

GOLD CANYON AREA DRAINAGE MASTER PLAN



FEMA

Technical Team



WHAT IS AN AREA DRAINAGE MASTER PLAN? (ADMP)

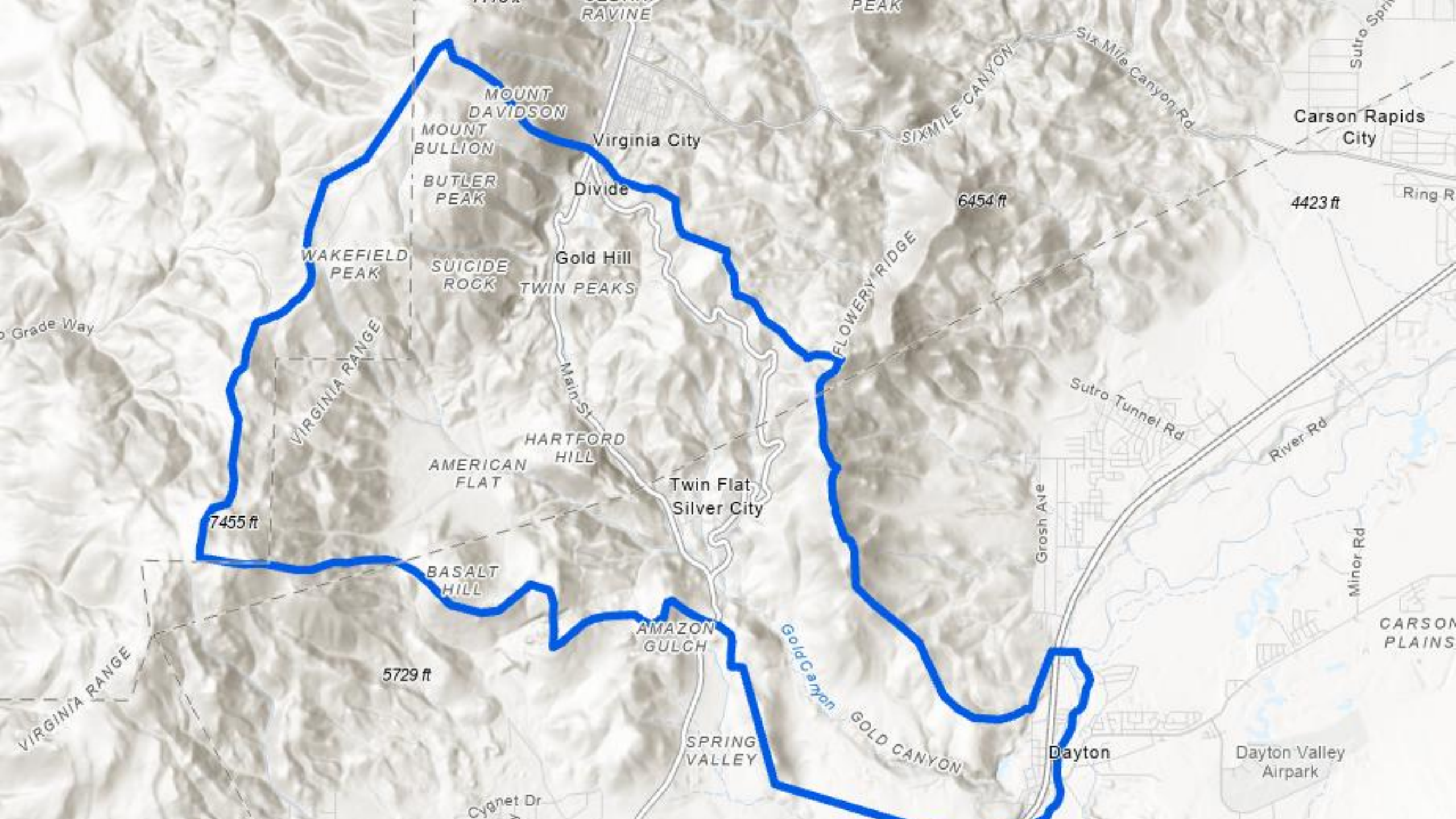
- Planning-level study of flooding hazards within a watershed
 - Multiple watercourses
- Goals:
 - Develop a comprehensive understanding of the drainage existing conditions
 - Develop alternative mitigation solutions

