JOPLIN CITY COUNCIL
INFORMAL MEETING
MONDAY, OCTOBER 2, 2023
5TH FLOOR COUNCIL CHAMBERS
602 S. MAIN ST.
5:30 PM

This meeting can be livestreamed at http://www.joplinmo.org/182/Video-Multimedia

AGENDA

1. MS4 Permit – Floodplain Management

Notice posted at 12:00 p.m. on this 28th day of September 2023. (RSMo 610.020)

The City of Joplin is committed to comply with the Americans with Disabilities Act. The Joplin City Council Chambers is wheelchair accessible. Request for reasonable special accommodations must be made 48 hours prior to the meeting. Please email the City Clerk's office at hnagy@joplinmo.org or call (417) 624-0820 ext. 1220 for assistance.

Ad Omnia Parata



City of Joplin MS4 Permit & Floodplain Management Support

WHAT IS AN MS4 PERMIT, AND COMMONLY USED ACRONYMS?

- MS4 = MUNICIPAL SEPARATE STORM SEWER SYSTEM
- MS4 PERMITS ARE ISSUED TO CITIES AND COUNTIES UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PROGRAM OF THE FEDERAL CLEAN WATER ACT TO REDUCE DISCHARGES OF POLLUTANTS IN STORMWATER TO THE NATION'S WATERS. THE CITY FIRST RECEIVED ITS MS4 PERMIT IN 2004.
- BMP = BEST MANAGEMENT PRACTICES
- MCM = MINIMUM CONTROL MEASURES

