# Post-Wildfire Flooding Update

**November 12, 2024**

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# Objectives for tonight

- Provide an overview of the Spruce Wash projects and progress.
- Project report and celebrate the completion of Schultz Creek improvements.
- Review the latest monsoon data and latest conditions of the Spruce Creek Watershed.
- Communicate community resources and guidance to support the continued mitigations and legislative activity.
- Questions

# Overall Map

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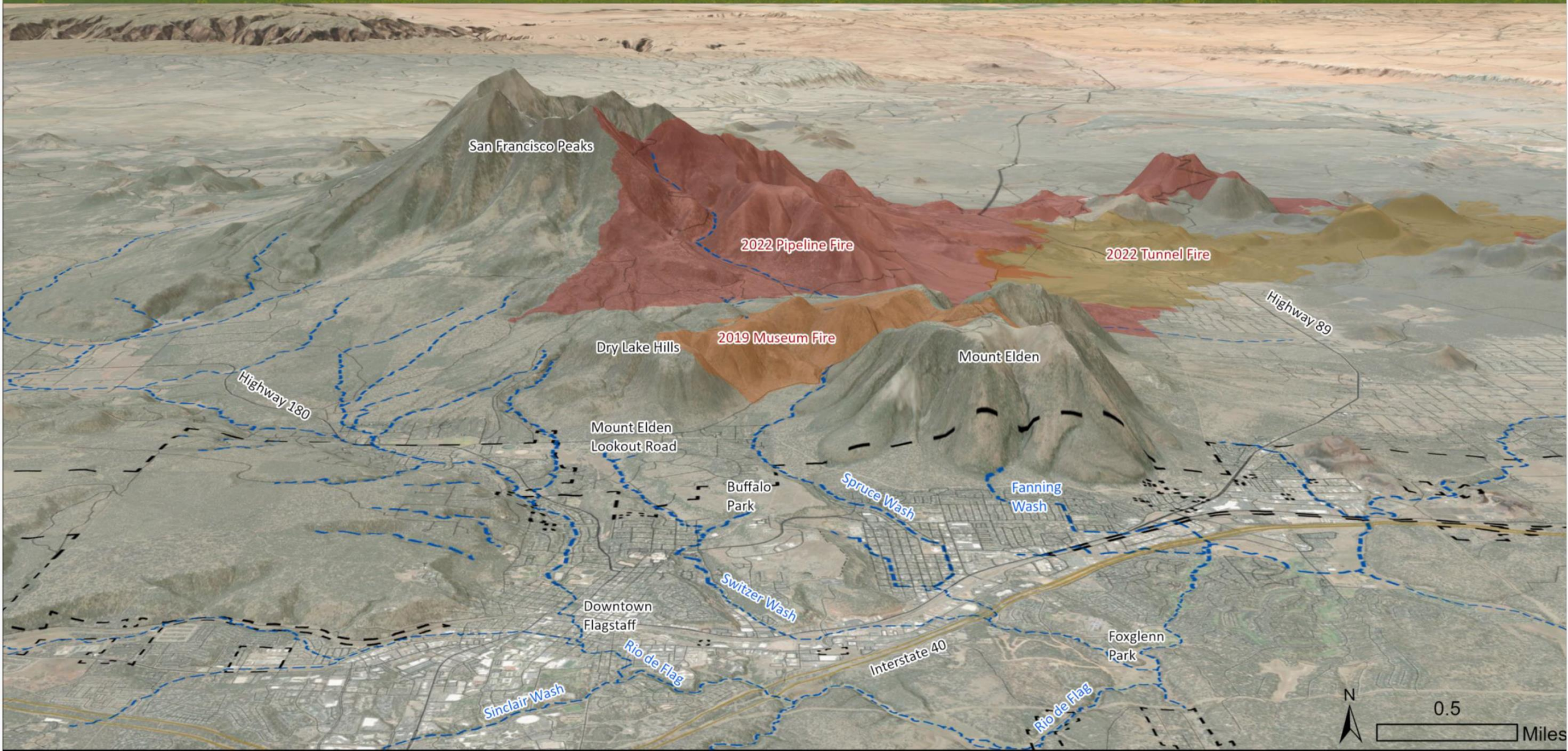
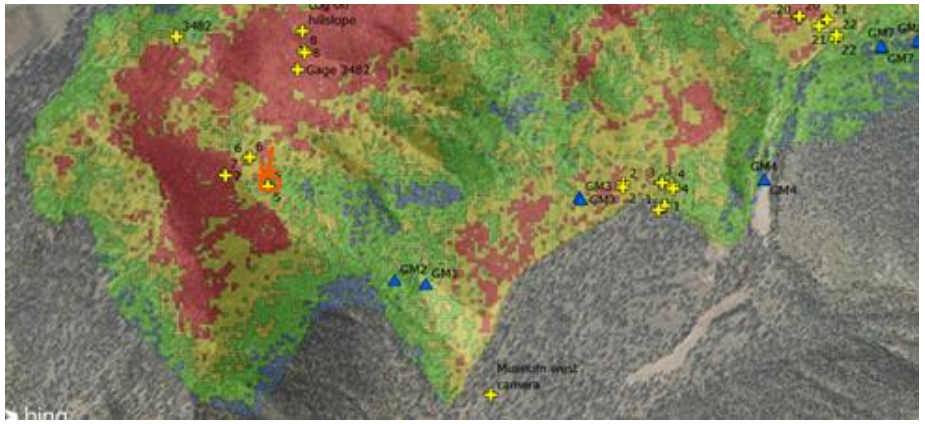


# Watershed Conditions

Point_5
Low Burn Severity



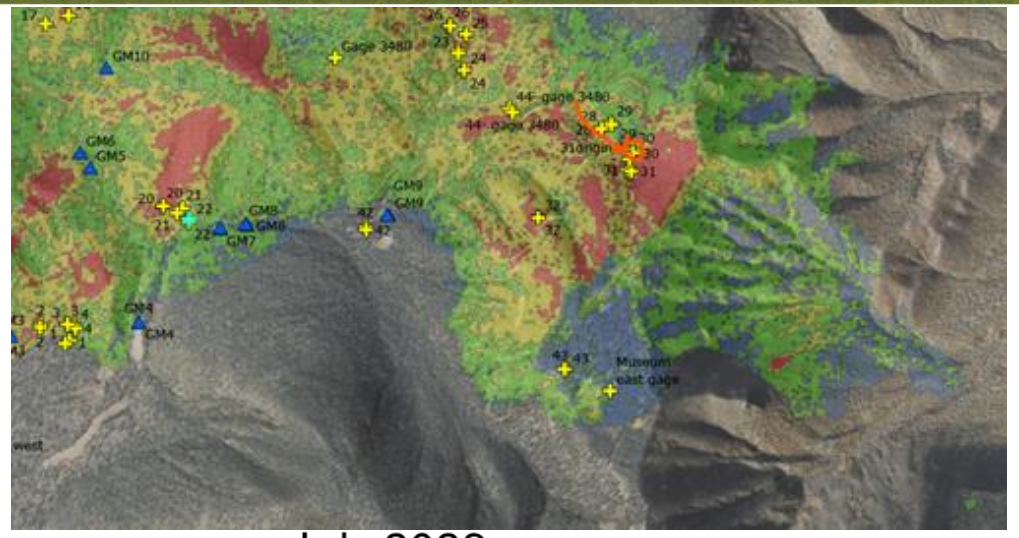

November 2022

May 2023

June 2024

# Watershed Conditions

Point_30
Moderate Burn Severity



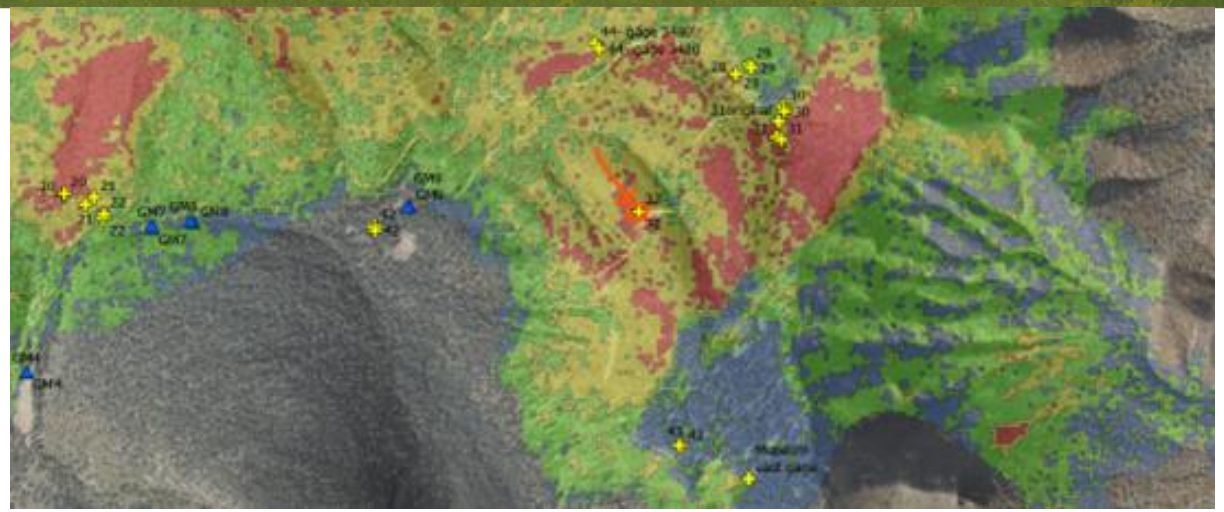

November 2022

July 2023

June 2024

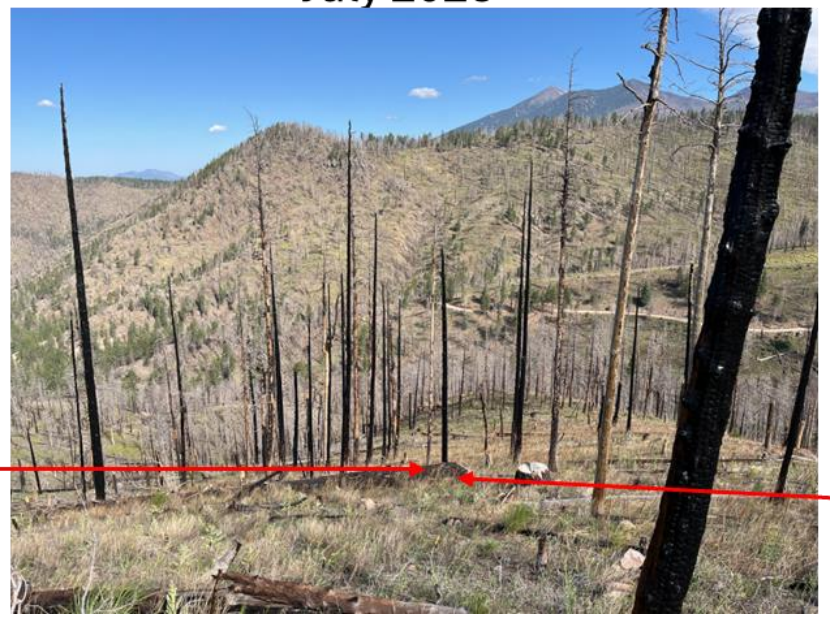
# Watershed Conditions

Point_32
High Burn Severity



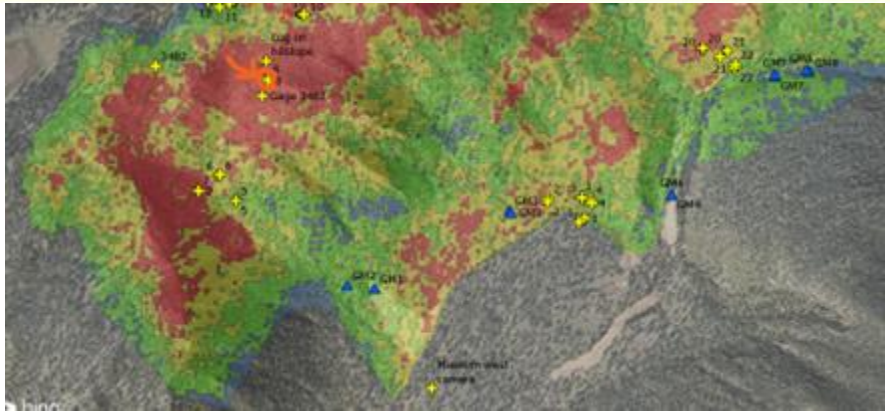
November 20222

July 2023

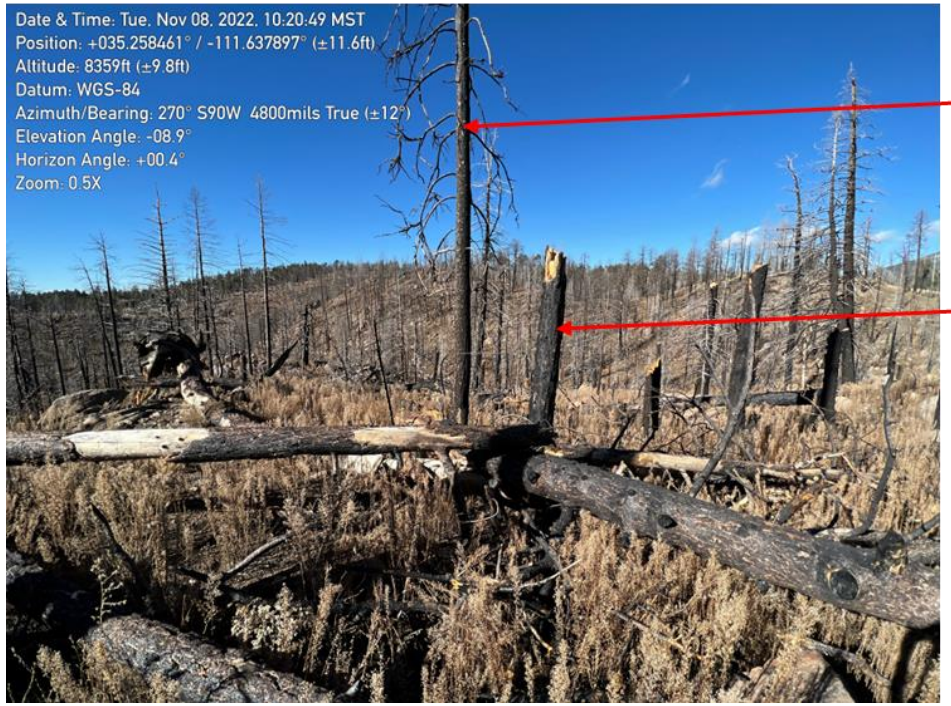


June 2024

# Watershed Conditions



November 2022




May 2023

May 2024

# Watershed Conditions

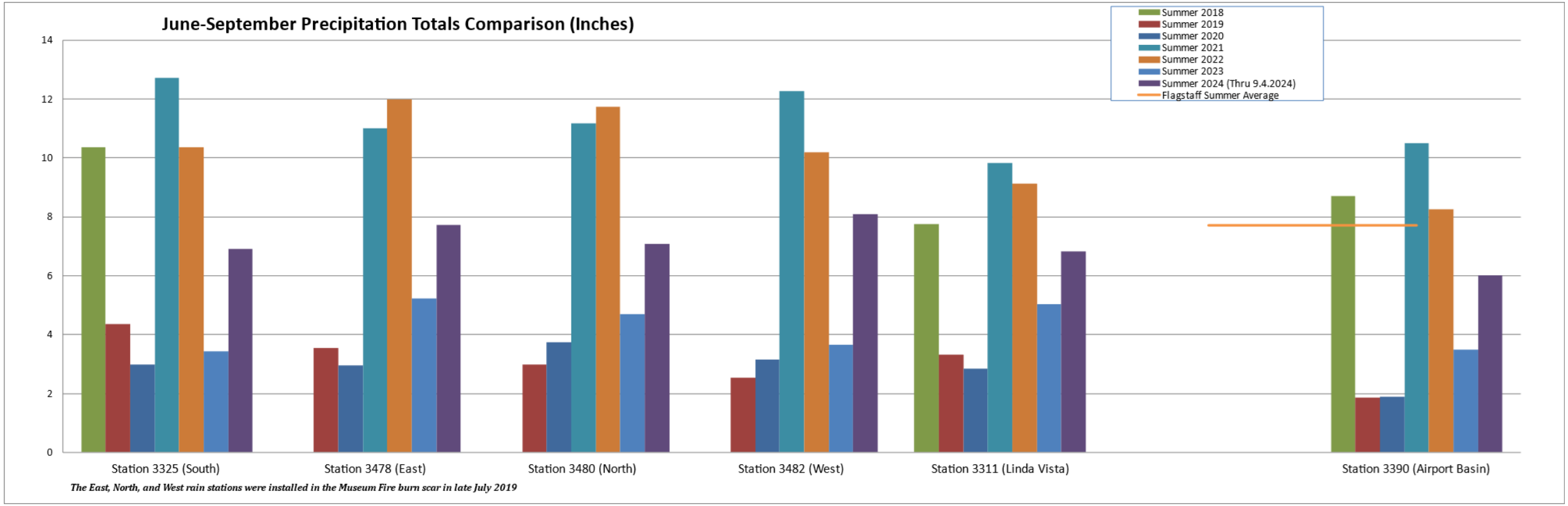
**Primary changes in watershed:**

- Aspen and Oak growth is improving though spatial extent is not changing
- Early successional forbes and grasses are predominant, and some mid successional grasses are also evident
- Significant blowdown of dead trees which provides some stabilization to the slopes
- Higher litter coverage

