclusion on the agenda pursuant to City Code section 2-33:

David Cameron, City Manager	05/12/2026
Maurice S. Jones, Deputy City Manager	05/13/2026

Attachments: 1. LAGERS Public Safety ARFF and 911

One-rdg. _____
P. Hrngs. _____
Pgs. _____
Filed 05-12-26

Sponsored by Caroll

First Reading _____ Second Reading _____

COUNCIL BILL 2026-112 SPECIAL ORDINANCE _____

AN ORDINANCE

AMENDING Special Ordinance 27857 providing benefits for certain employees under the Missouri Local Government Employees Retirement System, by reducing the retirement age for all eligible current and future telecommunicator first responders and all eligible current and future emergency medical service personnel.

_____

WHEREAS, on May 20, 1968, City Council adopted Special Ordinance 15049 which provided benefits to certain City employees under the Missouri Local Government Employees Retirement System ("LAGERS"); and

WHEREAS, in 2022 Missouri law was amended to allow for emergency telecommunicators (now telecommunicator first responders), jailors, and emergency medical service personnel to be categorized as public safety personnel within LAGERS which, if elected, reduces the normal retirement age for eligible employees from age 60 to age 55; and

WHEREAS, LAGERS has created four actuarial departments: General, Police, Fire, and Public Safety; and

WHEREAS, Special Ordinance 15049 was most recently amended by Special Ordinance 27857 in order to elect to move emergency telecommunicators into the Public Safety actuarial department; and

WHEREAS, the City has employees within all four of LAGERS' actuarial departments: General, Police, Fire, and Public Safety; and

WHEREAS, the City has three positions at the Airport that are currently within the LAGERS General actuarial department and which qualify for classification within the LAGERS Public Safety actuarial department, said positions being Aircraft Services Specialist, Aircraft Services Trainer, and Aircraft Services Coordinator; and

WHEREAS, in accord with Section 105.665, RSMo., LAGERS provided a cost statement addressing the cost to add the three Airport positions to the Public Safety department and the cost statement indicates doing so would result in an increase in unfunded actuarial accrued liability in the amount of Eight-Hundred Eighty-Nine Thousand Seven Hundred Forty-Five Dollars ($889,745); and

WHEREAS, pursuant to Section 105.675 RSMo., the cost statement has been made available as public information for a period of at least 45 days prior to the adoption of this Ordinance; and

WHEREAS, the City, including the Airport Board, support moving the three positions into the Public Safety actuarial department and has funding available for a one-time payment for the increased unfunded actuarial accrued liability, which is included in the budget for Fiscal Year 2026-2027; and

WHEREAS, the City has two positions within the Springfield-Greene County 911 Emergency Communications Department that are currently within the LAGERS General actuarial department and which qualify for classification within the LAGERS Public Safety actuarial department, said positions being 911 Training and Education Manager, and 911 Operations Manager; and

WHEREAS, LAGERS has informed the City that there is no need for a cost statement to move the 911 Operations Manager and 911 Training and Education Manager positions into the Public Safety actuarial department as the Springfield-Greene County 911 Emergency Communications Department is already enrolled within LAGERS' Public Safety actuarial department; and

WHEREAS, the City and the Greene County Commission support moving the two 911 Department positions into the Public Safety actuarial department; and

WHEREAS, the City supports the movement of any and all current or future positions that constitute telecommunicator first responders or emergency medical service personnel under section 70.631 RSMo. or its implementing regulations.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF SPRINGFIELD, MISSOURI, as follows, that:

NOTE: **Bold** language is being added and ~~stricken~~ language is being deleted.

Section 1 – Section 1 of Special Ordinance 27857 is amended in the following manner:

It is declared to be the public policy of the City of Springfield, a political subdivision as defined by section 70.600 RSMo., to cover all present and future **telecommunicator first responders** ~~emergency telecommunicators, namely the positions of 911 Telecommunicator, 011 Telecommunicator Lead, and 911 Shift~~

~~Supervisor~~ **and emergency medical personnel** as public safety personnel members of LAGERS, as defined in section 70.631 RSMo. **and its implementing regulations; provided that this change shall not apply to those positions that fall under the definition of "fireman" or "policeman" under section 70.600 RSMo**.

Section 2 – Section 2 of Special Ordinance 27857 is hereby amended in the following manner:

Special Ordinance 15049, as amended by Special Ordinance 2156 and General Ordinances 4348, 4812, 5089, 5432, and 5489, is hereby amended to modify the LAGERS benefits for all present and future **telecommunicator first responders and emergency medical personnel** ~~911 Telecommunicators, 911 Telecommunicator Leads, and 911 Shift Supervisors~~ as provided in this Ordinance. No other benefits are altered by the passage of this ordinance. **This change shall not apply to those positions that fall under the definition of "fireman" or "policeman" under section 70.600 RSMo. The current, specific job titles that are considered either telecommunicator first responders or emergency medical personnel are 911 Telecommunicator; 911 Telecommunicator Lead; 911 Shift Supervisor; 911 Training and Education Manager; 911 Operations Manager; Aircraft Services Specialist; Aircraft Services Trainer; and Aircraft Services Coordinator. Any new job titles or changes to existing positions that result in positions being considered telecommunicator first responders or emergency medical personnel will also be included as public safety personnel members of LAGERS.**

Section 3 – Section 3 of Special Ordinance 27857 is hereby amended in the following manner:

All present and future **telecommunicator first responders and emergency medical personnel, other than any positions that fall under the definition of "fireman" or "policeman" under section 70.600 RSMo.,** ~~911 Telecommunicators, 911 Telecommunicator Leads, and 911 Shift Supervisors~~ **and who are** declared to be eligible, who have 1,500 or more hours of annual employment shall be covered under LAGERS Benefit Program L-6 (2.00%).

Section 4 – Section 8 of Special Ordinance 27857 is hereby amended in the following manner:

The Director of Finance is directed to **pay on behalf** ~~deduct from the wages and salaries~~ of each eligible public safety personnel member, the contributions, if any, required by Section 70.705 RSMo., and to remit the **payments** ~~deductions~~ to LAGERS, together with the employer contributions required by Section **70.730** ~~70.705 and 70.750~~ RSMo.

Section 5 – Special Ordinance 27857 is hereby amended by adding a new Section 10.1 as follows:

Section 10.1 – The City Manager, or designee, is hereby authorized to enter into an agreement with Greene County for the purpose of Greene County reimbursing the City for Greene County's share of any increased actuarial accrued liability that may be incurred as a result of any positions within the Springfield-Greene County 911 Emergency Communications Department being added as public safety personnel.

Section 6 – This Ordinance shall be in full force and effect from and after passage.

Passed at meeting: _____

_____
Mayor

Attest: _____, City Clerk

Filed as Ordinance: _____

Approved as to form: _____, Assistant City Attorney

Approved for Council action: _____, City Manager

EXPLANATION TO COUNCIL BILL 2026-113 (LEE)

FILED: 05/07/2026

ORIGINATING DEPARTMENT: Environmental Services

TITLE: A special ordinance authorizing the City Manager, or designee, to enter into a Sewer Extension Cost Reimbursement Agreement with Sunshine Developer, LLC, for the recovery of proportional square foot costs of the construction of a force main sewer to serve Turner's Ranch Subdivision and establishing a sanitary sewer cost recovery area and a per square foot connection fee to reimburse the developer for proportional costs of construction of the force main sewer.

PURPOSE: Authorizing the City Manager, or designee, to enter into a developer's Sewer Extension Cost Reimbursement Agreement with Sunshine Developer, LLC, for the recovery of proportional square foot costs of the construction of a lift station sewer to serve Turner's Ranch and establishing a sanitary sewer cost recovery area and a per square foot connection fee to reimburse the developer for proportional costs of construction of the lift station sewer.

BACKGROUND INFORMATION: A new residential subdivision named Turner's Ranch is to be constructed northeast of the intersection of State Highway D (Sunshine Street) and South Farm Road 199. The subdivision will lie outside the existing corporate limits of the City but will lie within the Urban Service Area boundary. Currently, the City's sanitary sewer infrastructure stops short of this property and will need to be extended to provide service to the development. The developer has agreed to construct, at their own cost, the needed lift station extension totaling a new public lift station and 3,422 linear feet of force main sewer. The extension will serve the Turner's Ranch but will also make sewer service available to other tracts of land in the vicinity.

The City has established a mechanism, per City code Section 98-287, whereby if other properties connect to sewer infrastructure that was constructed by private contract, a pro rata contribution can be collected by the City and refunded to the Developer to offset a portion of their construction costs. The service area for this lift station extension has been identified to include the properties shown in "Exhibit A" of the Sewer Extension Cost Reimbursement Agreement ("Exhibit 1"). This service area includes 25,696,044 square feet. The developer's Sewer Extension Cost Reimbursement Agreement, if authorized by this Council bill, will establish a connection fee which will reimburse the developer for portions of the cost of this lift station as properties in this basin develop and connect to the lift station sewer.

This agreement is similar to others the City has entered into in the past when a developer must extend significant off-site sewers to serve a development. This developer's Sewer Extension Cost Reimbursement Agreement allows the developer to

recover some of the costs of the privately financed infrastructure as other property owners take advantage of the lift station sewer extension. The established connection fee for the Turner's Ranch Lift Station Service Area will be $0.0552 per square foot of property connected ($1,417,631.14, the Developer's construction cost, divided by 25,696,044 square feet of area served).

REMARKS: Because the extension of this privately constructed lift station sewer will provide sanitary sewer availability for multiple properties in this drainage basin and because the proposed developer's Sewer Extension Cost Reimbursement Agreement follows the requirements contained in City code Section 98-287, Environmental Services recommends passage of this Council bill.

Submitted By: Ron Petering, Assistant Director of Environmental Services

Authorized for inclusion on the agenda pursuant to City Code section 2-33:
Maurice S. Jones, Deputy City Manager 05/13/2026

Attachments:
1. ES Turner's Ranch CRA
2. Turner's Ranch CRA_Agree_Exh1
3. Turner's Ranch CRA_map _ExhA
4. Turner's Ranch CRA_Agree_ExhB

One-rdg. _____
P. Hrngs. _____
Pgs. _____
Filed: 05-12-26

Sponsored by: Lee

First Reading: _____ Second Reading: _____

COUNCIL BILL 2026-113 SPECIAL ORDINANCE _____

AN ORDINANCE

AUTHORIZING the City Manager, or designee, to enter into a Sewer Extension Cost Reimbursement Agreement with Sunshine Developer, LLC, for the recovery of proportional square foot costs of the construction of a force main sewer to serve Turner's Ranch Subdivision and establishing a sanitary sewer cost recovery area and a per square foot connection fee to reimburse the developer for proportional costs of construction of the force main sewer.

_____

WHEREAS, Sunshine Developer, LLC, is developing Turner's Ranch, northeast of the intersection of E State Highway D (Sunshine Street) and S Farm Road 199, by constructing a public lift station and 3,422 linear feet of force main sewer through an unserved portion of the Pierson Creek sewer shed to serve the development; and

WHEREAS, the area served by this force main sewer is 25,696,044 square feet and other property owners in the area may be able to take advantage of the force main sewer provided by Sunshine Developer, LLC; and

WHEREAS, the City and Sunshine Developer, LLC, desire to enter into a Sewer Extension Cost Reimbursement Agreement wherein the City agrees to establish and collect a per square foot construction connection fee to recover and reimburse the developer for the proportional construction costs of the off-site sewer as other property owners connect to the force main sewer provided; and

WHEREAS, the established construction connection fee for the Turner's Ranch Lift Station Service Area will be $0.0552 per square foot of property connected, which is calculated by dividing the developer's construction cost of $1,417,631.14 by the amount of square feet of area served of 25,696,044.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF SPRINGFIELD, MISSOURI, as follows, that:

Section 1 – The City Manager, or designee, is hereby authorized to enter into a Sewer Extension Cost Reimbursement Agreement with Sunshine Developer, LLC, said agreement to be in substantially the same form as the document attached hereto and incorporated herein by this reference as "Exhibit 1," and to do those things necessary to carry out the intent of the Agreement.

Section 2 – This Ordinance shall be in full force and effect from and after passage.

Passed at meeting: _____

_____
Mayor

Attest: _____, City Clerk

Filed as Ordinance: _____

Approved as to form: _____, Assistant City Attorney

Approved for Council action: _____, City Manager

Exhibit 1

DEVELOPER'S AGREEMENT FOR LIFT STATION AND SEWER EXTENSION COST REIMBURSEMENT

AGREEMENT No. _____

THIS AGREEMENT, is made and entered into this ___ day of _____, 2026, by and between the City of Springfield, Missouri, a municipal corporation, hereinafter referred to as the "City," Sunshine Developer, LLC, a Missouri Limited Liability Company, hereinafter referred to as the "Developer", and 106A Investor, LLC and Turners Ranch, LLC, collectively hereinafter referred to as the 'Owners".

WHEREAS, the City, Developer, and Owners desire to plan for adequate sewer services to (a) the 98.1-acre property being developed as the Turner's Ranch Subdivision (hereinafter "Development" or "Turner's Ranch") and (b) the surrounding area, according to plans and specifications approved by the City, said plan hereafter known as "PW Plan No. 2024PW0022"; and

WHEREAS, the City owns and operates the sanitary sewer collection system and treatment plant (hereinafter the "publicly owned treatment works" or "POTW") which could serve the Springfield Urban Service Area within which Turner's Ranch is located, and is agreeable to accepting and treating the sewerage from the Development and extended Service Area; and

WHEREAS, in order to serve Turner's Ranch, a new lift station and force main extension (hereinafter collectively "Lift Station") was constructed to connect the Development to the City's existing POTW. The new Lift Station, designated as "District 01 of Section 40 Joint District Sanitary Sewer Lift Station", serves a common public need, benefitting multiple properties, for sewer service within the drainage basin, which area is designated as "District 01 of Section 40 Joint District Sanitary Sewer Lift Station Service Area" (hereinafter "Service Area"); and

WHEREAS, the Lift Station was constructed by and at the expense of Developer in accordance with City standards and specifications and, upon completion, inspection, and approval by the City, Developer and Owners agree to deed, convey and assign all their right, title, interest and possession of the Lift Station to the City at no charge, and City agrees to assume ownership and maintenance of the Lift Station, pursuant to City Code §98-289; and

WHEREAS, the City will establish, at its expense, a Service Area boundary which will encompass the Lift Station and the properties draining by gravity to the Lift Station; and

WHEREAS, pursuant to City Code 120-256 the City shall thereafter collect a Service Area Connection Fee (hereinafter "Connection Fee") from each new connection within the Service Area for the privilege of connecting to the POTW, said Connection Fee to be used to provide partial reimbursement to the Developer according to the approved costs in constructing the Lift Station (hereinafter "Costs of the Project"); and

WHEREAS, Developer and Owners specifically agree any Refund Fee (as defined herein) should be paid to Developer to reimburse Developer for the costs of the Lift Station.

NOW, THEREFORE, in consideration of the foregoing premises and the mutual covenants, terms and conditions set forth herein, the Developer, Owners, and the City agree as follows:

1. Developer and Owners agree:

A. *Consent to Annexation.* 106A Investor, LLC, as the original owner of the entire 98.1 acre tract defined herein as the Property, has consented to, and executed, a Consent to Annexation ("CTA") of the Development, pursuant to City Code §120-72.

B. *Construct the Lift Station.* The Developer coordinated and administered all design and construction efforts necessary to build the Lift Station including:

i. Retaining professional engineering and land survey firm(s), licensed with the Missouri Board for Architects, Professional Engineers, Professional Land Surveyors and Professional Landscape Architects to develop sealed construction documents consisting of, but not limited to, construction plans, technical specifications, and any necessary easement documents for the Lift Station all of which shall comply with the standards and construction details established by the City; and

ii. Developer or Developer's contractor has restored all easements or licenses requiredfor construction to a similar condition as existed immediately prior to the commencement of the work.

C. *Finance the Construction.* The Developer has paid all approved Costs of the Project, including but not limited to, costs for the acquisition of Lift Station easements or right(s)-of-way (not to exceed the actual acquisition cost and which are determined to be reasonable by the director of Environmental Services), licenses, reasonable cost of blueprints, advertising, mailings, reasonable engineering and inspection expenses, surveying, title insurance, planning fees and expenses, contractor services and costs for materials ("Costs of the Project").

D. *Turn Completed Lift Station over to City.* Upon the City's inspection and approval of the constructed Lift Station, pursuant to PW Plan No. 2024PW0022, Developer and Owner will assign, deed and convey all of their right, title, easement(s), interest and possession of the Lift Station to the City, free and clear of any liens or encumbrances, for its use, operation and maintenance.

E. *Provide Warranty and indemnification.* The Developer and Owners agree to provide the followingwarranties, protections, and indemnifications to the City:

i. A one (1) year warranty from the date of City's acceptance covering all materialsand workmanship involved in construction of the Lift Station. The warranty shall be on a "full replacement value" basis, meaning that no deductible or other financial contribution is required of the City for correction of any warranty claims; and

ii. Developer and Owners warrant and defend any sanitary sewer temporary or permanent easement(s) of the Lift Station and will defend and indemnify the City, its successors and assigns, from and against the claims and demands of all persons whatsoever in connection with any claims arising from the acquisition of the easements required for construction of the Lift Station; and

iii. Developer and Owners agree to defend, indemnify, and hold the City harmless

from any and all claims, losses,and liabilities, including but not limited to personal injuries, death, property damage, or property claims, which are caused, or contributed to be caused, by the Developer and/or Owner's contractors or subcontractors, and/or its employees, contractors and subcontractors, or which may arise out of or in connection with performance of this Agreement or construction of the Lift Station.

2. <u>City Agrees to</u>:

A. *Accept and Record easements.* Upon inspection and acceptance of the Lift Station, the City will accept the executed easement documents and will be responsible for recording the same with the Greene County Recorder's office. The City will be responsible for payment of all recording fees.

B. *Assume maintenance responsibilities.* After the completed Lift Station successfully passes final inspections, the City agrees to accept the Lift Station into the collection system of its POTW and provide all subsequent maintenance (except for warranty work as described in section 1.E above) and operation of the Lift Station.

C. *Cost recovery from additional connections*. Since the Lift Station, as an extension of the POTW, will benefit multiple properties within the drainage basin by making sanitary sewer service more widely available, the City agrees to require a Connection Fee from property owners within the Service Area, outlined in **Exhibit 'A'**, at the time they make connection to the POTW. This Connection Fee is intended to recover a portion of the Costs of the Project that were originally expended by the Developer. See Section 3.D of this Agreement for additional detail regarding the determination and collection of the Connection Fee. The City and Owners agree, pursuant to City Code §98-287, to:

i. Reimburse to the Developer, who paid for the Lift Station, its pro-rata share of each applicable Connection Fee, (hereinafter a "Refund Fee"), collected by the City from property owners within the Service Area pursuant to §98-287, less costs of collection as calculated by the City's Director of Finance.

ii. The City's obligation to reimburse the Developer, for its Costs of the Project, out of Connection Fees collected within the Service Area, shall be in full force and effect for a period of 20 years from the date of this Agreement or until the City decommissions the Lift Station, whichever occurs first. The Developer shall be responsible during such time to furnish the Director of Environmental Services with Developer's correct mailing address and telephone number for the purpose of remitting the Refund Fee. In the event the Developer is no longer in existence or has failed to provide current information of its legal address for a two-year period from the time each Connection Fee is collected by the City, then the Refund Fee shall revert to the City's Sewer Use Fund for the benefit of all rate payers.

iii. The City offers no guarantee to the Developer as to the number or cumulative dollar amounts, if any, of Connection Fees that will be collected within the

timeframe identified in Section 2.D.ii. Nothing in this Agreement shall create any liability on behalf of the City for failure to collect or remit such Connection Fees to Developer pursuant to City Code §98-287(c).

3. Miscellaneous Provisions:

A. *Right to Terminate.* If the Developer shall fail to fulfill in a timely and proper manner Developer's obligations under this Agreement, or if Developer shall violate any of the covenants, terms, or stipulations of this Agreement, the City shall thereupon have the right to terminate this Agreement and any licenses given herein by giving at least 5 days' prior written notice to the Developer of such termination, specifying the effective date thereof. Provisions with respect to indemnity shall survive, notwithstanding termination of the Agreement.

B. Ownership of Documents. The Developer, in their contract with the engineer, shall require the engineer, upon completion of construction documents and payment being provided for design phase services, to furnish copies of all instruments of service, including, but not limited to, an electronic Adobe or Bluebeam file of all plans, Autocad or Microstation files, copies of estimates, specifications, written reports, and written design criteria, to the City for its use in connection with operation and maintenance of the Lift Station after acceptance.

C. *Acceptance of Work*. All work done hereunder by the Developer, or Developer's agents, employees, contractors or assigns, shall be subject to the inspection and approval of the Director of Environmental Services and/or Public Works (hereinafter 'director'), or his/her authorized representative. If the Developer, or Developer's agents, employees, contractors or assigns, fails or refuses to construct and deliver the Lift Station in accordance with the approved plans, the City may decline to accept dedication of the constructed sewers.

D. *Calculation and Application of Connection Fee*. In addition to all other applicable fees and charges the City shall require for the privilege of connecting to the POTW, a Connection Fee, and Consent to Annex, shall be required from all property owners who own land in the Service Area and desire to connect to City POTW, as shown and described in Exhibit 'A', for the purpose of requiring each property owner to pay their share of Costs of the Project paid for by the Developer. The Connection Fee shall be computed in accordance with City Code Sections 98-287 and 120-256. Any property owners desiring to connect to the Lift Station shall pay a Connection Fee at the time of connection of $0.055169 per square foot ($2,403.17 per acre) of land connecting ($1,417,631.14 divided by 25,696,044 square feet [589.9 acres]) of land in the Service Area.

   i. Notwithstanding any other provisions herein contained, Developer may request the City's consent to waive the Connection Fee (and thereby reimbursement of Refund Fee) with respect to specific tracts of land which agree to donate easements for the construction of the Lift Station. In the event

the City agrees to a fee waiver, the City will execute documentation granting said waiver concurrent with the property owner executing the sewer easement.

ii. Connection to the Lift Station is a one-time fee to assist with Developer reimbursement of the Costs of the Project. Subject to a waiver or prior payment, at the time a Connection Fee is paid, the Director of Finance shall determine what land is owned in the Service Area by the person for which the fee is being paid and, upon payment, no further Connection Fee shall be required by this agreement for connecting such land, it being intended that the person paying the Connection Fee shall have paid the fee for their successors in title, regardless if the property has or has not connected to the sewer line.

iii. Connection Fees will be collected at the time that owners of each tract of land within the Service Area, as constituted at time of this Agreement or as subsequently subdivided, make application to connect to the City's POTW, with the following exceptions:

   a. Owners of land tracts who intend to develop for residential purposes will be required to pay a Connection Fee at the time the public improvement plans are approved, for the land area contained within a single-phase development or contained within a designated phase of a multi-phase development.

   b. For land tracts that contain more than 5 acres, but which are minimally developed with only a single-family residence (including any associated outbuilding structures), a Connection Fee will only be collected on 5 acres of land area. Collection of Connection Fees for the remainder of the tract will be deferred until additional connections are requested thereon, at which time an additional Connection Fee shall be required based upon the entire area of the tract (if not subdivided), less the five (5) acres for which the Connection Fee has already been paid.

iv. Nothing in this Agreement shall eliminate or change the requirement to pay anyother applicable fees, nor the requirement to execute a CTA, for utilizing or connecting to City sewer.

v. The applicable Costs of the Project are limited to only those necessary to construct the Lift Station as shown in **Exhibit 'B'**. All other costs to construct public sewer within the limits of the development tract are the sole responsibility of the Developer and are not to be included in the Costs of the Project calculation of the Connection Fee.

vi. Developer shall have a licensed engineer in the state provide an itemized breakout of construction costs for the Lift Station, and certify to the director, that all such costs were necessary and were incurred in the construction of

the Lift Station. Reimbursable costs may include the cost of right-of-way acquisition which is determined to be reasonable by the director (not to exceed the actual cost of right-of-way acquisition) and the reasonable cost of blueprints, advertising, mailings, and reasonable engineering and inspection expenses, not exceeding 15 percent of the accepted construction bid. The director shall have the authority to determine whether or not specific costs shall be allowed in computing the Connection Fee.

vii. The director may inform the Developer that he has determined that the costs, or a portion thereof, are not reasonable and necessary; and upon such information, such costs shall not be included in determining the Costs of the Project for purposes of determining the Connection Fee, as set forth herein.