GOLD CANYON ADMP

Project Funding

- FEMA Cooperative Technical Partner (CTP) grant
- CWSD Funding Administrator
- Lyon & Storey Counties – in-kind leverage





ADMP STUDY AREA

Watershed Characteristics

- Dominantly Tributary Flooding Pattern
 - Gold Canyon
 - American Ravine
- Sedimentation
 - Clogged culverts
 - Debris on roadways

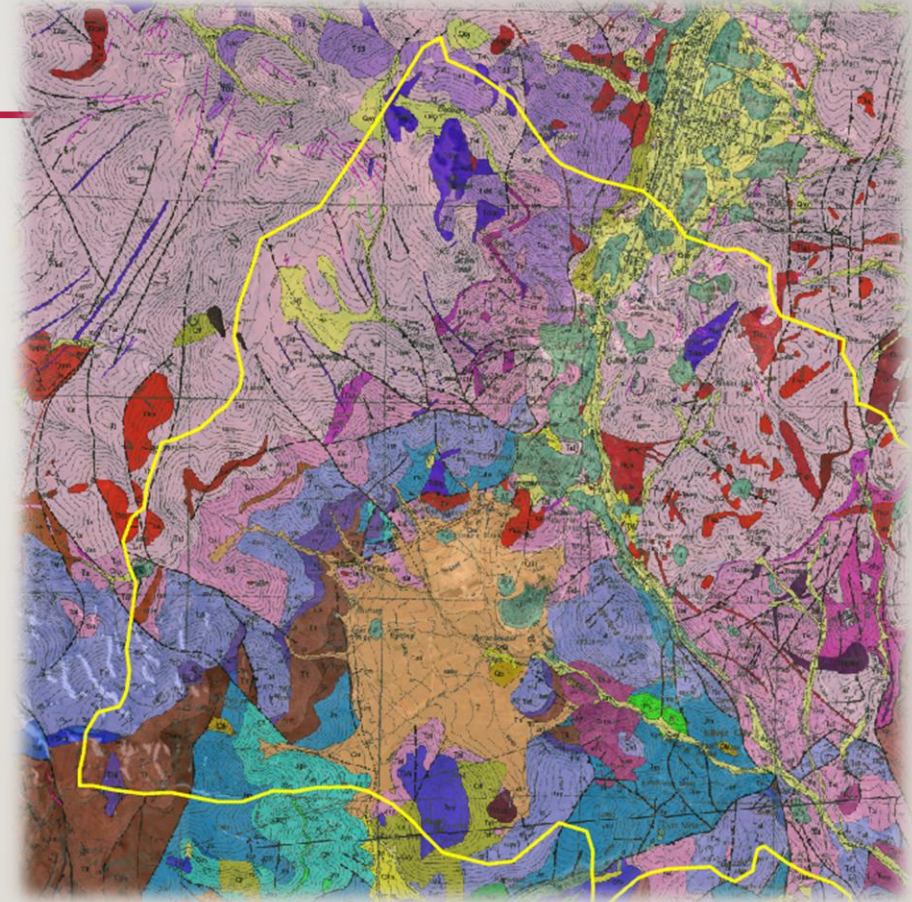


Near S. Main St. and Sky Lane

ADMP PROJECT ELEMENTS

Data Collection

- Previous Studies
- County Data (General Plans, drainage reports, land use, photos, mapping, etc.)
- NRCS Soils Mapping
- Geologic Mapping
- Historical Aerial Photography
- Rainfall and Streamflow Records
- Resident videos/photos and documentation