**Looking Forward:**

- Appears that there is some recovery (veg growth, litter coverage) happening
- From 2022 through 2024 there is not significant vegetation change
- Monitoring still recommended to learn from storm events
- Based on some ques from the 1977 Radio Fire, this watershed may be on a long slow recovery

# 2024 Monsoons




While rainfall is near the average, 2024 storms on the Museum Fire specifically have been smaller, or long duration storms.

# 2024 Monsoons

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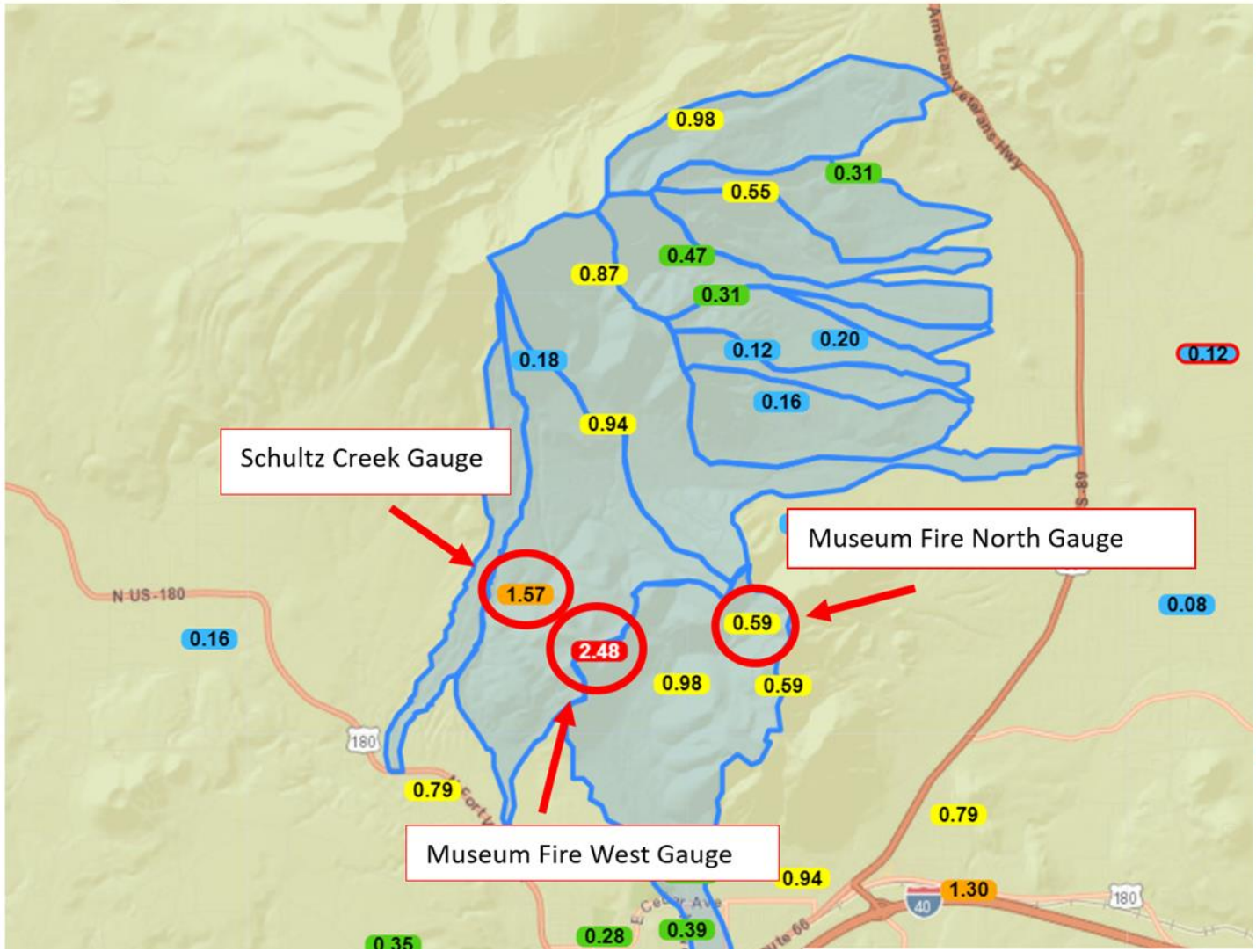
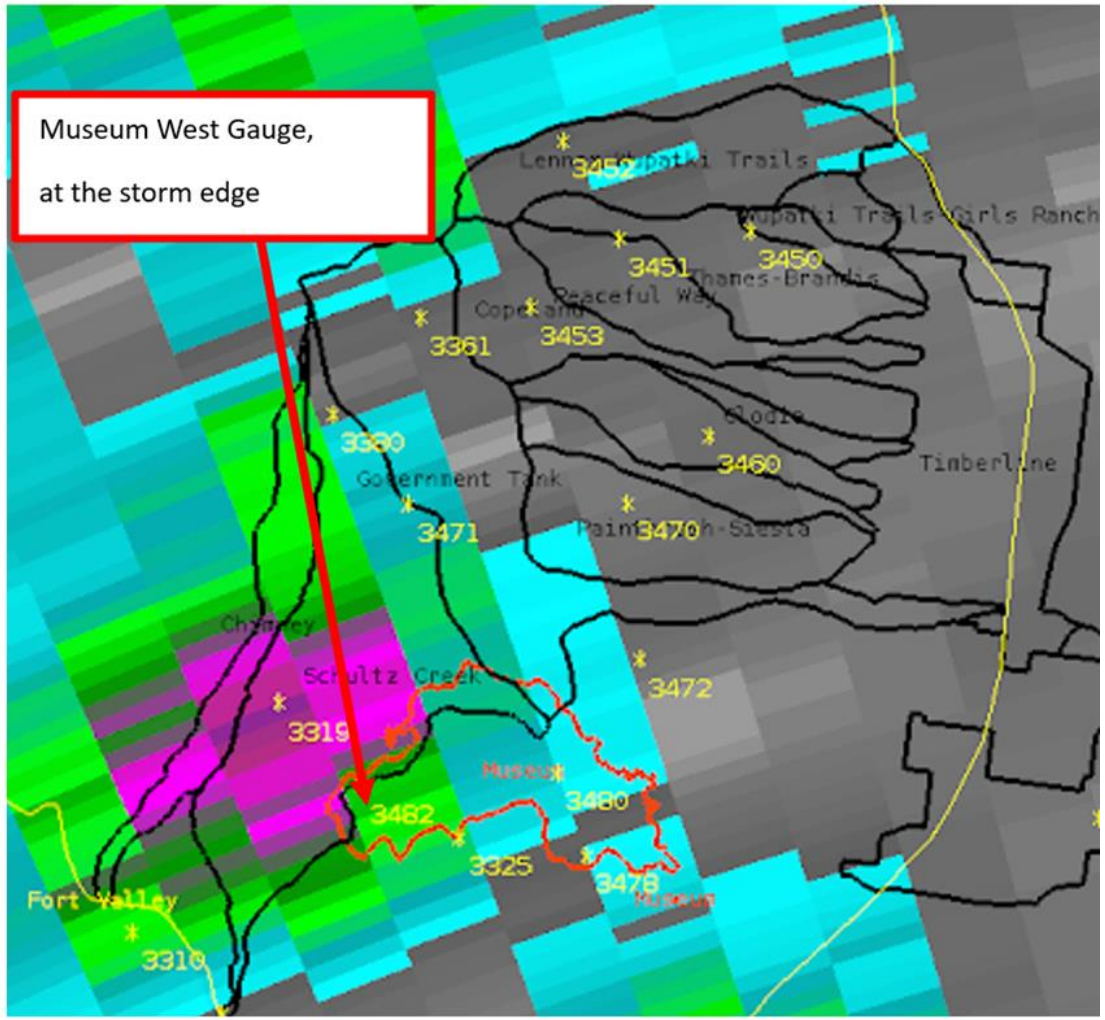
**Rain Gauge Measurements from June 25, 2024**




**Radar Data, June 25, 2024**



# 2024 Monsoons

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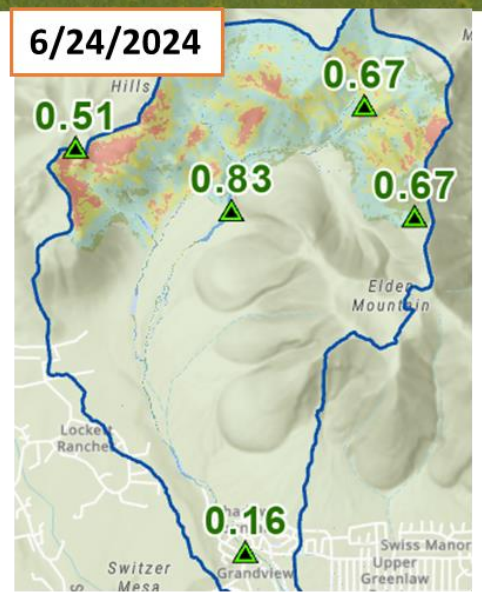
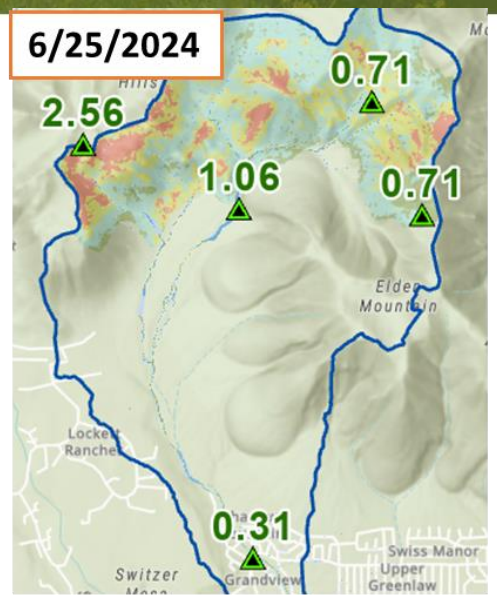
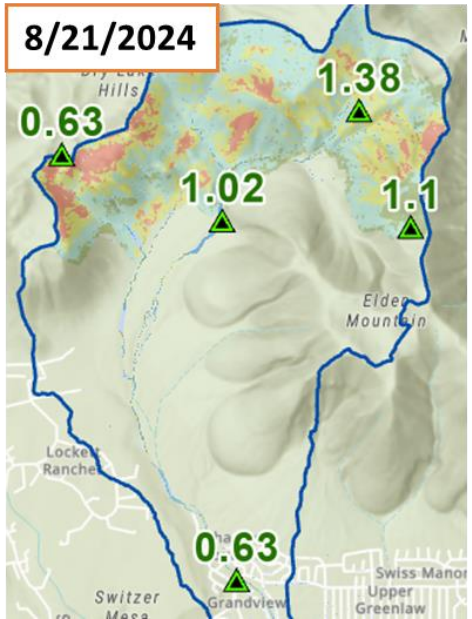
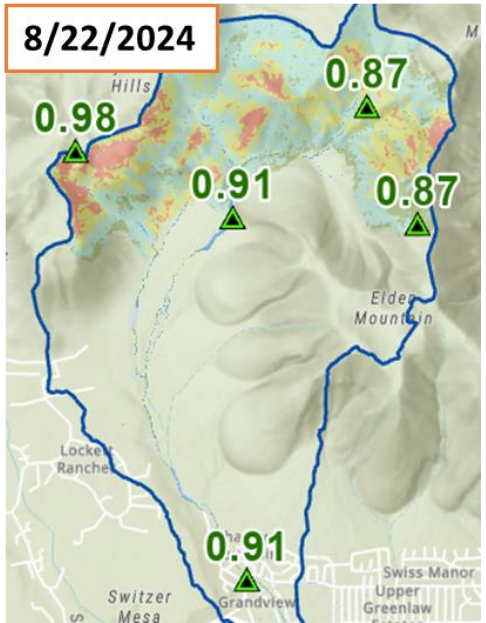
**Precipitation Events**

| Rainfall Date | Max 15 Minute Intensity (inches) | Max 60 Minute Intensity (inches) | Daily Total (inches) |
|---|---|---|---|
| 6/24/2024 | 0.44 | 0.68 | 0.83 |
| 6/25/2024 | 0.9 | 2.34 | 2.56 |
| 8/21/2024 | 0.32 | 0.6 | 1.38 |
| 8/22/2024 | 0.51 | 0.63 | 0.98 |



# 2024 Monsoons

**Peak Flow 2022**

**Peak June Flow 2024**

Museum West

Full watershed

# Spruce Wash

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SPRUCE WASH

# Suite of projects

## Key Flood Projects

2. "The Wedge" Detention Basin
3. Linda Vista Drive Crossing
4. Cedar Avenue to Linda Vista Drive Channel
5. Cedar Avenue Crossing
6. Arroyo Seco Drive to Dortha Avenue Channel
7. Arroyo Seco Drive Inlet
8. Killip Basins Outlet
9. Killip Basins Inlet

## Completed Key Flood Projects

1. Grandview Drive Reconstruction

- Spruce Wash Channel Improvements Project (Cedar Avenue to Dortha Avenue)
- Spruce Wash Channel Improvements Project (Dortha Avenue Inlet)
- Killip School Regional Detention Basins Project
- Park Way Basins

# Spruce Wash Schedule

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**NOV 2022**
PROP 441 PASSES

THANK YOU FLAGSTAFF!