E. *Insurance.* Developer and Owners, or their contractors shall be responsible for the Lift Station and any actions arising out of the Lift Station or its construction, at its own cost and expense throughout the duration of the construction, until the sanitary sewer Lift Station has been inspected, approved, and accepted by the City, and shall obtain insurance of such types and in such amounts as may be necessary to protect it, the interests of the City of Springfield, and the citizens of Springfield against all hazards or risks of loss. Failure to maintain coverage shall not relieve the Owners and Developer, or their contractors, of responsibility or obligation or liability in general or under this Agreement

F. *Procedures*. The Connection Fee required to be paid to the City shall be paid to the Director of Finance in accordance with procedures established by the Director.

G. *Collection of Connection Fees***.** The City shall use its best efforts to collect all Connection Fees from all persons who own land in the Service Area and who have connected to the City's POTW.

H. *Exclusion of City from Liabilities for Non-Collection***.** Nothing contained herein shall be construed to create any liability on behalf of the City, nor shall this Agreement with the Developer create any liability of the City or its departments, agents, or employees for any failure by, or legal inability of, the City to collect a Connection Fee, irrespective of any negligence on the part of the City or agent or employee in failing to collect said Connection Fee.

I. *Conflict of Interest*. No salaried officer or employee of the City, and no member of the City Council, shall have a financial interest, direct or indirect, in this Agreement. A violation of this provision renders the contract void. Developer warrants that no federal regulations relating to conflict of interest or applicable provisions in Section 105.450 et seq., RSMo. are violated by this Agreement.

J. *Independent Contractor*. Owners and Developer are independent contractors, and nothing contained herein shall constitute or designate the Developer, or any of the Developer's agents, contractors or employees, as agents or employees of the City of Springfield, Missouri.

K. *Liability and Indemnification*. The parties mutually agree to the following:

i. Owners and Developer shall defend, indemnify, and hold the City harmless from and against all damages, claims, losses, liabilities, expenses and costs with respect to all claims, including but not limited to personal injuries, death and/or property damage, which may be asserted against the City by any person or entity as a result of the actions or negligence of Developer, or its agents, contractors, subcontractors, representatives or assigns, arising out of or in connection with this Agreement, the construction of the Lift Station, or performance of this Agreement.

ii. In no event shall the City be liable for special, indirect, or consequential damages arising out of, or in any way connected with, the construction of the Lift Station or a breach of this Agreement, except those caused by the City's gross negligence or willful or wanton misconduct. The parties agree the maximum liability of the City with respect to suits, claims, damages, costs (including reasonable attorney's fees), losses, outlays, and expenses in any manner caused by, arising out of or connected with the construction of the Lift Station shall be limited to the amount of money received by the City under this Agreement.

iii. Owners and Developer assume full responsibility for relations with its contractors and subcontractors, and shall defend, indemnify and save harmless the City from and against, any and all liability from contractor and subcontractor suits, claims, damages, costs (including payment of reasonable attorney's fees), losses, outlays, and expenses in any manner caused by, arising out of or connected with the construction of the Lift Station or performance of this Agreement, including but not limited to wage or overtime compensation claims or any claim made under the Fair Labor Standards Act or any other federal or state law.

L. *Attorney Fees.* In the event of any litigation arising from breach of this Agreement the City shall be entitled to recover from the Owners and Developer all reasonable costs incurred for such litigation, including staff time, court costs, attorney fees, and all other related expense incurred in such litigation.

M. *Entire Agreement*. This Agreement contains the entire agreement of the parties. No modification, amendment, or waiver of any of the provisions of this Agreement shall be effective unless in writing specifically referring hereto, and signed by all parties affected by such modification, amendment or waiver.

N. *Assignment*. This Agreement may not be assigned by Owners or Developer without the express written agreement of the City, which agreement shall not be unreasonably withheld.

O. *Applicable Laws.* The Owners and Developer shall comply with all applicable federal, state, and local laws in the performance of this Agreement and shall include a similar provision in all subcontracts awarded hereunder. Developer will be responsible for all construction permits required from local or state agencies. This

Agreement and every question arising hereunder shall be construed or determined pursuant to the laws of the State of Missouri.

P. *Jurisdiction and Venue*. Should any part of this Agreement be litigated, venue shall be proper only in the Circuit Court of Greene County, Missouri.

CITY:

Approved by:

CITY OF SPRINGFIELD, MISSOURI

_____
Director of Environmental Services

By: _____
City Manager

Approved as to form:

_____
Assistant City Attorney

DEVELOPER:

SUNSHINE DEVELOPER, LLC

By: _____
Mike Nichols, Manager

OWNERS:

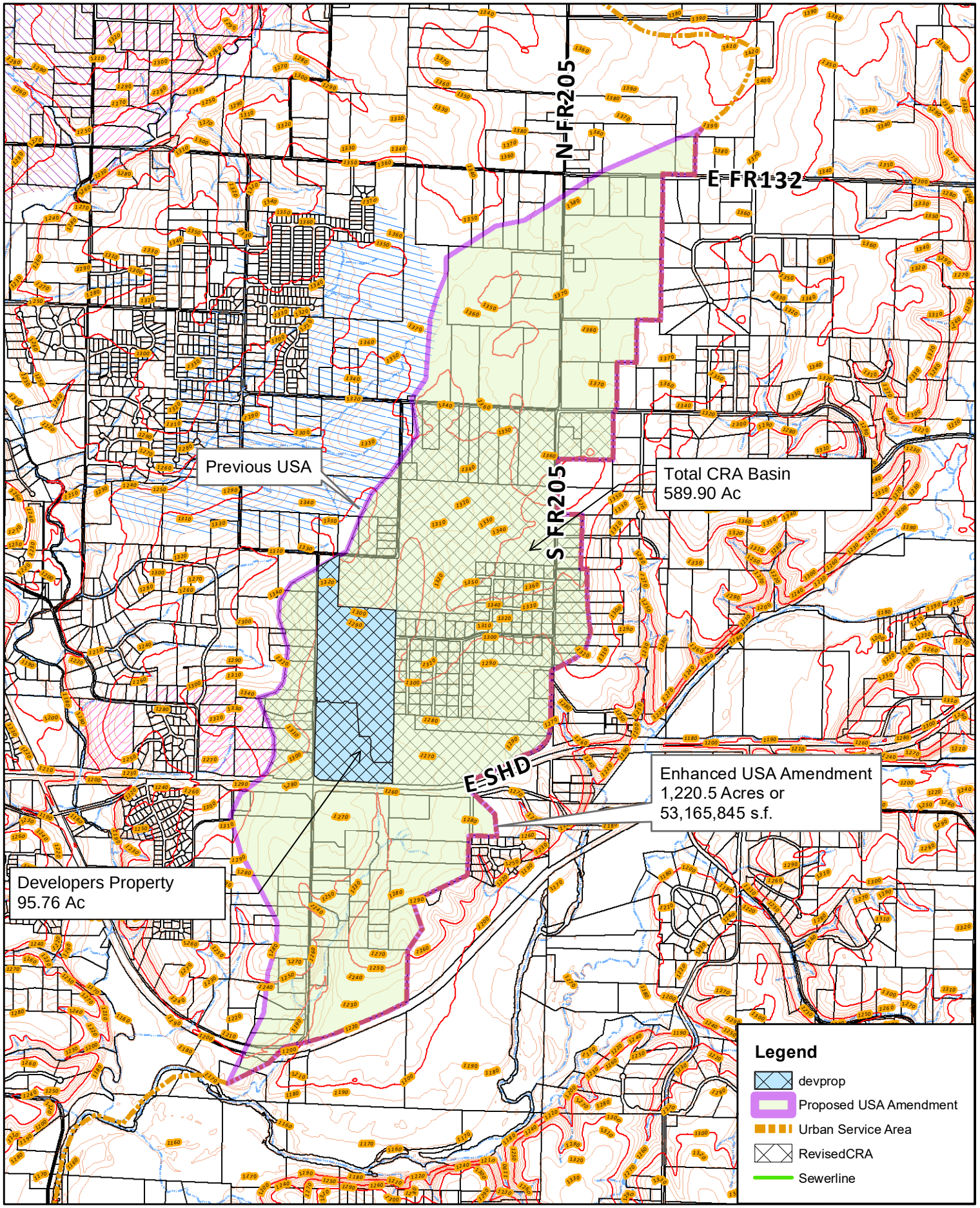
106A INVESTOR, LLC

By: _____
Mike Nichols, Manager

TURNERS RANCH, LLC

By: _____
Cade Rogers, Manager

Exhibit A



Environmental Services
Springfield, Missouri

CITY OF Springfield ENVIRONMENTAL SERVICES

1 inch = 2,101 feet

Date: 12/18/2025

DISCLAIMER: All information included on this map or digital file is provided "as-is" for general information purposes only. The City of Springfield, and all other contributing data suppliers, make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, or suitability of the data for any particular use. Furthermore, the City of Springfield, and all other contributing data suppliers, assume no liability whatsoever associated with the use or misuse of the data.

Exhibit B

Turner's Ranch Offsite Improvements (2024PW0022)
Sewer Cost Recovery - Exhibit B

General

Item	Description	Quantity	Units	Unit Price	Extended Price
A1	MOBILIZATION	1.00	LSUM	$17,000.00	$17,000.00
A2	PROTECT IN PLACE - POWER POLES, CONCRETE CHANNEL, GUY WIRE, FENCE, AND TREE LINE	1.00	LSUM	$1,000.00	$1,000.00
A3	CLEARING AND GRUBBING	1.53	ACRE	$500.00	$765.00
A4	EROSION AND SEDIMENT CONTROL	1.00	LSUM	$11,250.00	$11,250.00
A5	TRENCH ROCK	394.25	CY	$200.00	$78,850.00
A6	FINE GRADING	1.41	ACRE	$15,470.10	$21,812.84
A7	CLEAN-UP, SEEDING, FERTILIZER, AND MULCH	1.41	ACRE	$4,356.03	$6,142.00
A8	CONSTRUCTION STAKING	0.50	LSUM	$10,500.00	$5,250.00
A9	LEE ENGINEERING DESIGN AND CONSTRUCTION MANAGEMENT FEES	1.00	LSUM	$92,165.00	$92,165.00
				Total	$234,234.84

Sewer

Item	Description	Quantity	Units	Unit Price	Extended Price
C1	8 IN SANITARY SEWER	108.00	LF	$72.50	$7,830.00
C2	6 IN C900 CLASS 200 SANITARY SEWER	3422.00	LF	$53.00	$181,366.00
C3	4 FT DIA SANITARY SEWER MANHOLE (SAN-3)	2.00	EA	$3,894.00	$7,788.00
C4	CORE EXISTING MANHOLE P24SE013	1.00	EA	$1,563.00	$1,563.00
C5	12 IN BORING AND CASING (SAN-15)	21.00	LF	$394.00	$8,274.00
C6a	CONCRETE CHANNEL REMOVAL/REPLACEMENT	1.00	LSUM	$23,490.00	$23,490.00
C7	16 IN BORING AND CASING	49.00	LSUM	$709.00	$34,741.00
				Total	$265,052.00

Lift Station

Item	Description	Quantity	Units	Unit Price	Extended Price
B1	LIFT STATION	1.00	LSUM	$626,315.80	$626,315.80
B2	7 FT TALL WOODEN PRIVACY FENCE	235.00	LF	$71.50	$16,802.50
B3	LIFT STATION GRAVEL	273.00	SY	$11.50	$3,139.50
B4	LIGHT ASPHALT - 3 IN ASPHALTIC SURFACE OVER 8 IN MODOT TYPE 1 AGGREGATE BASE	310.00	SY	$89.50	$27,745.00
B5	CUT AND FILL	1.00	LSUM	$8,312.00	$8,312.00
B6	COS Fees	1.00	LSUM	$167,624.77	$167,624.77
				Total	$849,939.57

Water Service

Item	Description	Quantity	Units	Unit Price	Extended Price
D5	2 INCH HDPE WATER SERVICE LATERAL	710.00	LF	$26.50	$18,815.00
D6	2 INCH RPZ BACKFLOW PREVENTER	1.00	EA	$11,500.00	$11,500.00
				Total	$30,315.00

Electric Service

Item	Description	Quantity	Units	Unit Price	Extended Price
E1	SINGLE PHASE AND THREE PHASE ELECTRIC CONDUIT	1.00	LSUM	$38,089.73	$38,089.73
				Total =	$38,089.73

Grand Total =	$1,417,631.14

CITY OF Springfield

EXPLANATION TO COUNCIL BILL 2026-114 (HORTON)

FILED: 04/30/2026

ORIGINATING DEPARTMENT: Health

TITLE: A general ordinance amending the Springfield City Code, Chapter 18, "Animals," Articles I, II, and III, to provide improved enforcement measures for the Springfield-Greene County Health Department's ("SGCHD") animal control program to increase neighborhood safety by responding to dogs and owners who are not complying with City ordinances.

PURPOSE: The intent of this Ordinance revision is to provide improved enforcement measures for Animal Control to increase neighborhood safety by responding to dogs and owners who are not complying with City ordinances.

BACKGROUND INFORMATION: The Springfield community is experiencing ongoing issues with dogs running loose in neighborhoods. These situations are creating fear and safety concerns for residents. When dogs roam neighborhoods, they create frustration for neighbors and can display aggressive behavior toward other animals and people.

The Springfield-Greene County Health Department's ("SGCHD") Animal Control program aims to improve community compliance with established pet ownership responsibilities. Currently, processes for the enforcement of animal control ordinances in Springfield City Code, Chapter 18, "Animals," place a high burden on both neighbors and Animal Control staff to gain compliance, often requiring months or longer to resolve violations.

The proposed revisions to Chapter 18 focus on evolving how the City Code addresses these concerns. Needed improvements would enable faster, more effective enforcement with tools to hold animal owners accountable for the responsibilities of pet ownership in the city. These revisions would provide Animal Control officers with clearer authority to take appropriate action. These revisions will allow animal control to more effectively partner with neighbors to resolve ongoing issues, thereby reducing frustration and improving safety.

Submitted By: Anna Kremer, Health Policy Analyst

Authorized for inclusion on the agenda pursuant to City Code section 2-33:
Collin Quigley, Deputy City Manager 05/13/2026

Attachments: 1. Section 18 Revisions_Ord

2. ac-ordinance-revisions-complete-document

One rdg. _____
P. Hrngs. _____
Pgs. _____
Filed: 05-12-26

Sponsored by: Horton

First Reading: _____ Second Reading: _____

COUNCIL BILL 2026-114 GENERAL ORDINANCE _____

AN ORDINANCE

AMENDING the Springfield City Code, Chapter 18, “Animals,” Articles I, II, and III, to provide improved enforcement measures for the Springfield-Greene County Health Department’s (“SGCHD”) animal control program to increase neighborhood safety by responding to dogs and owners who are not complying with City ordinances.

_____

WHEREAS, the Springfield community is experiencing ongoing issues with dogs running loose in neighborhoods. These situations are creating fear and safety concerns for residents. When dogs roam neighborhoods, they create frustration for neighbors and can display aggressive behavior toward other animals and people; and

WHEREAS, the Springfield-Greene County Health Department’s (“SGCHD”) animal control program aims to improve community compliance with established pet ownership responsibilities. Currently, processes for the enforcement of animal control ordinances in Springfield City Code, Chapter 18, “Animals,” place a high burden on both neighbors and Animal Control staff to gain compliance, often requiring months or longer to resolve violations; and

WHEREAS, the proposed revisions to Chapter 18 focus on evolving how the City Code addresses these concerns. Needed improvements would enable faster, more effective enforcement with tools to hold animal owners accountable for the responsibilities of pet ownership in the city; and

WHEREAS, the proposed revisions give animal control officers with clearer authority to take appropriate action. These revisions will allow animal control to more effectively partner with neighbors to resolve ongoing issues, thereby reducing frustration and improving safety.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF SPRINGFIELD, MISSOURI, as follows, that:

Section 1 – Springfield City Code, Chapter 18, “Animals,” Article I, “In General,” Section 2, “Minimum fine for certain violations; reckless owners” is hereby amended as set forth below.

(Note: Language to be added is underlined, and language being removed is ~~stricken~~.)

Sec. 18-2. - Minimum fine for certain violations; reckless owners.

(a) Criminal Process. For the purpose of cases proceeding in municipal court, it is hereby found and declared that certain persons are reckless owners.

(1) A person shall be found to be a reckless owner;

a. When the person has been issued (4) citations for violations of Chapter 18 within a 24-month period; or

b. The person has been found guilty, pled guilty, or an administrative hearing officer has determined by a preponderance of the evidence that a person has committed animal cruelty as provided by Springfield City Code 18-9; or

c. The person owns, harbors, or possesses a dog that has been determined to be vicious, dangerous, or restricted, and the person has been cited for not complying with the requirements of Chapter 18 or an administrative hearing officer’s order; or

d. The person owns, harbors, or possesses a dog that has been accused of attacking or biting a domestic animal or a person, and the owner, harborer, or possessor fails to surrender the dog to animal control or fails to comply with the quarantine requirements as required by Chapter 18.

(2) Reckless owner prohibited from possessing animals

a. It shall be unlawful for a person who has been found guilty, pled guilty, or been found to be a reckless owner after an administrative hearing to own, possess, or harbor any animal for a period of five (5) years.

(3) Search Warrant and Hold Orders

a. The city attorney or an assistant city attorney may submit to the Springfield municipal court an application for a search and seizure warrant or an order to hold to seize and hold all animals owned or in possession of a person who owns, harbors or possesses animals upon a showing that there exists probable cause that the person is a reckless owner under section 18-2 and owned or is in possession of an animal or animals. The search warrant shall:

i. Provide the specified location where the animals may be found, and

ii. Provide that only animals may be seized, and

iii. Served only by an official of the department of public health and welfare in the company of a uniformed officer of the city police department, except when the animal is already in possession of animal control.

b. Upon application of the city attorney or assistant city attorney and upon a showing that there is probable cause to believe that a violation of section 18-2, 18-9, 18-59.1, or 18-60 exists, and that there is probable cause to believe that evidence of such violation may be found at a specified location, a judge at the Springfield Municipal Court may issue a search and seizure warrant or order to hold, which shall be served only by an official of the department of public health and welfare in the company of a uniformed officer of the city police department, except when the animal is already in possession of animal control. The warrant shall specify that only animals, domesticated or wild, and other living creatures may be seized and shall specify the location of any animals to be seized.

(4) Upon the seizure of an animal or animals unlawfully in the possession of a reckless owner or upon probable cause that the reckless owner unlawfully owns, possesses, or harbors an animal or animals, an animal control officer may submit a citation for the person being a reckless owner and violating section 18-2.

(5) Any person found guilty of a violation of Section 18-2 of this Code shall, upon conviction thereof, be punished as provided by section 1-7, and each and every instance of violation shall be a separate offense. In addition to all applicable court costs, the minimum fine for violation of this section shall be not less than $400.00 for each separate violation. The court shall not suspend the imposition of sentence for a violation of Section 18-2. In the event the sentencing judge suspends the execution of sentence, the sentencing judge shall require the offender serve a term of probation of not less than 720 days and order the offender to perform a minimum of 50 hours of community service work within the probationary term, in lieu of or in addition to any other penalties, including but not limited to a jail sentence as authorized by section 1-7. In addition, the sentence shall include a prohibition or revocation of the person’s right to own, harbor, or possess animals for five (5) years from the date of the order.

(6) A person found guilty of a violation of Section 18-2 may apply to the director of health or designee to have the ownership restrictions waived after three (3) years upon meeting the following conditions:

(a) The person has complied with all provisions of this Chapter for a period of three (3) years, and

(b) The person has no subsequent violations of this Chapter.

If the person provides the director with sufficient evidence that the owner has complied with this Chapter, the application shall be forwarded to the municipal judge to rescind the reckless owner restrictions, subject to conditions to help ensure no future violations of this Chapter.

(b) Administrative hearing process.

(1) Definition. A person may be declared a reckless owner by an administrative hearing officer if:

a. the person has received at least three citations for violations of this chapter within a 24-month period; or

b. The person has pled guilty, received suspended execution of sentence, is convicted of, or is found by a preponderance of evidence by an administrative hearing officer to have committed animal cruelty under section 18-9; or

c. The person owns, harbors, or possesses a dog that has been determined to be dangerous or restricted and has not complied with the subsequent requirements of this chapter; or

d. The person owns, harbors, or possesses a dog that has been accused of attacking a domestic animal or biting a person, and the owner, harborer, or possessor of such a dog fails to surrender the dog to the animal control authority or otherwise fails to comply with any of the requirements of this chapter.

e. Any individual cited for a violation of a potential exposure to rabies through an attack or bite, as referenced in Section 18-121.

(2) The city may at any time initiate an administrative hearing in writing to determine if a person is a reckless owner pursuant to this chapter. If an animal is being held pursuant to a municipal court order because its owner is an alleged reckless owner, the owner of the animal may request an administrative hearing in writing. The hearing shall be held in accordance with the procedure set forth in City Code Chapter 36, Article X, Uniform Enforcement Procedures, and shall be held within 25 days of the request unless continued based upon a showing of good cause. The hearing examiner, as appointed by the city manager, shall take evidence and determine if the facts support a finding that the person is a reckless owner. If the hearing examiner finds the person to be a reckless owner, an order

shall be entered consistent with the remedies set forth in this section. No penalty provided for in section 1-7 shall be imposed by the hearing examiner. The hearing examiner shall not be a judge of the municipal court.

(3) If it is hereby found that certain persons have committed either such severe or repeated violations of this chapter that they are reckless owners, a judgment of the hearing examiner shall include revocation of the person's right to own, harbor, or possess animals (with the type or types of animal to be determined by the hearing examiner) for five (5) years from the date of entry of the declaration and order. Upon entry of such order, unless a review of such order is filed in accordance with this section, such reckless owner shall be required to surrender any or all of his or her animals to the animal control authority within 24 hours, as ordered by the hearing examiner.

(4) Failure to surrender such animals is a criminal violation of this act that shall result in prosecution as well as immediate impoundment by the animal control authority upon issuance of a warrant of the municipal court for the authority to seize the animals. Such surrendered or impounded animals shall immediately become the property of the animal control authority and be disposed of pursuant to section 18-55 after the expiration of the appeal period. It shall further be unlawful, and constitute a violation of Section 18-2(a), for a reckless owner to subsequently own, possess, or have control over any animal for a period of five (5) years from the date of entry of the declaration and order.