THE CITY OF JOPLIN IS A PHASE II MS4
THE CURRENT MS4 PERMIT HAS BEEN IN EFFECT FOR 3 YEARS



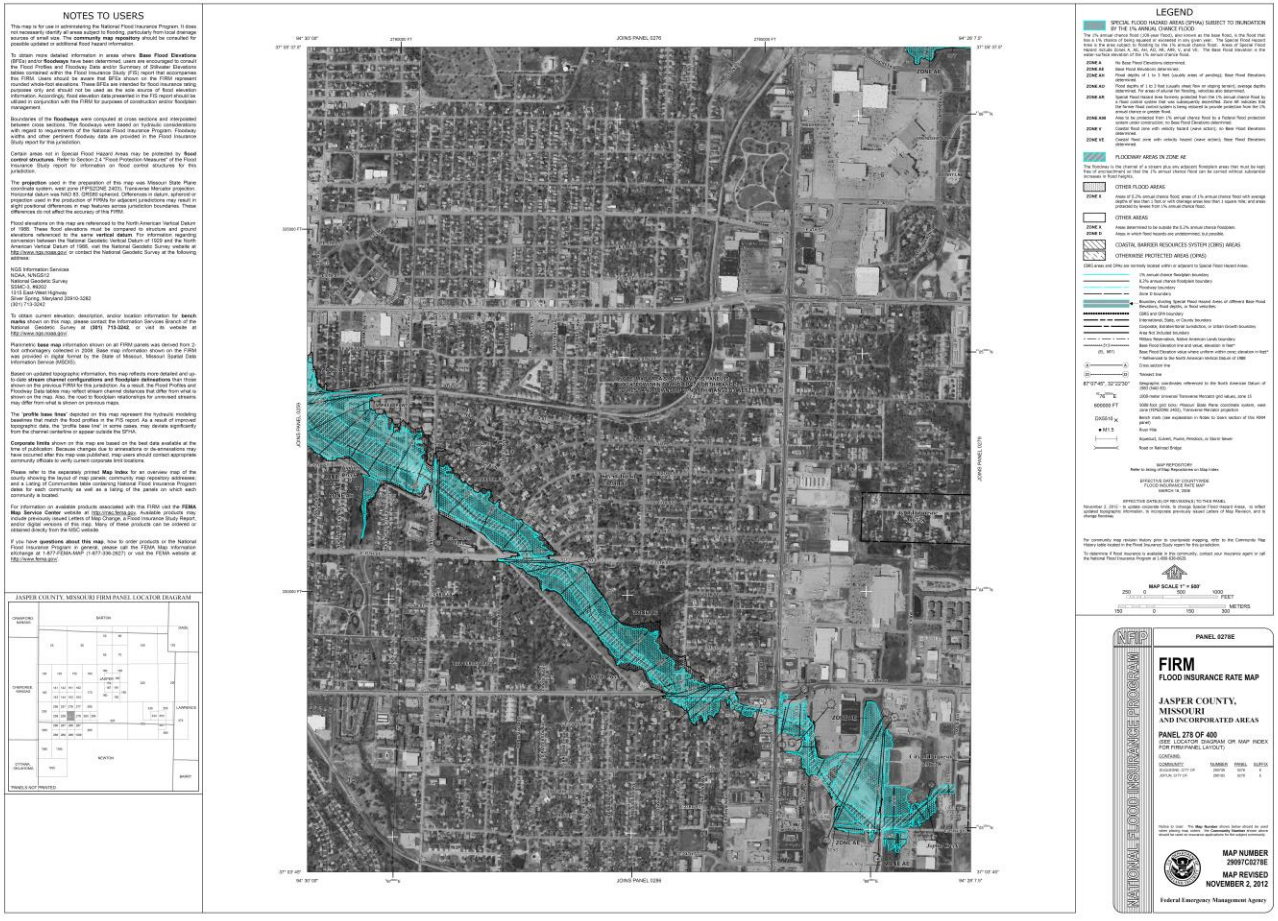
Six MCM's

1. PUBLIC EDUCATION & OUTREACH
2. PUBLIC INVOLVEMENT
3. ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)
4. CONSTRUCTION SITE STORM WATER RUNOFF CONTROL
5. POST-CONSTRUCTION STORM WATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT
6. Pollution Prevention/Good Housekeeping for Municipal Operations

AS PART OF THE PERMIT, AN ANNUAL REPORT IS PROVIDED TO THE MISSOURI - DEPARTMENT OF NATURAL RESOURCES WATER QUALITY DIVISION.

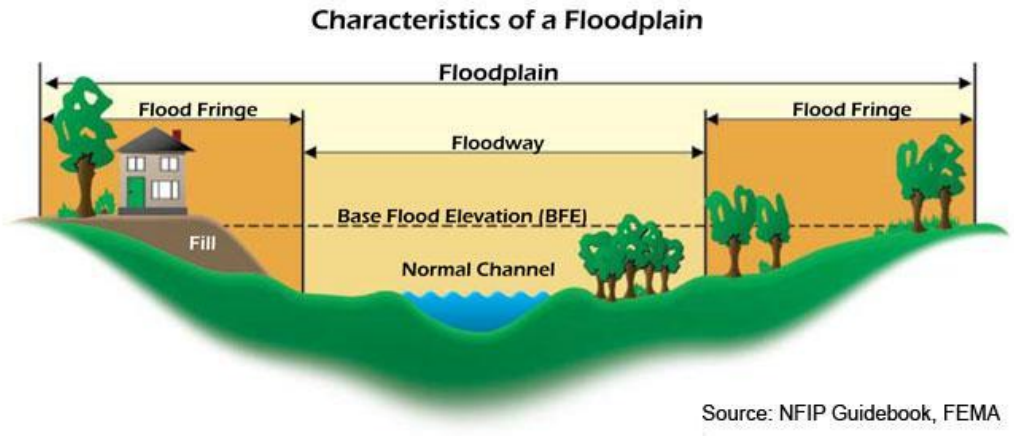
National Flood Insurance Program NFIP

- The City of Joplin has been a participating community starting in the 1970's
- Joplin adopted a floodplain development ordinance.
- Floodplain Manager



Remapping Effort

- SEMA is remapping the State
- Jasper County and Newton County are currently being remapped
- The goals of the remapping are good
- The techniques can result in very conservative maps
- Staff needs support to get the best maps.



SEMA Remapping of Jasper and Newton Co.

Joplin City Council Informal Meeting
October 2, 2023

Charles E. Patterson PhD, PE, CFM
Vice President, Hydro Division Manager

SEMA Draft Mapping Review Process.

- Draft map process allows the NFIP participating community to review and comment.
- Comments help the mapping contractor (WSP) create maps that are appropriate to the community.
- If comments are not made, the map will not be improved by local knowledge and data.

