City of Sedona Evacuation & Re-Entry Plan

City Council Presentation

Wednesday, May 24, 2023

3:00 pm – 5:00 pm

EM PARTNERS

Greenlight Traffic Engineering

Introduction and History

Joanne Keene, Deputy City Manager

Chief Stephanie Foley, Sedona Police Department

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Project Contract and Funding

Wes Dison, Director

Coconino County Emergency Management

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Sedona Emergency Evacuation Planning Traffic Study

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Methodology

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1. Data Collection/Preparation
2. Model Creation
3. Scenario Definition
4. Travel Time Analysis

Data Collection

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- Traffic Volumes collected at 35 City intersections on October 8 and 15, 2022 based on City guidance.
- Population, household, and parcel data were obtained from the City GIS and July 2021 Census Data.
  - StreetLight Data was used to estimate the number of visitor vehicles using the road network during an evacuation.

Population and Vehicles

Description	
Resident Data	
Sedona Population Estimate, Census July 2021	9,763
Sedona Parcel Units, Census July 2021	6,979
Sedona Households, Sedona GIS Data	6,834
Sedona Households/Units, Sedona GIS Data	0.98
Sedona Occupied Households, Census July 2021	5,179
Total Resident Vehicles to be Evacuated[1]	6,769
Visitor Data	
Daily Visitor Vehicles to Resident Vehicles Ratio, StreetLight Data	0.95
Daily Visitor Vehicles	6,438
Total Vehicles to be Evacuated	13,207

Model Creation

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- Vissim software used to create a digital model of the evacuation scenario.
- Traffic Counts collected on the following City intersections:

1. 89A/Owenby Way	13. 89A/Posse Ground Rd	25. 179/Portal Ln
2. 89A/Arroyo Roble Rd	14. 89A/Coffee Pot Dr	26. 179/Canyon Dr
3. 89A/Jordan Rd	15.89A/Rodeo Rd	27. 89A/Mountain Shadows Dr
4. 89A/179	16. 89A/Andante Dr	28. 179/Arrow Dr
5. 89A/Brewer Rd	17. 89A/Harmony Dr	29. 179/Doodlebug Rd
6. 89A/Art Barn Rd	18. 89A/Dry Creek Rd	30. 179/Mallard Dr
7. 89A/Forest Rd	19. 89A/Calle Del Sol	31. 179/Cathedral Rock Tr
8. 89A/Apple Ave	20. 89A/Foothills S Dr	32. 179/Chapel Rd
9. 89A/Amara Ln	21. 89A/Bristlecone Pines Rd	33. 179/Skyline Dr
10. 89A/Mid-block	22. 89A/Cultural Park Pl	34. 179/Meadowlark Dr
11. 89A/Airport Rd	23. 179/Schnebly Hill Rd	35. 179/Back O' Beyond Rd
12. 89A/Soldiers Pass Rd	24. 179/Ranger Rd	

- The evacuation traffic is primarily loaded on the network through these 35 major intersections.
- Traffic evacuates the City using two (2) major roadways:
  a. SR 89A to the northeast and west of the City
  b. SR 179 to the south of the City

Scenario Definition

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- Scenario 1 – All zones simultaneously begin evacuation to the primary exits (SR 89A and SR 179).
- Scenario 2 – SR 89A northbound is closed; all zones begin evacuation at the same time (SR 89A southbound and SR 179 are the only exits).
- Scenario 3 – SR 89A northbound is closed; staggered evacuating is used, with the Uptown Sedona area evacuated first.

Travel Time Analysis

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City Evacuation Travel Time

	Scenario Description	90% of City Evacuated (hours: minutes)	100% of City Evacuated (hours: minutes)
1	All Zones Evacuated at Same Time to Primary Exits	2:45	3:41
2	All Zones Evacuated at Same Time with North SR 89A Closed	2:53	3:38
3	Uptown Evacuated First with North SR 89A Closed	2:56	3:48