(5) A person found to be a reckless dog owner may apply to the director of health or designee to have these restrictions waived after three (3) years upon meeting the following conditions:

(a) The person has complied with all provisions of this Chapter for a period of three (3) years, and

(b) The person has no subsequent violations of this Chapter.

If the person provides the director with sufficient evidence that the owner has complied with this Chapter, the application shall be forwarded to the hearing officer to rescind the reckless owner restrictions, subject to conditions to help ensure no future violations of this Chapter.

(6) Administrative review. Any party aggrieved by an administrative decision may appeal by filing a request for review with the Greene County Circuit Court no later than the 30th day after the issuance of the administrative decision.

~~(a) Any person who has violated provisions of this chapter more than three times in an 18-month period shall be fined a minimum of $200.00 for the fourth offense and $400.00 for the fifth offense and each offense thereafter occurring during an 18-month period. Any person who has been found guilty of more than three~~

~~offenses during an 18-month period shall be required as a condition of releasing any animal impounded by the city to post a bond with the court equal to the minimum penalty for the offense as established by this section, which bond shall be subject to forfeiture to the city if the person is found guilty of a violation of this chapter. In addition to the fine, such person shall pay for all costs of keeping the animal. All such animals shall be disposed of by the city in accordance with the procedures set forth in section 18-55 if the person charged fails to pay the minimum fine assessed by the court plus the costs of keeping the animal as set forth in this chapter.~~

~~(b) It is hereby found and declared that certain persons have committed either such severe or repeated violations of this chapter that they are reckless owners, and a judgment of the hearing examiner shall include revocation of the person's right to own, harbor or possess animals (with the type or types of animal to be determined by the hearing examiner) for a specified amount of time.~~

~~(1) Definition. A person may be found to be a reckless owner if:~~

~~a. The person has been convicted of one or more violations of this chapter on three separate occasions within a 24-month period; or~~

~~b. Sufficient proof is presented that the person is guilty of animal cruelty under section 18-9;~~

~~c. The person owns, harbors or possesses a dog that has been determined to be vicious, restricted, or a nuisance and has not complied with the subsequent requirements of this chapter; or~~

~~d. The person owns, harbors or possesses a dog that has been accused of attacking a domestic animal or biting a person, and the owner, harborer, or possessor of such a dog fails to surrender the dog to the animal control authority or fails to comply with the requirements of this chapter.~~

~~(2) It is unlawful for any person to violate any restriction imposed by this section after a person has been declared a reckless owner by order of the municipal court or by order of the hearing examiner.~~

~~(3) Upon the filing of the affidavit of the director of public health and welfare, or of his designee, with the municipal prosecutor alleging a person is a reckless owner, and upon the motion of the prosecutor, the judge of the municipal court may order any of the following: that all domestic animals owned, possessed, or controlled by the person be seized and impounded during the pendency of charges and appeal and not be released while the charges or appeal are pending without order of the municipal judge, upon the recommendation from the hearing examiner.~~

~~(4) Administrative process.~~

~~a. The city may at any time initiate an administrative hearing in writing to determine if a person is a reckless owner pursuant to this chapter. If an animal is being held pursuant to a municipal court order because its owner is an alleged reckless owner, the owner of the animal may request an administrative hearing in writing. The hearing shall be held in accordance with the procedure set forth in Article X of the Land Development Code and shall be held within 25 days of the request unless continued based upon a showing of good cause. The hearing examiner, as appointed by the city manager, shall take evidence and determine if the facts support a finding that the person is a reckless owner. If the hearing examiner finds the person to be a reckless owner, an order shall be entered consistent with the remedies set forth in this section. No penalty provided for in section 1-7 shall be imposed by the hearing examiner. The hearing examiner shall not be a judge of the municipal court.~~

~~b. Upon entry of such declaration and order, unless a review of such order is filed in accordance with this section, such reckless owner shall be required to surrender any or all of his or her animals to the animal control authority within 24 hours, as ordered by the hearing examiner. Failure to surrender such animals is a criminal violation of this act that shall result in prosecution as well as immediate impoundment by the animal control authority upon issuance of a warrant of the municipal court for the authority to seize the animals. Such surrendered or impounded animals shall immediately become the property of the animal control authority and be disposed of pursuant to section 18-55 after the expiration of the appeal period.~~

~~(5) Administrative review. Any party aggrieved by an administrative decision pursuant to subsection (d) may appeal by filing a request for review with the Greene County Circuit Court no later than the 30th day after the issuance of the administrative decision.~~

~~(6) It shall be unlawful for a reckless owner to fail to surrender any or all animals, as ordered by the hearing examiner, within 24 hours or to subsequently own, possess, or have control over any animal for a period of 24 months from the date of entry of the declaration and order.~~

~~(7) Criminal process. Any person found guilty of a violation prescribed in subsection (f) by a judge of the municipal court shall, upon conviction thereof, be punished as provided by section 1-7, and each and every instance of violation shall be a separate offense. A judge of the municipal~~

~~court shall not impose any penalty listed in subsection (d).~~

Section 2 – Springfield City Code, Chapter 18, "Animals," Article I, "In General," Section 9, "Cruelty to animals" is hereby amended as set forth below.

(Note: Language to be added is underlined, and language being removed is ~~stricken~~.)

Sec. 18-9. - Cruelty to animals.

(a) No person shall be cruel or inhumane to any dog, ~~or~~ cat, or other domesticated animal by beating, torturing, kicking, or other physical abuse.

(b) No person shall torture, torment, wound, maim, mutilate, or cruelly beat, cruelly overwork, cruelly drive or work when unfit for labor, cruelly kill, or cruelly abandon to die any domestic animal; provided that nothing contained in this subsection shall be construed to prohibit or interfere with any scientific experiment or investigation.

(c) No person shall impound or confine, or cause to be impounded or confined, in any pound or other place, any animal or creature, and fail to supply the animal or creature during such confinement with adequate food and water, or shall unnecessarily fail to provide the animal or creature with adequate food, water or shelter or shall carry or cause the animal or creature to be carried or moved on any vehicle or otherwise in an unnecessarily cruel or inhumane manner.

(d) No person having ownership or custody of an animal shall fail to provide adequate care.

(e) Any person found guilty of a violation prescribed in this section shall, upon conviction thereof, be punished as provided by section 1-7, and each and every instance of violation shall be a separate offense.

(f) The city may at any time initiate an administrative hearing in writing to determine if a person has committed animal cruelty pursuant to this chapter. The hearing examiner, as appointed by the city manager, shall take evidence and determine if the facts support a finding that the person has committed animal cruelty. Any person found by a preponderance of the evidence by an administrative hearing officer to have committed animal cruelty shall be considered a reckless owner under 18-2, and the hearing officer shall enter an order consistent with the remedies set forth in 18-2(b).

Section 3– Springfield City Code, Chapter 18, "Animals," Article I, "In General," is hereby amended to add an additional section, "Obstruction of Animal Control Officer," as set forth below.

(Note: Language to be added is underlined, and language being removed is ~~stricken~~.)

Sec 18-29 Obstruction of Animal Control Officer.

No person shall:

(a) Fail or refuse to provide an Animal Control Officer with one's legal name and date of birth when an Animal Control Officer has reasonable suspicion that an animal owned, controlled, or harbored by the person has committed a violation of chapter 18 of the Springfield City Code.

(b) Make a false or misleading statement or representation about animal ownership or custody to an Animal Control Officer or Shelter Representative.

(c) Engage in conduct which the person knows or should know would prevent an Animal Control Officer from completing an investigation or performing any other lawful duty when investigating a violation of chapter 18 of Springfield City Code.

(d) Make a false representation or report a violation of chapter 18 of the Springfield City Code when the person knew or should have known such representations were not true.

Section 4– Springfield City Code, Chapter 18, "Animals," Article II, "Dogs, Cats, and Ferrets," Division 1, "Generally," is hereby amended to add an additional section, "Risking community exposure to rabies," as set forth below.

(Note: Language to be added is underlined, and language being removed is ~~stricken~~.)

Sec 18-52.5 Risking community exposure to rabies.

A person shall be guilty of risking community exposure to rabies by:

(a) Owning, controlling, harboring, or possessing a dog suspected of biting or scratching, and the dog was not displaying a rabies tag securely on the dog's collar or harness.

(b) Owning, controlling, harboring, or possessing a dog suspected of biting or scratching a person and not providing proof of vaccination upon request.

(c) In addition to all applicable court costs, the minimum fine for violation of subsection b. shall be not less than $200.00 for each separate violation. In the event the sentencing judge decides to suspend the imposition or execution of sentence, the sentencing judge shall require the offender serve a term of probation of not less than 365 days and order the offender to perform a minimum of 20 hours of community service work within the probationary term, in lieu of or in addition to any other penalties, including but not limited to a jail sentence as authorized by section 1-7.

Section 5– Springfield City Code, Chapter 18, “Animals,” Article II, “Dogs, Cats, and Ferrets,” Division 1, “Generally,” Section 53, “Running at large prohibited; minimum fine” is hereby amended as set forth below.

(Note: Language to be added is underlined, and language being removed is ~~stricken~~.)

Sec. 18-53. - Running at large prohibited; minimum fine.

(a) It shall be unlawful for any person owning, controlling, harboring, possessing, or having the management or care of any dog to permit such dog to run at large.

(b) In addition to all applicable court costs, the minimum fine for violation of this section shall be not less than $50.00 for each separate violation, which minimum fine shall be levied ~~The minimum fine for violation of this section shall be not less than $10.00 for each separate violation, which minimum fine shall be the minimum fine levied~~ pursuant to section 1-7.

(c) In the event the sentencing judge suspends the execution or suspend the imposition of sentence, the sentencing judge shall require the offender serve a term of probation of not less than 180 days and order the offender to perform a minimum of 8 hours of community service work within the probationary term, in lieu of or in addition to any other penalties, including but not limited to a jail sentence as authorized by section 1-7.

(d) For any person who pleads to or is found guilty of a second violation of this Code, the sentencing judge shall not suspend the execution or imposition of sentence.

Section 6– Springfield City Code, Chapter 18, “Animals,” Article II, “Dogs, Cats, and Ferrets,” Division 1, “Generally,” Section 55, “Holding and disposition of impounded dogs,” is hereby amended as set forth below.

(Note: Language to be added is underlined, and language being removed is ~~stricken~~.)

All dogs impounded shall be kept in the custody of the department of public health and welfare for a period of not less than 72 hours. They shall be fed, watered, and shielded from the elements in a manner acceptable to good veterinary practice. During the 72-hour period, the dog may be released by the animal control officer to any person who shall sign an affidavit swearing the dog is his or her personal property. The animal control officer shall, in addition, issue a summons to the owner for violation of subsections 18-51(a), 18-52(a) or section 18-53, and shall impose a claiming fee as provided for in section 18-3 and shall require that the dog's owner fulfill vaccination procedures before release, or that he carry out vaccination as set forth in section 18-56. At the end of the 72-hour period, if a dog has not been claimed as set out in this section,

the animal control officer is at liberty to dispose of the dog in any one of the following ways:

(1) Humane euthanasia in accordance with regulations promulgated by the director of the state department of agriculture.

(2) ~~Releasing the dog to any person expressing a desire for any given dog, after payment of an adoption fee as provided for in section 18-3 and completion of the registration-vaccination procedure before release or completion of the procedures set forth in section 18-56~~. Releasing the animal at no charge to ~~the Southwest Missouri Humane Society~~ a licensed and contracted rescue organization, provided the ~~society~~ organization agrees to indemnify and hold harmless the city from any and all liabilities that might arise from such transaction under its contract with the city.

(34) Any other method approved by the American Humane Association.

Section 7– Springfield City Code, Chapter 18, “Animals,” Article II, “Dogs, Cats, and Ferrets,” Division 1, “Generally,” Section 59.1, “Vicious dogs,” is hereby amended as set forth below.

(Note: Language to be added is underlined, and language being removed is ~~stricken~~.)

Sec. 18-59.1. - Vicious dogs.

(a) It is unlawful for any person to own, harbor, or possess a vicious dog, except as allowed by the provisions of this section.

The municipal court judge or hearing examiner may declare a dog vicious:

(1) When evidence shows an attack or bite to a human is unprovoked and is a Level 4 or higher on the Dunbar scale, set forth in section 18-62; or

(2) When evidence shows an attack upon another domestic animal is unprovoked and is a Level 4 or higher on the Dunbar scale, and a pattern of vicious behavior such as habitually snapping, charging, growling, or otherwise manifests a disposition to bite, attack or injure any person or domestic animal or pet if afforded the opportunity, or if in the judgment of the court or administrative tribunal it causes any person to have a reasonable fear of immediate serious physical injury; or

(3) When evidence shows an attack or bite to a human is unprovoked and is less than a Level 4 on the Dunbar scale, and pattern of vicious behavior such as habitually snapping, charging, growling, or otherwise manifests a disposition to bite, attack or injure any person, domestic animal or pet if afforded the opportunity, or if in the judgment of the court or administrative

tribunal it causes any person to have a reasonable fear of immediate serious physical injury.

(b) It is unlawful for any person to violate any restriction imposed by this section after a dog has been declared a vicious dog by order of the municipal court or by order of the hearing examiner.

(c) Upon the filing of the affidavit of the director of public health and welfare, or of his or her designee, with the municipal prosecutor alleging the dog is a vicious dog, and upon the motion of the prosecutor, the judge of the municipal court may order any of the following: that the dog be seized and impounded, that the dog be impounded past the ten-day rabies observation period, or that the dog be impounded during the pendency of charges and appeal and not be released while the charges or appeal are pending without order of the municipal judge, upon the recommendation from the hearing examiner.

(d) Administrative hearing process.

(1) The city may at any time initiate an administrative hearing in writing to determine if a dog is vicious pursuant to this chapter. If a dog is being held pursuant to a municipal court order as an alleged vicious dog, the owner of the dog may request an administrative hearing in writing. The hearing shall be held in accordance with the procedure set forth in City Code Chapter 36, Article X , Uniform Enforcement Procedures, ~~of the Land Development Code~~ and shall be held within 25 days of the request unless continued based upon a showing of good cause. The hearing examiner, as appointed by the city manager, shall take evidence and determine if the facts support a finding that the dog is vicious. If the hearing examiner finds the dog to be vicious, an order shall be entered consistent with the remedies set forth in this section. No penalty provided for in section 1-7 shall be imposed by the hearing examiner. The hearing examiner shall not be a judge of the municipal court.

(2) Any dog declared vicious by the hearing examiner ~~may~~ shall be ordered humanely euthanized upon the expiration of the appeal period.

(3) The owner of a dog found to be vicious shall be liable for and shall pay all costs associated with impoundment, removal, or euthanasia of said animal. The owner is liable for and shall pay for any other associated costs incurred for sheltering their animal during the pendency of the vicious dog case.

~~(3) Any dog declared vicious by the hearing examiner and not ordered euthanized and as a condition of residing within the corporate limits of the city shall be required to meet the following mandated restrictions:~~

a. The dog or dogs must receive an identification microchip implant within one week of the order of the municipal court or administrative tribunal. The microchip used must be approved by the city department of public health and welfare. It shall be a violation of this Code for a microchip to be removed unless it is for a medical reason and then only by a licensed practicing veterinarian. The health authority must be notified immediately of said removal.

b. The dog or dogs shall be securely confined indoors or in a securely enclosed and locked kennel or cage. The kennel or cage shall be the size appropriate to the size of the dog or dogs kept therein and shall provide adequate ventilation, shade from the sun, and protection from the elements. In the event of a dispute over the appropriate size, the guidelines of the state department of agriculture regulations for animal care facilities shall apply. The kennel or cage must be constructed with nine-gauge steel chain link. Such kennel or cage must have secure sides, a secure top, and secure bottom or floor attached to the sides, or the sides must be embedded in the ground. In addition, the kennel or cage must have a double-blind entrance and must be locked with a key or combination lock when such dog or dogs are within the structure. Any such kennel or cage must be located at least 25 feet from the nearest point to the dwelling of another, a church, a school or a place of business of another and must comply with all zoning and building regulations of the city.

c. The dog or dogs shall not be allowed by remedy to be removed from the city to a location outside of the city limits.

(4) Any dog declared vicious by the hearing examiner and not ordered euthanized, and as a condition of residing within the corporate limits of the city, may be required to meet any or all of the following restrictions:

a. The dog or dogs shall be spayed or neutered within one week of the ruling unless a duly licensed veterinarian practicing in the city or Greene County documents to the director of public health and welfare that medical conditions of the dog contradict sterilization. Such sterilization shall require surgical removal of the gonads. Verification that sterilization has taken place shall be presented to the director of public health and welfare by the licensed practicing veterinarian performing the procedure.

b. The dog or dogs shall be registered with the health department each year with the annual fee to be set at $50.00.

c. All owners, keepers or harborers of any vicious dog must

~~maintain in effect public liability insurance in a single incident amount of $100,000.00 for bodily injury to or death of any person or persons or for damage to property owned by any persons which may result from the ownership, keeping or maintenance of such dog. A $100,000.00 surety bond or letter of credit may be substituted for the insurance policy. All owners, keepers or harborers of vicious dogs shall present to the animal control officer a statement from all parties involved certifying that they have the required insurance policy, surety bond, or letter of credit.~~

~~d. When confined indoors, no vicious dog or dogs may be kept on a porch, patio or in any part of a house, building or structure that would allow the dog or dogs to exit such building on its own volition. No such dog or dogs may be kept in a house, building or structure when the windows are open. No vicious dog may be kept in a house, building or structure when screen windows or screen doors are the only obstacles preventing the dog from exiting the structure.~~

~~e. No person shall permit a vicious dog or dogs to go outside its kennel, cage, or secure structure unless that person is age 18 or older, that person has the dog or dogs securely leashed to a buckle collar and on a leash no longer than six feet in length, and that person has physical control of the dog. Such dogs shall not be leashed to inanimate objects such as trees, posts and buildings. Additionally, all such dogs on a leash outside the dog's kennel, cage, or secure structure must be muzzled by a humane muzzling device sufficient to prevent the dog from biting persons or other animals.~~

~~f. The premises on which the dog or dogs are kept shall be clearly posted with signage warning the public of the following:~~

~~WARNING A VICIOUS DOG IS PRESENT ON THIS PROPERTY IS NOT ALLOWED OUT OF HOUSE OR PEN WITHOUT LEASH AND MUZZLE. REPORT VIOLATIONS.~~

~~The sign shall be visible and capable of being read from the street, road or highway that abuts the premises. In addition, the sign must include a picture or symbol that conveys the idea of a vicious dog to small children that cannot read.~~

~~g. Any dog or dogs declared vicious by the hearing examiner cannot be sold, given away, or ownership otherwise transferred without the expressed permission of the director of public health and welfare.~~

~~h. Reserved.~~

~~i. Refusal or failure to comply with any of the mandated or hearing examiner-ordered restrictions or authorized inspection shall constitute a violation of this Code and, in addition, shall be considered as justifiable grounds for the hearing examiner to order further restrictions or euthanization of the dog or dogs~~.

(~~5~~4) Any party aggrieved by an administrative hearing decision pursuant to subsection (d) may appeal by filing a request for review with the Greene County Circuit Court no later than the 30th day after the issuance of the administrative decision.

(e) Criminal process. Any person found guilty of a violation prescribed in subsection (a) or (b) by a judge of the municipal court shall, upon conviction thereof, be punished as provided by section 1-7, and each and every instance of violation shall be a separate offense. A judge of the municipal court shall not impose any penalty listed in subsection (d).

(f) Any dog or dogs maintained and utilized by any governmental law enforcement agency shall not be considered a vicious dog so long as it is maintained and utilized for law enforcement purposes.

Section 8– Springfield City Code, Chapter 18, “Animals,” Article II, “Dogs, Cats, and Ferrets,” Division 1, “Generally,” Section 60, “Restricted dogs,” is hereby amended as set forth below.

(Note: Language to be added is underlined, and language being removed is ~~stricken~~.)

Sec. 18-60. – Dangerous ~~Restricted~~ dogs.

(a) It is unlawful for any person to own, harbor, or possess a dangerous ~~restricted~~ dog~~,~~ except as allowed by the provisions of this section. The director of health or his or her designee, the hearing examiner, or municipal judge may declare a dog ~~restricted~~ dangerous:

(1) When evidence shows an attack or bite to a human is unprovoked and is determined to be at a Level 2 or higher on the Dunbar scale, set forth in section 18-62; or

(2) When evidence shows an attack upon another domestic animal is unprovoked and is determined to be at a Level 2 or higher on the Dunbar scale, and a pattern of vicious behavior such as habitually snapping, charging, growling, or otherwise manifests a disposition to bite, attack or injure any person or domestic animal or pet if afforded the opportunity, or

if in the judgment of the court or administrative tribunal it causes any person to have a reasonable fear of immediate serious physical injury; or

(3) In the absence of a bite, when sufficient evidence, including testimony of an animal control officer, is presented to show the dog or dogs display characteristics such as habitually snapping, charging, growling, or otherwise manifests a disposition to bite, attack or injure any person or domestic animal or pet if afforded the opportunity, or if, in the judgment of the court or administrative tribunal, it causes any person to have a reasonable fear of immediate serious physical injury.

(4) After a person has had a dog they own, possess, or harbor declared restricted under Section 18-61, and the owner subsequently has had two (2) additional citations issued for dog at large.

(b) It is unlawful for any person to violate any restriction imposed by this section after a dog has been declared a dangerous ~~restricted~~ dog by the director of health, his or her designee, or by order of the municipal court or by order of the hearing examiner.

(c) Any person who owns, possesses, or harbors a dog that has been ~~dog~~ declared dangerous ~~restricted by the director of health~~ shall be required to meet and provide evidence of satisfying the following mandated restrictions ~~for 24 months~~ as a condition of the dog residing within the corporate limits of the city:

(1) The dog or dogs must receive an identification microchip implant. The microchip used must be approved by the city department of public health and welfare. It shall be a violation of this Code for a microchip to be removed unless it is for a medical reason and then only by a licensed practicing veterinarian. The health authority must be notified immediately of said removal.

(2) The dog or dogs shall be spayed or neutered within 30 days of the ruling unless a duly licensed veterinarian practicing in the city or Greene County documents to the director of public health and welfare that medical conditions of the dog contradict sterilization. Such sterilization shall require surgical removal of the gonads. Verification that sterilization has taken place shall be presented to the director of public health and welfare by the licensed practicing veterinarian performing the procedure.

(3) The dog shall be securely confined indoors, in a securely enclosed and locked kennel or cage, or securely restrained as set forth herein.

a. The kennel or cage shall be the size appropriate to the size of the dog or dogs kept therein and shall provide adequate ventilation, shade from the sun, and protection from the elements. In the event

of a dispute over the appropriate size, the guidelines of the state department of agriculture regulations for animal care facilities shall apply. The kennel or cage must be constructed with nine-gauge steel chain link. Such kennel or cage must have secure sides, a secure top, and a secure bottom or floor attached to the sides, or the sides must be embedded in the ground, in such a location that prohibits the dog from tunneling out of the kennel or cage. In addition, the kennel or cage must have a double-blind entrance and must be locked with a key or combination lock when such dog is within the structure. Any such kennel or cage must be located at least 25 feet from the nearest point to the dwelling of another, a church, a school, or a place of business of another, and must comply with all zoning and building regulations of the city.

b. When confined indoors, the dog may not be kept on a porch, patio, or in any part of a house, building, or structure that would allow the dog to exit such building on its own volition. No such dog or dogs may be kept in a house, building, or structure when the windows are open. No ~~restricted~~ dangerous dog may be kept in a house, building, or structure when screen windows or screen doors are the only obstacles preventing the dog from exiting the structure.

c. No person shall permit a ~~restricted~~ dangerous dog to go outside its kennel, cage, or secure structure unless that person is age 18 or older, that person has the dog securely leashed to a buckle collar and on a leash no longer than six feet in length, and that person has physical control of the dog. Such dogs shall not be leashed to inanimate objects such as trees, posts, and buildings. Additionally, all such dogs on a leash outside the dog's kennel, cage, or secure structure must be muzzled by a humane muzzling device sufficient to prevent the dog from biting persons or other animals.