ArcGIS Web Map



9/29/2023, 3:49:48 PM

Flood Hazard Boundaries

Limit Lines

NP

SFHA / Flood Zone Boundary

Flowage Easement Boundary

1:18,056

0 0.13 0.25 0.5 mi

0 0.17 0.35 0.7 km

State of Missouri, Maxar

Missouri SEMA Outreach

MoDOT | State of Missouri, Maxar |

Effective Floodplain Map (2012)

ArcGIS Web Map



9/29/2023, 3:51:02 PM

1:4,514

0 0.03 0.06 0.12 mi

0 0.05 0.1 0.2 km

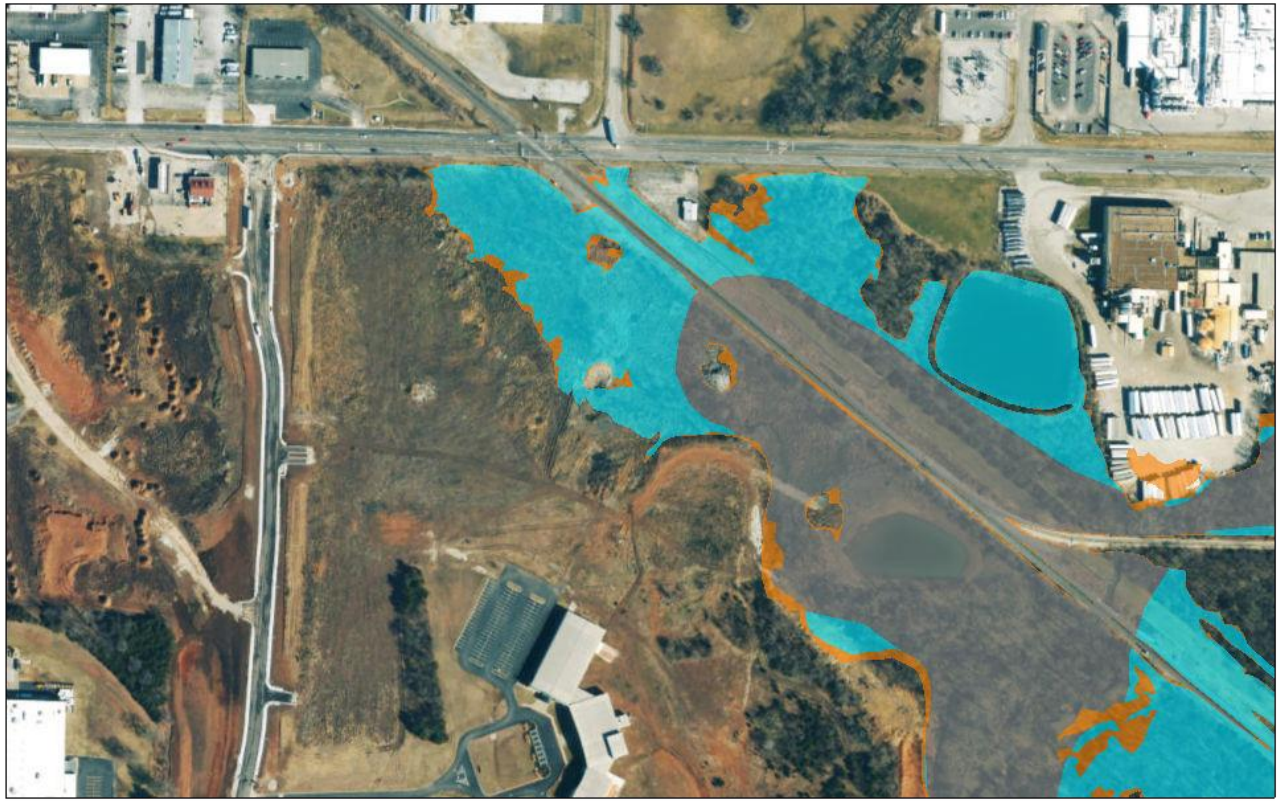
State of Missouri, Maxar

Missouri SEMA Outreach

MoDOT | State of Missouri, Maxar |

Effective Floodplain Map (2012)