Sedona Citywide Evacuation Map

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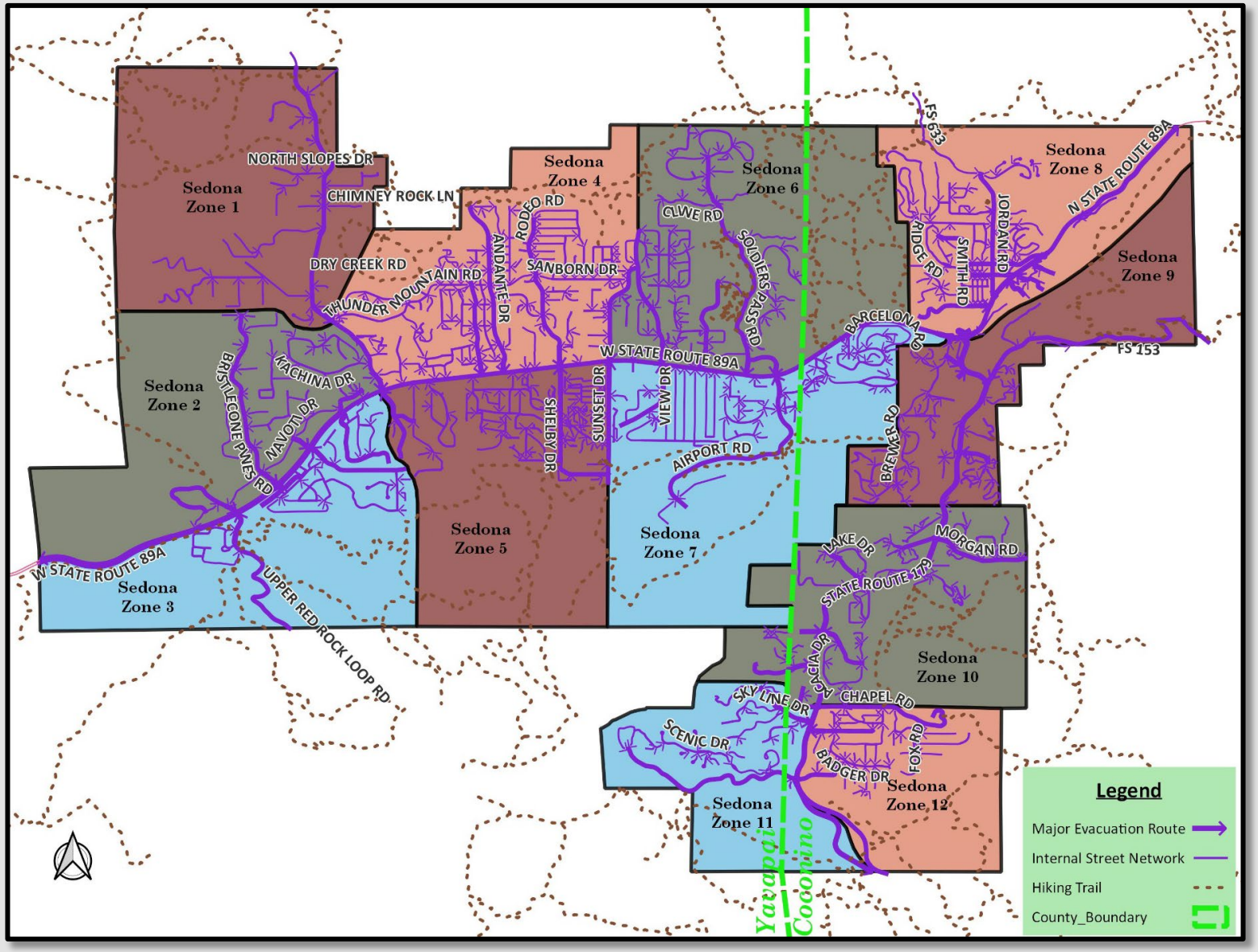

Vissim Overview

City of Sedona Public Works

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Sedona Evacuation & Re-Entry Plan

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Plan Overview

- Base Plan
- Community Zone Evacuation Maps Annex
- Operational Considerations Annex (FOUO)
- Traffic Study Report (FOUO)