(4) The dog shall be registered with the health department for two years with the annual fee to be set at $50.00.

(5) The premises on which the dog or dogs are kept shall be clearly posted with signage, provided by the department of health, warning the public of the following:

WARNING DANGEROUS ~~RESTRICTED~~ DOG IS PRESENT ON THIS PROPERTY THAT IS NOT ALLOWED OUT OF HOUSE OR PEN WITHOUT LEASH AND MUZZLE. REPORT VIOLATIONS.

The sign shall be visible and capable of being read from the street, road or highway that abuts the premises. In addition, the sign must include a

picture or symbol that conveys the idea of a vicious dog to small children ~~that~~ who cannot read.

(6) The dog or dogs shall not be allowed by remedy to be removed from the city to a location outside of the city limits.

(7) Any dangerous ~~restricted~~ dog cannot be sold, given away, or ownership otherwise transferred without the expressed written permission of the director of public health and welfare.

(8) Refusal or failure to comply with any of the mandated or hearing examiner-ordered restrictions or authorized inspection shall constitute a violation of this Code and, in addition, shall be considered as justifiable grounds for the hearing examiner to order further restrictions of the dog or dogs and to declare the owner reckless according to the procedure set forth in section 18-2.

(d) Upon the filing of the affidavit of the director of public health and welfare, or of his or her designee, with the municipal prosecutor alleging the dog is a dangerous ~~restricted~~ dog, and upon the motion of the prosecutor, the judge of the municipal court may order any of the following: that the dog be seized and impounded, that the dog be impounded past the ten-day rabies observation period, or that the dog be impounded during the pendency of charges and appeal and not be released until the condition set forth in subsection (c) are met, without order of the municipal judge upon the recommendation from the hearing examiner.

(e) Administrative review.

(1) ~~The city may at any time initiate an administrative hearing in writing to determine if a dog is restricted pursuant to this chapter.~~ If a dog has been declared dangerous ~~restricted~~ by the director of health, the owner of the dog may request an administrative hearing in writing within ten days of the declaration, to challenge the declaration. The hearing shall be held in accordance with the procedure set forth in City Code Chapter 36, Article X , Uniform Enforcement Procedures, ~~of the Land Development Code~~ and shall be held within 25 days of the request unless continued based upon a showing of good cause. The hearing examiner, as appointed by the city manager, shall take evidence and determine if the facts support a finding that the dog is dangerous ~~restricted~~. If the hearing examiner finds the dog to be ~~restricted~~ dangerous, an order shall be entered consistent with the remedies set forth in this section. No penalty provided for in section 1-7 shall be imposed by the hearing examiner. The hearing examiner shall not be a judge of the municipal court.

(2) Any owner of a dog declared dangerous ~~restricted~~ by the hearing

examiner shall be ordered to comply with any or all of the restrictions set forth in subsection (c).

(f) Appeal. Any party aggrieved by an administrative decision pursuant to subsection (e) may appeal by filing a request for review with the Greene County Circuit Court no later than the 30th day after the issuance of the administrative decision.

(g) Criminal process. Any person found guilty of a violation prescribed in subsection (a), ~~or~~ (b), or (c) by a judge of the municipal court shall, upon conviction thereof, be punished as provided by section 1-7, and each and every instance of violation shall be a separate offense. ~~A judge of the municipal court shall not impose any penalty listed in subsection (c).~~ In addition to all applicable court costs, the minimum fine for violation of this section shall be not less than $300.00 for each separate violation. In the event the sentencing judge decides to suspend the imposition or execution of sentence, the sentencing judge shall require the offender serve a term of probation of not less than 365 days and order the offender to perform a minimum of 30 hours of community service work within the probationary term, in lieu of or in addition to any other penalties, including but not limited to a jail sentence as authorized by section 1-7.

(h) A dangerous dog owner may apply to the director of health or designee to have the declaration waived after three (3) years upon meeting the following conditions:

(1) The owner of the dog has complied with all the provisions of this Chapter; and

(2) The owner and offending dog have no subsequent violations of this Chapter for a period of three (3) years.

If the owner provides the director with sufficient evidence that the owner and offending dog have complied with all conditions in this Chapter, and sufficient evidence that the offending dog's behavior has changed, the director of health may lift some or all restrictions in the dangerous dog declaration.

(i) Any dog or dogs maintained and utilized by any governmental law enforcement agency shall not be considered a dangerous ~~restricted~~ dog so long as it is maintained and utilized for law enforcement purposes.

Section 9– Springfield City Code, Chapter 18, "Animals," Article II, "Dogs, Cats, and Ferrets," Division 1, "Generally," Section 61, "Nuisance dogs," is hereby amended as set forth below.

(Note: Language to be added is underlined, and language being removed is ~~stricken~~.)

Sec. 18-61. – Restricted ~~Nuisance~~ dogs.

(a) It is unlawful for any person to own, harbor, or possess a restricted ~~nuisance~~ dog, except as allowed by the provisions of this section. The director of health or his or her designee, the hearing examiner, or municipal judge may declare a dog restricted ~~a nuisance~~ when ~~a dog has been found~~ at least one prior citation has been issued for a dog running at large in violation of section 18-53 ~~more than one time~~ within a 12-month period.

(b) It is unlawful for any person to violate any restriction imposed by this section after a dog has been declared a restricted ~~nuisance~~ dog by the director of health, or by order of the municipal court, or by order of the hearing examiner.

(c) Any person who owns, possesses, or harbors a dog declared restricted ~~a nuisance~~ by the director of health, his or her designee, the hearing examiner, or municipal judge shall be required to meet the following mandated restrictions for 24 months as a condition of residing within the corporate limits of the city:

(1) The dog or dogs must receive an identification microchip implant. The microchip used must be approved by the city department of public health and welfare. It shall be a violation of this Code for a microchip to be removed unless it is for a medical reason and then only by a licensed practicing veterinarian. The health authority must be notified immediately of said removal. It shall be prima facie evidence that the owner of the restricted dog removed the microchip if a restricted dog is found to have its microchip implant removed.

(2) The dog or dogs shall be spayed or neutered within 30 days of the ruling unless a duly licensed veterinarian practicing in the city or Greene County documents to the director of public health and welfare that medical conditions of the dog contradict sterilization. Such sterilization shall require surgical removal of the gonads. Verification that sterilization has taken place shall be presented to the director of public health and welfare by the licensed practicing veterinarian performing the procedure.

(3) The dog shall be registered with the health department for 24 months, with the annual fee to be set at $50.00.

(d) Refusal or failure to comply with any of the mandated or hearing examiner-ordered restrictions shall constitute a violation of this Code and, in addition, shall be considered as justifiable grounds for the hearing examiner to declare the owner reckless according to the procedure set forth in section 18-2.

(e) Administrative review.

(1) ~~The city may at any time initiate an administrative hearing in writing to determine if a dog is a nuisance pursuant to this chapter.~~ If a dog has been declared restricted ~~a nuisance~~ by the director of health, the owner of the dog may request an administrative hearing in writing within ~~30~~ 10 days of the declaration, to challenge the declaration. The hearing shall be held in accordance with the procedure set forth in City Code Chapter 36, Article X, Uniform Enforcement Procedures, ~~of the Land Development Code~~ and shall be held within 25 days of the request unless continued based upon a showing of good cause. The hearing examiner, as appointed by the city manager, shall take evidence and determine if the facts support a finding that the dog is restricted ~~a nuisance~~. If the hearing examiner finds the dog to be restricted ~~a nuisance~~, an order shall be entered consistent with the remedies set forth in this section. No penalty provided for in section 1-7 shall be imposed by the hearing examiner. The hearing examiner shall not be a judge of the municipal court.

(2) Any owner of a dog declared restricted ~~a nuisance~~ by the hearing examiner shall be ordered to comply with any or all of the restrictions set forth in subsection (c).

(f) Appeal. Any party aggrieved by an administrative decision pursuant to subsection (e) may appeal by filing a request for review with the Greene County Circuit Court no later than the 30th day after the issuance of the administrative decision.

(g) Criminal process. Any person found guilty of a violation prescribed in subsection (a) ~~or~~, (b), or (c) by a judge of the municipal court shall, upon conviction thereof, be punished as provided by section 1-7, and each and every instance of violation shall be a separate offense. ~~A judge of the municipal court shall not impose any penalty listed in subsection (c).~~ In addition to all applicable court costs, the minimum fine for a violation of this section shall be not less than $200.00 for each separate violation. In the event the sentencing judge decides to suspend the imposition or execution of sentence, the sentencing judge shall require the offender serve a term of probation of not less than 365 days and order the offender to perform a minimum of 20 hours of community service work within the probationary term, in lieu of or in addition to any other penalties, including but not limited to a jail sentence as authorized by section 1-7.

(h) Any dog ~~or dogs~~ maintained and utilized by any governmental law enforcement agency shall not be considered a restricted ~~nuisance~~ dog so long as it is maintained and utilized for law enforcement purposes.

Section 10– Springfield City Code, Chapter 18, “Animals,” Article II, “Dogs, Cats, and Ferrets,” Division 3, “Prohibition of Pit Bull Dogs,” Section 98, “Additional regulations,” is hereby amended as set forth below.

(Note: Language to be added is underlined, and language being removed is ~~stricken~~.)

Sec. 18-98. - Additional regulations.

(a) The current owner of any pit bull or any person who acquires valid ownership of a pit bull shall be allowed to keep such pit bull within the city only if the owner registers the pit bull with the city and receives a valid registration. Further, any person owning a pit bull who relocates his or her residence to the city shall, within 30 days of relocating their residence to the city, register their pit bull and comply with all provisions of this chapter regarding ownership of such animal. As a condition of registration of a pit bull, the owner shall, at the time of application, comply with or otherwise provide sufficient evidence that the owner is in compliance with all of the following regulations:

(1) The owner of the pit bull shall provide proof of rabies vaccination and shall pay the annual pit bull registration fee of $50.00.

(2) The owner of the pit bull shall keep current the registration for such pit bull through annual renewal. Such registration is not transferable and shall be renewable only by the holder of the registration or by a member of the holder's immediate family. A pit bull registration tag will be issued to the owner at the time of issuance of the registration. Such registration tag shall be attached to the pit bull by means of a collar or harness and shall not be attached to any pit bull other than the pit bull for which the registration was issued. If the pit bull tag is lost or destroyed, a duplicate tag may be issued upon the payment of a $2.00 fee.

(3) The owner shall, at the owner's own expense, have the pit bull spayed or neutered and shall present to the city manager or his or her authorized representative documentary proof from a licensed veterinarian that this sterilization has been performed. This subsection shall not apply to any pit bull ~~which~~ that is registered as an active participant in a dog exhibition, ~~or~~ skills association, or organization for which the owner must present a certificate of registration from the American Kennel Club and/or the United Kennel Club and a signed and notarized affidavit that the animal has or will be used as a show dog or is a registered service animal. The exception contained in this subsection does not apply to any pit bull ~~which~~ that has not actively participated in any such shows in the previous 12 months.

(4) The owner shall bring the pit bull along with the documentary proof that all of the above conditions have been met to the city animal shelter. The city animal shelter shall issue a registration and registration tag if all conditions have been met and upon receipt of the registration fee. The owner shall allow a person authorized by the city manager to implant a microchip or, at the owner's option, have the microchip implanted by a veterinarian. The city

animal shelter shall maintain a file containing the registration numbers and names of the pit bulls and the names and addresses of the owners. The owner shall notify the city animal shelter of any change of address.

(5) At all times when a pit bull is at the property of the owner, the owner shall keep the pit bull "confined" indoors, or securely restrained as set forth in 18-60(c)(3). ~~, as that term is defined in subsection 18-59.1(d)(3)~~ At all times when a pit bull is away from the property of the owner, the owner shall keep the pit bull securely leashed and either muzzled or wearing head gear that provides equal protection as if muzzled or in a "secure temporary enclosure", as that term is defined in section 18-96.

~~(6) An owner of a pit bull shall notify the city manager or authorized representative within five days in the event that the pit bull is lost, stolen, dies, or has a litter. In the event of a litter, the owner must deliver the puppies to the city animal shelter for destruction or permanently remove the puppies from the city and provide sufficient evidence of such removal by the time the puppies are weaned, but in no event shall the owner be allowed to keep in the city a pit bull puppy born after the date of publication of this ordinance, that is more than eight weeks old. Any pit bull puppies kept contrary to the provisions of this subdivision are subject to immediate impoundment and disposal pursuant to this section.~~

(6~~7~~) The owner shall have posted at each possible entrance to the owner's property where the pit bull is kept a conspicuous and clearly legible pit bull sign. Such pit bull sign must be at least eight inches by ten inches in rectangular dimensions and shall contain only the words "PIT BULL DOG" in lettering not less than two inches in height.

(b) Notwithstanding the provisions of this chapter, the city manager or his or her authorized representative is authorized to immediately impound any pit bull found in the city which does not fall within the exceptions listed in section 18-97, and the municipal animal shelter may house or dispose of such pit bull in such manner as the city manager or his or her authorized representative may deem appropriate, except as the procedures in subsection (c), otherwise require.

(c) When the city manager or his or her authorized representative has impounded any pit bull dog pursuant to this section, and the owner of such dog disputes the classification of such dog as a pit bull, the owner of such dog may file a written petition with the city manager or his or her authorized representative for an administrative hearing concerning such classification no later than seven days after impoundment. Such petition shall include the name and address, including mailing address, of the petitioner. The city manager or his or her authorized representative will then issue a notice of hearing date by mailing a copy to the petitioner's address no later than ten

days prior to the date of the hearing. Where no written request from the owner for a hearing is received by the city manager or his or her authorized representative within seven days of impoundment, the pit bull shall be destroyed.

(d) The administrative hearing, if any, will be held before the city administrative hearing officer, to be appointed by the city manager. Any facts which the petitioners wish to be considered shall be submitted at the hearing. The hearing officer shall make a final determination whether the dog is a pit bull as defined in section 18-96. Such final determination shall be considered a final order of the city manager or his or her authorized representative, subject to review under RSMo ch. 536.

(e) If the dog is found to be a pit bull, it shall be destroyed, unless the owner produces evidence deemed sufficient by the city manager or his or her authorized representative that the pit bull is to be permanently taken out of the city and the owner pays the cost of impoundment. If the dog is found not to be a pit bull, the dog shall be released to the owner. The procedures in this subsection shall not apply, and the owner is not entitled to such a hearing with respect to any dog which was impounded as the immediate result of an attack or bite and has been deemed a "vicious or dangerous ~~restricted~~ dog" under section 18-59.1 or 18-60, or if the owner is a "reckless owner" pursuant to section 18-2.

Section 11– Springfield City Code, Chapter 18, “Animals,” Article II, “Dogs, Cats, and Ferrets,” Division 3, “Prohibition of Pit Bull Dogs,” Section 99, “Enforcement,” is hereby amended as set forth below.

(Note: Language to be added is underlined, and language being removed is ~~stricken~~.)

Sec. 18-99. - Enforcement.

(a) Any person pleading or found guilty of a violation of sections 18-95 through 18-98 shall be penalized in accordance with section 1-7 of this Code, except that upon conviction for each such violation, the penalty shall be or include a fine in an amount no less than $~~5~~200.00 in addition to all applicable court costs. The sentencing judge shall not suspend the imposition of the sentence for such a violation. In the event the dog is subsequently registered as required by Chapter 18, the sentencing judge may ~~decides to~~ suspend the execution of the sentence, and the sentencing judge shall require the offender to serve a term of ~~supervised~~ probation of not less than one year (365 days), and require the offender to perform a minimum of ~~100~~25 hours of community service work within the probationary term, in lieu of or in addition to any other penalties, including but not limited to a jail sentence as authorized by section 1-7, imposed as a part of the sentence.

(b) Any person pleading or found guilty of a second or subsequent violation of sections 18-95 through 18-98 shall be penalized in accordance with section 1-7 of this Code, except that upon conviction for each such second or subsequent violation, the penalty shall be or include a fine in an amount no less than ~~$1,05~~500.00 in addition to all applicable court costs. The sentencing judge shall not suspend the imposition of the sentence for such a violation. In the event the sentencing judge decides to suspend the execution of the sentence, the sentencing judge shall require the offender serve a term of supervised probation of not less than two years (730 days), and the offender perform a minimum of ~~20~~50 hours of community service work within the probationary term, in lieu of or in addition to any other penalties, including but not limited to a jail sentence as authorized by section 1-7, imposed as a part of the sentence.

Section 12– Springfield City Code, Chapter 18, “Animals,” Article III, “Rabies Control,” Section 121, “Procedure when person bitten or scratched by animal; Penalty for violation,” is hereby amended as set forth below.

(Note: Language to be added is underlined, and language being removed is stricken.)

(a) The ~~owner~~ person who owns, possesses, or harbors ~~of~~ any animal which, through biting or scratching, breaks or abrades the skin of any person, regardless of the circumstances or whether the animal is vaccinated and registered or not, shall be required to turn the animal over to the health department or an animal control officer immediately upon the request of the health department or an animal control officer and the animal shall be delivered to the animal shelter. Upon written authorization from the health department or an animal control officer, the animal may, in lieu of being placed in the animal shelter, be delivered to a veterinary hospital maintained by a licensed veterinarian. The owner shall provide documentation to the health department stating the name and contact information for the applicable veterinary hospital prior to said approval. The animal shall remain at the animal shelter or the veterinary hospital ~~place the animal in a veterinary hospital maintained by a licensed veterinarian~~ for a period of not less than ten days following the evening of the day of the bite for clinical observation based upon the most current medical information. Only upon written authorization made by the health department or an animal control officer and directed to the owner of the animal shall an animal be confined on the owner's or other premises for the ten-day period. The owner of the animal shall make the animal available for observation on a schedule as set forth by the health department or animal control officer, and the animal shall remain quarantined from all other animals until the health department has indicated the animal is no longer subject to quarantine. The observation and disposition of other animals involved in biting or scratching any person shall be specified by the department of public health and welfare.

(b) All expenses shall be borne by the owner of the animal. If such animal

develops symptoms suggestive of rabies, the department shall determine the necessity of euthanasia, or the animal may be allowed to die a natural death. If the animal should die while in confinement for any reason, the head of such animal shall be removed and submitted to any qualified official laboratory for the testing of rabies. When the director of public health and welfare determines that an immediate examination of the animal is proper in order to provide for adequate protection of human life or safety, then the animal may be euthanized for purpose of examination before the lapse of ten days. If at the end of the ten-day period the animal is alive and healthy, it may be released to its owner. ~~Only under special circumstances to be specified by the department of public health and welfare shall an animal be confined on the owner's or other premises for the ten-day period.~~

(c) Should it be deemed advisable by the director of public health and welfare of the city, animals impounded under this section may be kept at the animal shelter for the costs provided for in section 18-3.

(d) All animals under clinical observation for rabies must fulfill all other conditions of this chapter prior to release. At the time of the biting, a summons shall be issued to the owner if in violation of any other parts of this chapter.

(e) It shall be unlawful for the owner of the animal to fail to follow the requirements of Section 18-121 of this Code.

(f) Any individual cited for a violation of Section 18-121 is a reckless owner, subject to the provisions of Section 18-2 of this code.

(g) Any person pleading or found guilty of a violation of 18-121 shall be penalized in accordance with section 1-7 of this Code, except that upon conviction for each such violation, the penalty shall be or include a fine in an amount no less than $200.00 in addition to all applicable court costs. In the event the sentencing judge decides to suspend the imposition or execution of the sentence, the sentencing judge shall require the offender serve a term of supervised probation of not less than one year (365 days), and the offender perform a minimum of 20 hours of community service work within the probationary term, in lieu of or in addition to any other penalties, including but not limited to a jail sentence as authorized by section 1-7, imposed as a part of the sentence.

Section 13 – Savings Clause. Nothing in this Ordinance shall be construed to affect any suit or proceeding now pending in any court or any rights acquired or liability, nor any cause or causes of action occurring or existing, under any act or ordinance repealed hereby. Nor shall any right or remedy of any character be lost, impaired, or affected by this Ordinance.

Section 14 – Severability Clause. If any section, subsection, sentence, clause, or phrase of this Ordinance is for any reason held to be invalid, such decision shall not affect the validity of the remaining portions of this Ordinance. City Council hereby declares that it would have adopted the ordinance and each section, subsection, sentence, clause, or phrase thereof, irrespective of the fact that any one or more sections, subsections, sentences, clauses, or phrases thereof be declared invalid.

Section 15 – This Ordinance shall be in full force and effect from and after passage.

Passed at meeting: _____

_____
Mayor

Attest: _____, City Clerk

Filed as Ordinance: _____

Approved as to form: Mary B. Bozarth, City Attorney

Approved for Council action: _____, City Manager

Revisions and Additions to Chapter 18 of the City Code

EXECUTIVE SUMMARY

The Springfield community is experiencing ongoing issues with dogs running loose in neighborhoods. These situations are creating fear and safety concerns for residents. When dogs roam neighborhoods, they create frustration for neighbors and can display aggressive behavior toward people and other animals. Owning a pet is a privilege and responsibility. Animal Control aims to improve community compliance with established responsibilities. Currently, processes for enforcement of animal control ordinances in Chapter 18 place a high burden on both neighbors and Animal Control staff to gain compliance, often requiring months or longer to resolve.

The recommended revisions focus on evolving how the City Code addresses these concerns. Needed improvements would reduce the time to respond swiftly with enforcement tools to hold animal owners accountable to the responsibilities of pet ownership in the city. The changes establish a more straightforward, step-by-step process for establishing graduated restrictions on problem dogs and their owners. These revisions will allow Animal Control to more effectively partner with neighbors to resolve ongoing issues, helping reduce frustration and improve safety.

Revisions to City Code

The following are intended to provide explanations for the revisions and additions to the City Code proposed by SGCHD. These are proposed changes and require approval by City Council.

City Code Section	*Revision*
18-2 **Minimum fine for certain violations; reckless owners**	The revisions provide the City with two pathways to declare someone as a reckless owner: through civil procedures or criminal prosecution. Once deemed a reckless owner, an individual cannot own dogs for five years.
18-9 **Cruelty to animals**	The revisions allow for a simpler path forward for declaring someone as a reckless owner due to cruelty. Once deemed a reckless owner, an individual cannot own dogs for five years. Animal Control is more quickly able to connect an animal that is involved with a case of cruelty to a rescue agency to rehome the animal.
NEW: 18-29 **Obstruction of Animal Control Officer**	This addition creates a requirement for the community to cooperate with Animal Control Officers. There is currently no requirement for individuals to provide basic information, like name and date of birth. This change will help officers in the field as they respond to complaints.