**NOV 2022 - ONGOING**
STUDY, PLANNING, DESIGN & PRECON

**APR 2024**
COMPLETED:

GRANDVIEW UTILITIES & WEDGE CLEARING

**OCT 2024**
COMPLETED:

GRANDVIEW STREET

WEDGE UTILITIES

**2024**
CONSTRUCT:

BEGIN LV-Cedar Channel

BEGIN Wedge Stormdrain

Linda Vista Crossing

**2025**
CONSTRUCT:

LV-Cedar Channel

Wedge Stormdrain & Basin

Cedar Xing

Dortha-Arroyo Seco Channel

Killip Inlet & Outlet

**2026**
CONSTRUCT:

Final Cleanup and Close-Out

# Spruce Wash Budget

- Total Estimated Project Costs: **$39M**
- Funding Sources:
  - Bond (Proposition 441) - $26M
  - Water Services (Drinking, Storm & Waste Water) - $0.7M
  - Streets (Road Repair & Street Safety) - $5.5
  - Transportation (Proposition 419) - $0.5M
  - USFS (Wedge Basin) - $3.5M
  - FEMA HMGP (Cedar Crossing) - $1M
  - USACE (Killip Inlet) - $1.5M
  - FEMA/DEMA (Ponderosa Park Area) - $1.5M
  - **TOTAL: $40M**
- PENDING GRANT (Killip Secondary Outlet): $1.7M

# Grandview Drive Reconstruction

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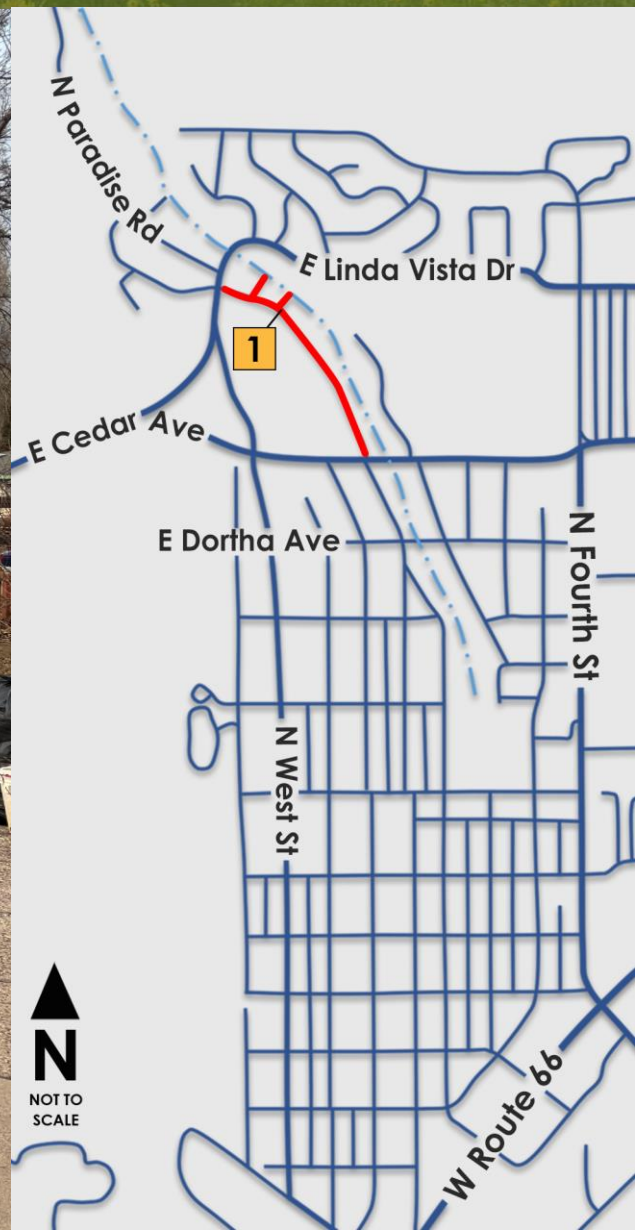
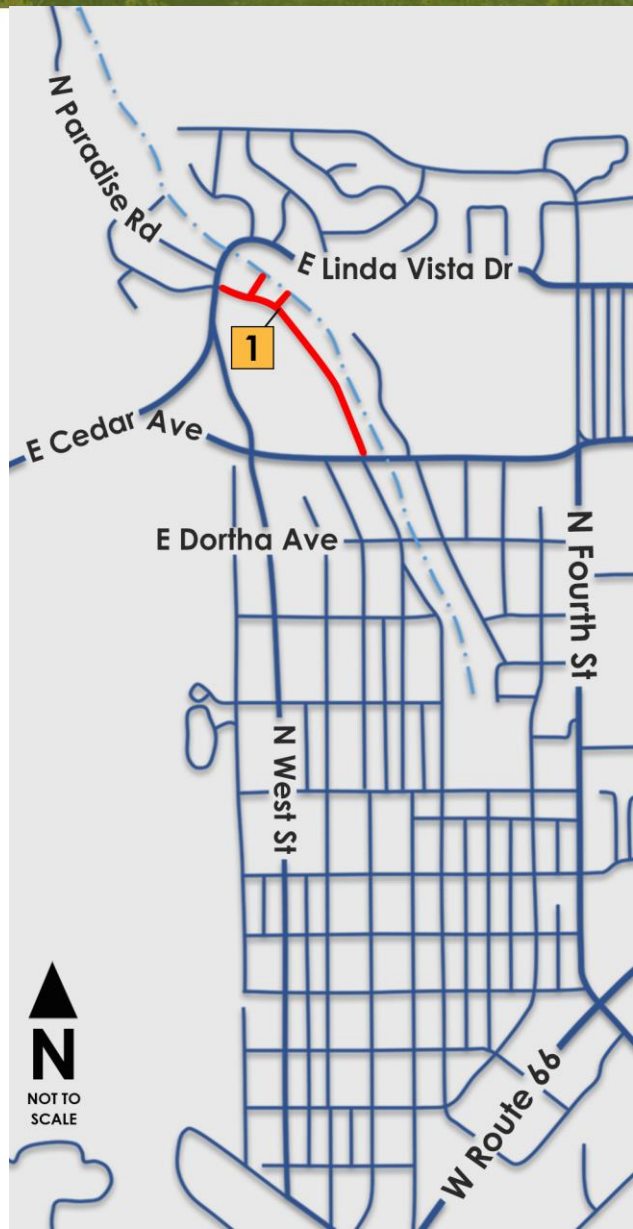
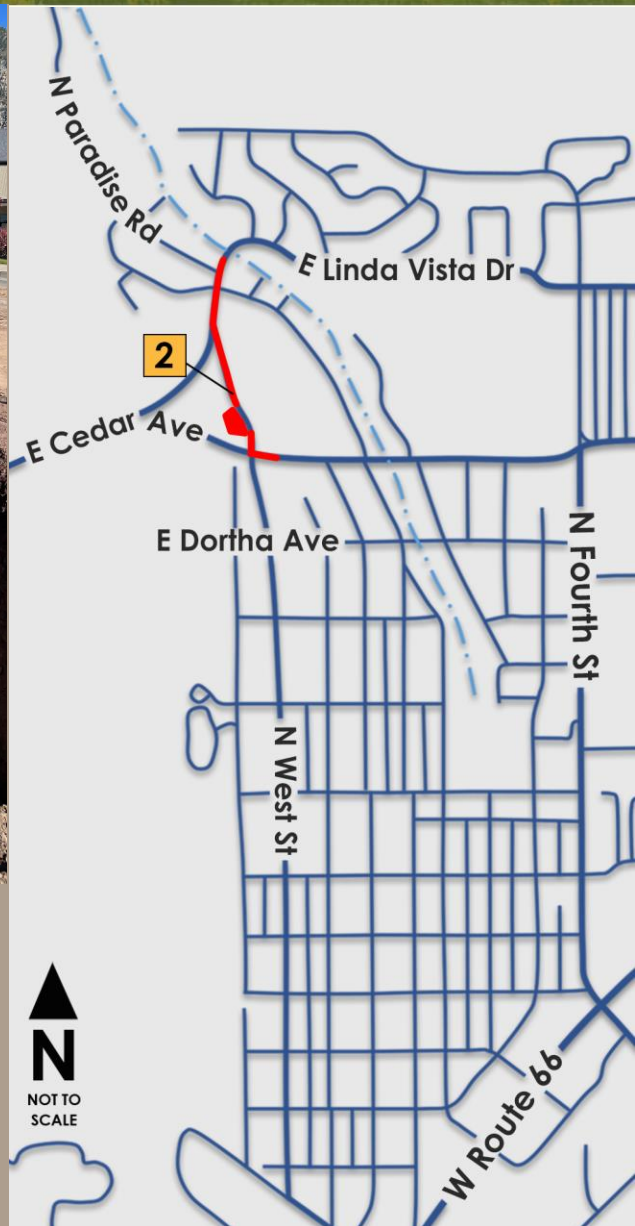
## Pre-Construction Conditions



# Grandview Drive Reconstruction



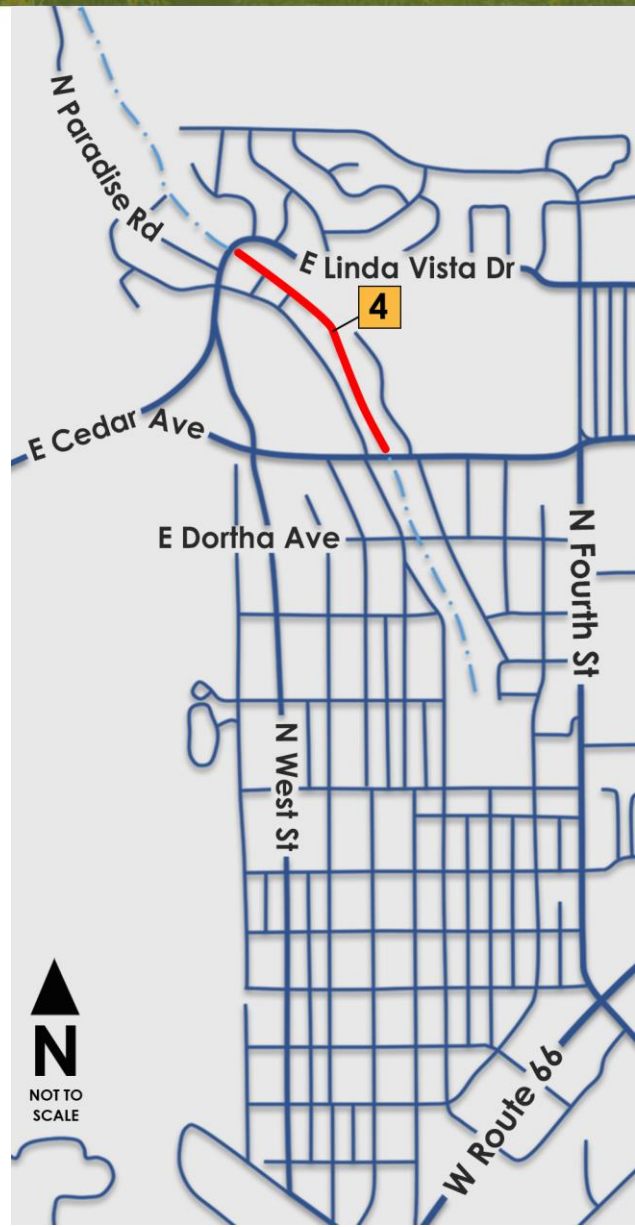
# "The Wedge" Storm drain



# Linda Vista Crossing

# Linda Vista Crossing

# Linda Vista to Cedar Channel



# Cedar Avenue Crossing

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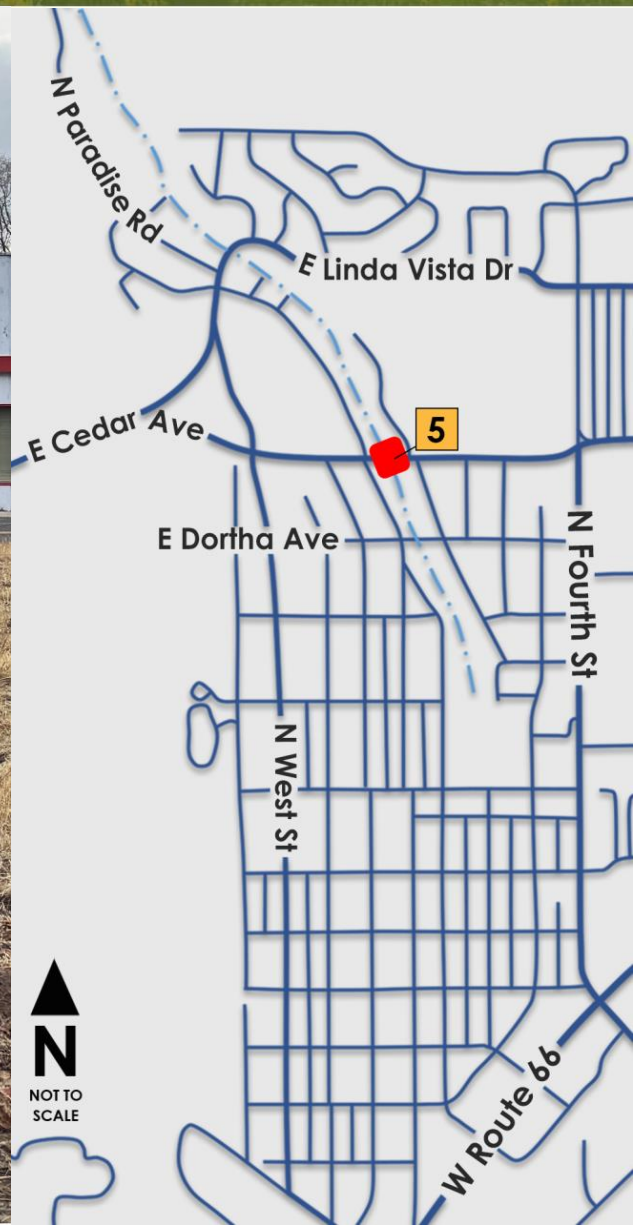
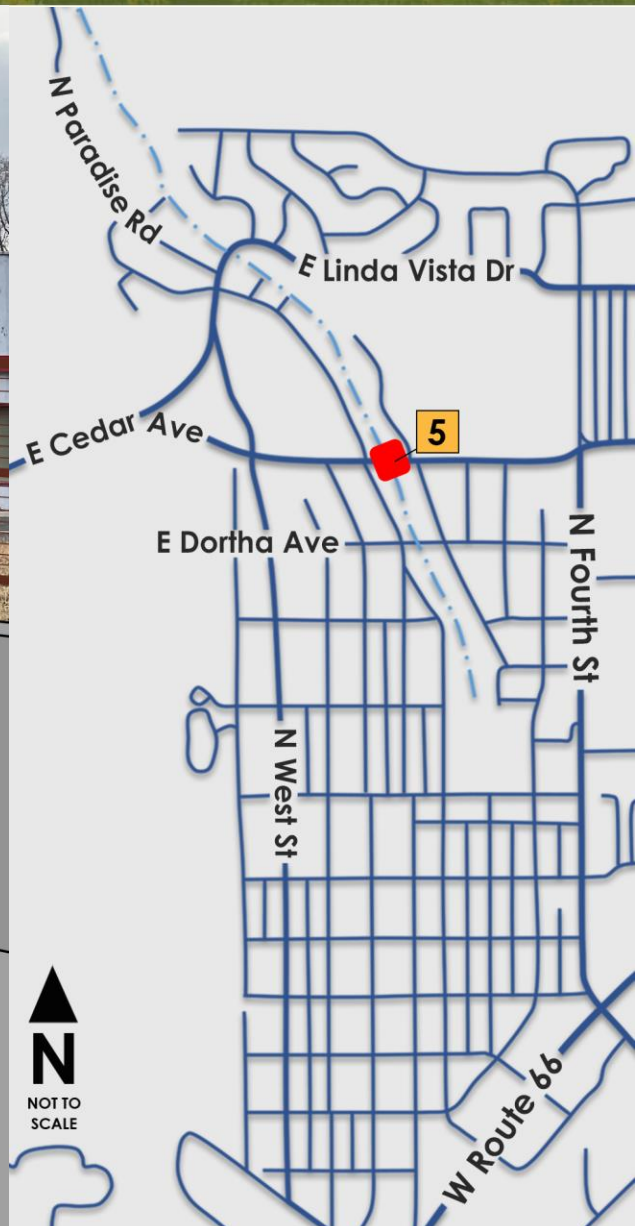
## Current Conditions