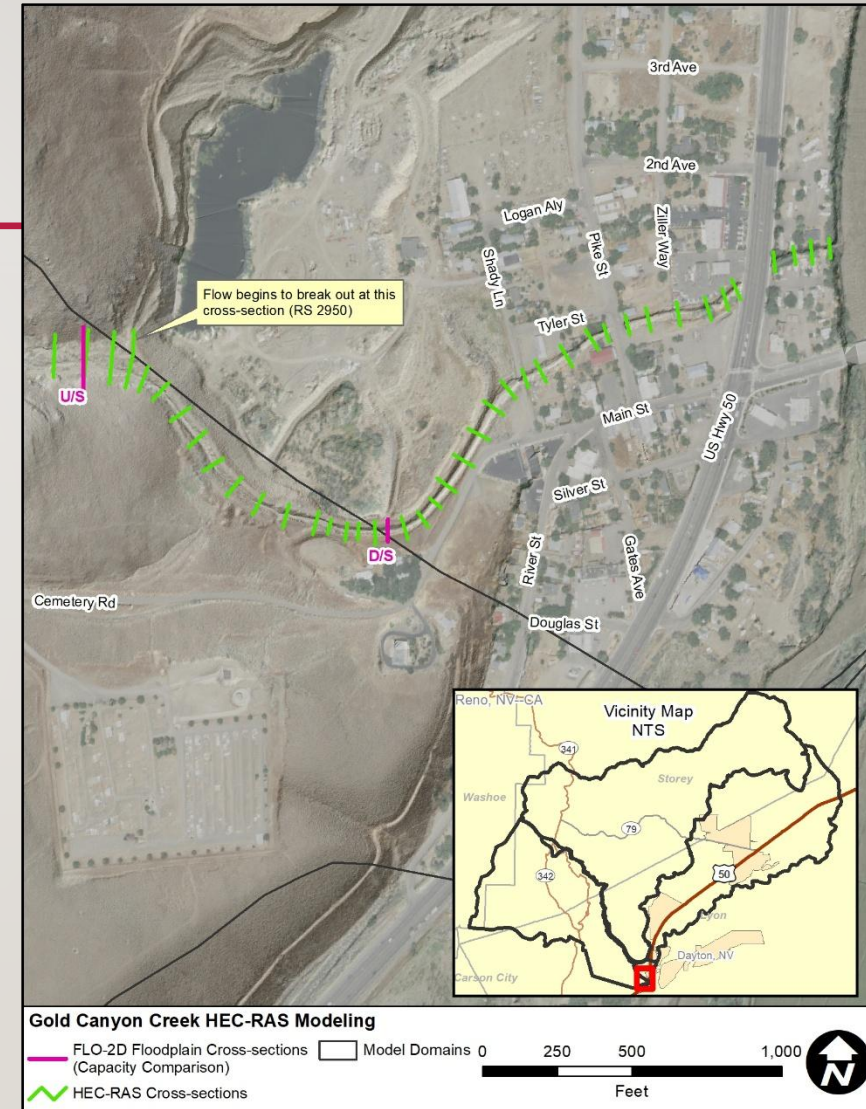


Geologic Mapping

ADMP PROJECT ELEMENTS

Prior Study – Dayton Valley ADMP (2019)

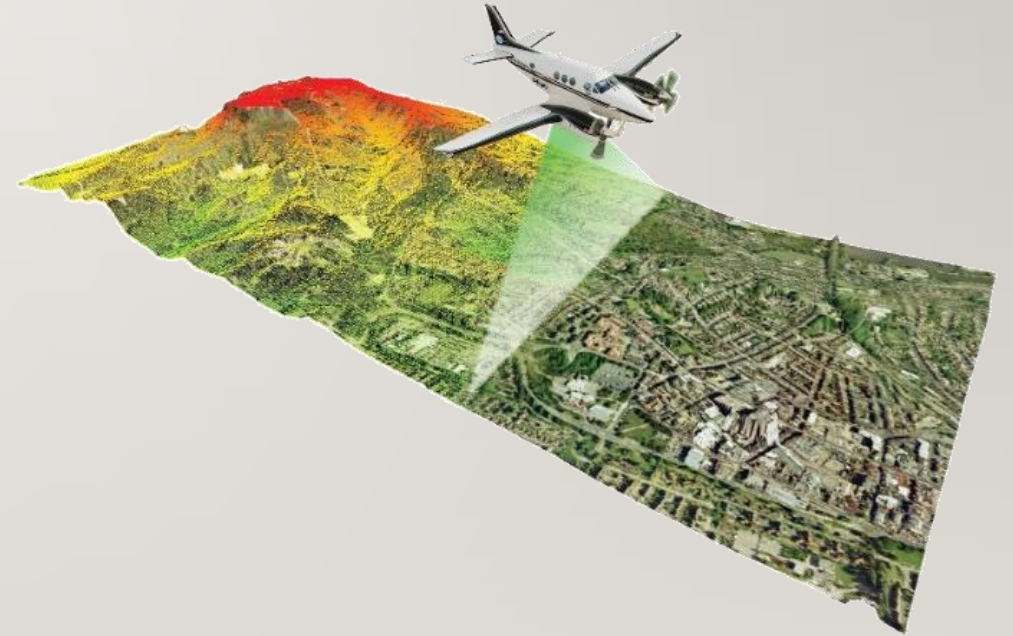
- Included Gold Canyon watershed
- Primary focus was Town of Dayton
- Dayton Valley model is being updated with higher resolution data