NEW: 18-52.5 Risking Community Exposure to Rabies	This addition establishes a clear expectation that dogs must display a rabies tag and creates a penalty if they do not, particularly when the dog is involved with a bite or scratch incident. Rabies is a serious disease and the victim of the bite or scratch needs to know whether there is a risk for exposure to rabies.
18-53 Running at large prohibited; minimum fine	This revision raises the minimum fine from $10 to $50 for an at large dog, providing a stronger deterrent for individuals.
18-55 Holding and disposition of impounded animals	This revision recognizes that there are multiple rescue organizations in the community that the City can partner with to connect animals to adoption opportunities. It also clarifies that the animal shelter cannot adopt animals directly from the shelter.
18-59.1 Vicious dogs	This revision clarifies that once a dog is declared vicious, it cannot be returned to the owner, and the owner is responsible for paying all fees associated with keeping the dog at the shelter.
18-60 Dangerous dogs	The name of this section is being changed from Restricted Dogs to Dangerous Dogs. The revision clarifies the Health Department's role in declaring dogs dangerous and clarifies the owner's responsibilities of owning a dangerous dog. It also changes how long a dog is considered dangerous from two years to for the life of the dog. Owners can apply to have the designation removed after three years. The revision also allows Animal Control to consider a dog dangerous if it has already been declared restricted and continues to run at large in the neighborhood.
18-61 Restricted dogs	The name of this section is being changed from Nuisance Dogs to Restricted Dogs. This revision creates a clean and clear path for Animal Control to declare a dog as restricted. It allows Animal Control to determine this after an owner has been issued two citations for violations for their dog(s) running loose.
18-98 Additional regulations	This revision clarifies the requirements of owning a pit bull. There are no changes in what must be done, but it does clarify one requirement of a kennel for a pit bull. Additionally, revisions removes a portion of City Code that required ongoing communication with Animal Control about changes to registered pit bull dogs.
18-99 Enforcement	This revision reduces the penalty for failing to register a pit bull, making penalties similar to other violations.
18-121 Procedure when person bitten or scratched by animal	This revision clarifies that when an animal is involved with bite or scratch, the animal must be observed by Animal Control.

Revisions and Additions to Chapter 18 of the City Code

INTRODUCTION

The review and revisions of Chapter 18 were motivated by the opportunity to better serve the community, improve public safety, and reduce the risk of rabies exposure. The Health Department and Law Department, including the Chief Prosecutor, collectively reviewed and made revisions, with each department lending its knowledge, experience, and expertise to the process. The goals of the revisions are to a) streamline and improve enforcement of violations, and b) support and protect individuals already following animal control laws. This document outlines the rationale for revising and adding sections of City Code.

PURPOSE FOR REVISIONS TO CHAPTER 18 OF THE CITY CODE

The Springfield community is experiencing ongoing issues with dogs running loose in neighborhoods. These situations are creating fear and safety concerns for residents. When dogs roam neighborhoods, they create frustration for neighbors and can display aggressive behavior toward people and other animals. Owning a pet is a privilege and responsibility. Animal Control aims to improve community compliance with established responsibilities. Currently, processes for enforcement of animal control ordinances in Chapter 18 place a high burden on both neighbors and Animal Control staff to gain compliance, often requiring months or longer to resolve.

For instance, someone who lets their dog run loose may be issued multiple citations by Animal Control. Neighbors must wait for these citations to work through the legal process while enduring the dog continuing to run loose. This process can often last months and in some cases, years. Once the legal process is complete, there are still multiple steps that must be taken to create a solution for the neighbors. This is an unreasonable situation for law-abiding citizens and the recommendations presented here help create solutions.

The recommended revisions focus on evolving how the City Code addresses these concerns. Needed improvements would reduce the time to respond swiftly with enforcement tools to hold animal owners accountable to the responsibilities of pet ownership in the city. The revisions give Animal Control Officers clearer authority to respond quickly and take appropriate action. The changes establish a more straightforward, step-by-step process for establishing graduated restrictions on problem dogs and their owners. If those requirements are not met, the owner may be prohibited from owning dogs for five years. These revisions will allow Animal Control to more effectively partner with neighbors to resolve ongoing issues, helping reduce

frustration and improve safety. It is our recommendation to adopt the revisions to Chapter 18 to help address animal control within the city, improving neighborhood safety and stability.

RATIONALE FOR REVISIONS AND ADDITIONS TO SECTIONS OF CHAPTER 18 OF THE CITY CODE

Each section within the rationale provides an explanation of the present challenges of existing language within the City Code, how the revisions improve the City Code, and why the change is being made.

Sec. 18-2. - Minimum fine for certain violations; reckless owners

The existing language can be confusing and lacks clarity to distinguish between criminal and civil elements and remedies. The proposed revisions help clarify the differences between the necessary elements in criminal and civil reckless owner cases.

For example, currently, one path to a civil reckless owner finding requires an individual to be found guilty beyond a reasonable doubt in a criminal prosecution before the civil reckless owner case can be filed in an administrative proceeding, where the standard is a preponderance (more likely than not) of the evidence. The revisions specifically related to civil cases are necessary to eliminate the need for the City to satisfy a criminal burden of proof (where the punishment involves a fine, plus releasing all animals to the custody of Animal Control and prohibiting the respondent from owning an animal for a period of five years) in order to obtain a civil remedy (release and five year prohibition only).

The proposed revisions provide greater clarity to differentiate between criminal and civil options in reckless owner cases, furnishing Animal Control and the City a more efficient process to obtain a civil remedy. The revisions also change the length of time an individual is prohibited from owning animals from two years to five years, with an opportunity to apply for the restrictions to be lifted after three years. This change more closely aligns the requirements with model code language and provides community relief for a longer period of time.

Sec. 18-9. - Cruelty to animals

The existing City Code requires that the owner be found guilty beyond a reasonable doubt of animal cruelty before the victim animal can be placed with a rescue agency to be re-homed. This can leave animals in the Shelter for extended periods of time, which is potentially harmful to the animal and burdens shelter operations.

A past Animal Control case prompted these revisions. In that case, an abused animal was held in the shelter, with a rescue organization ready to adopt. However, due to challenges and length of the process to prosecute the cruelty case, the Shelter was not able to release the animal to the rescue organization, resulting in the abused animal being held long-term in the

shelter. The intent is to give an opportunity for animals in this situation to be rescued using evidence of abuse to trigger a reckless owner finding.

The proposed revisions create a civil administrative process to expedite relief for the victim animal, permitting Animal Control to more efficiently connect the animal with a rescue agency for re-homing.

Sec. 18-29. - Obstruction of Animal Control Officer

The existing City Code lacks any requirement to cooperate with an Animal Control Officer. Animal Control Officers are not commissioned peace officers, which limits their ability to require cooperation during an investigation. Currently, officers cannot require someone to identify themselves or to cooperate with an investigation. This places officers at a disadvantage and creates significant inefficiencies in investigating violations of Chapter 18. The addition of this section raises expectations for compliance.

The proposed additions create a requirement for individuals to provide their personally identifiable information (e.g., legal name and date of birth) when the Animal Control Officer has reason to believe they have been involved in a violation of Chapter 18. The proposed addition prohibits individuals from making false statements and representations, which inhibit the officer from completing their investigation of Chapter 18 violations.

Sec. 18-52.5 - Risking community exposure to rabies

The existing City Code lacks a consequence for the owner of a dog that bites or otherwise exposes the community to rabies.

Exposure to rabies is a significant health threat for the victim of a bite or scratch. When vaccine status of the offending dog is unknown, it is recommended the victim receive post exposure prophylaxis, which creates additional burden, stress, and financial strain on the victim.
The proposed additions establish the expectation that owners of dogs will display and provide the animal's vaccination status in the event that it potentially exposes someone to rabies. The proposed additions establish a criminal violation for an owner whose dog bites or scratches and fails to display rabies tags or otherwise provide proof of vaccination for the dog, imposing a minimum fine of $200 or 20 hours of community service when found guilty.

Sec. 18-53. - Running at large prohibited; minimum fine

Under the current City Code, owners who violate this section only receive a minimum $10 fine. City staff has received feedback that the current fine is not sufficient to deter individuals from future offenses, and often, individuals are not financially able to pay a larger fine, resulting in the judge waiving it. The revision sets the minimum fine at $50 and includes an option for a judge to assign 8 hours of community service in lieu of the fine.

Sec. 18-55. - Holding and disposition of impounded dogs

Under the current City Code, only the Southwest Missouri Humane Society is contemplated as a rescue organization suitable for placing unclaimed animals from the shelter. This language does not reflect the present reality that there are many suitable rescue organizations with whom Animal Control can contract to adopt out unclaimed animals. The revision broadens the scope, removing "the Southwest Missouri Humane Society" and replacing it with "a contracted rescue organization" so that more animals in our community have the opportunity to be rescued and re-homed. Additionally, the revisions remove the ability of the Animal Control program to directly adopt from the facility, which is not allowed by the program's facility license with the Missouri Department of Agriculture.

Sec. 18-59.1. - Vicious dogs

Under the existing City Code, an alternative to euthanizing is provided after a vicious dog ruling. The alternative involves returning the dog to the owner under certain restrictions, requiring Animal Control to monitor and verify the owner's compliance with the restrictions. It is not clear under the existing City Code whether the owner must pay Animal Control impoundment fees to offset the cost of housing the animal during the proceeding as a condition of the animal's release.

A past administrative vicious dog case prompted the proposed revisions. In that case, the hearing officer was under the mistaken impression that Animal Control had the operational capacity to regularly monitor the vicious dog's home to ensure the owners were in compliance with the numerous restrictions imposed by the City Code and reflected in his ruling. The hearing officer did not find authority in the City Code to charge the owners for several months of impoundment fees, resulting in that cost being passed on to taxpayers.

To avoid this outcome from recurring, the alternatives to euthanasia for a vicious dog has been removed Animal Control's authority to collect impoundment fees under this section has been clarified.

Sec. 18-60. - Dangerous dogs

The name of this section is being changed from Restricted Dog to Dangerous Dog to more closely align with model code language. The current City Code lacks clarity pertaining to the Health Department's authority concerning dangerous dogs, as well as the requirements for the owner of a dog declared dangerous.

The proposed revisions are necessary to clarify the Health Department's authority to declare a dog dangerous, and the dog owner's obligation to satisfy the requirements.
In addition, the proposed revisions to the City Code change the dangerous dog declaration from two years to indefinite, with an opportunity to apply for the restrictions to be lifted after

three years. It provides the opportunity for a dog and its owner who have not had any violations during that period to have the designation removed. This change more closely aligns the requirements with model code language.

The revisions include a provision for a dog that has been previously declared restricted (formerly nuisance) and has been cited two additional times to be declared dangerous. This is a key aspect of graduated enforcement, placing kenneling specifications as part of the requirements for the owner to prevent a dog from repeatedly running at large in the neighborhood.

Sec. 18-61. - Restricted dogs

The name of this section is being changed from Nuisance Dogs to Restricted Dogs to better align with the requirements for the owner. Under the existing City Code, a dog cannot be declared restricted until “found” running at large more than one time within a 12-month period.

These proposed revisions were prompted by the enforcement challenges encountered with restricted dog owners who repeatedly violate Chapter 18. Much of this enforcement challenge can be attributed to the lack of clarity as to the requirement of what constitutes “finding” a dog at large in violation of Section 18-53. When interpreted to require a criminal conviction rather than a citation, this can prolong the process to provide relief to neighborhoods that are meaningfully impacted by at large dogs roaming the streets. Animal Control has received community feedback that this has been a concern and source of frustration.

The restricted dog declaration is a tool that can serve as an early deterrent and control measure to improve an owner’s compliance with City Code. Creating a more expedited process for restricted dog declarations will allow the City to apply the designation to prevent future violations. Restricted dog declarations are also a key tool in utilizing graduated enforcement, serving as a pathway to both dangerous dog and reckless owner declarations. These revisions also place fines and community service as part of the penalty to impress upon individuals the severity of the violation.

The proposed revisions clarify that only a dog at large citation is needed, not a conviction, for the Animal Control to declare a restricted dog. This change will provide a more responsive approach to dogs that are allowed to run loose. The proposed revisions establish a minimum fine of $200 or 20 hours of community service. The proposed revision also reduces the appeal period from 30 days to 10 days to more quickly respond to the community.

Sec. 18-98. - Additional regulations

In the current City Code, Section 18-98, which provides additional regulations for owners of pit bulls within Springfield, refers to Sec. 18-59.1, Vicious dogs, regarding confinement. In the

recommended revisions to Section 18-59.1, this language is deleted along with other criteria for releasing a vicious dog with certain restrictions. The proposed revision of City Code Section 18-98 refers to the confinement language in Section 18-60 (Restricted dogs), which include the same containment requirements. There will be no practical change for owners of pit bull dogs. The proposed revisions also remove a paragraph that requires an owner to contact Animal Control if the animal is lost, stolen, dies or has a litter, which is not feasible for the owner or Animal Control to monitor.

Sec. 18-99. - Enforcement

The City Prosecutor recommends reducing the penalties and community service for the failure to register pit bull dogs. The current penalties for failure to register a pit bull dog in the existing City Code were adopted after the city prohibited the ownership of pit bulls within the city limits. The penalty remained in place after voters decided to allow the ownership of registered pit bull dogs. City Code was not fully updated after this decision. Additionally, financial challenges can be a contributing factor in a person's failure to comply with City Code. The current penalty does not distinguish between a person who refuses to register their dog and one who subsequently registers it. The recommended changes reduce the penalties and community service for the failure to register pit bull dogs. Changing the ordinance will encourage compliance and registration, and the proposed changes are more aligned with the economic reality faced by individuals with limited financial resources.

Sec. 18-121. - Procedure when person bitten or scratched by animal; Penalty for violation

In the past, there have been issues filing and prosecuting cases where an owner, possessor, or person harboring the dog has failed or refused to follow the procedures for animal quarantine. The current City Code relies on the admission of reports from others (hearsay) as evidence to establish a violation. The proposed revisions provide a straightforward rule that an animal involved in biting or scratching must be turned over to Animal Control immediately upon request unless written authorization from Animal Control permits an alternative method for quarantine. This revision will improve Animal Control’s ability to monitor the animal for rabies during the quarantine period.

EXPLANATION TO COUNCIL BILL 2026-115 (CARROLL)

FILED: 05/01/2026

ORIGINATING DEPARTMENT: Police

TITLE: A special ordinance amending the budget of the City of Springfield for Fiscal Year 2025-2026, in the amount of $118,800, to appropriate unused funds originally budgeted for Police Department salaries to provide for the sustainment of Police Department Body Worn Cameras.

PURPOSE: Budget transfer within SPD allocated funds to pay for one year of body worn camera services.

BACKGROUND INFORMATION: The SPD contract for body worn cameras ("BWC") is near the end of its original 5-year term. The department needs to extend the contract for one year while evaluating and securing a contract for replacements. The cost of a one-year contract to continue the existing service, without disruption, is $118,800. Funds are available in the SPD budget to cover the cost due to vacant positions, and a budget transfer is required.

Submitted By: Paul Williams, Police Chief

Authorized for inclusion on the agenda pursuant to City Code section 2-33:
Collin Quigley, Deputy City Manager 05/13/2026

Attachments:
1. Police Department BWC Budget Adjustment Ord
2. '051 POL FY26 Body Worn Cameras Year 6 from SPD Salary Savings General Fund

One-rdg. _____
P. Hrngs. _____
Pgs. _____
Filed: 05-12-26

Sponsored by: Carroll

First Reading: _____ Second Reading: _____

COUNCIL BILL 2026-115 SPECIAL ORDINANCE _____

AN ORDINANCE

AMENDING the budget of the City of Springfield for Fiscal Year 2025-2026, in the amount of $118,800, to appropriate unused funds originally budgeted for Police Department salaries to provide for the sustainment of Police Department Body Worn Cameras.

_____

WHEREAS, the Police Department began the use of Body Worn Cameras ("BWCs") in 2021; and

WHEREAS, Police Department BWCs were initially acquired and deployed pursuant a 5-year contract with Motorola Solutions; and

WHEREAS, the initial contract is nearing the end of its original 5-year term; and

WHEREAS, the conclusion of the original contract provides a natural opportunity for the Police Department to reevaluate options for BWC providers to ensure this service is obtained cost-effectively and efficiently; and

WHEREAS, the Police Department wishes to continue the use of BWCs in the field uninterrupted while evaluating other options for BWC services; and

WHEREAS, extending the existing contract for one additional year, at a cost of $118,800, allows for uninterrupted BWC service while also allowing for a thorough review of all options currently available.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF SPRINGFIELD, MISSOURI, as follows, that:

Section 1 – The budget for Fiscal Year 2025-2026 of the City of Springfield is hereby amended in the accounts and in the amounts as shown on Budget Adjustment No. 051, a copy of which is attached hereto and incorporated herein by this reference as "Exhibit A".

Section 2 – City Council finds that the budget adjustment made above has been recommended by the City Manager.

Section 3 – The City Manager, or designee, is directed to cause the appropriate entries to be made in the books and records of the City.

Section 4 - This Ordinance shall be in full force and effect from and after passage.

Passed at meeting: _____

_____
Mayor

Attest: _____, City Clerk

Filed as Ordinance: _____

Approved as to form: _____, Assistant City Attorney

Approved for Council action: _____, City Manager

CITY OF SPRINGFIELD, MO
BUDGET ADJUSTMENT

Exhibit A

Budget Adjustment
051

Revenues:

Fund	Dept	Org	Account	P&G	Location	Amount	Description
Net Revenue Adjustment						-	

Expenditures:

Fund	Dept	Org	Account	P&G	Location	Amount	Description
10110	18	97510	501190	000000		118,800.00	Body Worn Cameras Yr 6 Cloud, Software and Hosting
10110	18	90100	500110	000000		(118,800.00)	FY26 SPD Salary Savings - General Fund
Net Expenditure Adjustment						-	

Fund Balance Appropriation:

Fund		Title	Amount

Explanation: To amend the FY2025-26 budget by appropriating $118,800 from PD salary saving to approved purchases.

Requested By:

Amanda Livingston 3/10/2026
Department Head Date

Approved By:

3/10/2026
Director of Finance Date

City Manager Date

Authorization:

Council Bill No. 2026-115
Ordinance No.
1st Reading
2nd Reading
Journal Imp No.

EXPLANATION TO COUNCIL BILL 2026-116 (LEE)

FILED: 05/01/2026

ORIGINATING DEPARTMENT: Police

TITLE: A special ordinance amending the budget of the City of Springfield for Fiscal Year 2025-2026, in the amount of $98,708, to appropriate unused funds originally budgeted for Police Department salaries to provide for the continuation of the Police Recruitment Plan.

PURPOSE: Budget transfer within the SPD allocated funds to continue the nationwide recruiting campaign in order to increase applicants for the police academy.

BACKGROUND INFORMATION: The police department is facing a staffing shortage and initiated an extensive recruiting campaign. The results have been positive in attracting more applicants in 2025. In order to continue the campaign in 2026, an additional $98,708 is needed. Due to vacant officer positions, monies are available within the SPD budget to fund the expense.

Submitted By: Paul Williams, Police Chief

Authorized for inclusion on the agenda pursuant to City Code section 2-33:
Collin Quigley, Deputy City Manager 05/13/2026

Attachments:
1. Police Department Recruitment Budget Adjustment Ord (1)
2. 0057 POL FY25-26 Salary Savings for Police Recruitment BA

One-rdg. _____
P. Hrngs. _____
Pgs. _____
Filed: 05-12-26

Sponsored by: Lee

First Reading: _____ Second Reading: _____

COUNCIL BILL 2026-116 SPECIAL ORDINANCE _____

AN ORDINANCE

AMENDING the budget of the City of Springfield for Fiscal Year 2025-2026, in the amount of $98,708, to appropriate unused funds originally budgeted for Police Department salaries to provide for the continuation of the Police Recruitment Plan.

_____

WHEREAS, the Police Department implemented an extensive recruiting campaign in response to ongoing staffing shortages; and

WHEREAS, the recruitment campaign has been effective in attracting more applicants to the Police Department; and

WHEREAS, based on current staffing levels and the success of the recruitment campaign, the Police Department wishes to continue the campaign for an additional year; and

WHEREAS, the cost of extending the existing campaign for one additional year is $98,708.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF SPRINGFIELD, MISSOURI, as follows, that:

Section 1 – The budget for Fiscal Year 2025-2026 of the City of Springfield is hereby amended in the accounts and in the amounts as shown on Budget Adjustment No. 057, a copy of which is attached hereto and incorporated herein by this reference as “Exhibit A”.

Section 2 – City Council finds that the budget adjustment made above has been recommended by the City Manager.

Section 3 – The City Manager, or designee, is directed to cause the appropriate entries to be made in the books and records of the City.

Section 4 - This Ordinance shall be in full force and effect from and after passage.

Passed at meeting: _____

_____
Mayor

Attest: _____, City Clerk

Filed as Ordinance: _____

Approved as to form: _____, Assistant City Attorney

Approved for Council action: _____, City Manager

CITY OF SPRINGFIELD, MO
BUDGET ADJUSTMENT

Exhibit A

Budget Adjustment
057

Revenues:

Fund	Dept	Org	Account	P&G	Location	Amount	Description
Net Revenue Adjustment						-	

Expenditures:

Fund	Dept	Org	Account	P&G	Location	Amount	Description
10110	18	97510	504580	103070		98,708.00	POLICE RECRUITMENT PLAN
10110	18	90100	500110	000000		(98,708.00)	FY26 SPD SALARY SAVINGS - GENERAL FUND
Net Expenditure Adjustment						-	

Fund Balance Appropriation:

Fund		Title	Amount

Explanation: To amend the FY2025-26 budget by appropriating $98,708.00 from PD salary saving to Police Recruitment Plan.

Requested By:

Amanda Livingston 4/30/2026
Department Head Date

Approved By:

4/30/2026
Director of Finance Date

City Manager Date

Authorization:

Council Bill No. 2026-116
Ordinance No.
1st Reading
2nd Reading
Journal Imp No.

CITY OF Springfield

EXPLANATION TO COUNCIL BILL 2026-117 (HOSMER)

FILED: 04/23/2026

ORIGINATING DEPARTMENT: Finance

TITLE: A special ordinance setting a preliminary tax levy on real and personal property for current expenses and debt retirement of the City of Springfield, Missouri, and its boards and agencies, for the Fiscal Year beginning July 1, 2026, and ending June 30, 2027; and declaring an emergency pursuant to Section 2.12(5) of the City Charter.

PURPOSE: To set the real and personal property preliminary tax levy for the City of Springfield for Fiscal Year 2026-2027 at a level of $0.5636 per $100 assessed valuation; and declaring an emergency.

BACKGROUND INFORMATION: This Ordinance is a companion bill to the adoption of the annual City operating budget and sets the preliminary tax levy on real and personal property. The tax levy is assessed on all property on the tax rolls as of January 1, 2026. Notices have been published calling a public hearing for the purpose of setting the tax levy for the City of Springfield budget for 2026-2027. A copy of the notice is attached hereto setting forth the estimate of the assessed valuations and the tax revenues for 2026.

The tax levies established by this ordinance are based upon State law. The State Auditor is required to review and approve all levies and determine that they meet the statutory test and the Constitutional Test or Hancock Amendment. These tests factor in growth in assessed value and the Consumer Price Index. After checking all relevant information, the State Auditor provides the City of Springfield with a statement showing the tax rate ceiling, which is an amount that the levies cannot exceed without a vote of the people.

The projected levy for Fiscal Year 2026-2027 will be $0.5636 per $100 assessed valuation in the Proposed Budget. The actual levy may be adjusted in August 2026, based on the tax levies provided by the State Auditor.