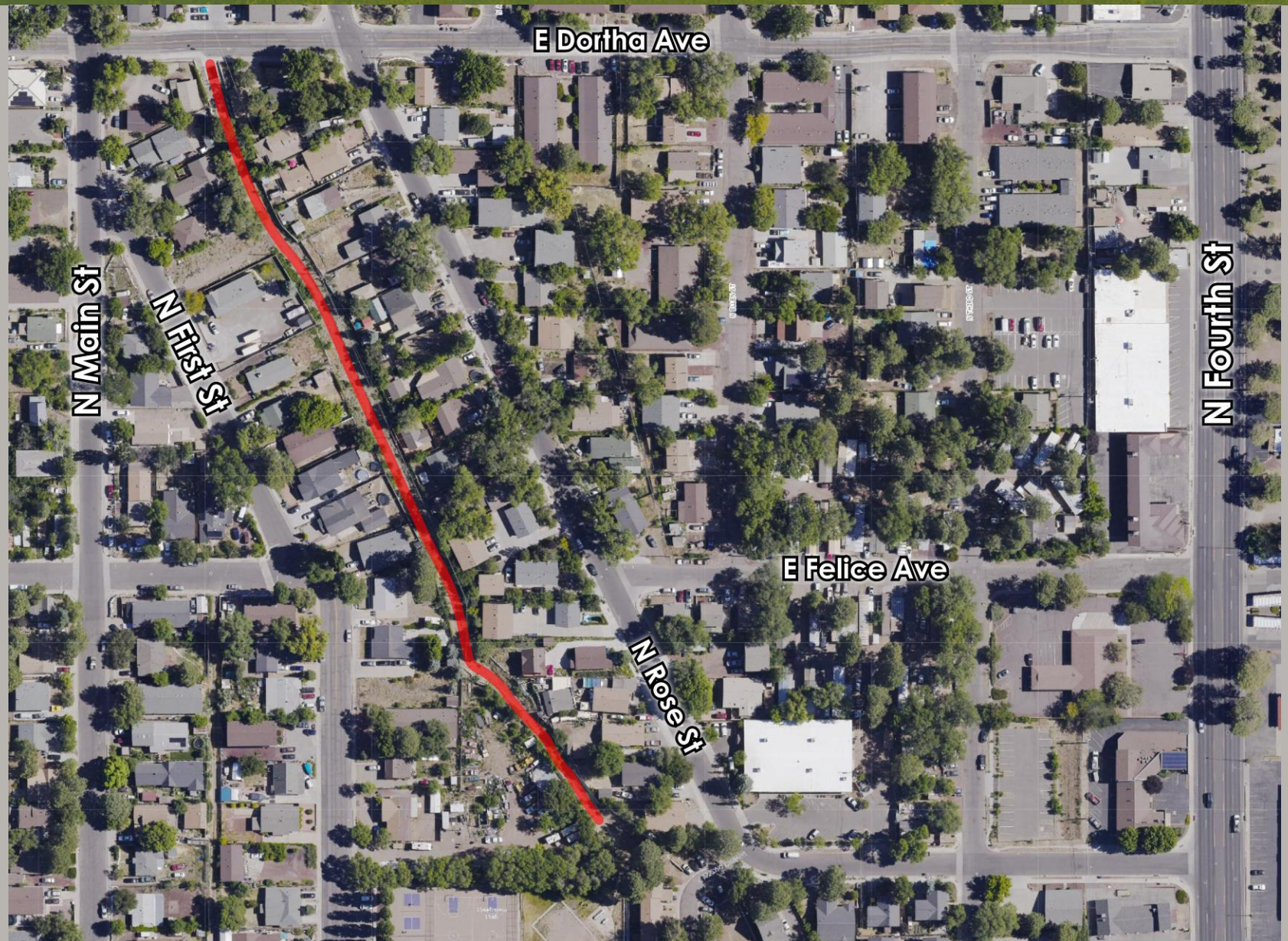


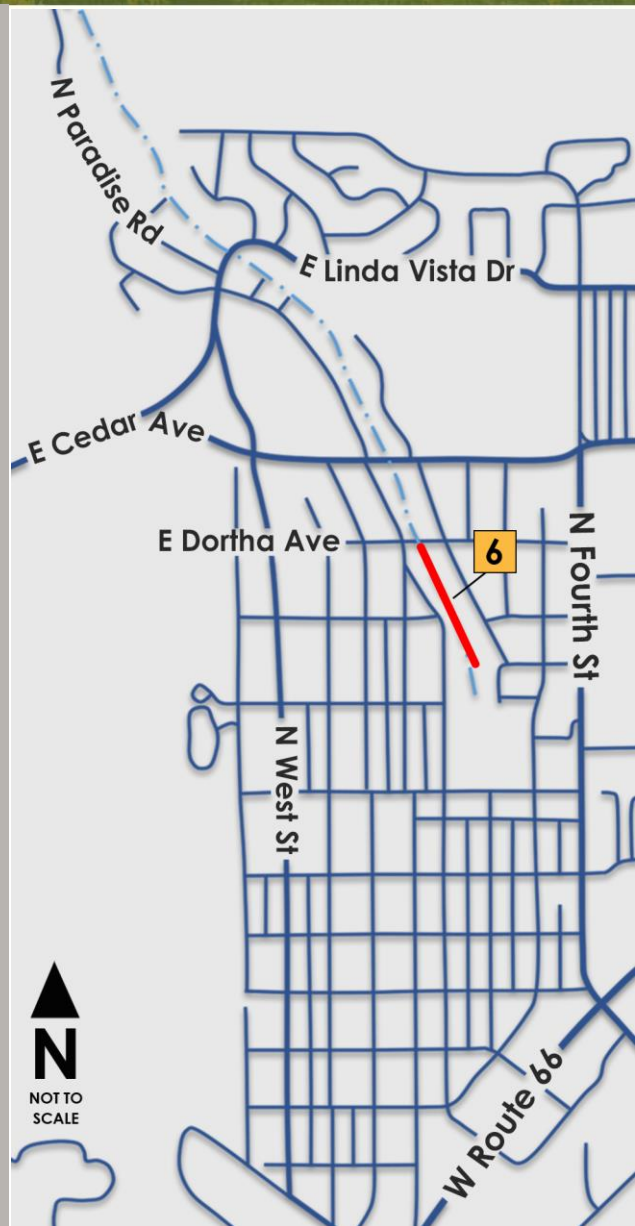
# Cedar Avenue Crossing

## Future Improvements

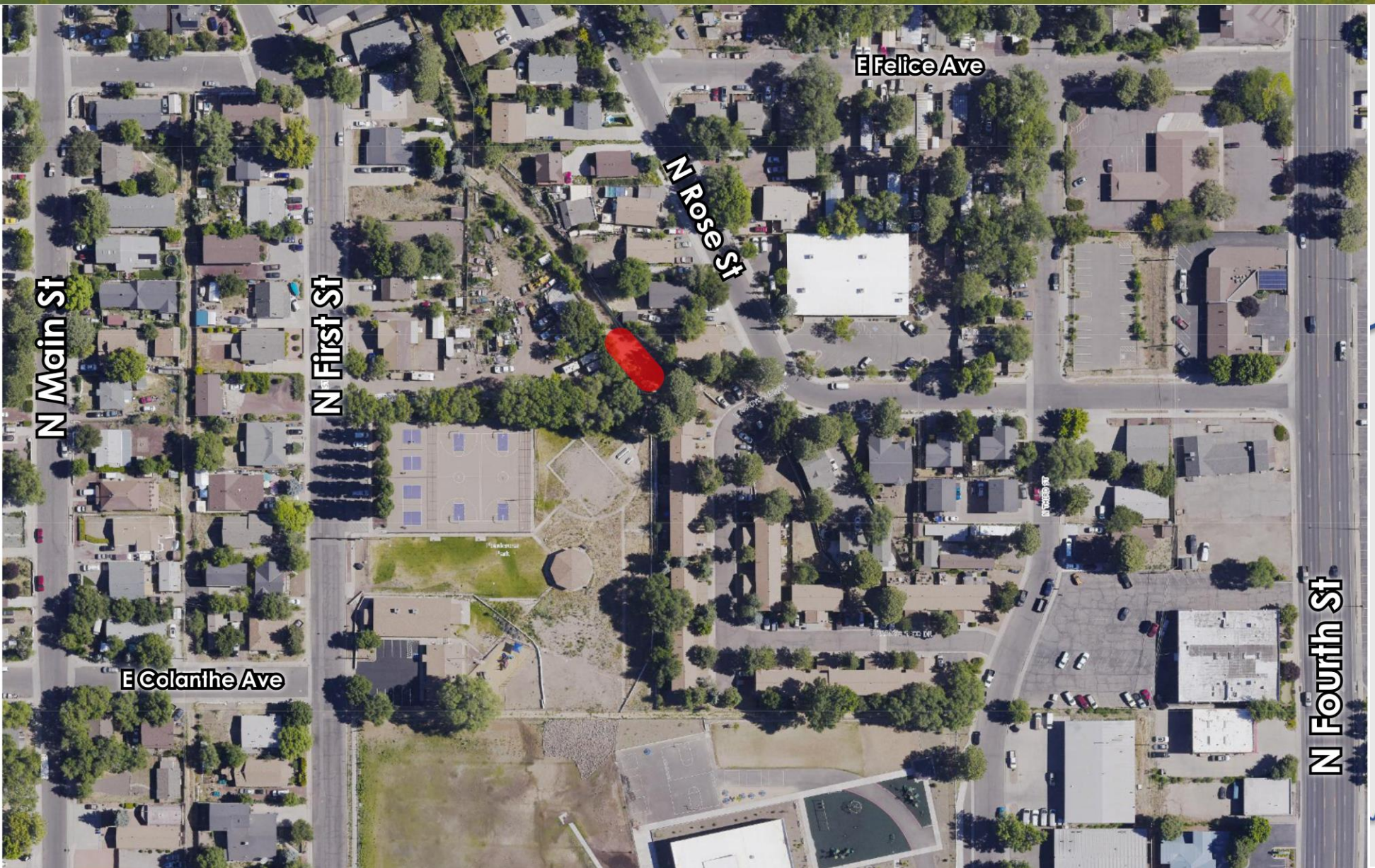


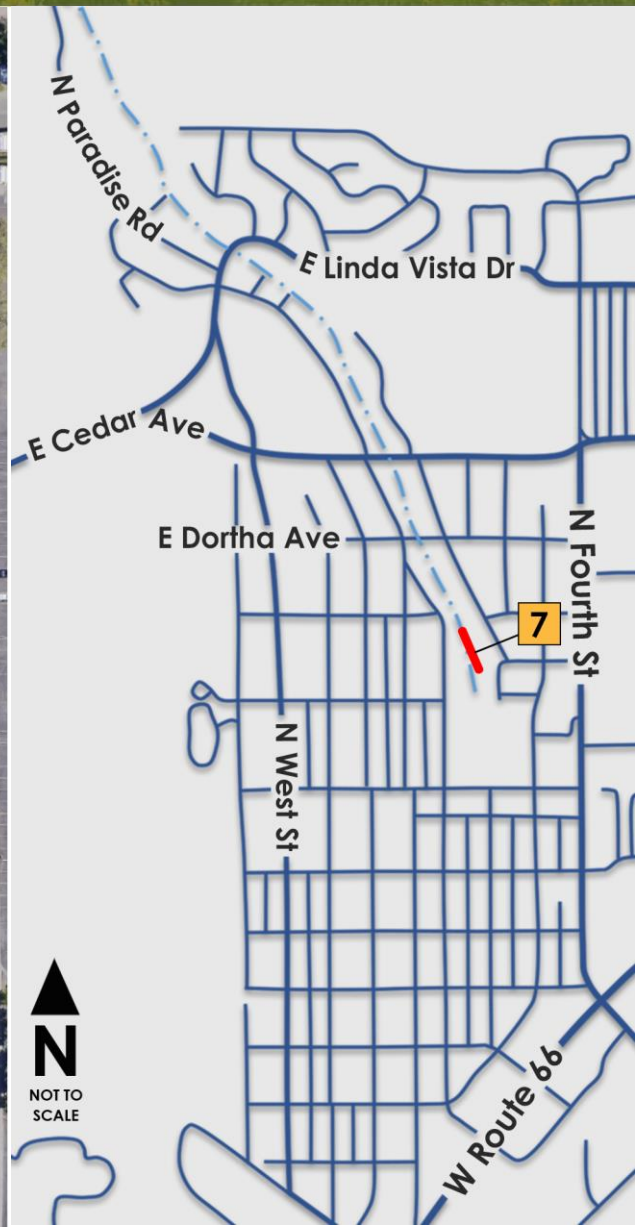
# Arroyo Seco to Dortha Channel



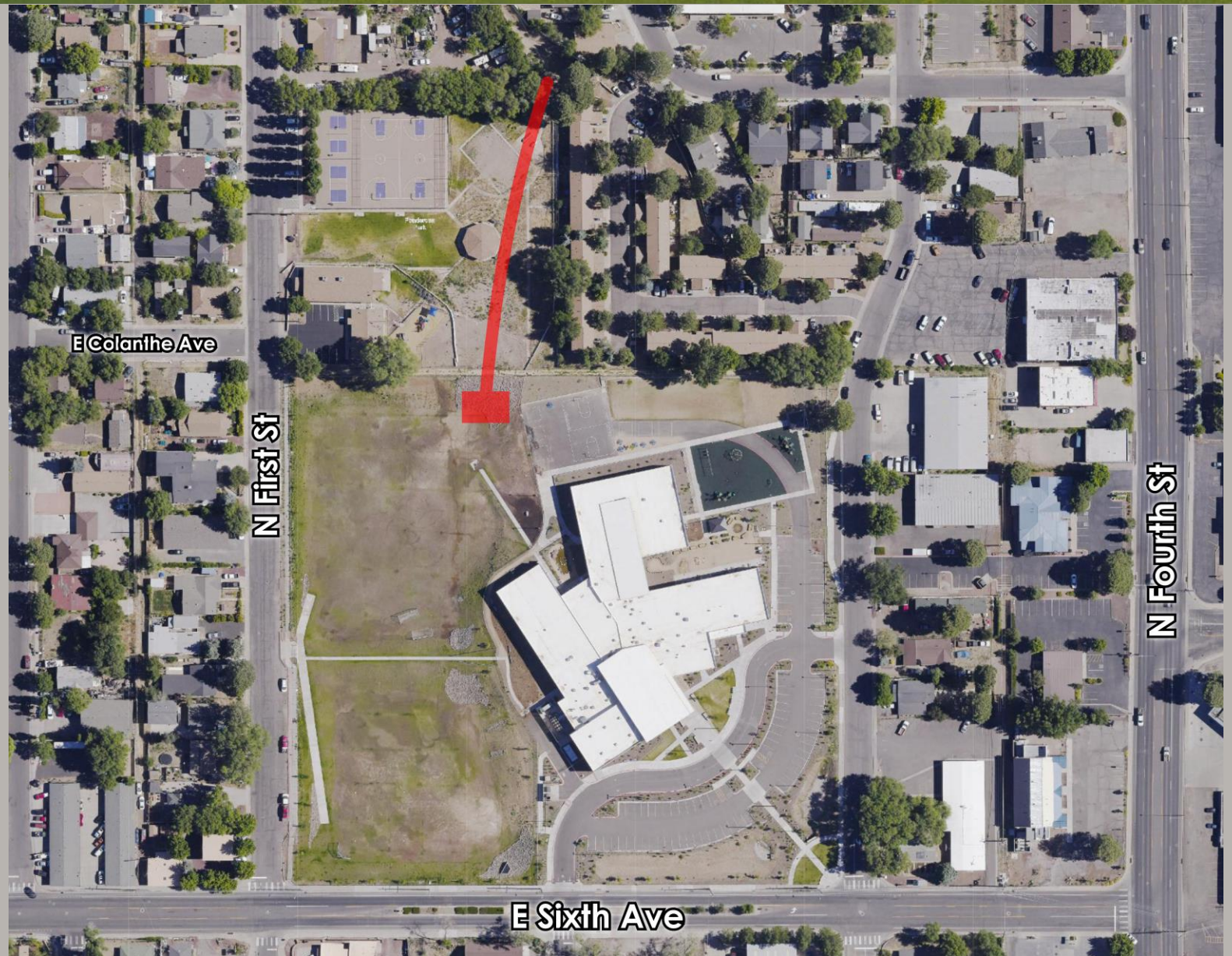



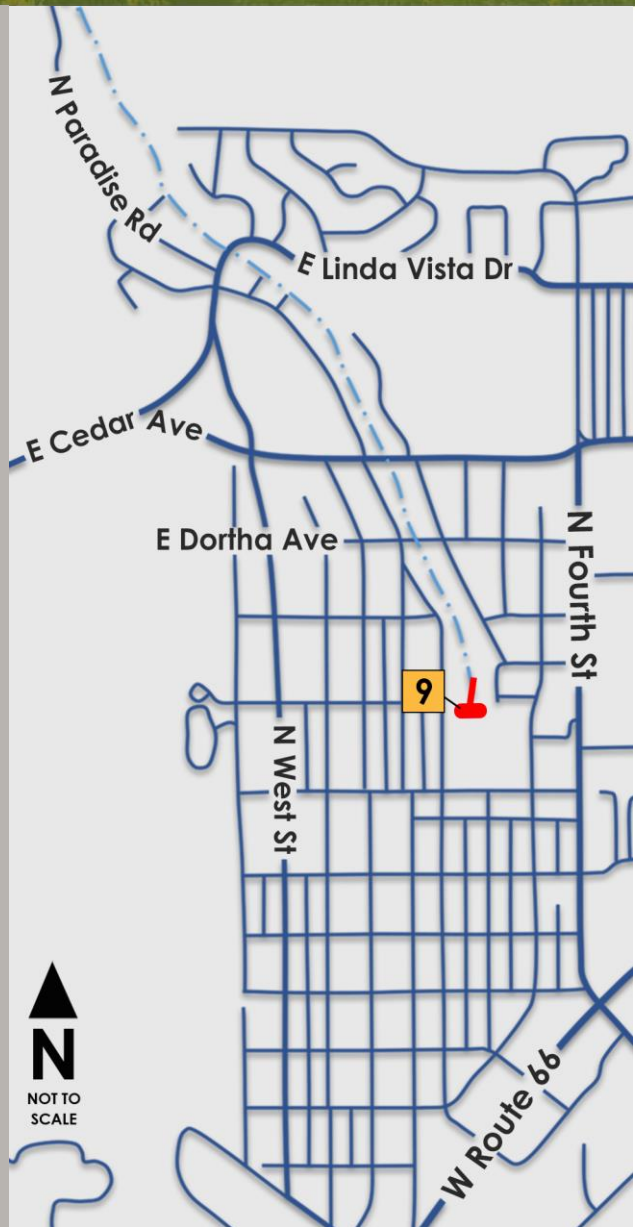
# Arroyo Seco Inlet



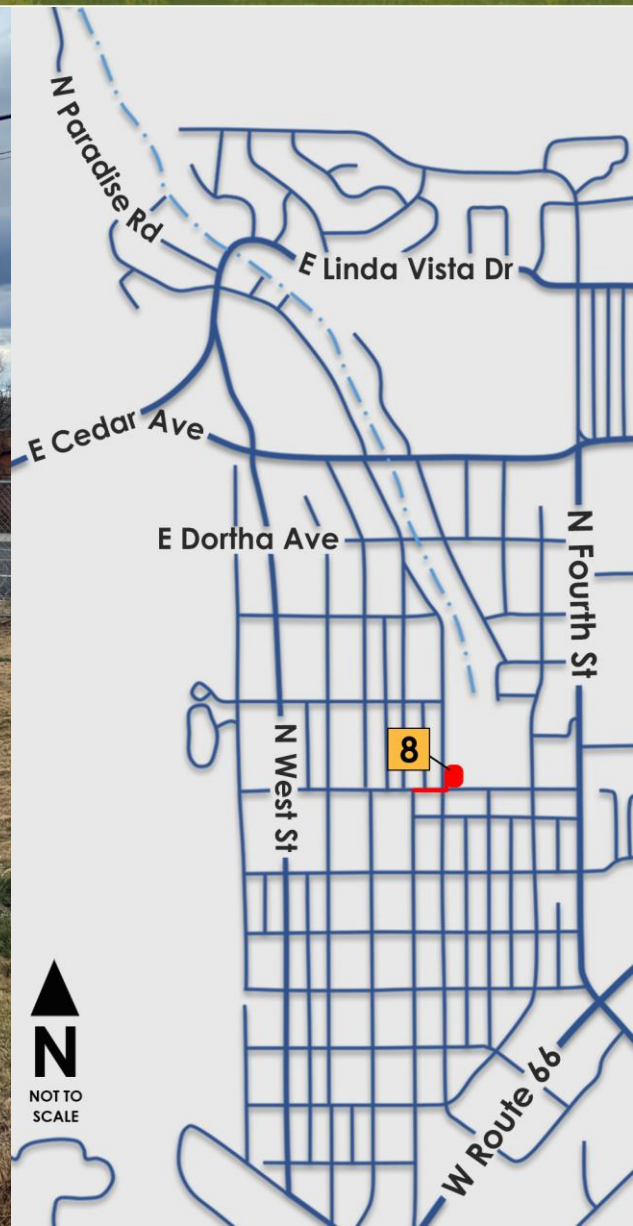
# Killip Basins Inlet



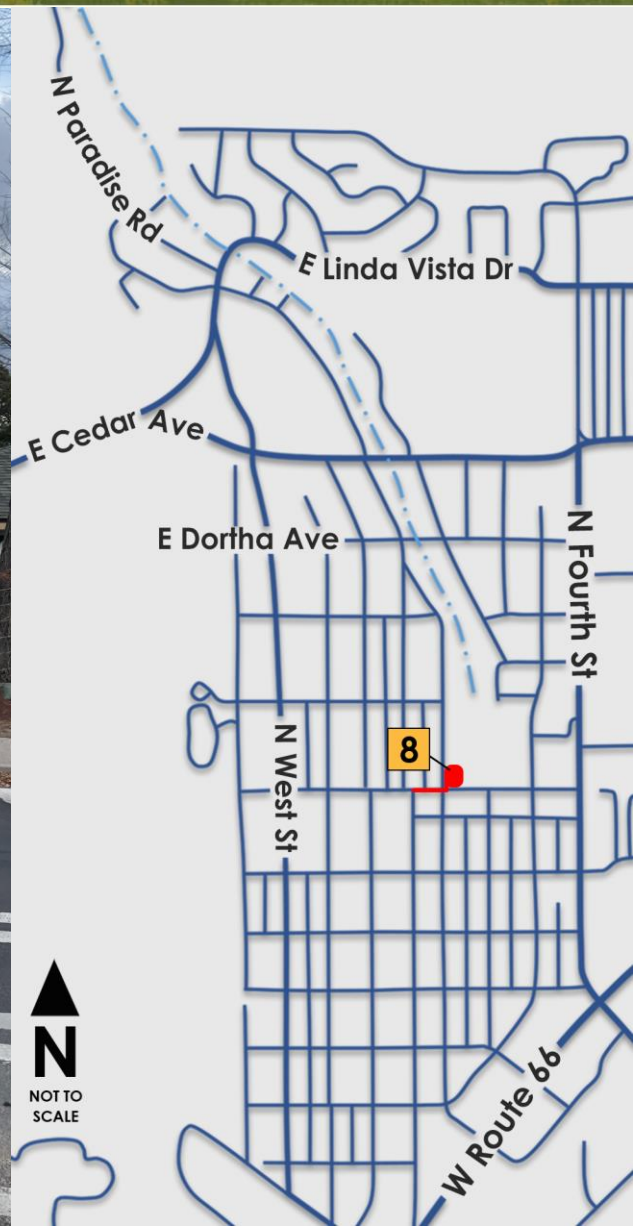
# Killip Basins Outlet

## Future Improvements



# Killip Basins Outlet

## Future Improvements



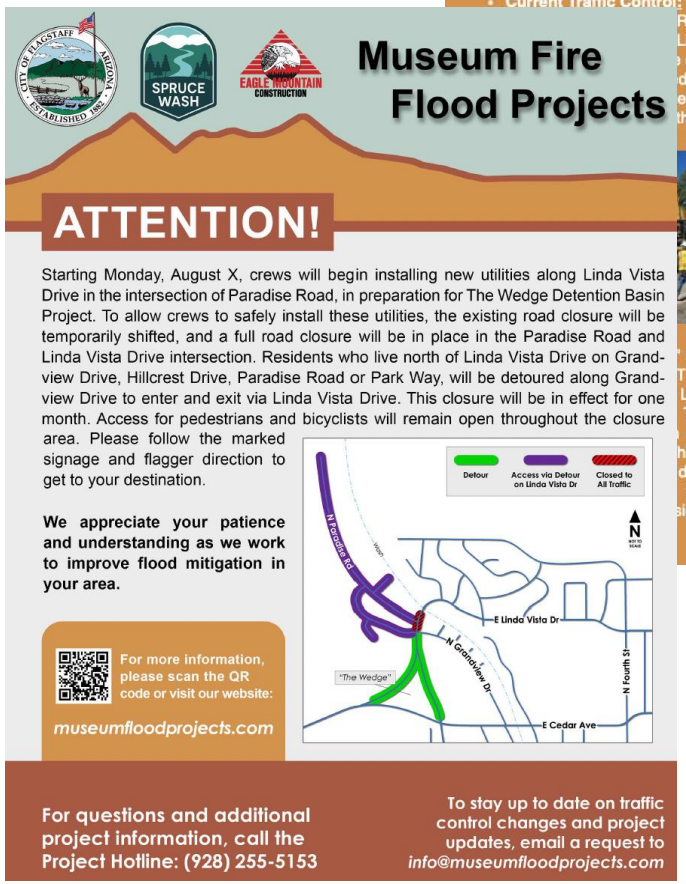
# Traffic Control

- Linda Vista CLOSED to thru traffic through Spring 2025
- Lane Shifts
  - Cedar Avenue
  - West Street / Linda Vista
- Pedestrian & Bicycle Access MAINTAINED!

# Communications

- Weekly e-news
- Door-hangers
- News Release
- Meet-in-the-Street
- Sunnyside Neighbor-hood Assoc.

Project hotline: 928-255-5153
email: info@museumfloodprojects.com
website: museumfloodprojects.com



SPRUCE WASH

EAGLE MOUNTAIN CONSTRUCTION

Museum Fire Flood Projects

ATTENTION!

Starting Monday, August X, crews will begin installing new utilities along Linda Vista Drive in the intersection of Paradise Road, in preparation for The Wedge Detention Basin Project. To allow crews to safely install these utilities, the existing road closure will be temporarily shifted, and a full road closure will be in place in the Paradise Road and Linda Vista Drive intersection. Residents who live north of Linda Vista Drive on Grand-view Drive, Hillcrest Drive, Paradise Road or Park Way, will be detoured along Grand-view Drive to enter and exit via Linda Vista Drive. This closure will be in effect for one month. Access for pedestrians and bicyclists will remain open throughout the closure area. Please follow the marked signage and flagger direction to get to your destination.

**We appreciate your patience and understanding as we work to improve flood mitigation in your area.**

For more information, please scan the QR code or visit our website:

*museumfloodprojects.com*

Detour
Access via Detour on Linda Vista Dr
Closed to All Traffic
N
NORTH SCALE
N Paradise Rd
Moon
E Linda Vista Dr
N Grandview Dr
"The Wedge"
N Fourth St
E Cedar Ave

For questions and additional project information, call the Project Hotline: (928) 255-5153

To stay up to date on traffic control changes and project updates, email a request to *info@museumfloodprojects.com*

Museum Fire Flood Projects

Good afternoon!

Here's a look at what's happening next week. If you'd like more information, please give us a call at 928-255-5153 or visit our webpage.