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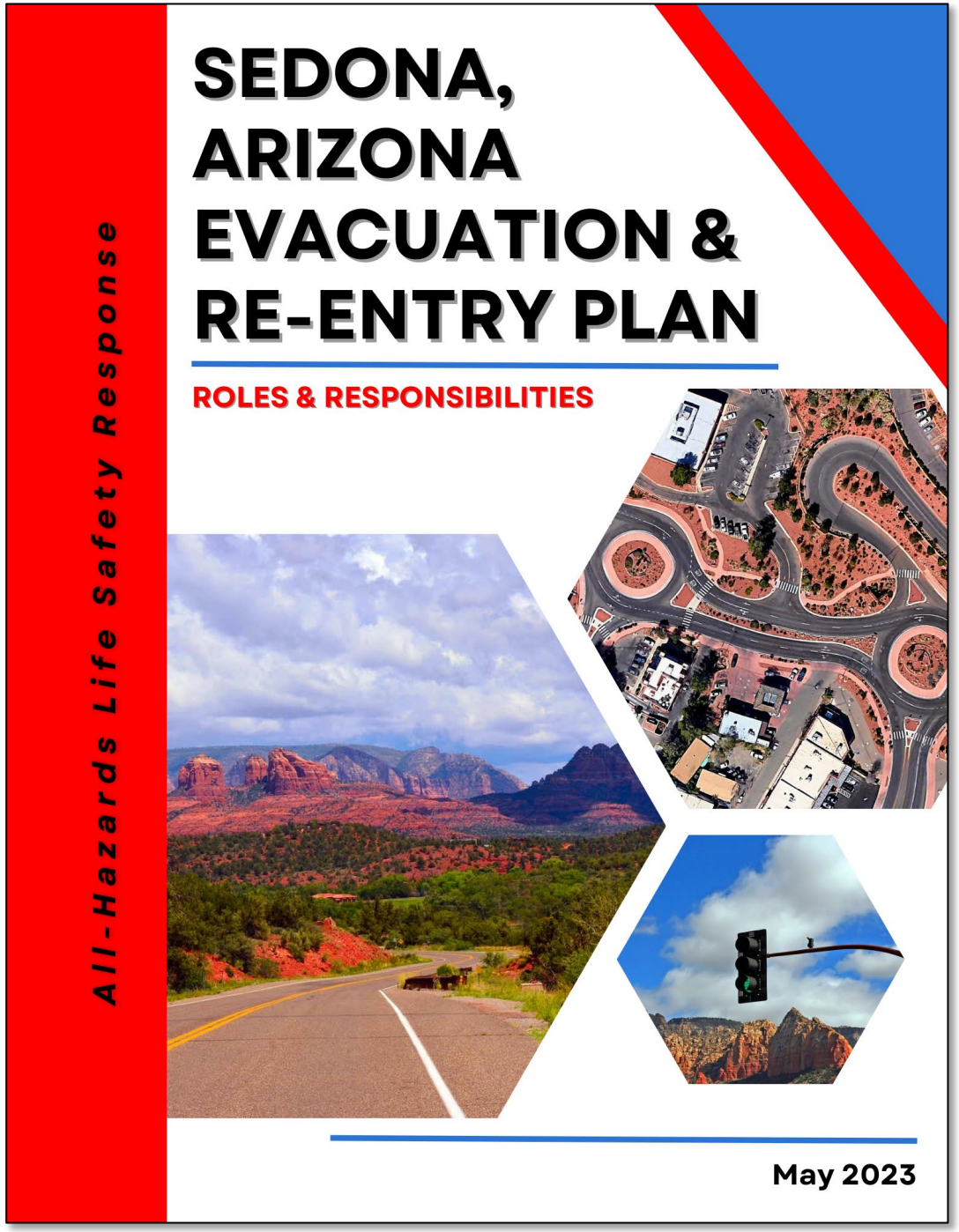
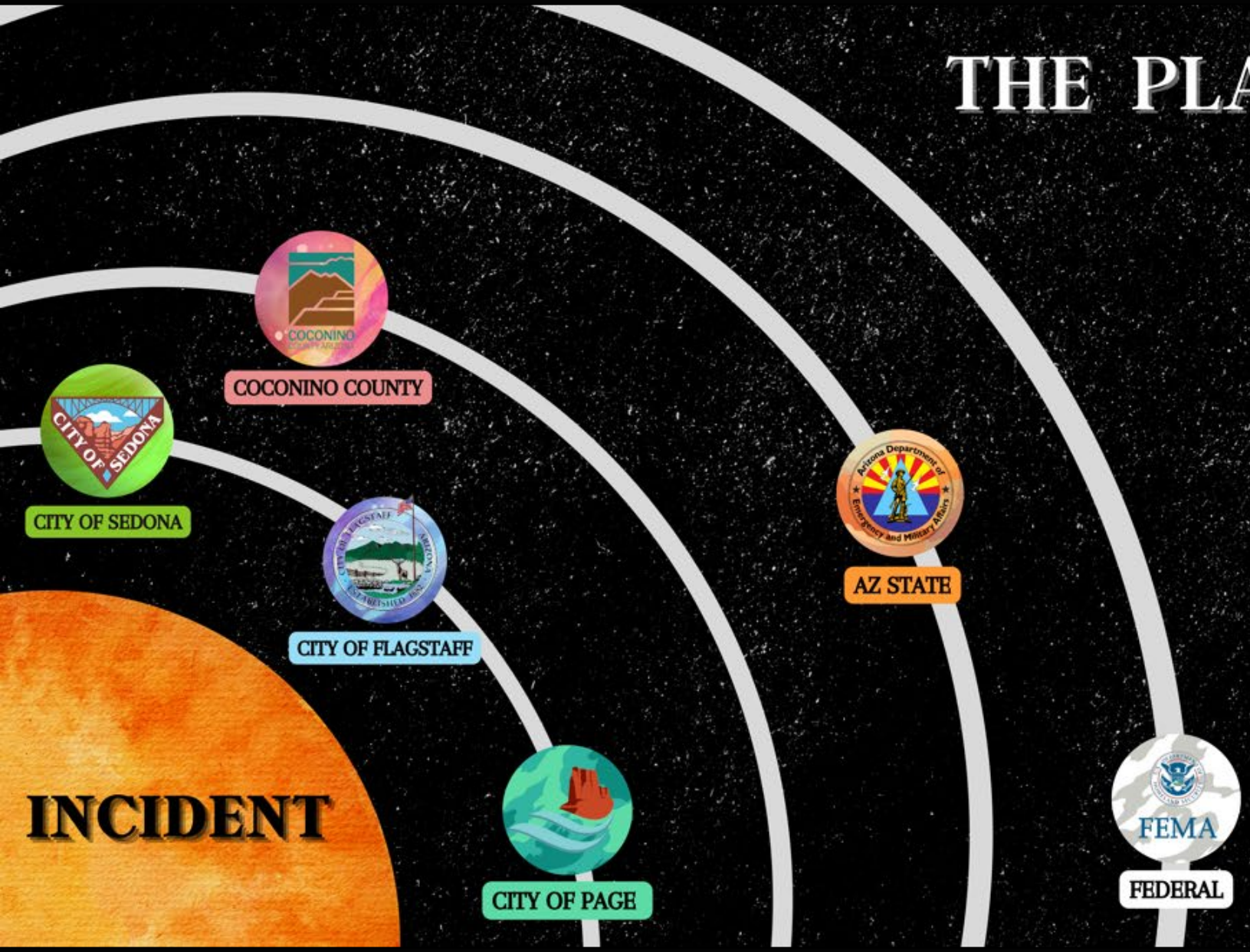