ADMP PROJECT ELEMENTS

Mapping and Survey

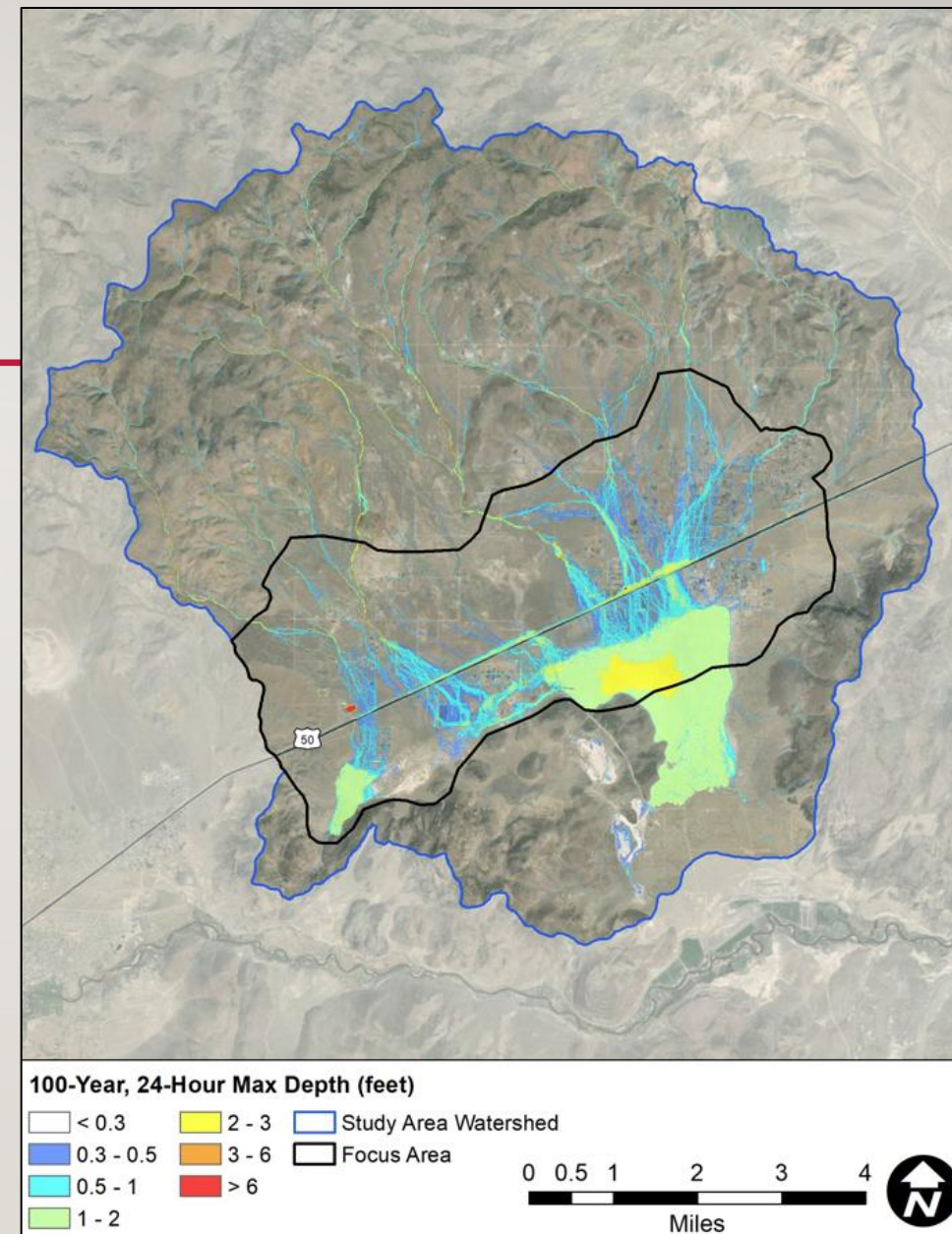
- High-resolution LiDAR mapping (USGS)
 - Light Detection and Ranging
- Existing drainage infrastructure inventory
 - Culverts
 - Bridges