ArcGIS Web Map



9/29/2023, 3:52:56 PM

FRR #1 Flood Hazard Areas

AE,

AE,FLOODWAY

X,0.2 PCT ANNUAL CHANCE FLOOD HAZARD

1:4,514

0 0.03 0.06 0.12 mi

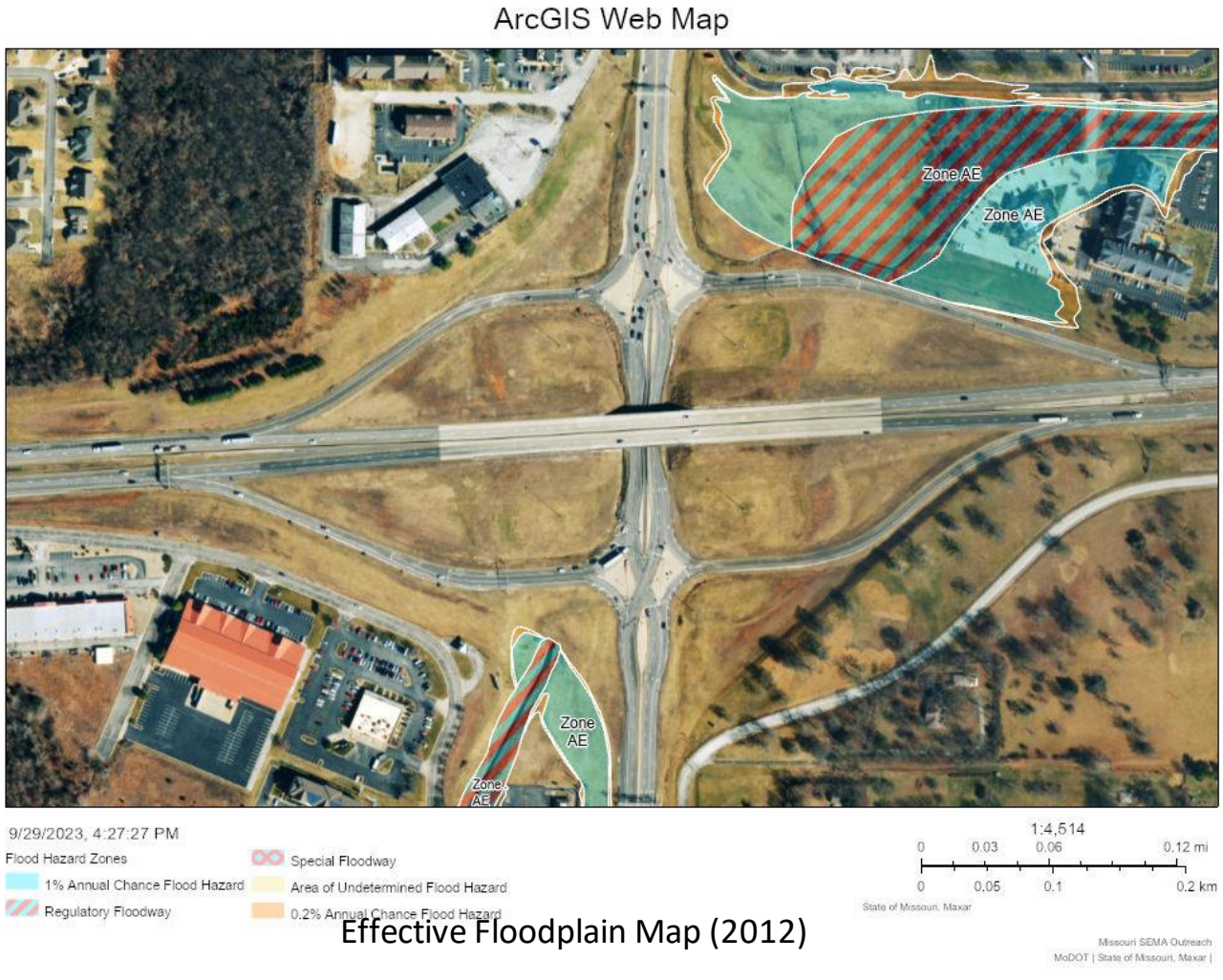
0 0.05 0.1 0.2 km

State of Missouri, Maxar

Missouri SEMA Outreach

MoDOT | State of Missouri, Maxar |

Draft Floodplain Map (2023)