THE PLANNING UNIVERSE

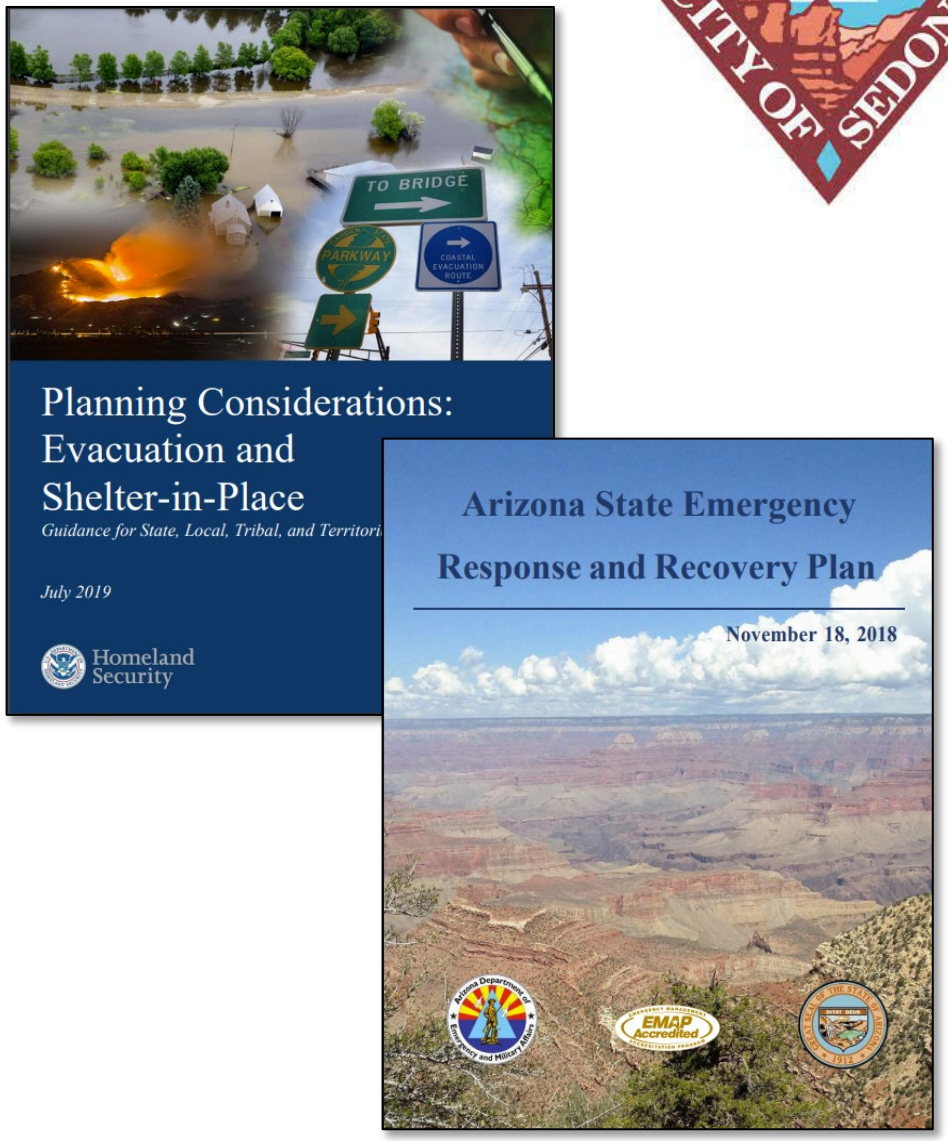
"where plans align"