***What to expect the week of October 28:***

- **Current Traffic Control:** Linda Vista Drive is closed to through traffic. The Road and Linda Vista Drive is closed, and the intersection Linda Vista Drive is open for residents who live north and on Grandview Drive, Hillcrest Drive, Paradise Road and destrians and bicyclists will remain open through the e signage and flagger's direction.

the new storm drain system at the Linda Vista crossing.

storm drain The Wedge Linda Vista Traffic will directions; hifting lanes down Linda follow the signage and

*Click the images for a larger version!*

# Schultz Creek

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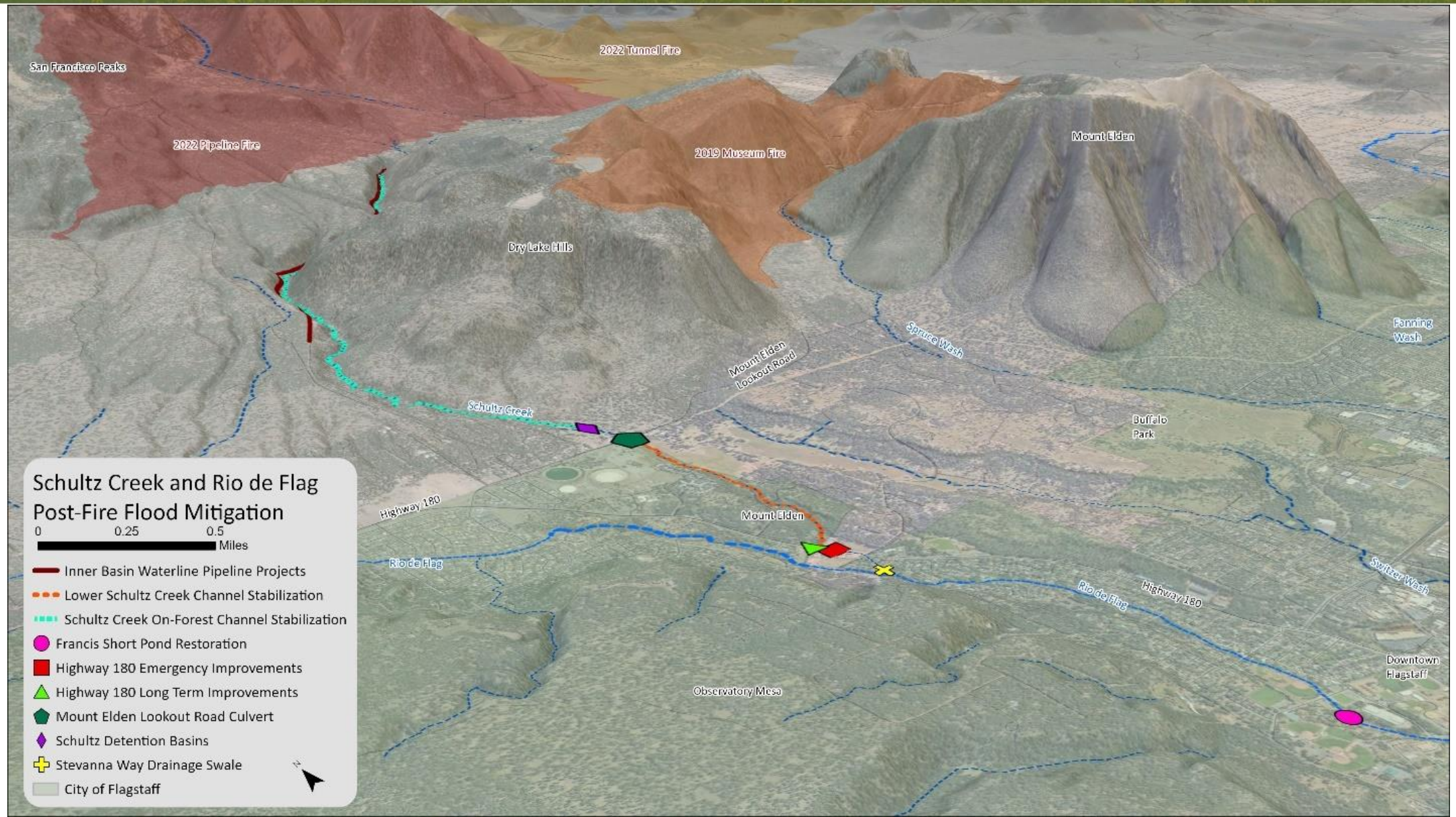
# System of Improvements

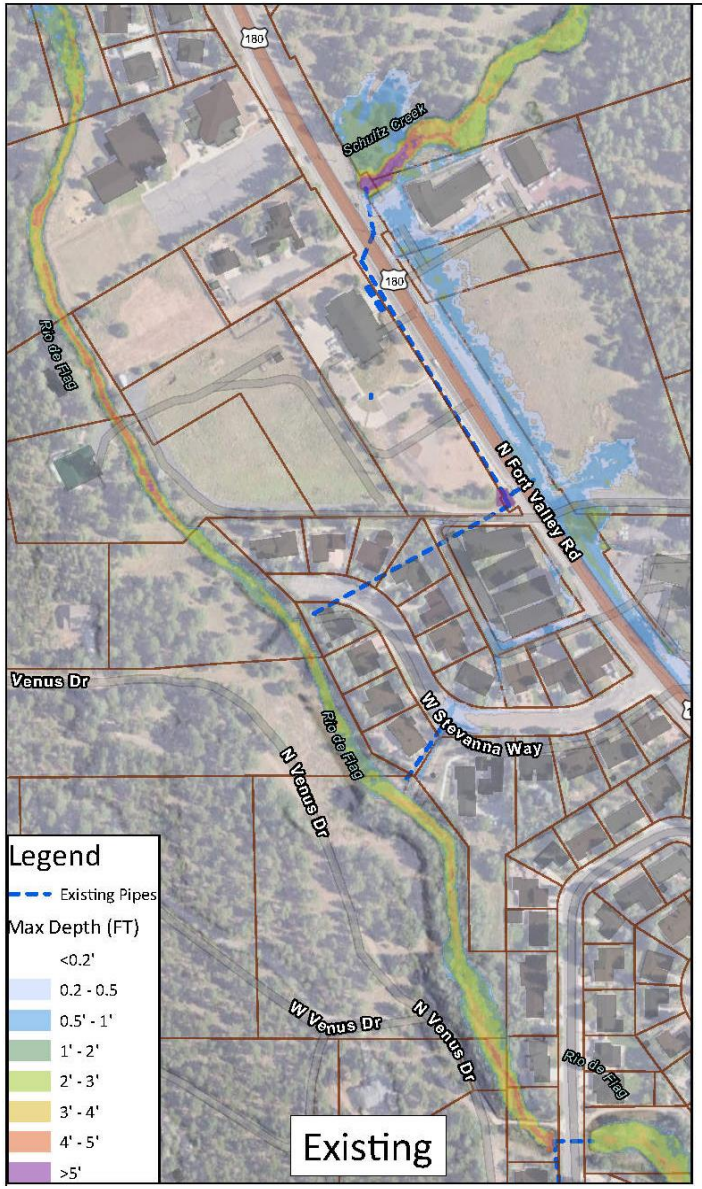


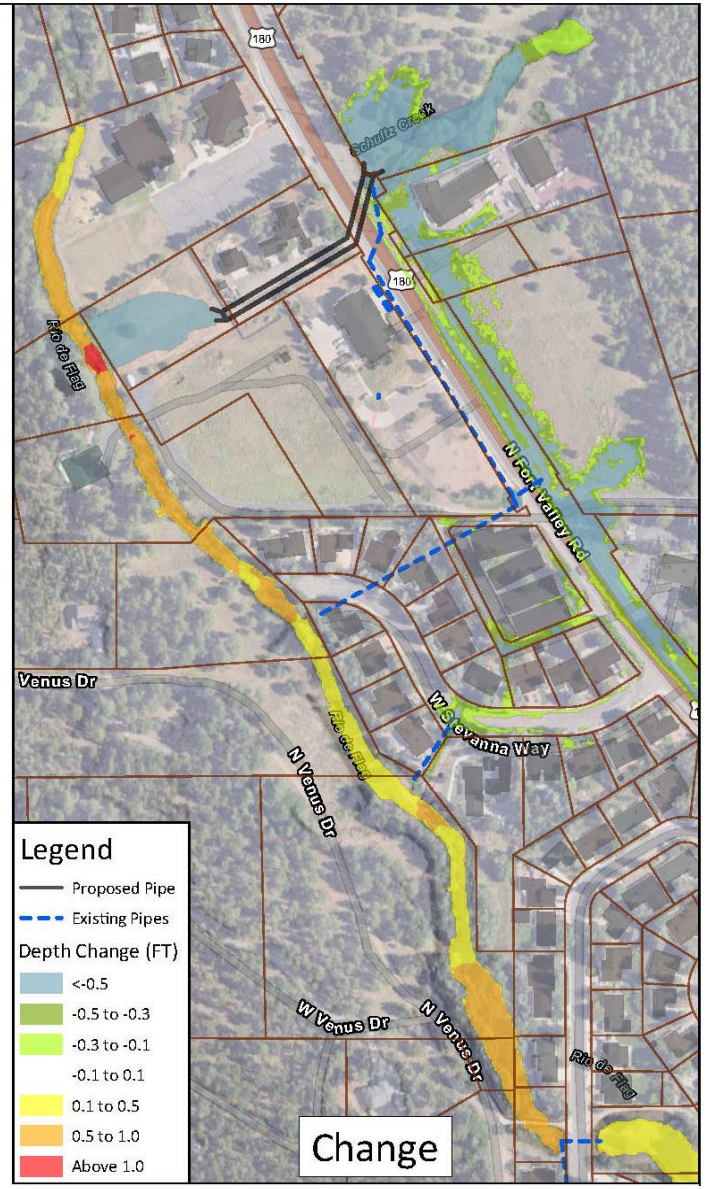
# Schultz Creek Long Term Mitigation

## Highway 180 culvert

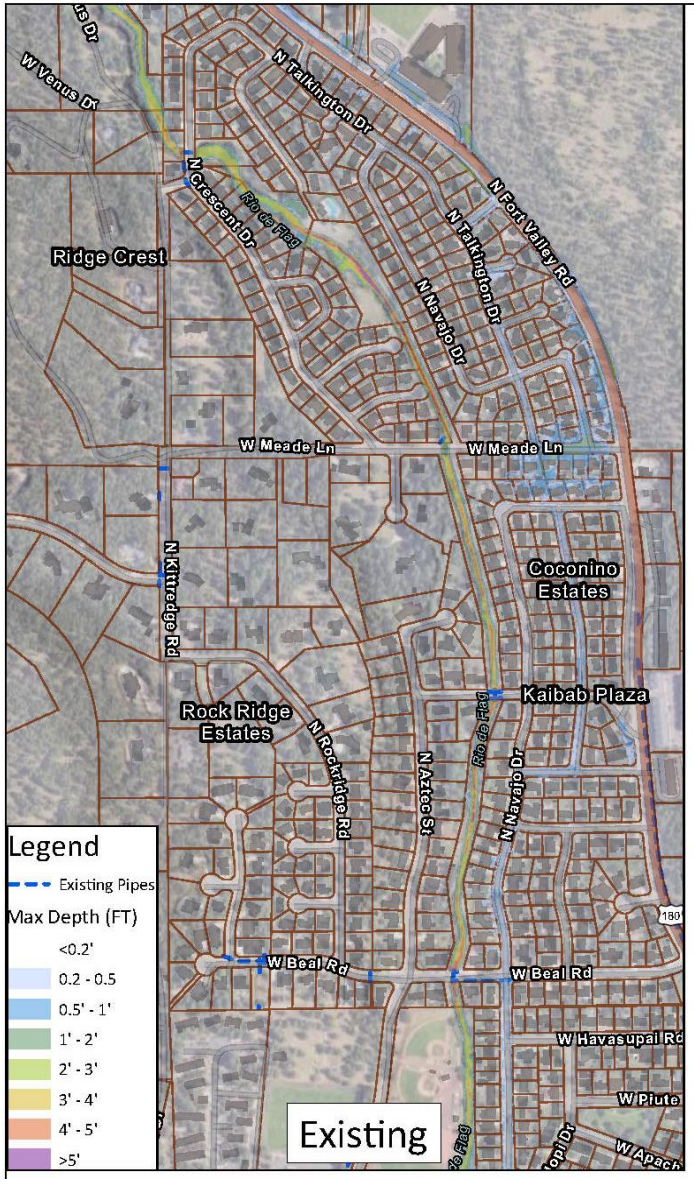
- ~$7M
- Fully funded by S.B. 1720
- Banicki Construction, CMAR
- Substantially complete!

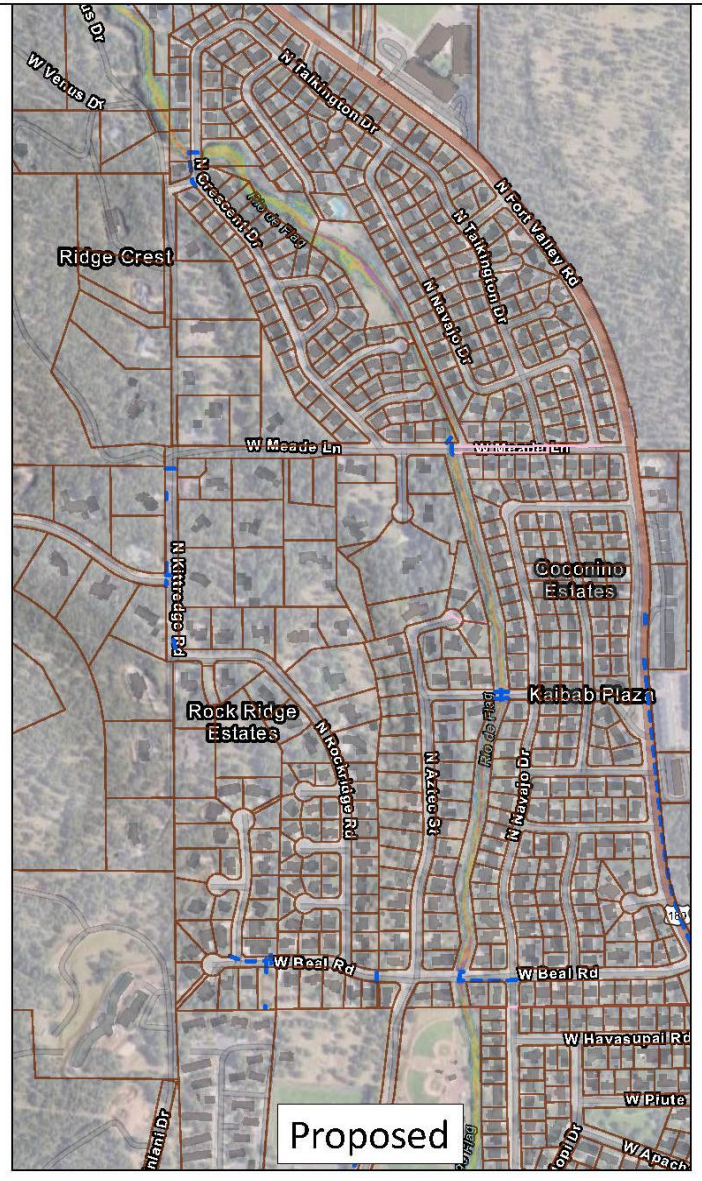
# Schultz Creek Modeling

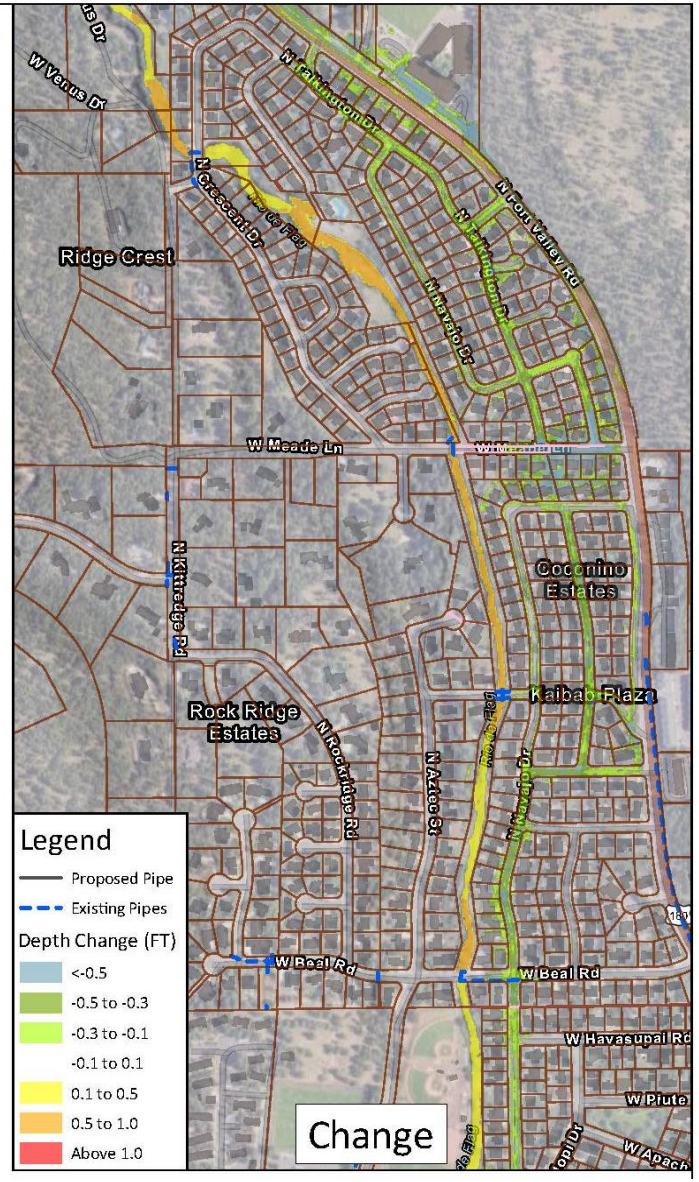




# Schultz Creek Modeling



# Short-term Mitigations – Schultz Creek

- Sandbags and barrier were removed this fall, huge success.