This bill is presented as an emergency. City Council is not expected to vote on this bill after the first reading. The bill is presented as an emergency to allow changes to the ordinance after the first reading and prior to final approval by City Council.

Submitted By: Tammy Beeman, Financial Analyst

Authorized for inclusion on the agenda pursuant to City Code section 2-33:
Collin Quigley, Deputy City Manager 05/13/2026

Attachments:
1. FY27 Tax Levy
2. FY27_Tax_Levy_Exhibit_A_Public_Notice

One-rdg. _____
P. Hrngs. _____
Pgs. _____
Filed: 05-12-26

Sponsored by: Hosmer

First Reading: _____ Second reading: _____

COUNCIL BILL 2026-117 SPECIAL ORDINANCE _____

AN ORDINANCE

SETTING a preliminary tax levy on real and personal property for current expenses and debt retirement of the City of Springfield, Missouri, and its boards and agencies, for the Fiscal Year beginning July 1, 2026, and ending June 30, 2027; and declaring an emergency pursuant to Section 2.12(5) of the City Charter.

_____

WHEREAS, with the adoption of the budget for the Fiscal Year beginning July 1, 2026, and ending June 30, 2027, generally referred to as “Fiscal Year 2026-2027,” it is necessary for City Council to set the preliminary tax levy on real and personal property; and

WHEREAS, said tax levies are assessed on all real and personal property on the tax rolls as of January 1, 2026; and

WHEREAS, the projected levy for Fiscal Year 2026-2027 is anticipated to be $0.5636 per $100 of assessed valuation, although this levy may be adjusted by the State Auditor in August of 2026; and

WHEREAS, the City of Springfield Public Hearing Notice regarding the levies herein has been published, and a copy of said notice is attached hereto as “Exhibit A.”

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF SPRINGFIELD, MISSOURI, as follows, that:

Section 1 – There is hereby levied for Fiscal Year 2026-2027, a tax upon the $100 valuation of all real and personal property within, or having its taxable status within, the corporation limits of the City subject to taxation, and upon the $100 valuation of all property in the City, subject to taxation and assessed to any railroad, telegraph, telephone, street, railway, or bridge company, according to the last assessed valuation of the said properties of such companies fixed by the following purposes:

(a) For municipal purposes as authorized by Article X Section 1 of the Constitution

of the State of Missouri and approved by the voters of the City, a rate of $0.2424;

(b) For the establishment and maintenance of public parks in the City, for the aforesaid fiscal year, a rate of $0.1698;

(c) For maintenance and operation of public health service in the City, for the aforesaid fiscal year, a rate of $0.1158;

(d) For the establishment and maintenance of an art museum in the City, for the aforesaid fiscal year, a rate of $0.0356.

These levies are subject to revision based on the levies certified by the Greene County Clerk.

Section 2 – City Council finds that the Director of Finance of the City has presented to City Council the following information:

(1) The assessed valuations by category of real, personal, and other tangible property for the preceding year and this year are as follows:

SOURCE	2025 FINAL VALUATION	2026 ESTIMATED VALUATION
Real Estate	$3,648,326,921	$3,820,163,119
State Assessed Utilities	27,183,208	28,463,537
Personal Property	775,699,850	812,235,313
Total	$4,451,209,979	$4,660,861,969

(2) The amount of revenue required to be produced from the property tax as set forth in the annual budget is $27,003,162.

(3) The tax rates proposed to generate this revenue and their estimated yields are as follows:

PURPOSE	PROPOSED TAX LEVY	TOTAL
Art Museum	$ 0.0356	$ 1,785,899
Public Parks	0.1698	8,518,690
Public Health	0.1158	5,809,738
Municipal Purposes	0.2424	12,161,004
Total	$ 0.5636	$ 28,275,331

Section 3 – City Council finds that proper notice was published containing the

information set forth in Section 2 above, and a public hearing has been held regarding the proposed rates of taxes.

Section 4 – Within such time so as to permit the aforesaid taxes to be extended upon the assessment books, the levy so established herein shall be certified by the City Clerk to the Director of Finance and to the County Collector of Greene County, Missouri, who shall proceed to extend the aforesaid taxes for the year upon the assessment books, in the appropriate columns. Furthermore, City Council expressly authorizes the City Manager and City Clerk to take any and all actions necessary to carry out the intent and purpose of this Ordinance.

Section 5 – This Ordinance, any ordinance fixing any tax rate or assessment, is an emergency within the meaning of Section 2.12(5) of the Home Rule Charter of the City of Springfield, Missouri, and shall be in full force and effect immediately from and after its passage and approval.

Passed at meeting: _____

_____
Mayor

Attest: _____, City Clerk

Filed as Ordinance: _____

Approved as to form: Laura Vales, Assistant City Attorney

Approved for Council action: _____, City Manager

CITY OF SPRINGFIELD
PUBLIC HEARING NOTICE

SUBJECT: Setting tax levy for the City of Springfield budget for 2026-2027

DATE AND TIME: May 18, 2026 at 6:30 P.M.

PLACE: Regional Police-Fire Training Center, 2620 W Battlefield, Springfield, MO 65807

SUPPLEMENTAL INFORMATION: To provide citizens of the City of Springfield, Missouri, the opportunity to submit written and oral comments on the City's tax levy. Estimated assessed valuations for 2026 are:

SOURCE	VALUATION
Real Property	$3,820,163,119
State Assessed Utilities	28,463,537
Personal Property	812,235,313
Total	$4,660,861,969

The proposed City budget for 2026-2027 reflects the following yield on this estimated valuation:

FUND	TAX LEVY	YIELD	SURTAX	TOTAL
Art Museum	$ .0356	$ 1,659,267	$ 126,632	$ 1,785,899
Public Parks	.1698	7,914,144	604,546	8,518,690
Public Health	.1158	5,397,278	412,460	5,809,738
Municipal Purposes	.2424	11,297,930	863,074	12,161,004
Total	$ .5636	$26,268,619	$2,006,712	$28,275,331

The City of Springfield tax levies will be finalized in August 2026 when the Greene County Clerk provides the City with the certified levy amounts.

Address written comments to Anita Cotter, City Clerk, P. O. Box 8368, Springfield, MO 65801-8368. Written comments received before or at the hearing will be placed in the record.

Anita Cotter, City Clerk
City of Springfield, Missouri

EXPLANATION TO COUNCIL BILL 2026-118 (HARDINGER)

FILED: 04/23/2026

ORIGINATING DEPARTMENT: Finance

TITLE: A special ordinance adopting a budget for the City of Springfield, Missouri, for the Fiscal Year beginning July 1, 2026, and ending June 30, 2027; providing that certain amounts shown in the budget document are appropriated for the various departments specified in said budget; and declaring an emergency pursuant to Section 2.12(3) of the City Charter.

PURPOSE: To adopt the Fiscal Year 2026-2027 Budget for the City of Springfield and declare an emergency

BACKGROUND INFORMATION: The Finance Department recommends the adoption of a Proposed Budget totaling $560,505,636 as submitted by the City Manager, which is available on-line through the City's website and a copy is on file with the City Clerk's office, entitled "CITY OF SPRINGFIELD PROPOSED ANNUAL BUDGET, Fiscal Year 2026–2027." The proposed budget was reviewed and discussed by City Council on March 16, 2026; April 27, 2026; and May 11, 2026. There was an opportunity for public input at a public hearing held on May 18, 2026.

The proposed budget revenues and appropriations are detailed in "Exhibit A" of the Ordinance.

This Ordinance is presented as an emergency as it relates to and meets the requirements of adopting a budget for the City. City Council is not expected to vote on this Ordinance after the first reading. The Ordinance is presented as an emergency to allow changes to the Ordinance after the first reading and prior to final approval by City Council.

Submitted By: Tammy Beeman, Financial Analyst

Authorized for inclusion on the agenda pursuant to City Code section 2-33:
Collin Quigley, Deputy City Manager 05/13/2026

Attachments:
1. FY27 Budget
2. FY27 Revenues
3. FY27 Appropriations

One-rdg._____
P. Hrngs. _____
Pgs. _____
Filed: 05-12-26

Sponsored by: Hardinger

First Reading: _____ Second Reading: _____

COUNCIL BILL 2026-118 SPECIAL ORDINANCE _____

AN ORDINANCE

ADOPTING a budget for the City of Springfield, Missouri, for the Fiscal Year beginning July 1, 2026, and ending June 30, 2027; providing that certain amounts shown in the budget document are appropriated for the various departments specified in said budget; and declaring an emergency pursuant to Section 2.12(3) of the City Charter.

WHEREAS, the City Manager, or designee, has submitted a budget to City Council for the Fiscal Year beginning July 1, 2026, and ending June 30, 2027, generally referred to as "Fiscal Year 2026-2027"; and

WHEREAS, a public hearing was held on the budget on May 18, 2026.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF SPRINGFIELD, MISSOURI, as follows, that:

Section 1 – A budget for Fiscal Year 2026-2027 for the City of Springfield, Missouri, entitled "CITY OF SPRINGFIELD PROPOSED ANNUAL BUDGET, Fiscal Year 2026-2027" ("Budget"), a copy of which is on file with the City Clerk, providing total revenues of $560,505,636 and appropriations for all funds of $560,505,636, is hereby adopted. Budgeted revenues and appropriations for Fiscal Year 2026-2027 are detailed in "Exhibit A," which is attached hereto and incorporated herein by reference.

Section 2 – The lease obligations under various agreements between the City and the Public Building Corporation of the City of Springfield, Missouri, as well as all other similar lease obligations subject to annual appropriations, are hereby authorized for renewal for Fiscal Year 2026-2027, and the funds for such payments as set forth in the Budget stand appropriated.

Section 3 – From July 1, 2026, the effective date of the Budget, the amounts shown in the Budget as adopted are hereby appropriated for the various departments, offices, and agencies specified therein. All Fiscal Year 2026-2027 expenditures of the City shall be limited to the appropriations provided for the departments, offices, and

agencies, as detailed in the Budget, unless further appropriations are made by City Council.

Section 4 – The City Manager, or designee, is directed to cause the proper accounting entries to be made in the books and records of the City so as to reflect the revenues and appropriations for Fiscal Year 2026-2027 and is further directed to file a certified copy of the adopted Budget for said fiscal year with the City Clerk.

Section 5 – This Ordinance, an appropriation for the payment of current expenses of the city government, is an emergency within the meaning of Section 2.12(3) of the Home Rule Charter of the City of Springfield, Missouri, and shall be in full force and effect immediately from and after its passage and approval.

Passed at meeting: _____

_____
Mayor

Attest: _____, City Clerk

Filed as Ordinance: _____

Approved as to form: Laura Vales, Assistant City Attorney

Approved for Council action: _____, City Manager

Revenues

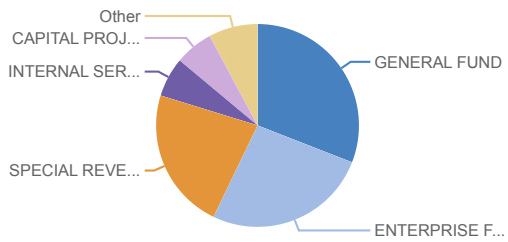
Schedule of Actual and Projected Revenues and Resources (All Funds Types):

FY2026-27 Annual Operating Budget

CITY OF SPRINGFIELD - CITY CHARTER
SECTION 5.8(1)

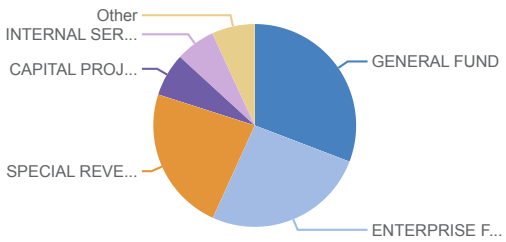
The budget shall provide:
An itemized statement of estimated revenues from all sources for the year which the budget is to cover, together with a comparative statement of revenues for the last completed fiscal year and the year in progress.

FY26 Budgeted Revenues



$529,828,212.00
Revenues in 2026

FY27 Budgeted Revenues



$560,505,636.00
Revenues in 2027

Revenues by Fund Type

	2023 - 24 Actual	2024 - 25 Actual	2025-26 Adopted Budget	2026-27 Proposed Budget
GENERAL FUND	$114,920,416	$128,007,204	$163,864,675	$172,686,006
SPECIAL REVENUE FUNDS	$161,162,641	$158,630,721	$119,838,457	$129,778,402
GRANT REVENUE FUNDS	$20,213,839	$18,275,318	$20,485,778	$15,795,881
CAPITAL PROJECTS FUNDS	$38,592,520	$38,372,734	$32,353,000	$38,522,923
DEBT SERVICE FUNDS	$21,486,938	$23,666,482	$20,988,722	$22,781,335
ENTERPRISE FUNDS	$175,274,875	$217,919,215	$138,914,248	$145,558,757
INTERNAL SERVICE FUNDS	$31,885,390	$33,101,865	$33,383,332	$35,382,332
TOTAL	**$563,536,619**	**$617,973,538**	**$529,828,212**	**$560,505,636**

All Revenues Details

	2023 - 24 Actual	2024 - 25 Actual	2025-26 Adopted Budget	2026-27 Proposed Budget
CHARGES AND FEES				
AVIATION FUEL SALES	$6,503,803	$5,899,653	$7,178,000	$7,438,000
CHARGES FOR SERVICES	$84,082,417	$91,242,283	$90,236,982	$92,685,075
RENTALS	$9,111,816	$8,525,143	$10,159,575	$10,152,930
SALE OF GOODS	$3,325,103	$3,354,735	$3,835,523	$3,880,512
USER FEES	$33,027,797	$37,428,782	$36,805,354	$38,788,400
CHARGES AND FEES TOTAL	**$136,050,936**	**$146,450,596**	**$148,215,434**	**$152,944,917**
INTERGOVERNMENTAL				
GASOLINE TAX	$6,269,197	$6,956,815	$7,400,000	$7,750,000
GRANT REVENUE	$32,001,413	$37,295,262	$22,477,358	$25,938,851
GREENE COUNTY	$2,333,077	$2,396,961	$2,450,000	$2,600,000
STATE OF MISSOURI	$2,624,533	$2,624,754	$2,750,000	$2,800,000
INTERGOVERNMENTAL TOTAL	**$43,228,221**	**$49,273,792**	**$35,077,358**	**$39,088,851**
LICENSES AND FINES				
COURT COSTS	$1,009,173	$706,151	$337,000	$337,000
FINES AND FORFEITURES	$875,464	$800,420	$723,000	$573,000
OCCUPATIONAL LICENSES	$5,495,416	$5,205,431	$5,702,500	$5,702,500
PERMITS	$2,348,480	$2,776,750	$2,431,500	$2,636,500
LICENSES AND FINES TOTAL	**$9,728,533**	**$9,488,753**	**$9,194,000**	**$9,249,000**
OTHER FINANCING SOURCES/USES				
BOND AND LOAN PROCEEDS	$9,502,733	$7,898,228	$362,500	$1,800,730
TRANSFERS	$99,562,112	$115,851,875	$47,905,481	$51,365,182
OTHER FINANCING SOURCES/USES TOTAL	**$109,064,845**	**$123,750,103**	**$48,267,981**	**$53,165,912**
OTHER REVENUES				
INTEREST	$15,118,180	$18,313,002	$9,839,716	$10,651,250
OTHER MISC	$16,471,817	$23,835,991	$18,965,357	$13,563,220
RESERVE	$0	-$633	$6,950,998	$15,803,303
SPECIAL ASSESSMENT TAX BILL	$132,322	$138,980	$245,500	$0
OTHER REVENUES TOTAL	**$31,722,320**	**$42,287,340**	**$36,001,571**	**$40,017,773**
TAXES				
CIGARETTE TAX	$513,100	$471,657	$475,000	$450,000
GROSS RECEIPTS TAX	$4,329,319	$3,852,826	$3,730,000	$3,835,000
PAYMENT IN LIEU OF TAXES	$17,130,144	$17,350,262	$17,130,000	$18,623,000
PROPERTY TAX	$26,127,053	$28,627,030	$28,334,385	$28,643,954
SALES TAX	$159,779,605	$169,764,749	$177,280,102	$185,903,239
SPECIAL TAXING DISTRICTS	$8,946,877	$9,952,584	$5,320,881	$5,640,920
TOURISM	$6,332	$0	$4,001,500	$4,303,070
USE TAX	$16,909,335	$16,703,845	$16,800,000	$18,640,000
TAXES TOTAL	**$233,741,764**	**$246,722,953**	**$253,071,868**	**$266,039,183**
TOTAL	**$563,536,619**	**$617,973,538**	**$529,828,212**	**$560,505,636**

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Expenditures

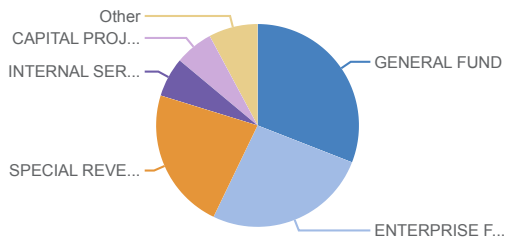
Summary of Expenditures and Appropriations (All Fund Types):

FY2026-27 Annual Operating Budget

CITY OF SPRINGFIELD - CITY CHARTER
SECTION 5.8(2)

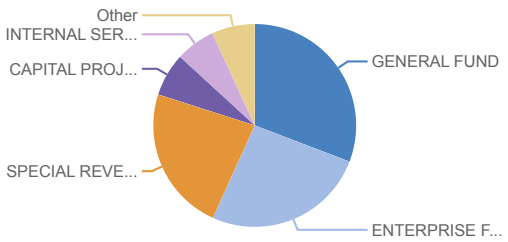
The budget shall provide:
An itemized statement of expenditures recommended by the City Manager for each office, department or agency for the year which the budget is to cover, together with a comparative statement of expenditures for the last completed fiscal year and the year in progress.

FY26 Appropriations



$529,828,212.00
Expenses in 2026

FY27 Appropriations



$560,505,636.00
Expenses in 2027

FY2027 General Fund Expenditures by Dept

	2023 - 24 Actual	2024 - 25 Actual	2025-26 Adopted Budget	2026-27 Proposed Budget
BUILDING DEVELOPMENT SERVICES	$4,056,936	$4,266,821	$4,940,187	$5,163,952
CITY ATTORNEY	$2,497,927	$2,721,552	$2,927,753	$3,019,228
CITY CLERK	$1,007,039	$949,981	$860,992	$994,852
CITY MANAGER	$2,522,591	$2,995,205	$4,133,502	$5,813,588
ECONOMIC VITALITY	$843,319	$861,094	$939,218	$961,030
FINANCE	$14,846,098	$14,601,597	$46,871,975	$49,752,490
FIRE	$27,055,410	$27,821,188	$31,153,721	$32,643,434
HEALTH	$79,938	$84,379	$130,500	$130,500
HUMAN RESOURCES	$2,482,220	$2,646,692	$3,070,072	$3,157,848
INFORMATION SYSTEMS	$5,259,266	$5,127,171	$5,609,402	$6,252,450
MAYOR AND COUNCIL	$322,174	$341,169	$338,159	$342,687
MUNICIPAL COURT	$2,008,037	$2,172,465	$2,495,324	$2,682,572
PARKS	$1,422	$189,540	$100,000	$100,000
PLANNING & DEVELOPMENT	$2,805,099	$2,453,190	$2,682,645	$2,865,667
POLICE	$33,135,000	$36,154,343	$42,721,877	$43,416,579
PUBLIC INFORMATION	$1,740,689	$1,860,915	$1,783,634	$1,931,255
PUBLIC WORKS	$12,321,375	$12,466,275	$13,030,714	$13,382,874

	2023 - 24 Actual	2024 - 25 Actual	2025-26 Adopted Budget	2026-27 Proposed Budget
WORKFORCE DEVELOPMENT	$71,434	$74,941	$75,000	$75,000
TOTAL	$113,055,975	$117,788,517	$163,864,675	$172,686,006

FY2027 All Appropriations by Type

	2023 - 24 Actual	2024 - 25 Actual	2025-26 Adopted Budget	2026-27 Proposed Budget
ENTERPRISE FUNDS				
CLEAN WATER SERVICES	$87,934,428	$72,233,552	$71,162,500	$72,750,000
AIRPORT	$38,382,860	$50,659,354	$43,129,533	$46,866,300
SOLID WASTE	$26,746,783	$53,292,302	$19,325,000	$19,903,300
GOLF	$4,705,104	$5,565,196	$5,297,215	$6,039,157
ENTERPRISE FUNDS TOTAL	$157,769,174	$181,750,404	$138,914,248	$145,558,757
GENERAL FUND	$113,055,975	$117,788,517	$163,864,675	$172,686,006
SPECIAL REVENUE FUNDS				
PUBLIC PARKS	$38,678,908	$35,402,566	$36,168,619	$38,469,590
PUBLIC SAFETY PENSION SALES TAX	$45,705,145	$36,631,486	$0	$0
PUBLIC WORKS - TRANSPORTATION	$15,355,787	$15,908,621	$20,925,000	$25,500,000
LAW ENFORCEMENT SALES TAX	$9,416,877	$10,642,323	$10,790,626	$11,572,000
PUBLIC HEALTH SERVICES	$8,183,955	$8,252,664	$9,756,376	$11,000,803
EMERGENCY COMMUNICATIONS	$7,435,590	$6,604,026	$9,802,139	$9,821,750
LEVEL PROPERTY TAX	$6,292,079	$6,215,887	$6,848,478	$8,251,898
HOTEL/MOTEL TAX	$3,819,318	$6,050,330	$4,001,500	$4,303,070
CONVENTION AND VISITORS BUREAU	$4,386,886	$4,445,527	$4,421,575	$4,647,221
MISCELLANEOUS SPECIAL REVENUE	$1,375,182	$1,814,938	$6,198,617	$5,842,188
COMMUNITY IMPROVEMENT DISTRICTS	$2,648,019	$3,407,876	$3,272,500	$2,112,347
ART MUSEUM	$2,133,132	$2,296,697	$2,199,437	$2,481,181
POLICE SPECIAL REVENUE	$1,639,309	$1,650,685	$2,783,590	$2,943,826
ROAD AND BRIDGE MAINTENANCE	$786,204	$1,451,821	$2,650,000	$2,775,000
VIDEO SERVICE PROVIDER	$38,392	$47,122	$20,000	$57,528
SPECIAL REVENUE FUNDS TOTAL	$147,894,785	$140,822,568	$119,838,457	$129,778,402
INTERNAL SERVICE FUNDS				
SELF-INSURANCE	$25,793,373	$27,088,901	$27,359,620	$28,673,620
SERVICE CENTER	$4,043,671	$4,241,993	$5,750,000	$6,375,000
PRINT SHOP	$228,041	$270,192	$273,712	$333,712
INTERNAL SERVICE FUNDS TOTAL	$30,065,084	$31,601,087	$33,383,332	$35,382,332
CAPITAL PROJECTS FUNDS	$18,627,772	$29,049,773	$32,353,000	$38,522,923
DEBT SERVICE FUNDS	$23,840,694	$20,296,199	$20,988,722	$22,781,335
GRANT REVENUE FUNDS				
WORKFORCE DEVELOPMENT	$11,209,235	$10,891,605	$9,971,513	$5,434,339
COMMUNITY DEVELOPMENT	$3,484,036	$3,163,061	$6,767,300	$6,809,089
WIC PROGRAM	$1,644,658	$2,020,753	$1,957,648	$1,928,662
PUBLIC HEALTH GRANTS	$2,876,542	$2,508,496	$974,572	$717,466
POLICE GRANTS	$618,925	$705,271	$814,745	$906,325
FIRE GRANTS	$341,382	$174,865	$0	$0
GRANT REVENUE FUNDS TOTAL	$20,174,777	$19,464,051	$20,485,778	$15,795,881
TOTAL	$511,428,262	$540,772,598	$529,828,212	$560,505,636

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CITY OF Springfield

EXPLANATION TO COUNCIL BILL 2026-119 (HOSMER)

FILED: 05/01/2026

ORIGINATING DEPARTMENT: Police

TITLE: A special ordinance authorizing the City Manager, or designee, to enter into an Intergovernmental Agreement with the Board of Governors of Missouri State University for the purpose of continuing to provide enhanced law enforcement services within and around the Missouri State University campus.