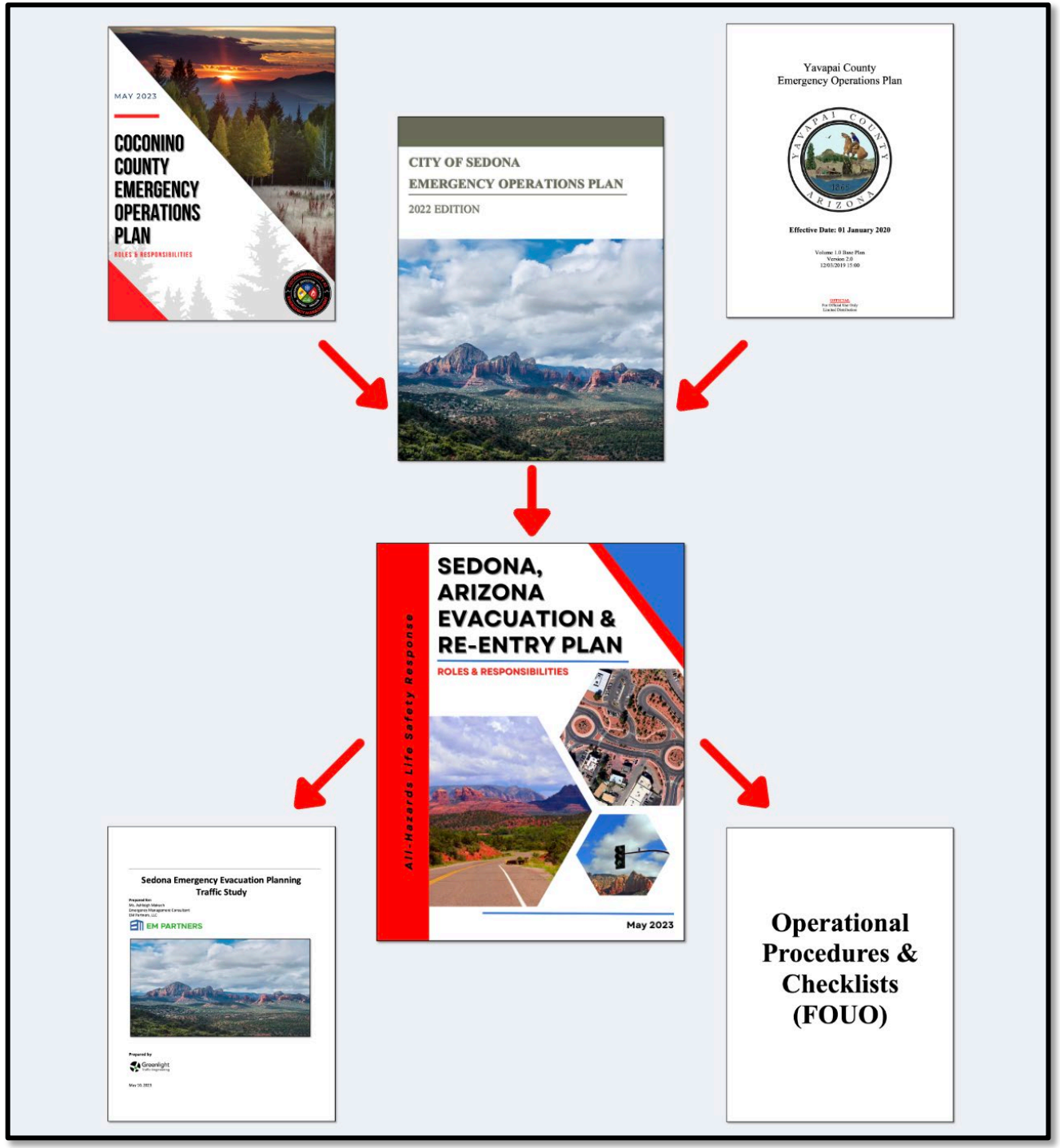
- CHECKLIST
- PROCEDURE
- PLAN
- POLICY
- FEMA / PPD 8