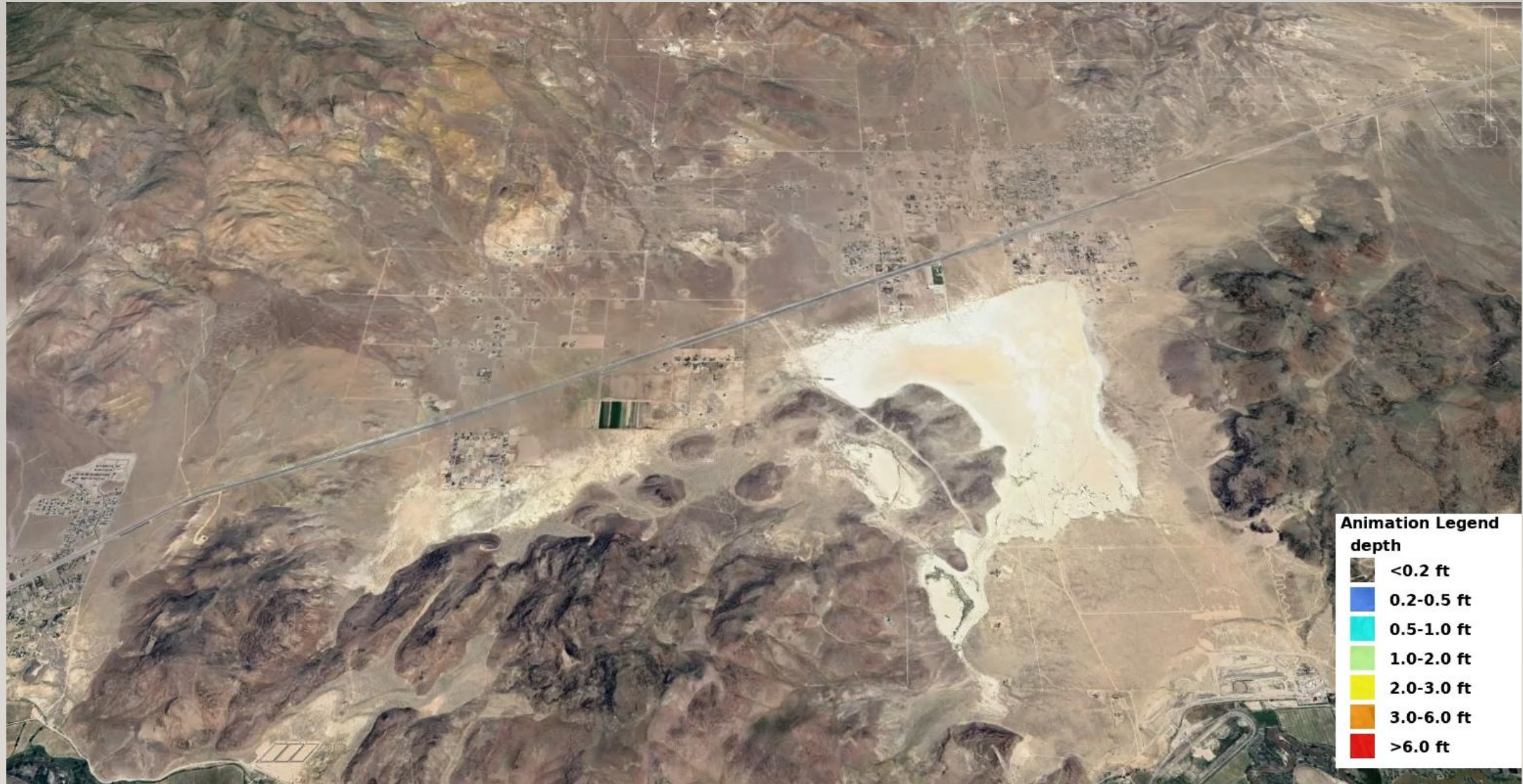


ADMP PROJECT ELEMENTS