# Re-using sandbags

- Sandbags removed from Coconino Estates were recycled with cinders used for other City projects.

# Non-fire 2024 flood summary

- Historic areas that experienced flooding this year
  - Meade Lane
  - Lockett Drive
  - Country Club
  - Foxglenn/"The Meadows"
- Flooding also occurs outside of post-fire areas and residents should remain vigilant.

Flooding along Meade Lane in 2024

# Legislative Actions

- Multiple meetings with State, Federal, and Non-profit leadership to highlight community need.
- Congressional Directed Spending
- Continued push for grants

$7M of external funding secured or in the process of being secured

# Flood prevention grants

- Visit [flagstaff.az.gov/floodproof](flagstaff.az.gov/floodproof)
- Property owners and renters can apply for grant funding for materials to protect their home
- Apply online or in person for a grant up to $7,500 (options for upfront funding)
- Funding can be used to purchase **flood gates** for windows or doors, **sealants** for foundations, and **<u>temporary</u> flood barriers**
- Applications are processed on a rolling basis, utilizing a first-come, first-served approach, while funding lasts

# Questions?

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# Slides if needed

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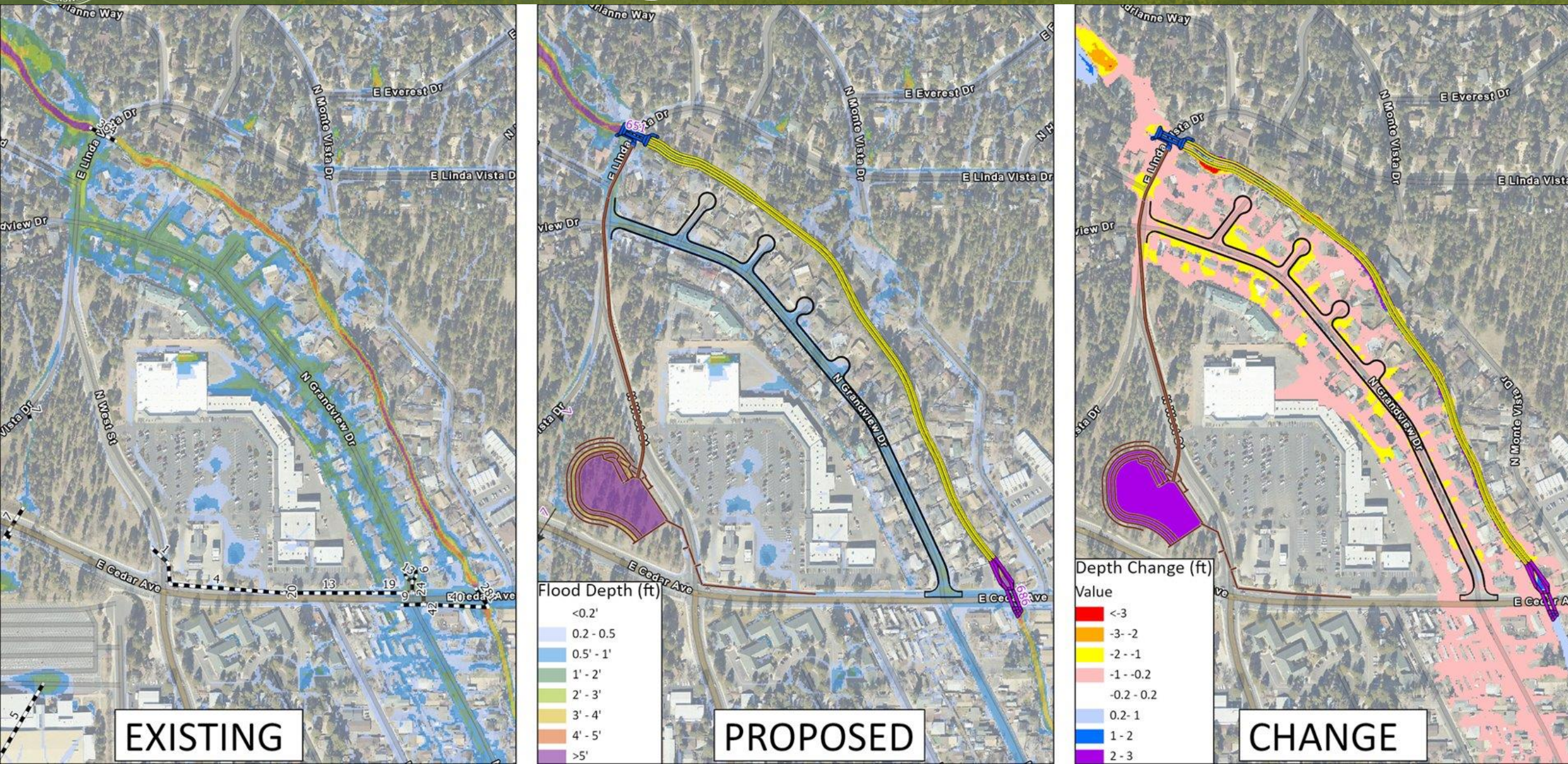
# Draft modeling results –2" storm