Planning Guidance

- City of Sedona Emergency Operations Plan (EOP) and Ready Sedona Guide
- Coconino and Yavapai County EOPs
- Arizona State Emergency Response and Recovery Plan
- FEMA Planning Considerations: Evacuation and Shelter-in-Place
- FEMA Comprehensive Preparedness Guide (CPG) 101



City of Sedona Emergency Management Program



Planning Process

- 22 Stakeholder Team Members
- 6 Core Citizen Representatives
- 7 Stakeholder Planning Workshops
- 58-page Evacuation & Re-Entry Plan
- 108-page Traffic Study Report
- 35 Intersection Traffic Counts
- 12 Community Zone Evacuation Route Maps
- 2 Community Presentations (*following plan adoption)*

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Plan Highlights

- ALL-HAZARDS LIFE SAFETY RESPONSE
- Roles and responsibilities
- Based on ground-truth traffic study data
- Clean, concise, and useable document
- Community personal responsibility
- Supports city officials' training, exercise, and response activities

"The plan generates conversation."

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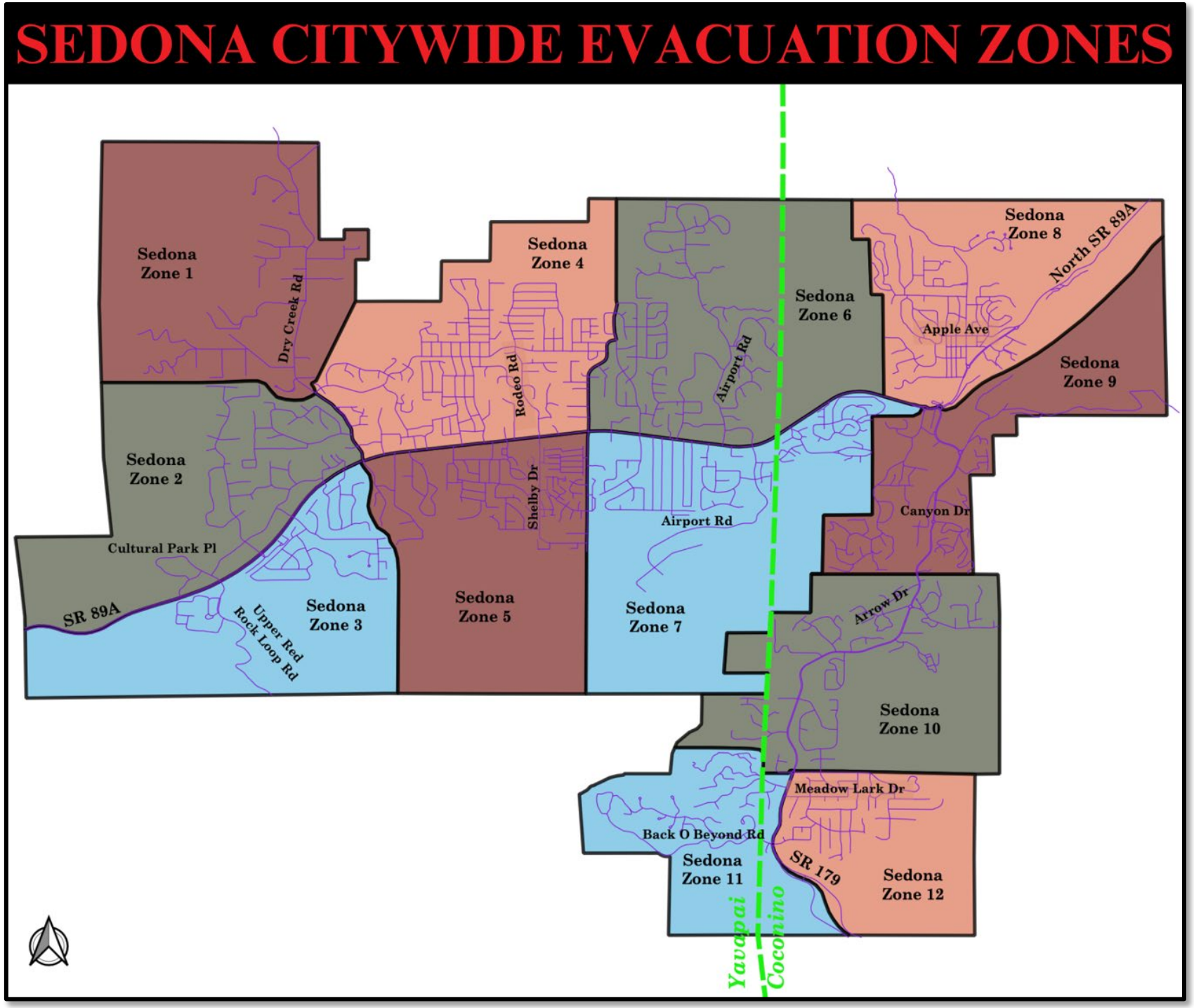
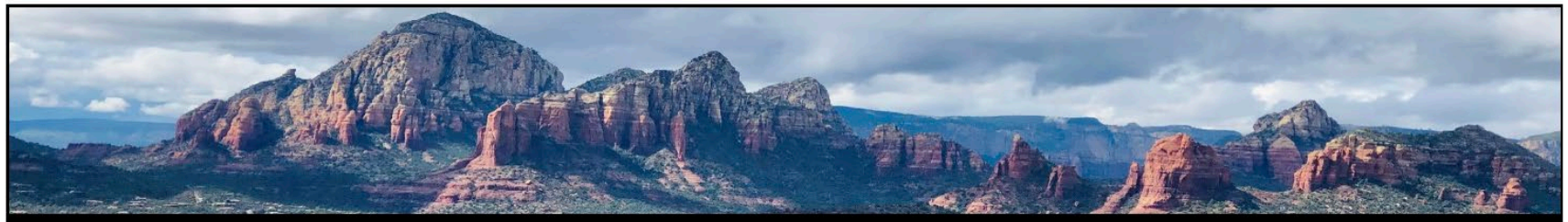
Base Plan Contents

- Introduction
- Organization and Assignment of Responsibilities
- Concept of Operations
  - Public Information and Warning
  - Evacuation Phase
    - Considerations
  - Re-Entry Phase
    - Considerations
- Plan Development and Maintenance