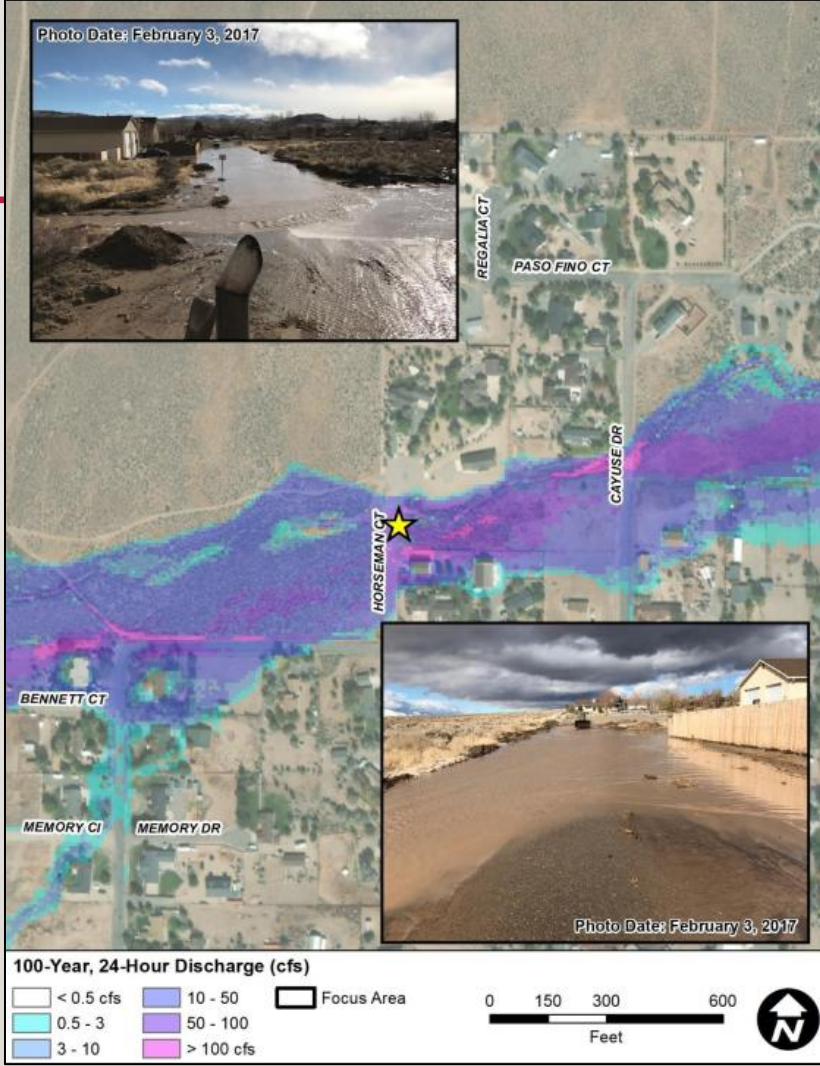