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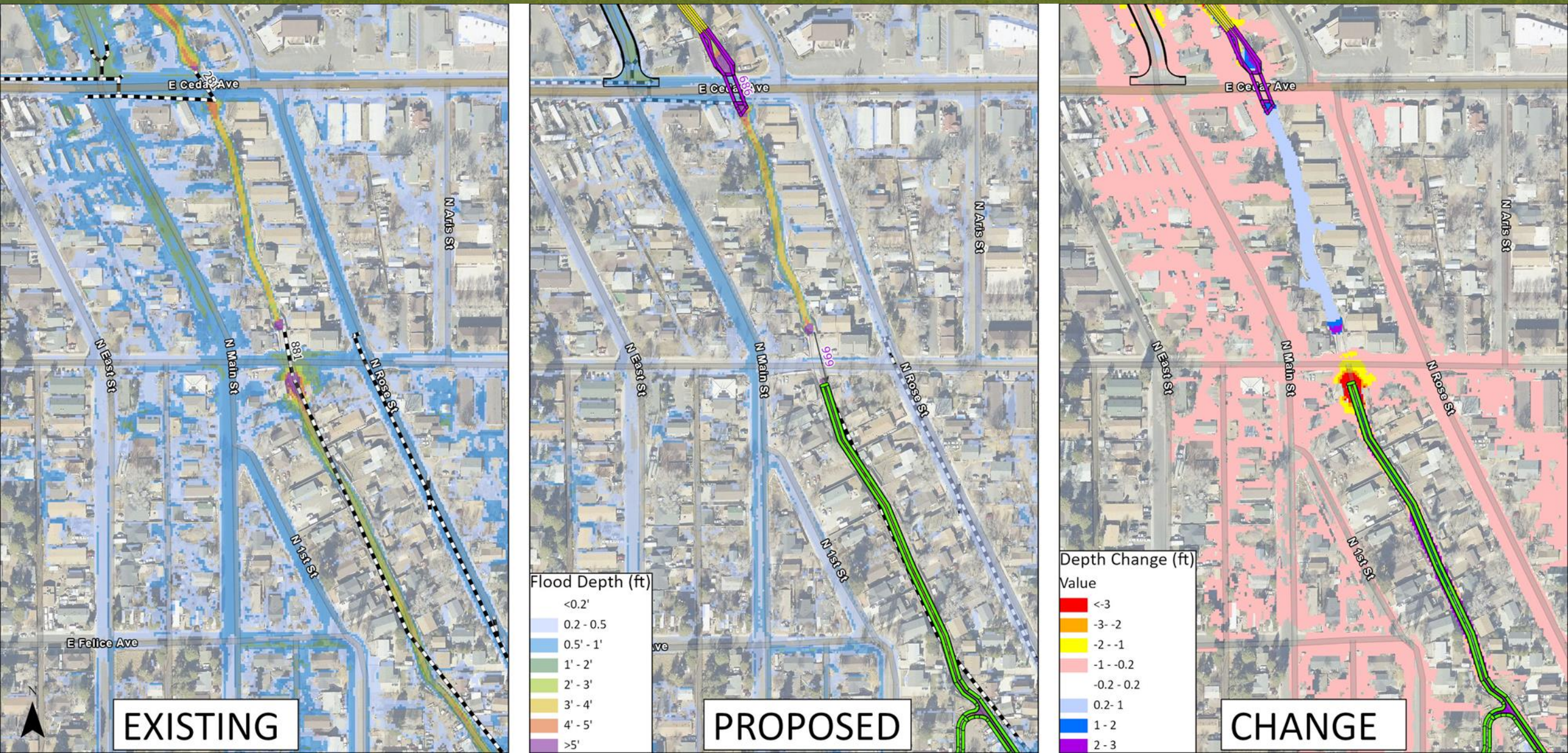
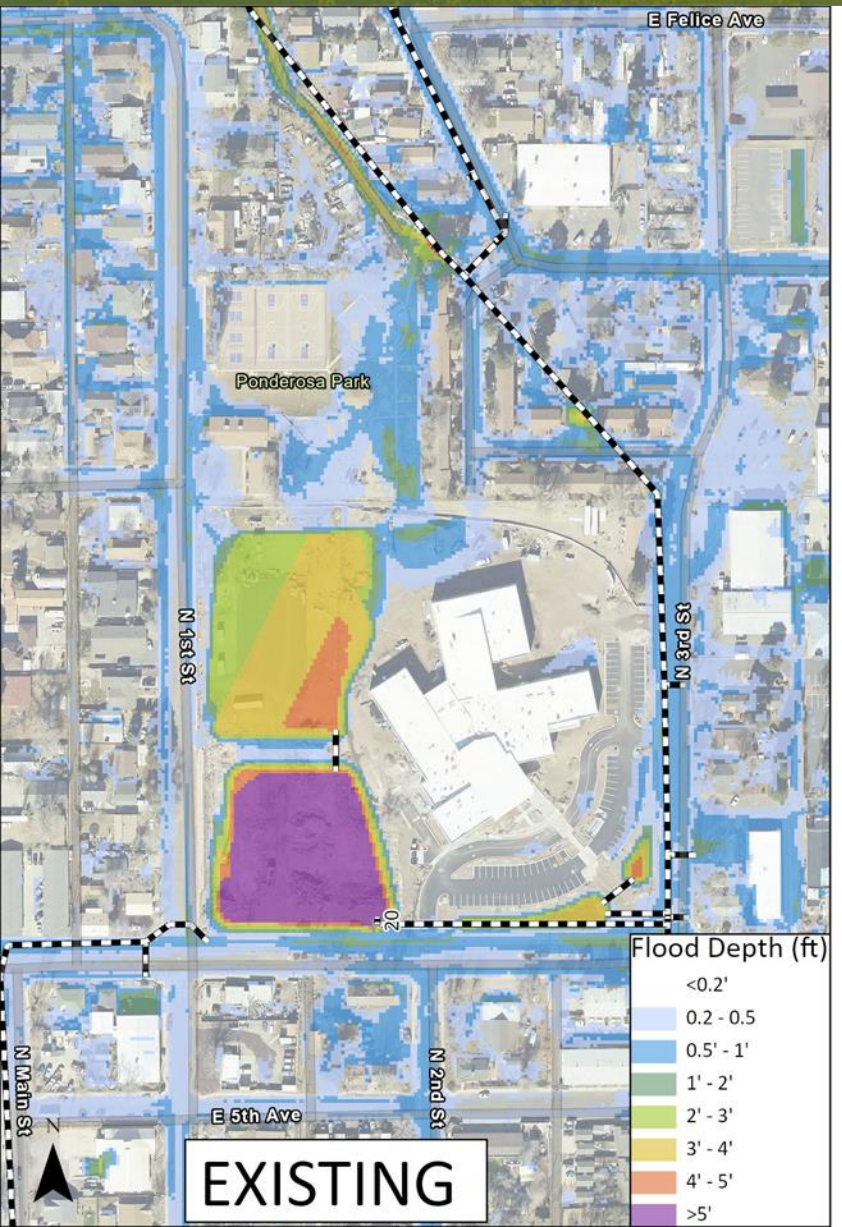
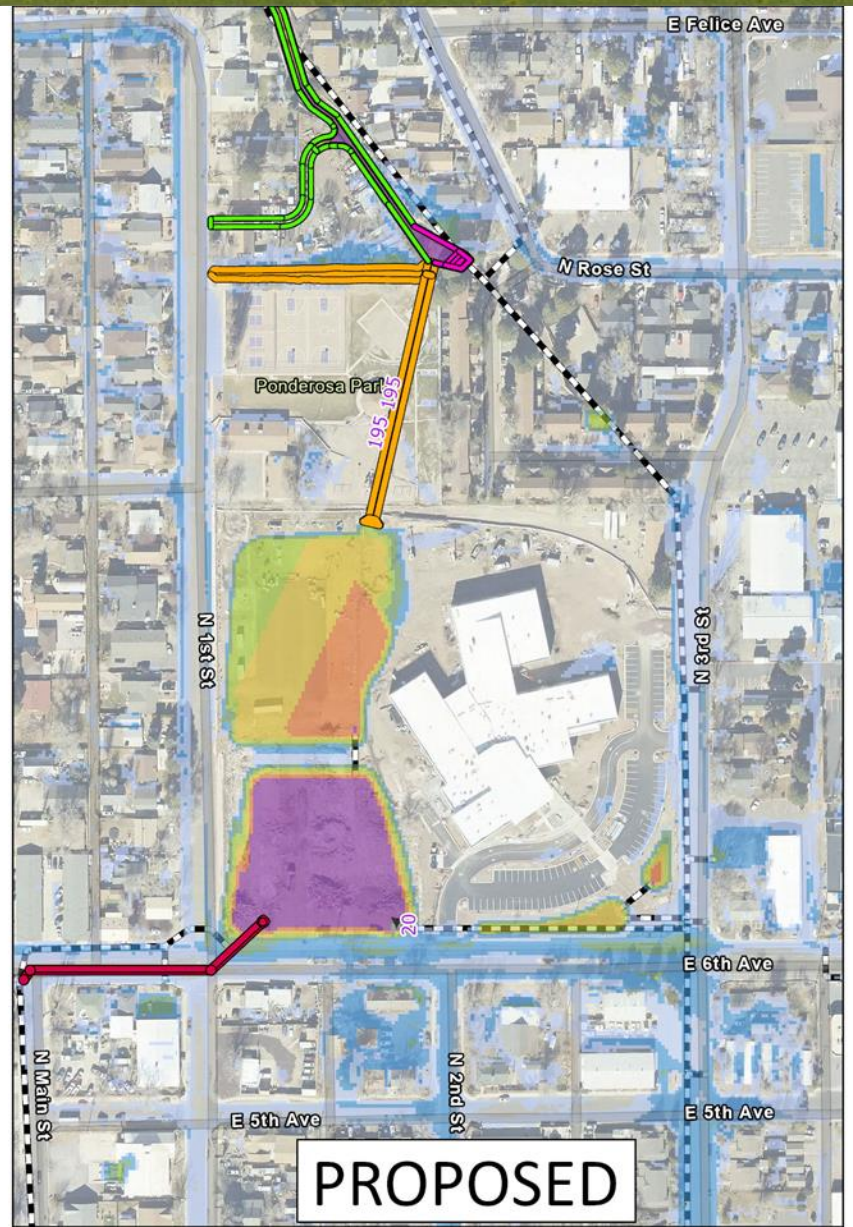
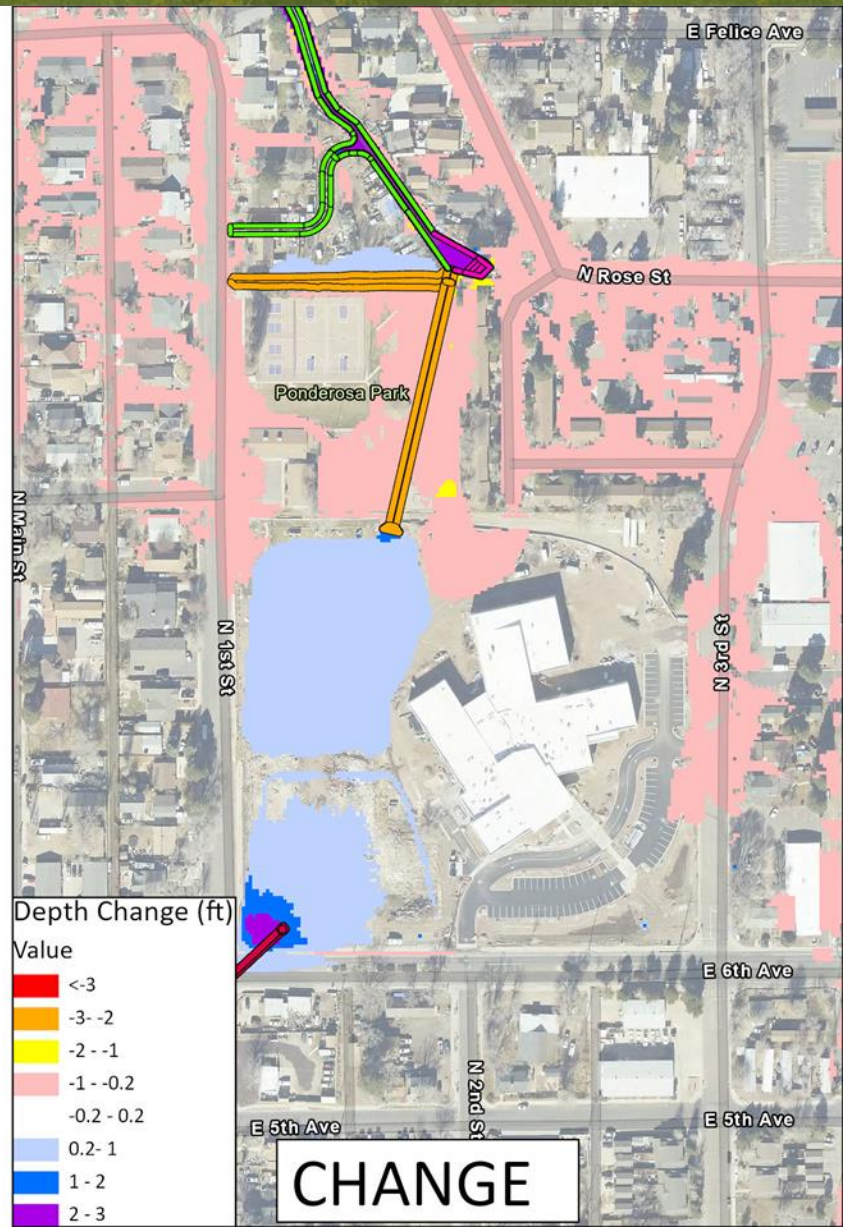
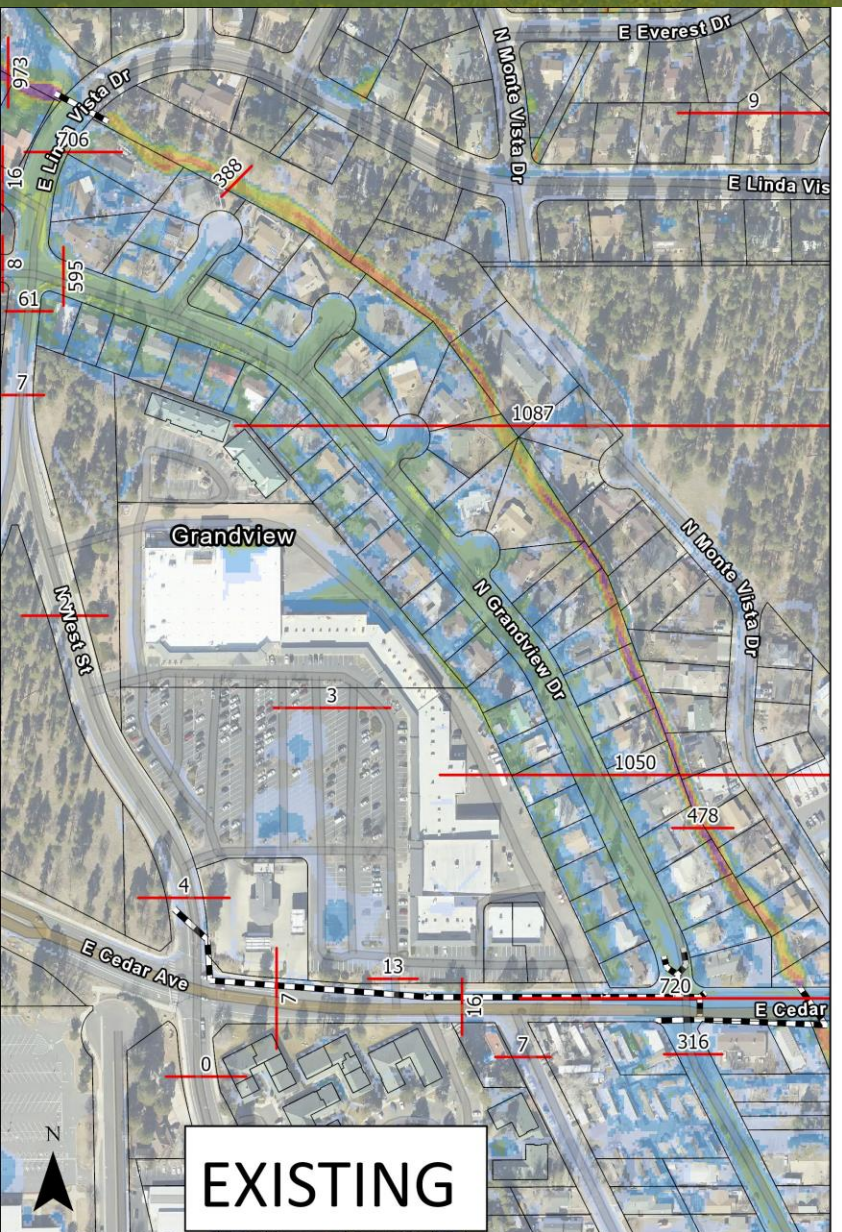
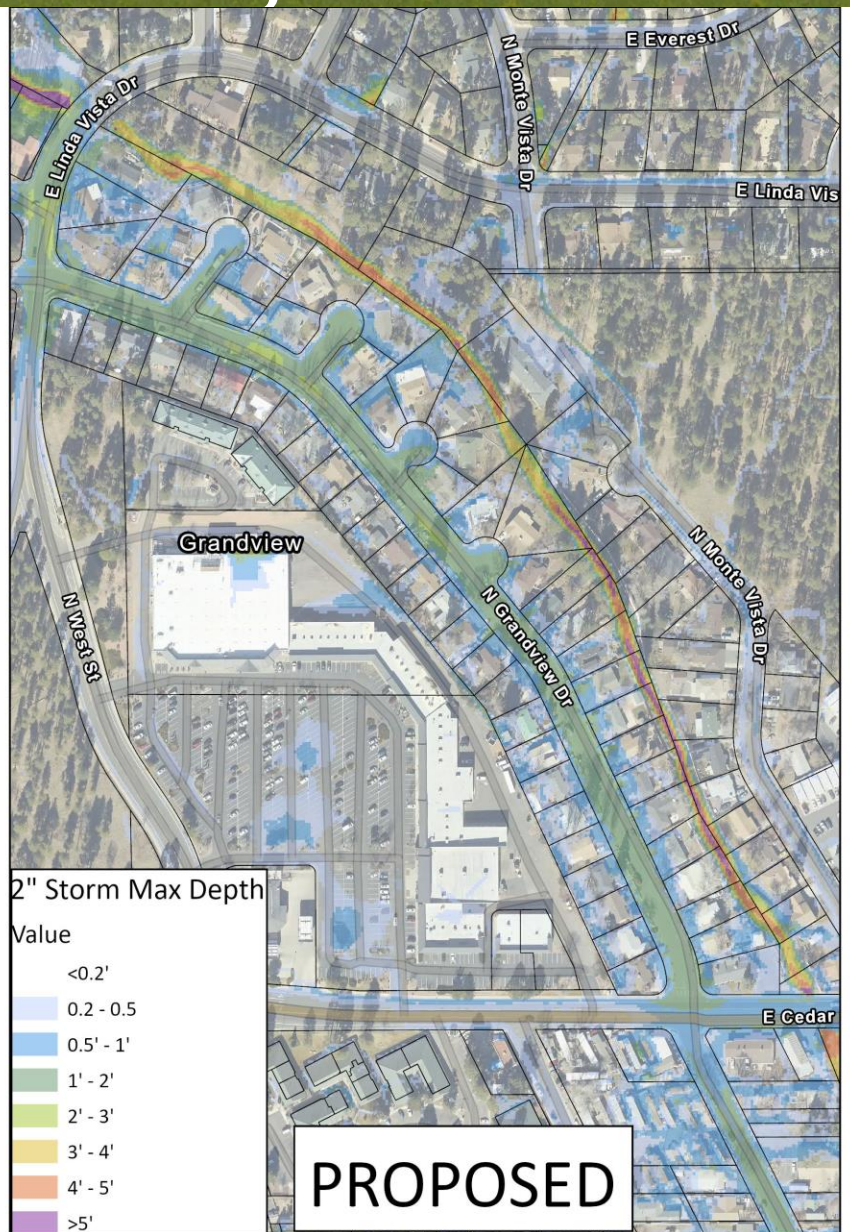
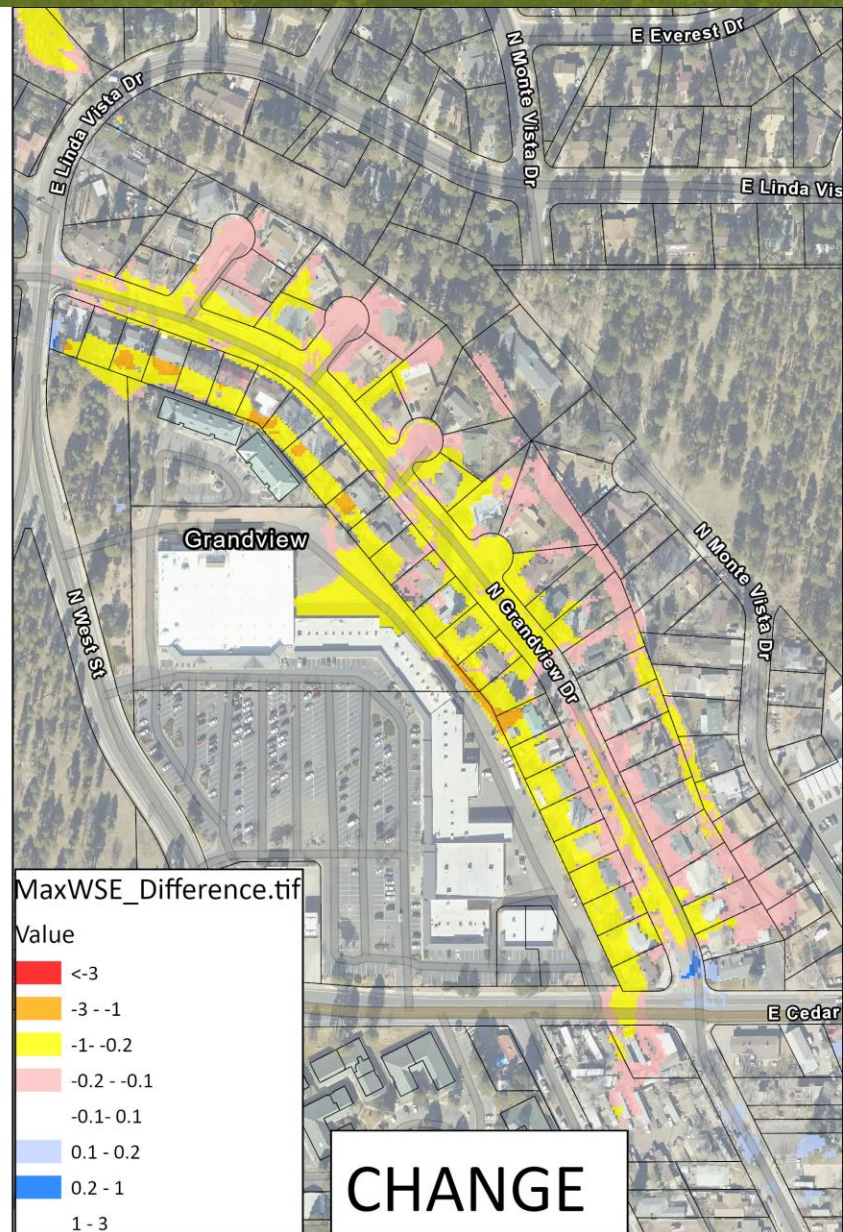


# Draft modeling results –2" storm






# Interim condition – Grandview Drive Reconstruction Project