Community Zone Evacuation Maps Annex

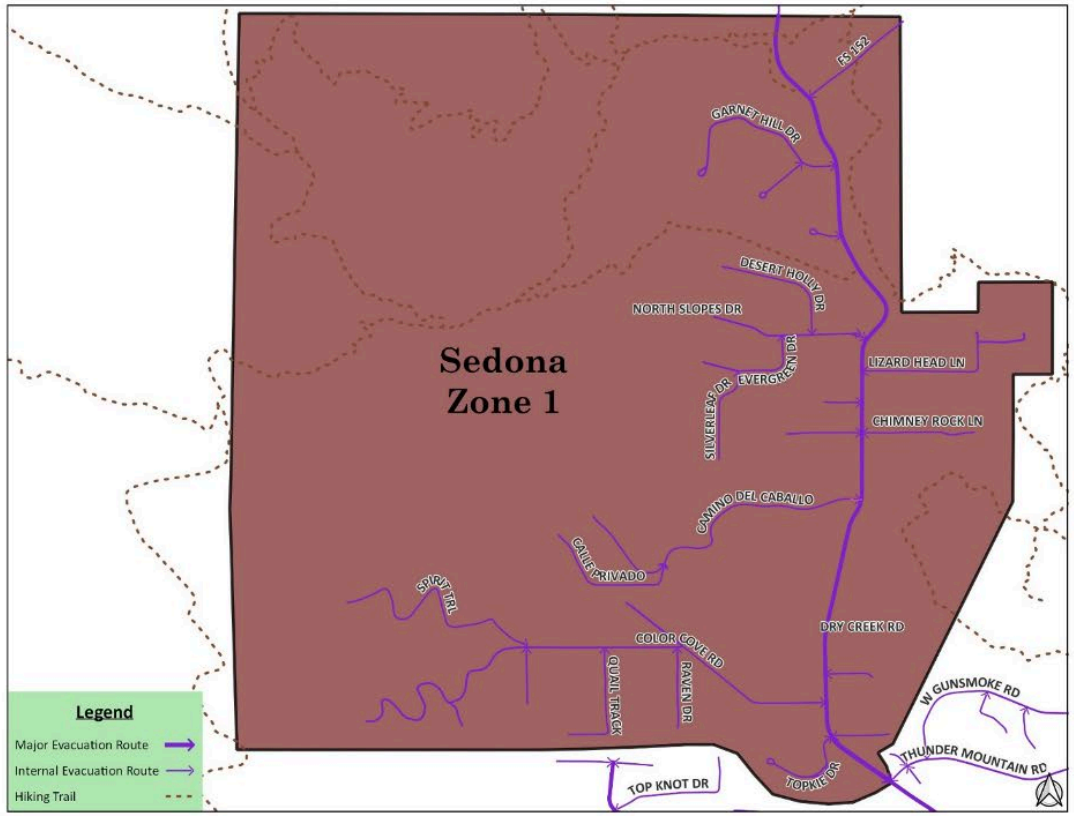


Community Zone Evacuation Maps Annex



SEDONA ZONE 1

Know your route. Own your plan.



SIGN UP FOR EMERGENCY ALERTS

City of Sedona
www.sedonaaz.gov/alerts

Yavapai County
www.ycsoaz.gov/ens

Coconino County
www.coconino.az.gov/ready

READY, SET, GO!
Prepare now. Be alert. Evacuate!
Learn more at ein.az.gov

For an interactive map:
scan this QR code
or visit coconino.az.gov/evacmap

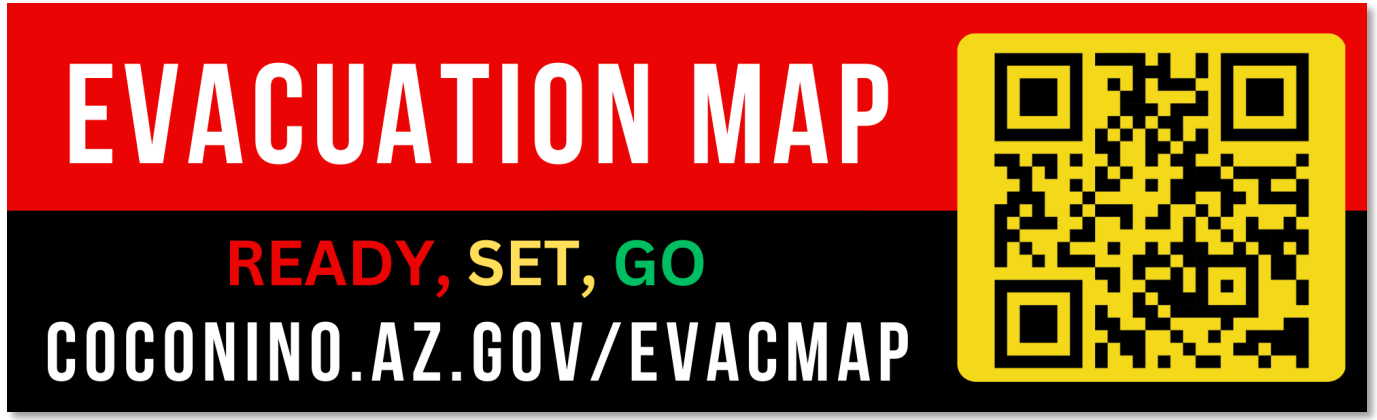
COCONINO COUNTY ARIZONA

City of Sedona, Arizona – Emergency Management
www.sedonaaz.gov/emergencymanagement

Coconino County Evacuation Map

Wes Dison, Director

Coconino County Emergency Management



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Yavapai County

Ashley Ahlquist, Emergency Manager

Yavapai County Office of Emergency Management

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Questions?

Closing Remarks