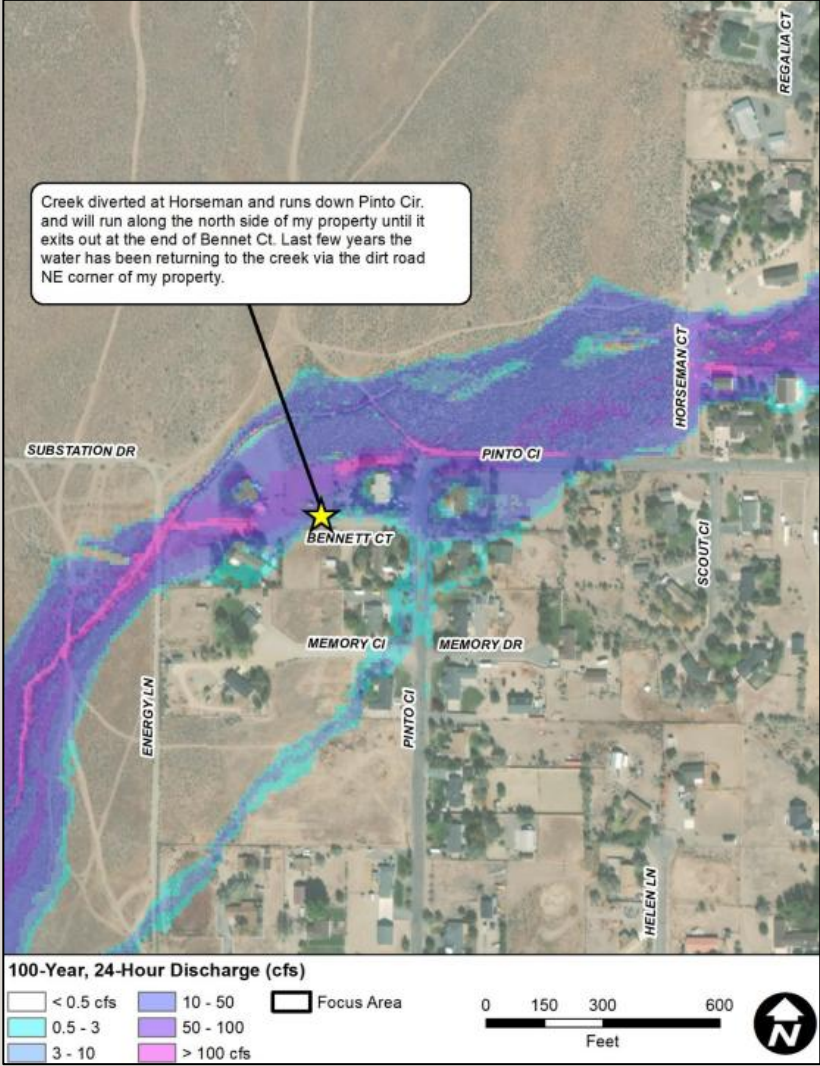
Hydrologic and Hydraulic Modeling