PURPOSE: For over 25 years, SPD has staffed a police substation on the MSU campus as part of an intergovernmental agreement to provide policing services to the campus community. This is the annual renewal of the agreement which divides funding the personnel costs between MSU (80%) and the City (20%).

BACKGROUND INFORMATION: For over 25 years, SPD has maintained a police substation on the campus of MSU staffed by10 officers. Under the agreement, MSU funds 80% and the City funds 20% of the personnel costs. The partnership has been an unqualified success in creating a safe and secure environment for students, faculty, staff, and visitors.

Submitted By: Paul Williams, Police Chief

Authorized for inclusion on the agenda pursuant to City Code section 2-33:
Collin Quigley, Deputy City Manager 05/13/2026

Attachments: 1. MSU Substation 2026-2027 ordinance

One-rdg. _____
P. Hrngs. _____
Pgs. _____
Filed: 05-12-26

Sponsored by: Hosmer

First Reading: _____ Second Reading: _____

COUNCIL BILL 2026-119 SPECIAL ORDINANCE _____

AN ORDINANCE

AUTHORIZING the City Manager, or designee, to enter into an Intergovernmental Agreement with the Board of Governors of Missouri State University for the purpose of continuing to provide enhanced law enforcement services within and around the Missouri State University campus.

_____

WHEREAS, the need exists to staff a police substation on the campus of Missouri State University ("MSU") on a continuous basis to promote public safety, prevent crime and enhance the quality of life in and around the expanding MSU campus; and

WHEREAS, the City of Springfield, Missouri, ("City") and MSU have worked together for over 25 years in a partnership to meet that need by locating a substation of the Springfield Police Department ("SPD") on the MSU campus; and

WHEREAS, the City and MSU wish to continue working together to provide a safe community in and around the MSU campus by renewing the Intergovernmental Agreement Regarding Law Enforcement Services ("IGA") for a police substation on the MSU campus; and

WHEREAS, this IGA outlines the terms for the continued operation of the SPD substation on the MSU campus.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF SPRINGFIELD, MISSOURI, as follows, that:

Section 1 – The City Manager, or designee, is hereby authorized to enter into an Intergovernmental Agreement with the Board of Governors of Missouri State University to continue providing enhanced law enforcement services, said agreement to be substantially in the form and content as that document attached hereto and incorporated herein by reference as "Exhibit A."

Section 2 – This Ordinance shall be in full force and effect from and after passage.

Passed at meeting: _____

_____
Mayor

Attest: _____, City Clerk

Filed as Ordinance: _____

Approved as to form: _____, Assistant City Attorney

Approved for Council action: _____, City Manager

CITY OF Springfield

EXPLANATION TO COUNCIL BILL 2026-107 (MCGULL)

FILED: 05/08/2026

ORIGINATING DEPARTMENT: Planning and Development

TITLE: A special ordinance authorizing the Director of Planning and Development to accept the dedication of public streets and easements to the City of Springfield, Missouri, as shown on the Preliminary Plat Renewal of MHC Kenworth Addition, generally located at 5400 East Bucees Boulevard, upon the applicant filing and recording a final plat that substantially conforms to the preliminary plat; and authorizing the City Clerk to sign the final plat upon compliance with all the terms of this Ordinance.

PURPOSE: Authorizing the Director of Planning and Development to accept the dedication of public streets and easements to the City of Springfield, Missouri, as shown on the Preliminary Plat Renewal of MHC Kenworth Addition, generally located at 5400 East Bucees Boulevard upon the applicant filing and recording a final plat that substantially conforms to the preliminary plat; and authorizing the City Clerk to sign the final plat upon compliance with all the terms of this Ordinance. (Staff recommends that City Council accept the public streets and easements.)

BACKGROUND INFORMATION:

A. An original Preliminary Plat of MHC Kenworth Addition dated January 31st, 2024, is on file in the Department of Planning and Development. A reduced version of which is included for general reference in Exhibit B, Attachment 3.

B. The Planning and Zoning Commission held a public hearing on April 9th, 2026, and approved the Preliminary Plat by a vote of 8 to 0, subject to the following conditions:

1. All improvements shall be constructed in accordance with the “Design Standards for Public Improvements” of the Public Works Department and the maintenance and operation of such improvements shall be the responsibility of the developers unless approved by the Director of Public Works. All required sanitary sewer, street, sidewalk, and drainage plans shall be prepared in accordance with City standards and specifications and approved by the Director of Public Works.

2. All required street rights-of-way, drainage and utility easements and limitations of access shall be dedicated on the final plat.

3. The developer shall meet all city and state erosion control regulations prior to disturbing the soil.

4. It is determined that the public interest requires assurance concerning adequate maintenance of common space areas and improvements. The restrictive covenants, rules and bylaws creating the common ownership must therefore provide that if the owners of the Property Owners Association shall fail to maintain the common areas or improvements in reasonable order and condition in accordance with the approved plans, the City may, after notice and hearing, maintain the same and assess the costs against the units or lots, per the Common Open Space and Common Improvement Regulations section of the Zoning Ordinance.

5. The developer shall be responsible for the relocation costs of any existing utility services and shall be responsible for clearing all utility easements of trees, brush, and overhanging tree limbs.

6. All other requirements which are necessary for this subdivision to be in compliance with the Subdivision Regulations.

All required improvements shall be the sole responsibility of the sub-divider. As prescribed by Section 36-233 of the Subdivision Regulations, the improvements shall be made or guaranteed by means of bond, escrow agreement, letter of credit or other appropriate security agreement. Release of the final plat for recording shall be withheld until the sub-divider has complied with this section.

Section 36-226 of the Subdivision Regulations requires that a final plat be submitted within two years of City Council's acceptance of the public streets and easements.

Attached for Council information is a sketch showing the location of the plat area, an exhibit showing the proposed plat, and a copy of the Planning and Development Department staff report to the Planning and Zoning Commission.

REMARKS: Staff recommends approval.

Submitted By: Andrew Menke, Senior Planner

Authorized for inclusion on the agenda pursuant to City Code section 2-33:

Attachments:
1. Preliminary Plat Renewal of MHC Kenworth Addition - 5400 E Bucees Boulevard
2. PPlat Renewal MHC Kenworth_exhA
3. PPlat Renewal MHC Kenworth_exhB

One-rdg. _____
P. Hrngs. _____
Pgs. _____
Filed: 04-28-26

Sponsored by: McGull

First Reading: _____ Second Reading: _____

COUNCIL BILL 2026-107 SPECIAL ORDINANCE _____

AN ORDINANCE

AUTHORIZING the Director of Planning and Development to accept the dedication of public streets and easements to the City of Springfield, Missouri, as shown on the Preliminary Plat Renewal of MHC Kenworth Addition, generally located at 5400 East Bucees Boulevard, upon the applicant filing and recording a final plat that substantially conforms to the preliminary plat; and authorizing the City Clerk to sign the final plat upon compliance with all the terms of this Ordinance.

_____

WHEREAS, an original Preliminary Plat of MHC Kenworth Addition, dated January 31, 2024, is on file with the City's Department of Planning and Development; and

WHEREAS, the Planning and Zoning Commission of the City of Springfield, Missouri, conditionally approved the Preliminary Plat of MHC Kenworth Addition on February 15, 2024; and

WHEREAS, the City Council previously authorized the Director of Planning and Development to accept the dedication of public streets and easements to the City of Springfield, Missouri, as shown on the Preliminary Plat of MHC Kenworth Addition on March 25, 2024, via Special Ordinance 27974; and

WHEREAS, the Preliminary Plat of MHC Kenworth Addition was set to expire on March 25, 2026; and

WHEREAS, Section 36-226(3)(h)2 of the Springfield City Code allows the Planning and Zoning Commission to grant a single two-year extension upon request; and

WHEREAS, such request was made prior to expiration of the Preliminary Plat of MHC Kenworth Addition; and

WHEREAS, the Planning and Zoning Commission held a public hearing and

conditionally approved the Preliminary Plat Renewal of MHC Kenworth Addition on February 26, 2026, by a vote of 9 to 0, a copy of the Record of Proceedings from said public hearing being attached hereto and incorporated herein by this reference as "Exhibit A."

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF SPRINGFIELD, MISSOURI, as follows, that:

Section 1 – City Council hereby authorizes the Director of Planning and Development, on behalf of the City of Springfield, to accept the land, easements, and improvements dedicated to the City, as shown on the Preliminary Plat Renewal of MHC Kenworth Addition, which is generally located at 5400 East Bucees Boulevard, as approved by the Planning and Zoning Commission. The original Preliminary Plat of MHC Kenworth Addition is on file in the Department of Planning and Development ("Approved Preliminary Plat"), a reduced version of which is attached hereto for general reference as "Exhibit B – Attachment 3." All of "Exhibit B," including attachments, is incorporated herein by this reference.

Section 2 – The Director of Planning and Development shall be authorized to accept the land, easements, and improvements dedicated to the City, as shown on said plat, upon the applicant filing and recording a final plat in accordance with this Ordinance and the Subdivision Regulations of the City, which final plat shall substantially conform to the Approved Preliminary Plat, including those conditions described in "Exhibit B – Attachment 2," and upon the Director of Public Works certifying to the Director of Planning and Development and the City Clerk that the public improvements have been made in accordance with City standards and specifications. Said public improvements shall not be accepted until the occurrence of all conditions referenced herein and in "Exhibit B – Attachment 2."

Section 3 – The final plat shall not be recorded until: (1) the public improvements relating to the Approved Preliminary Plat have been constructed according to the specifications of the City of Springfield, Missouri, and are approved by the Director of Public Works, and all engineering fees, permit fees, licenses, and other fees occasioned by or in connection with the construction of said improvements have been paid to the City; or (2) in lieu of the construction of the improvements, that the Applicant has filed with the City Manager, according to the terms of the Subdivision Regulations of the City, the prescribed financial assurances in a form acceptable to the City to ensure the construction of the improvements and the payment to the City of all engineering fees, permit fees, licenses, and other fees occasioned by, or which will be occasioned by, the construction of the improvements.

Section 4 – Upon compliance with all the requirements of this Ordinance, including the conditions described in "Exhibit B – Attachment 2," the City Clerk is hereby authorized to endorse City Council's approval upon the final plat pursuant to Section 445.030, RSMo., and such endorsement shall constitute the acceptance of the Public Improvements contained therein.

Section 5 – This Ordinance shall be in full force and effect from and after its passage.

Passed at meeting: _____

_____
Mayor

Attest: _____, City Clerk

Filed as Ordinance: _____

Approved as to form: Laura Vales, Assistant City Attorney

Approved for Council action: _____, City Manager

EXHIBIT A
RECORD OF PROCEEDINGS
Planning and Zoning Commission – April 9, 2026

Preliminary Plat Renewal of MHC Kenworth Addition
5400 East Bucees Boulevard
Applicant: TCEK Real Estate, LLC

Mr. Crighton stated that this is a request to approve the renewal of a preliminary plat for a 2-lot commercial subdivision. Commissioner Knuckles raised concerns about traffic impact studies and turning radius for semi-trucks, which staff confirmed would be addressed at the building permit stage.

Commissioner Doennig opened the public hearing

Mr. Patrick Doty, 3301 E. Kearney Street, stated that they are requesting an extension due to construction timing, noting that a general contractor has been selected. He also addressed concerns about traffic flow, stating a similar business that utilizes the roundabouts has been able to operate without any issues. They also have been having conversations with the city about making adjustments to the farm road to improve access.

Commissioner Doennig closed the public hearing.

COMMISSION ACTION:
Planning and Zoning Commissioner Knuckles moved to approve Preliminary Plat Renewal of MHC Kenworth Addition. Commissioner Jacquez seconded the motion. The item **Passed** with the following votes: Ayes: Commissioner Doennig, Commissioner Hunton, Commissioner Pauly, Commissioner McClure, Commissioner Knuckles, Commissioner Jacquez, Commissioner Souliere, and Commissioner Scott. Nays: None. Absent: Commissioner Gunther. Abstain: None.



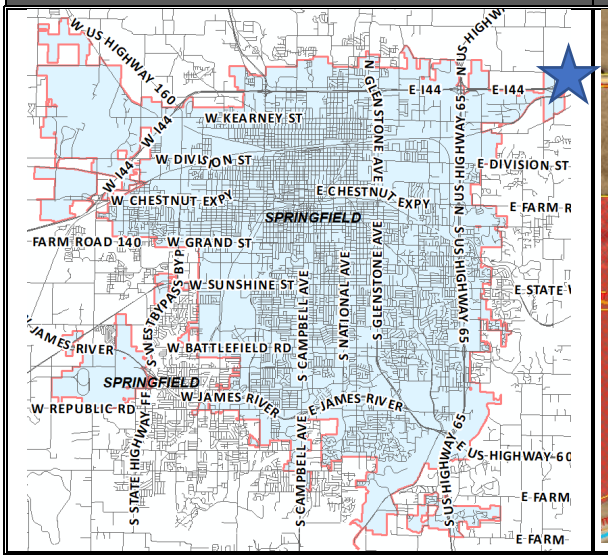
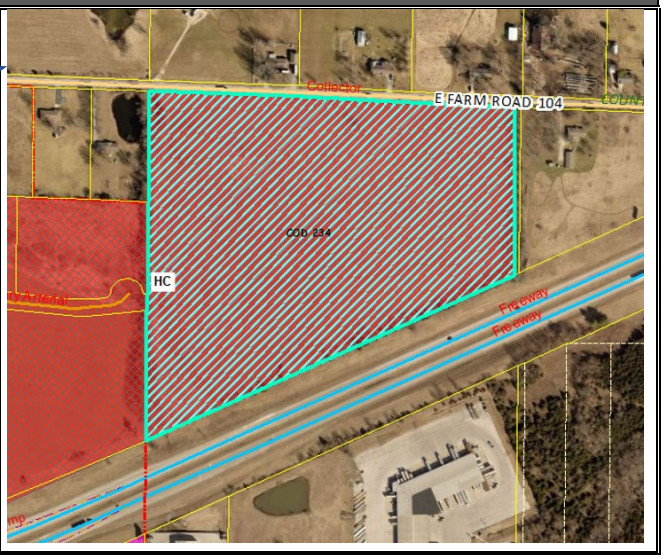
Bob Hosmer, AICP
Planning Manager

DEVELOPMENT REVIEW STAFF REPORT

PROJECT INFORMATION	
Case Number:	Preliminary Plat Renewal of MHC Kenworth Addition
Location:	5400 East Bucees Boulevard
Total Acres:	28.2 acres
Applicant:	TCEK Real Estate, LLC
Existing Land Use:	Undeveloped
Neighborhood Meeting:	N/A
Planning and Zoning Commission:	April 9, 2026
City Council:	May 4, 2026
Public Notification:	Posted property
Staff:	Andrew Menke, Senior Planner, (417) 864-1613
Staff recommendation:	Staff recommends approval
Proposed motion:	Move to approve the renewal of the preliminary plat of MHC Kenworth Addition subject to the conditions listed in Attachment 2 of the staff report. (All commission motions are made in the affirmative.)
Required Vote:	A majority of those present (5 members are a quorum).

PROJECT SUMMARY:

TCEK Real Estate, LLC is requesting to renew the preliminary plat of MHC Kenworth Addition, a two-lot commercial subdivision. The property is approximately 28.2 acres and is generally located at 5400 East Bucees Boulevard.

LOCATION MAP	ZONING MAP
	

DEVELOPMENT REVIEW STAFF REPORT

GOOGLE AERIAL OF LANDMARKS, BUSINESSES, AND ATTRACTIONS:



GOOGLE MAPS STREET VIEW:



View from Farm Road 104

DEVELOPMENT REVIEW STAFF REPORT

PROPERTY HISTORY:

The subject property was annexed into the city on August 21, 2023. On this date the property was rezoned from County A-1, Agricultural to a HC, Highway Commercial District with Conditional Overlay District 234.

As a part of the 2026 Citywide Remapping, the zoning of this property translated to GC, General Commercial District with Conditional Overlay District 234 on April 7, 2026.

The original version of this preliminary plat was approved by the Planning & Zoning Commission on February 15, 2024 and the streets and easements accepted by City Council on March 25, 2024.

PLANNING AND ZONING COMMISSION AUTHORITY:

Action Type: Administrative.

A subdivision is the legal process to divide a surveyed tract of land into lots for the purposes of sale of the property. Platting is the process of mapping those lots and is considered part of the subdivision process. Subdivision is an administrative action. An administrative action is ministerial and non-discretionary. In reviewing a preliminary plat, the role of the Planning and Zoning Commission is to determine whether the plat meets the minimum requirements set forth in the subdivision statutes and the subdivision regulations in the Land Development Code. If the plat meets these standards, approval is required.

Relevant Authority

Revised Statutes of Missouri: Sections 89.400 through 89.470

City Charter: Sec. 11.7. – Legal status of master plan.

(1) *Master plan to provide general guidelines.* The master plan shall be prepared and maintained as a general guide for the orderly and efficient development and redevelopment of the City of Springfield. The master plan shall be kept current through review not less than every five years. When required by this Charter or otherwise deemed necessary, such review shall include proposed revisions or alterations in the master plan and public hearings thereon.

(2) *Regulations to generally conform to master plan.* All rezoning of land, subdivision plats, development proposals, and the zoning ordinance, subdivision ordinance and the zoning map should generally conform with the guidelines set forth in the master plan and should be reviewed for consistency with the master plan; provided, however, inconsistencies with the master plan shall not constitute cause to invalidate any such matter. The master plan shall not have the effect of a regulatory ordinance.

(3) *Master plan to guide public improvements.* The master plan shall provide guidelines for the location of public streets, parks and other public ways, grounds and spaces, public buildings and structures, facilities of public or private utilities, and the acquisition of real property by the city for public use. To that end the planning and zoning commission shall review the following:

(a) All proposals to construct or extend public streets.
(b) All proposals to improve land as a park.
(c) All proposals to lay out or improve other public ways, grounds or spaces.
(d) All proposals to construct public buildings and structures.
(e) All proposals to lay out and construct facilities of public utilities, whether publicly or privately owned.
(f) All proposals to acquire real property for public purposes.

In reviewing and approving all such proposals, the function of the planning and zoning commission shall be to determine whether they are generally consistent with the master plan of the city. No such proposals shall be constructed or authorized until the location, extent and character thereof has been submitted and approved by the planning and zoning commission.

In case of disapproval, the commission shall communicate its reasons to the city council, and the city council, by vote of not less than two-thirds of its entire membership, may overrule the disapproval and, upon the overruling, the city council or the appropriate board or officer may proceed, except that if the proposal is by an agency other than an agency of the city and the authorization or financing does not fall within the province of the city council, then the submission to the planning commission shall be by the agency having jurisdiction, and the planning commission's disapproval may be overruled by that agency by a vote of not less than two-thirds of its entire membership. The acceptance, widening, removal, extension, relocation, narrowing, vacation, abandonment, change of use, acquisition of land, sale or lease of any street or other public facility is subject to similar submission and approval, and the failure to approve may be similarly overruled.

In the event the commission shall fail to act within thirty days after the date of official submission of a proposal (which date shall be the date that the matter is placed upon the agenda of the commission) to the commission, then the proposal shall be deemed to have been approved by the commission, unless a longer period for review by the commission shall have been authorized by the council or by the public officials submitting the proposal. In any case in which the commission finds that it is not reasonably able to complete its review of a proposal within thirty days, it may extend the time for such review for not more than thirty days.

City of Springfield Land Development Code

Sec. 36-226. - Major subdivision review procedure.

(3) Preliminary plat.

(a) After participating in the pre-subdivision review with city staff, the subdivider may prepare a preliminary plat, together with supplementary material as prescribed in section 36-263.

(b) Copies of the preliminary plat and supplementary materials specified, together with a fee for administrative handling and processing in the amount prescribed by ordinance, shall be submitted to the director of planning and development with written application for approval. Upon determination that the application is complete, the director shall place the application on the agenda of the commission at a regular meeting not later than the second such meeting following the date of the filing of the application.

(c) The commission shall hold a public hearing on the preliminary plat. Notice of the public hearing shall be made in accordance with city ordinance and the rules of the commission.

(d) The commission shall review the preliminary plat and supporting material, recommendations from agencies or officials, and testimony and exhibits submitted at the public hearing. The commission shall approve, conditionally approve or disapprove the preliminary plat and if approved, the commission shall express its approval and state the conditions of such approval, if any, or if disapproved, shall express its disapproval and its reasons, therefore. In any case, a notation of the action taken, and the reasons, therefore, shall be entered in the records of the commission.

(e) If approved by the commission or approved with conditions acceptable to the applicant, then the director of planning and development shall forward the preliminary plat to the city council for its approval. Council shall determine if the land or easement proposed to be dedicated by the applicant for public use or if the public improvements shall be accepted by the city. If the city council determines that the location of the land to be dedicated for public use or the location of public improvements is appropriate and complies with applicable ordinances then the city council shall authorize the acceptance of the dedication of the land or easements upon the applicant filing and recording a final plat which substantially conforms to the preliminary plat and shall authorize the acceptance of the public improvements upon the director of public works certifying to the director of planning and development and the city clerk that the public improvements have been made in accordance with city standards and specifications.

(f) If approved with modifications which are not acceptable to the applicant or if disapproved, the director of planning and development shall attach to the plat a statement of reasons for such action and return it to the subdivider.

(g) Actions by the commission regarding the preliminary plat are final unless such action is appealed by the subdivider to the city council within 90 days of the action by the commission.

(h) Effective period of preliminary approval.

1. The approval of a preliminary plat shall be effective for a period of two years. The application for final plat approval must be submitted to the department of planning and development within the two-year period. Any plat not submitted within the two-year limit shall be null and void except as provided in subparagraph 2. below.

2. The planning and zoning commission may at its discretion and upon application by the subdivider extend the effective period of preliminary approval by two years, one time. All other submittals shall be considered a new preliminary plat and subject to applicable reviews.