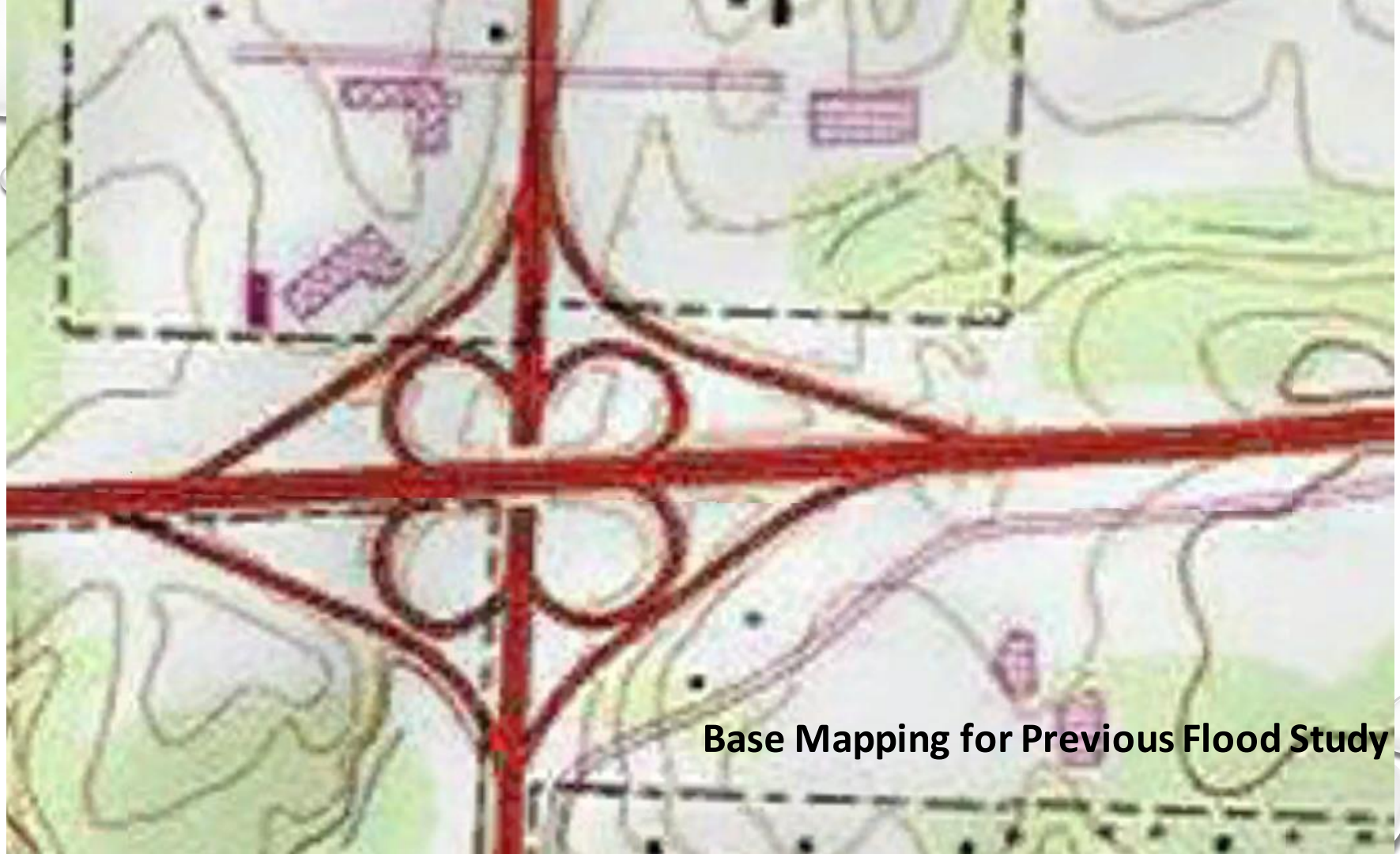


Effective Floodplain Map (2012)