- Where do flood flows come from?
 - Rainfall & Runoff
 - Storms
 - 25-year, 100-year storms
 - NDOT hydrologic parameters
- Where does the storm runoff go?
 - Two-Dimensional hydraulic model (FLO-2D)
 - Latest technology
 - Best tool for complex, urban flooding
 - High resolution, detailed results
 - Flow Depth
 - Flow Velocity





RESIDENT VIDEOS/PHOTOS AND DOCUMENTATION



ADMP PROJECT ELEMENTS

Sedimentation Assessment

- Sediment is an issue
 - Clog roadside ditches
 - Clog culverts
 - Debris in roadways



Toll Road in Silver City – Jan 2017

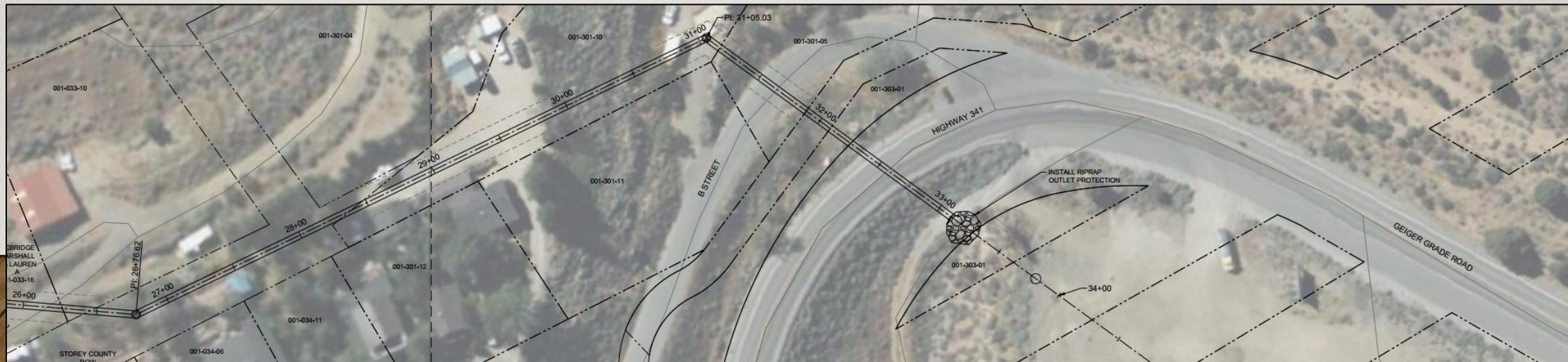
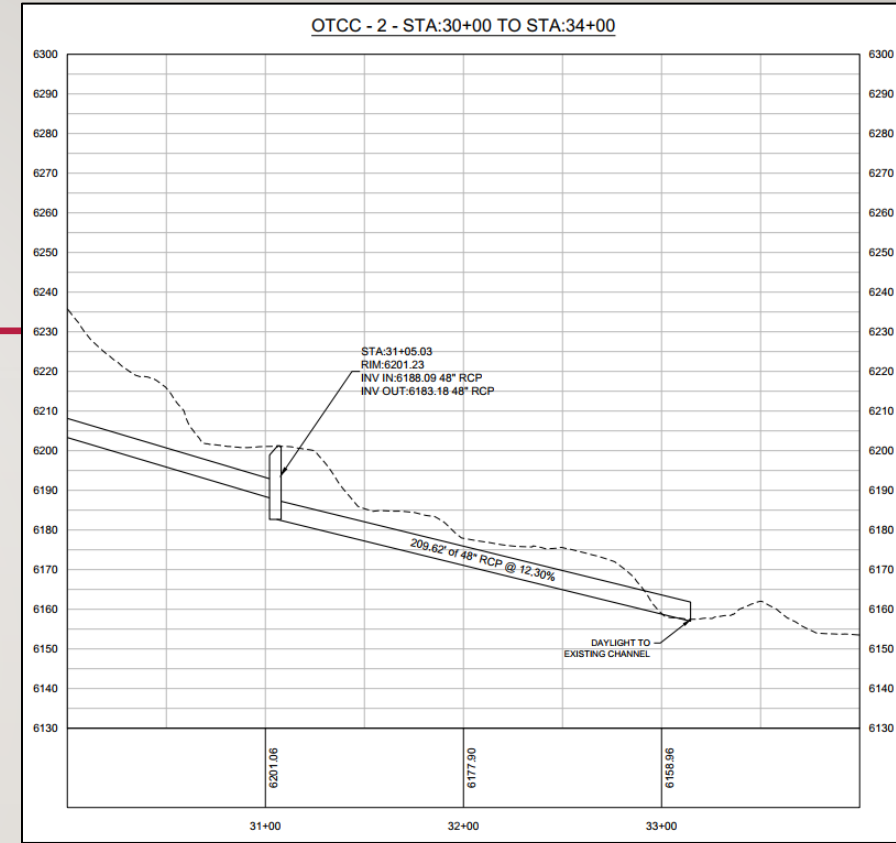
Pike Street (Dayton) – January 2017



ADMP PROJECT ELEMENTS

Alternatives Formulation

- Mitigation for the 25-year storm
- Mitigation for the 100-year storm
- Mitigation for sediment
- Conceptual Design Plans



ADMP PROJECT ELEMENTS

Public Meetings and Outreach

- Open House – Tonight
 - Introduce Project
 - Hear your experiences, get your input on where problems frequently occur
- Meeting #2 – Summer 2026
 - Present project results, mitigation alternatives
- CWSD Board | Lyon/Storey County Board