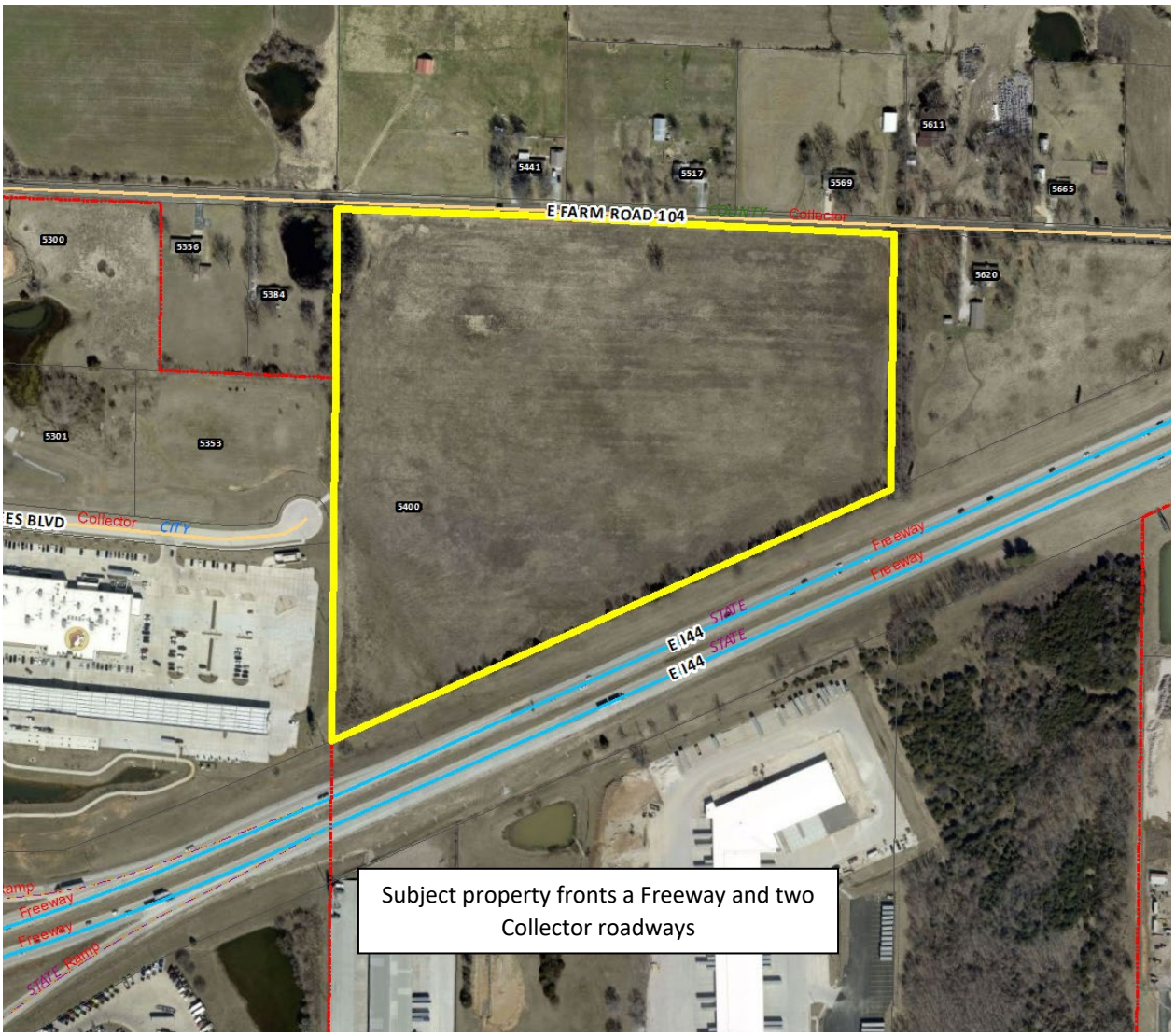
DEVELOPMENT REVIEW STAFF REPORT

ZONING ORDINANCE REQUIREMENTS:

CODE ITEM	REQUIREMENTS FOR GENERAL COMMERCIAL
Lot Area Standards	Minimum: N/A Maximum: N/A
Lot Width Standards	Minimum: 50 feet Maximum: N/A
Minimum Open Space Requirements	20%
Maximum Structure Height	N/A
Minimum Setbacks	Front: 30 feet Side (Interior): N/A Side (Street): 25 feet Rear: N/A
Street Classification	E Farm Road 104 – Collector Interstate 44 – Freeway E Bucees Boulevard – Collector
Sidewalks	Sidewalk is required along the frontage of E Farm Road 104 and the future extension of E Bucees Boulevard. Sidewalk currently does not exist along E Farm Road 104.

DEVELOPMENT REVIEW STAFF REPORT

MAJOR THOROUGHFARE MAP:



DEVELOPMENT REVIEW STAFF REPORT

STAFF ANALYSIS AND RECOMMENDATION:

1. The applicant is proposing to subdivide approximately 28.2 acres into a two (2) lot subdivision named “MHC Kenworth Addition”.

2. At the time this application was submitted, the property was zoned HC, Highway Commercial District with Conditional Overlay District 234. As a part of the 2026 Citywide Remapping, the zoning of this property translated to GC, General Commercial District with Conditional Overlay District 234 on April 7, 2026.

3. All lots meet the minimum requirements of the City’s subdivision regulations and the GC, General Commercial District.

4. The preliminary plat for MHC Kenworth was approved by City Council on March 25, 2024. An approved preliminary plat is active for two (2) years. If a final plat is not submitted within the two-year limit the Planning and Zoning Commission may, upon application by the subdivider, extend the effective period of preliminary approval by two years, one time.

5. Public improvement plans for the subdivision were submitted on March 25, 2025 and are currently under review by City staff.

6. If Planning and Zoning Commission approves the renewal of the preliminary plat, then the plat will be forwarded to City Council for acceptance of public streets and easements. An approved preliminary plat is active for two (2) years.

7. The Land Development Code requires that each lot have adequate public facilities including but not limited to water, sanitary sewer, electricity, gas, open space, storm drainage, access to the public transportation system, and that any existing natural features such as floodplains, stream buffers and sinkholes have been identified on the preliminary plat.

8. The proposed preliminary plat was reviewed by City departments and comments are contained in ***Attachment 1.*** Conditions of Approval are provided in ***Attachment 2.*** The Preliminary Plat drawing can be found in ***Attachment 3.***

STAFF RECOMMENDATION:

1. The proposed subdivision meets all applicable requirements of the City of Springfield’s *Land Development Code* for subdivisions and is compatible with the zoning requirements of the General Commercial District.

2. Staff recommends approval as submitted in the staff report.

PLANNING AND ZONING COMMISSION OPTIONS:

In reviewing a preliminary plat, the role of the Planning and Zoning Commission is to determine whether the plat meets the requirements set forth in the subdivision statutes and the Land Development Code. If the plat meets these minimum standards, approval is required.

The commission shall review the preliminary plat and supporting material, recommendations from agencies or officials, and testimony and exhibits submitted at the public hearing.

1. The commission shall approve the renewal of the preliminary plat.

2. The commission shall conditionally approve the renewal of the preliminary plat.

3. The commission shall disapprove the renewal of the preliminary plat and state for the record which requirement or requirements of the *Land Development Code* the preliminary plat fails to meet.

PUBLIC NOTIFICATION AND COMMENTS:

The property was posted by the applicant at least 10 days prior to the public hearing.
No comments were received by citizens for this case at the time of publication.

DEVELOPMENT REVIEW STAFF REPORT

DEPARTMENT COMMENTS:

ATTACHMENT 1

1. AT&T:

   Did not respond in allotted review time.

2. CITY UTILITIES:

   CU has electric/gas/water available along the west property line and electric/gas along FR 104.

3. DEPARTMENT OF PUBLIC WORKS TRANSPORTATION ENGINEERING SURVEY DIVISION:

   Approved

4. DEPARTMENT OF ENVIRONMENTAL SERVICES WASTEWATER MANAGEMENT DIVISION:

   1. A new sewer easement extending up to Farm Road 104 will be required on the Final Plat.
   2. This property is not in a sewer district. If any new buildings are constructed, the property owner would need to sign and execute a special sewer connection agreement and pay any required fees. These are required for sewer connections that are not in sewer districts. According to city code, no person shall connect to sanitary sewer located outside of a sewer district without obtaining a special connection agreement. This agreement does not relieve the property owner from special assessments for future sanitary sewer districts and/or joint sanitary sewer district connection fees(City Code Section 120-249 & Section 120-250). The city code can be viewed here: https://library.municode.com/mo/springfield/codes/code_of_ordinances
   3. The property is also subject to a $0.048 per sq. ft. trunkline connection fee to connect into the Mulroy Rd trunk sewer basin. These fees are based on sq. footage of property and will be added to the sewer permit when building permits are applied for.

5. FIRE DEPARTMENT:

   Approved. No comment on zoning.

6. PARKS & GREENWAYS:

   Approved.

7. DEPARTMENT OF PUBLIC WORKS TRANSPORTATION ENGINEERING RIGHT-OF-WAY DIVISION:

   Approved.

8. DEPARTMENT OF PUBLIC WORKS TRANSPORTATION CONSTRUCTION INSPECTION DIVISION:

   Approved. See comments by others. No additional comments.

9. MISSOURI DEPARTMENT OF TRANSPORTATION:

   Approved. No comments at this time. We will need to review and provide comments on the site plans when they are ready.

10. Greene County Highway Department:

    Did not respond in allotted review time.

11. DEPARTMENT OF PUBLIC WORKS STORMWATER ENGINEERING DIVISION:

    Site Description and Drainage Pattern

	Drainage Basin	Fee in Lieu of Flood Control	Fee in Lieu of Water Quality	Stream Buffer on Site	Sinkhole or Watershed	Floodplain/Floodway
5400 E Bucees Blvd	South Dry Sac	No	No	No	No	No

    All chapter and section references below are to the City's Flood Control and Water Quality Protection Manual Version April 2022.

    Detention and Discharge Requirements

    1. Public Improvement is designed and approved for construction of a regional extended dry detention basin for flood control.

    Water Quality Requirements

    1. Public Improvement is designed and approved for construction of a regional extended dry detention basin for water quality.

    2. A land disturbance permit will be required with disturbing 1 acre or greater per Chapter 4 Section 5 of the City's Flood Control and Water Quality Protection Manual.

    Floodplain

    N/A

    Natural Channels and Stream Buffers

    N/A

Sinkholes and Karst Features

N/A

12. DEPARTMENT OF PUBLIC WORKS TRAFFIC ENGINEERING DIVISION:

Traffic Report

	Street Name	Street Classification	Jurisdiction	ROW from Centerline (ft.)		Traffic Count (vehicles per day)	On-Street Parking	Sidewalk	
				Required	Existing			Required	Existing
Street 1	Farm Road 104	Collector	County	30	**25**	NA	No	Yes	**No**
Street 2	Interstate 44	Freeway	MoDOT	150	150	NA	No	No	No
Street 3	Future Bucees Boulevard	Collector	City	30	**0**	NA	No	Yes	**No**

Access

All new and existing driveway approaches shall comply with the current City of Springfield standards for the street classification.

Trails, Bus Stops, And Additional Information

There are no Greenway Trails near the property. There are no bus stops near the property.

Improvements

No improvements are required for this preliminary plat. A traffic study is not required for this plat. All public improvements including the construction of Bucees Boulevard and sidewalk required for the development must be constructed or escrowed prior to approval of the building permit or plat. A traffic study will be required at the time of development.

CONDITIONS FOR APPROVAL:

ATTACHMENT 2

Staff recommends the Planning and Zoning Commission approve the Preliminary Plat, with the conditions listed below:

1. All improvements shall be constructed in accordance with the “Design Standards for Public Improvements” of the Public Works Department and the maintenance and operation of such improvements shall be the responsibility of the developers unless approved by the Director of Public Works. All required sanitary sewer, street, sidewalk, and drainage plans shall be prepared in accordance with City standards and specifications and approved by the Director of Public Works.

2. All required street rights-of-way, drainage and utility easements and limitations of access shall be dedicated on the final plat.

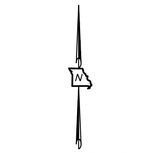
3. The developer shall meet all city and state erosion control regulations prior to disturbing the soil.

4. It is determined that the public interest requires assurance concerning adequate maintenance of common space areas and improvements. The restrictive covenants, rules and bylaws creating the common ownership must therefore provide that if the owners of the Property Owners Association shall fail to maintain the common areas or improvements in reasonable order and condition in accordance with the approved plans, the City may, after notice and hearing, maintain the same and assess the costs against the units or lots, per the Common Open Space and Common Improvement Regulations section of the Zoning Ordinance.

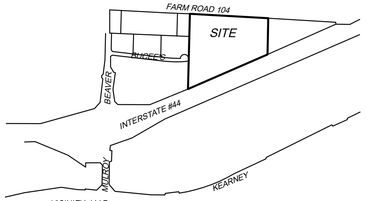
5. The developer shall be responsible for the relocation costs of any existing utility services and shall be responsible for clearing all utility easements of trees, brush, and overhanging tree limbs.

6. All other requirements which are necessary for this subdivision to be in compliance with the Subdivision Regulations.

If the request is recommended for denial by the Commission and the applicant requests City Council consideration, all the above conditions, plus any amendments made by the Planning and Zoning Commission, shall be included in the Council Bill.



GRID NORTH
BASED ON THE MoDOT
RTK USERS NETWORK



VICINITY MAP
NORTHEAST 1/4 OF SECTION 1,
TOWNSHIP 29 NORTH, RANGE 21 WEST

SYMBOL INDEX
- ● EXISTING IRON PIN (AS NOTED)
- ▲ EXISTING R/W MARKER POST
- ○ SET 1/2" IRON PIN "WLS LSC 370"
- ◉ GAS LINE MARKER POST
- ⊟ MAILBOX
- Ø UTILITY POLE
- (MH) MANHOLE
- ◈ PEDESTAL
- — x — WIRE FENCE
- — OH — OVERHEAD UTILITY LINE
- — G — BURIED GAS LINE (BASED ON MARKER POSTS)
- — S — BURIED SANITARY SEWER LINE

PRELIMINARY PLAT OF

MHC KENWORTH ADDITION

PROJECT LOCATION: 5500 E. FARM ROAD 104
GREENE COUNTY, MISSOURI

LOCATED IN THE WEST 1/4 OF LOT 3, FRACTIONAL NE/4 OF
SECTION 1, TOWNSHIP 29N, RANGE 21W

OWNER / DEVELOPER

TCEK REAL ESTATE, LLC

11120 TOMAHAWK CREEK PARKWAY
LEAWOOD, KS 66211

PLAT NOTES

1. PROPERTY ZONING: HC – HIGHWAY COMMERCIAL W/COD #234

2. TOTAL NUMBER OF LOTS: 2
– LARGEST LOT: LOT 2 (±24.2 ACRES)
– SMALLEST LOT: LOT 1 (±2.7 ACRES)

3. SETBACKS PER ZONING:
– FRONT: 25'
– REAR: NONE
– SIDE*: NONE

4. OPEN SPACE REQUIREMENTS: NOT LESS THAN 20% SHALL BE DEVOTED TO OPEN SPACE, INCLUDING REQUIRED YARDS AND BUFFERYARDS

5. MAXIMUM IMPERVIOUS SURFACE SHALL NOTE EXCEED 80%

6. SOURCE OF UTILITIES:
– WATER: CITY UTILITIES
– GAS: CITY UTILITIES
– SEWER: CITY OF SPRINGFIELD

7. THE DEVELOPER ELECTS TO PAY FEE IN LIEU OF INSTALLING PUBLIC SIDEWALK

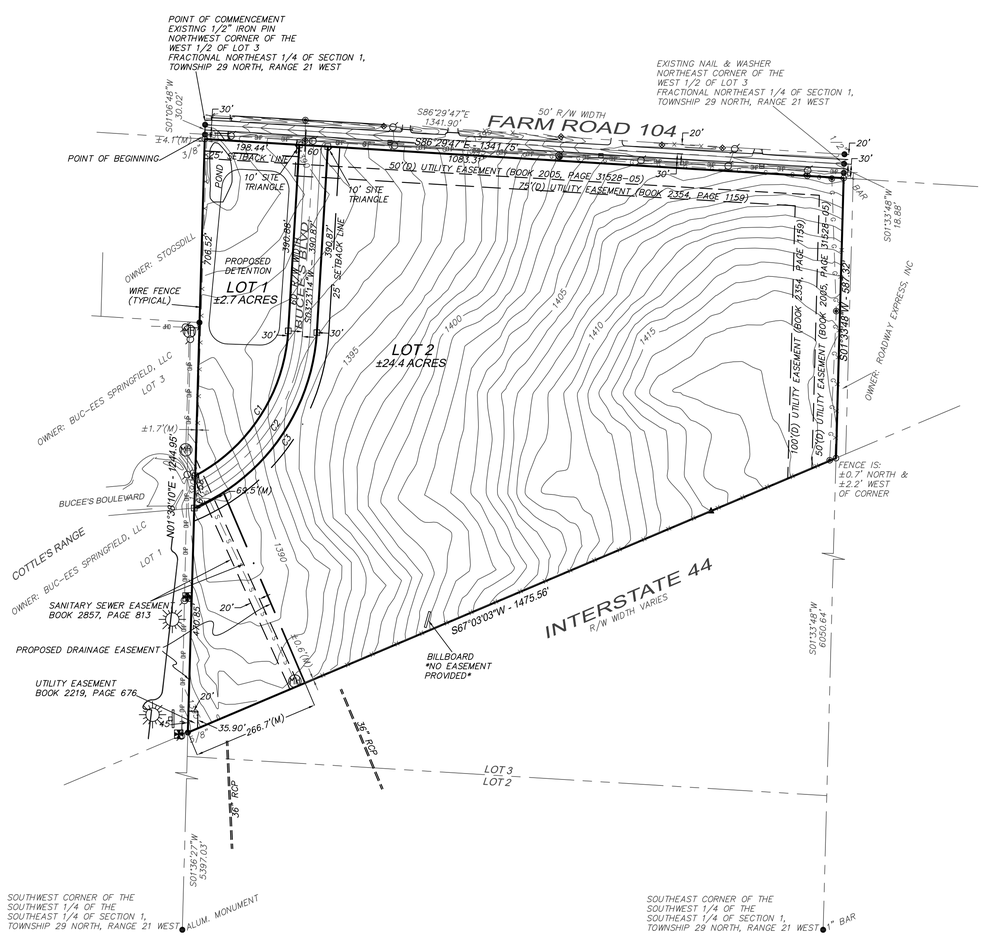
8. NO LOT SHALL HAVE DIRECT ACCESS TO FARM ROAD 104 OR INTERSTATE 44

9. THE AREA SHOWN HEREON IS NOT LOCATED IN A STORM SEWER DISTRICT AS OF THE DATE OF RECORDING AND MAY BE SUBJECT TO FUTURE ASSESSMENT COST IF INCLUDED IN FUTURE STORM WATER BENEFIT DISTRICT DEEMED NECESSARY RESULTING FROM PROBLEMS CREATED BY SURFACE WATER RUNOFF. THIS IS DUE TO THE FACT THAT THE SURFACE WATER RUNOFF IS PRESENTLY BEING ACCOMMODATED BY STREET AND OPEN DRAINAGE FACILITIES.

10. ALL DRAINAGE EASEMENTS ARE TO BE MAINTAINED BY THE PROPERTY OWNER.

11. THE PROPERTY IS SUBJECT TO A $0.048 PER SQUARE FOOT TRUNK LINE CONNECTION FEE TO CONNECT TO MULROY ROAD TRUNK SEWER. THIS IS BASED ON THE AREA OF THE PROPERTY.

12. THE CONNECTION TO MoDOT'S CULVERT MUST BE MAINTAINED AND CAN ONLY BE REMOVED ONCE MoDOT REMOVES THE CULVERT UNDER I-44



CURVE NUMBER	RADIUS	ARC DISTANCE	CENTRAL ANGLE	CHORD BEARING	CHORD DISTANCE
C1	370.00'	377.31'	58°25'38"	S32°42'23"W	361.17'
C2	400.00'	424.82'	60°51'05"	N33°55'07"E	405.14'
C3	430.00'	472.03'	62°53'44"	N34°56'26"E	448.68'

DESCRIPTION OF PLATTED AREA

THAT CERTAIN PARCEL OR TRACT OF LAND BEING LOCATED IN THE WEST 1/2 OF LOT 3 OF THE FRACTIONAL NORTHEAST 1/4 OF SECTION 1, TOWNSHIP 29 NORTH, RANGE 21 WEST, BEING DESCRIBED AS FOLLOWS:

COMMENCING AT AN EXISTING 1/2" IRON PIN AT THE NORTHWEST CORNER OF THE WEST 1/2 OF SAID LOT 3;
THENCE, S01°06'48"W, A DISTANCE OF 30.02 FEET TO A SET 1/2" IRON PIN WITH A CAP STAMPED "WLS LSC 370", SAID POINT BEING ON THE NEW SOUTH RIGHT-OF-WAY LINE OF FARM ROAD 104;
THENCE, S86°29'47"E, ALONG SAID NEW SOUTH RIGHT-OF-WAY LINE, A DISTANCE OF 1341.75 FEET TO A SET 1/2" IRON PIN WITH A CAP STAMPED "WLS LSC 370";
THENCE, S01°33'48"W, A DISTANCE OF 587.32 FEET TO AN EXISTING 1/2" IRON PIN WITH A CAP STAMPED "WLS LSC 370", SAID POINT BEING ON THE APPARENT NORTHERLY RIGHT-OF-WAY LINE OF INTERSTATE 44;
THENCE, S67°03'03"W, ALONG SAID APPARENT NORTHERLY RIGHT-OF-WAY LINE, A DISTANCE OF 1475.56 FEET TO AN EXISTING 5/8" IRON PIN;
THENCE, N01°38'10"E, A DISTANCE OF 1244.95 FEET TO THE POINT OF BEGINNING.

CONTAINING 28.2 ACRES, MORE OR LESS, AND BEING SUBJECT TO ALL EASEMENTS AND RESTRICTIONS OF RECORD, IF ANY.

DECLARATION

KNOW ALL MEN BY THESE PRESENTS:

THAT I, MICHAEL WHITE, DO HEREBY CERTIFY FOR WHITE LAND SURVEYING, LLC, THAT THIS PLAT WAS PREPARED UNDER MY SUPERVISION FROM AN ACTUAL SURVEY OF THE LAND HEREIN DESCRIBED PREPARED BY WHITE LAND SURVEYING, LLC, DATED MAY 26, 2023, AND SIGNED BY MICHAEL WHITE, PLS 2488 AND THAT THE CORNER MONUMENTS AND LOT CORNER PINS SHOWN HEREIN WERE PLACED UNDER THE PERSONAL SUPERVISION OF MICHAEL WHITE, PLS 2488 IN ACCORDANCE WITH SECTION 410.5 OF THE SUBDIVISION REGULATIONS, ARTICLE II, CHAPTER 36 OF THE CITY OF SPRINGFIELD, GREENE COUNTY, MISSOURI, AND THE CURRENT MISSOURI STANDARDS FOR PROPERTY BOUNDARY SURVEYS.

MICHAEL WHITE, PLS 2488 – WHITE LAND SURVEYING, LLC CORP #2003000370

01/31/2024
DATE PREPARED

WHITE LAND SURVEYING, LLC
222 OLD TOWN RD.
BILLINGS, MISSOURI
PHONE: 417.733.0005
email: info@whitelandsurvey.com
www.whitelandsurvey.com

SURVEY DATE: 05.26.2023
DWG DATE: 01.31.2024
DRAWN BY: MW
S/T/R: 01/30/21
PROJECT No.: 2023-105

PREPARED FOR
TCEK REAL ESTATE, LLC
PROJECT LOCATION: E. FARM ROAD 104
GREENE COUNTY, MISSOURI

PREPARED BY:

MICHAEL WHITE– MISSOURI PROFESSIONAL LAND SURVEYOR #2488

WHITE LAND SURVEYING, LLC – MISSOURI PROFESSIONAL LAND SURVEYING CORPORATION #2003000370

STATE OF MISSOURI
MICHAEL WHITE
NUMBER PLS-002488
PROFESSIONAL LAND SURVEYOR

01/31/2024

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