ArcGIS Web Map

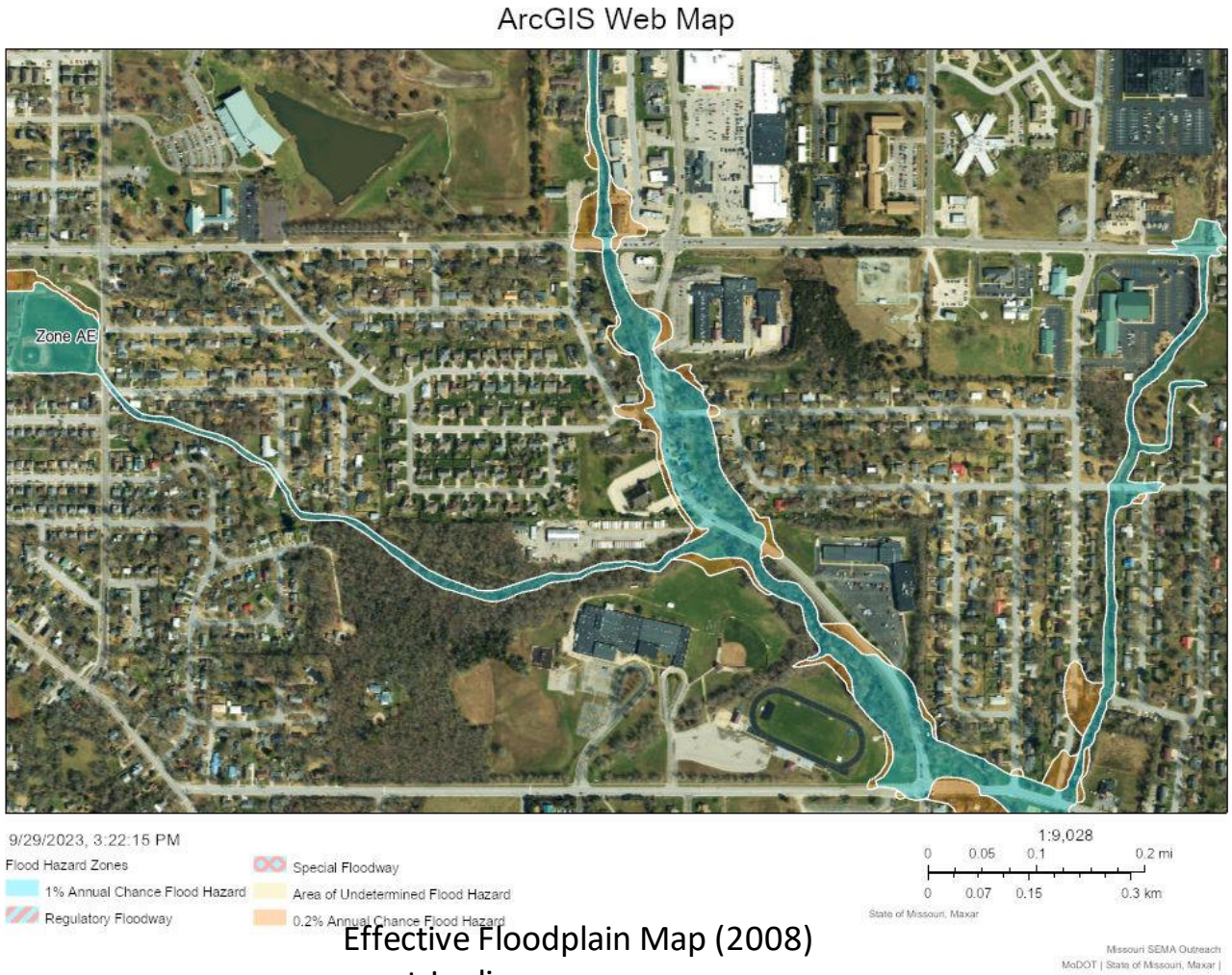


Draft Floodplain Map (2023)



Base Mapping for Previous Flood Study


Base Mapping for Draft Flood Study



Effective Floodplain Map (2008) – not Joplin

ArcGIS Web Map



9/29/2023, 3:21:33 PM

FRR #3 Flood Hazard Areas AE,

A,

1:9,028

0 0.05 0.1 0.2 mi

0 0.07 0.15 0.3 km

State of Missouri, Maxar

Missouri SEMA Outreach

MoDOT | State of Missouri, Maxar |

Draft Floodplain Map (2022)

- not Joplin

Sample Data. (from another community)

Drainage Basins equal to or larger than 1.00 sq mile	1% AEP Event (100-Yr) % Difference from Critical Event Flowrate					0.2% AEP Event (500-Yr) % Difference from Critical Event Flowrate				
	1 hour	2 hour	3 hour	6 hour	NRCS Type II	1 hour	2 hour	3 hour	6 hour	NRCS Type II
% difference between median and critical event	-3.0%	-1.7%	-1.4%	-10.6%	39.4%	-2.7%	-1.1%	0.0%	-10.8%	37.0%
% difference between average and critical event	-3.1%	-1.5%	-2.1%	-13.1%	40.7%	-3.0%	-1.2%	-1.9%	-14.3%	38.9%
maximum % difference from critical event	-7.6%	-4.6%	-8.5%	-24.7%	50.6%	-7.0%	-4.0%	-8.3%	-25.2%	49.2%
Number of basins larger than threshold	44									

SEMA Draft Mapping Support Provided by Allgeier, Martin and Associates.

- Provide assistance to the City by communicating with the mapping contractor.
- Assist the City on how to make effective comments that will improve the mapping that will better approximate the risk of flooding from the 1% flood.
- Provide technical assistance to the underling methodologies used by the mapping contractor and discuss with the mapping contractor changes to improve the floodplain mapping.

Questions?