

BIA Flood Hazard Classification Modeling

Jack G. Byers P.E. (Retired)

- Bureau of Indian Affairs Dam Safety and Security Officer
- Chief, Branch of Dam Safety, Security, and Emergency Management
Bureau of Indian Affairs
- Vice President; Dams and Levees, Kleinfelder

Shane Willard, GISP

- Geospatial Program Manager
- Managed Business Solutions (MBS), LLC

Jacqueline Contreras, GISP

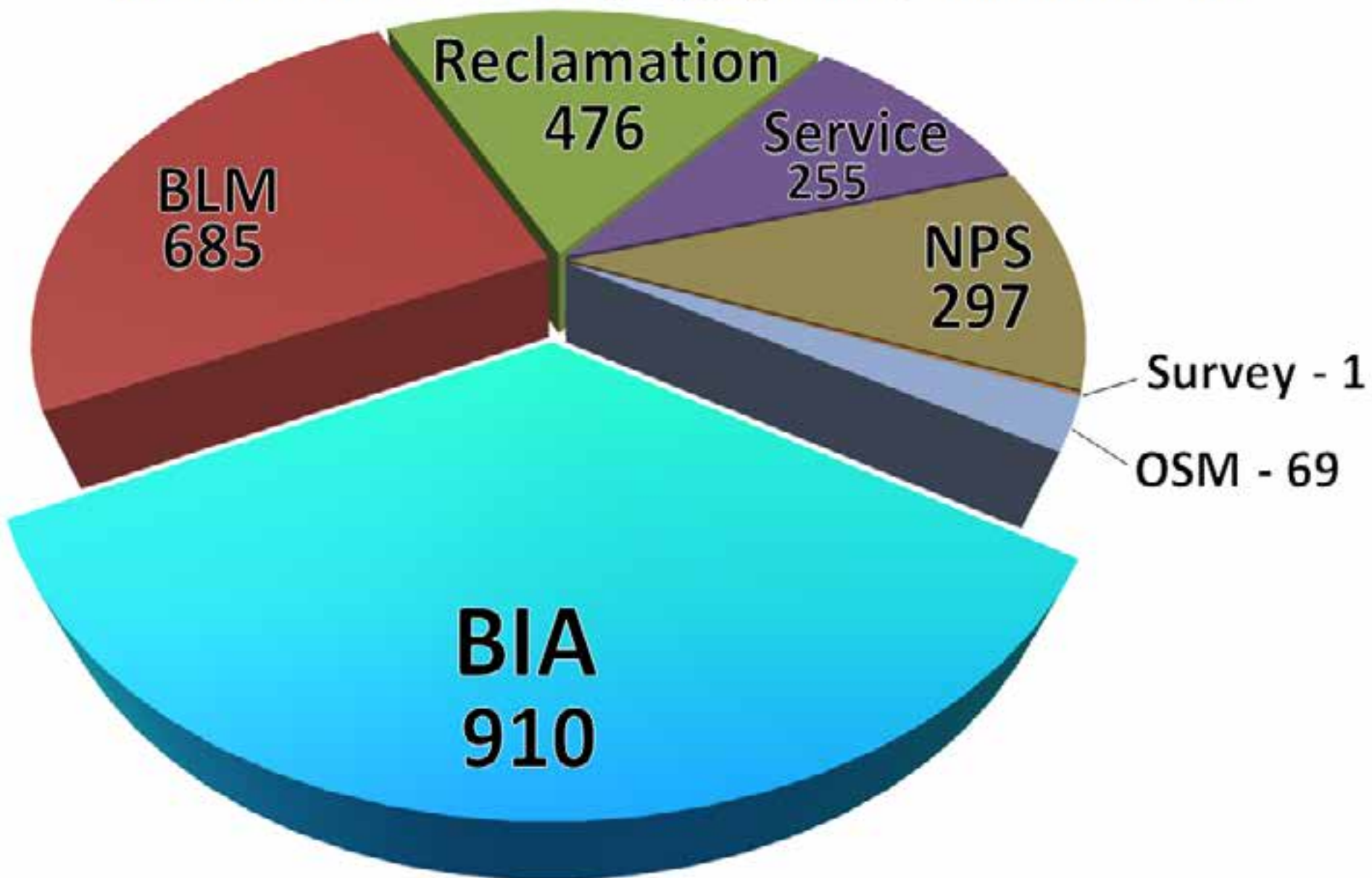
- Senior Geospatial Analyst
- Managed Business Solutions (MBS), LLC



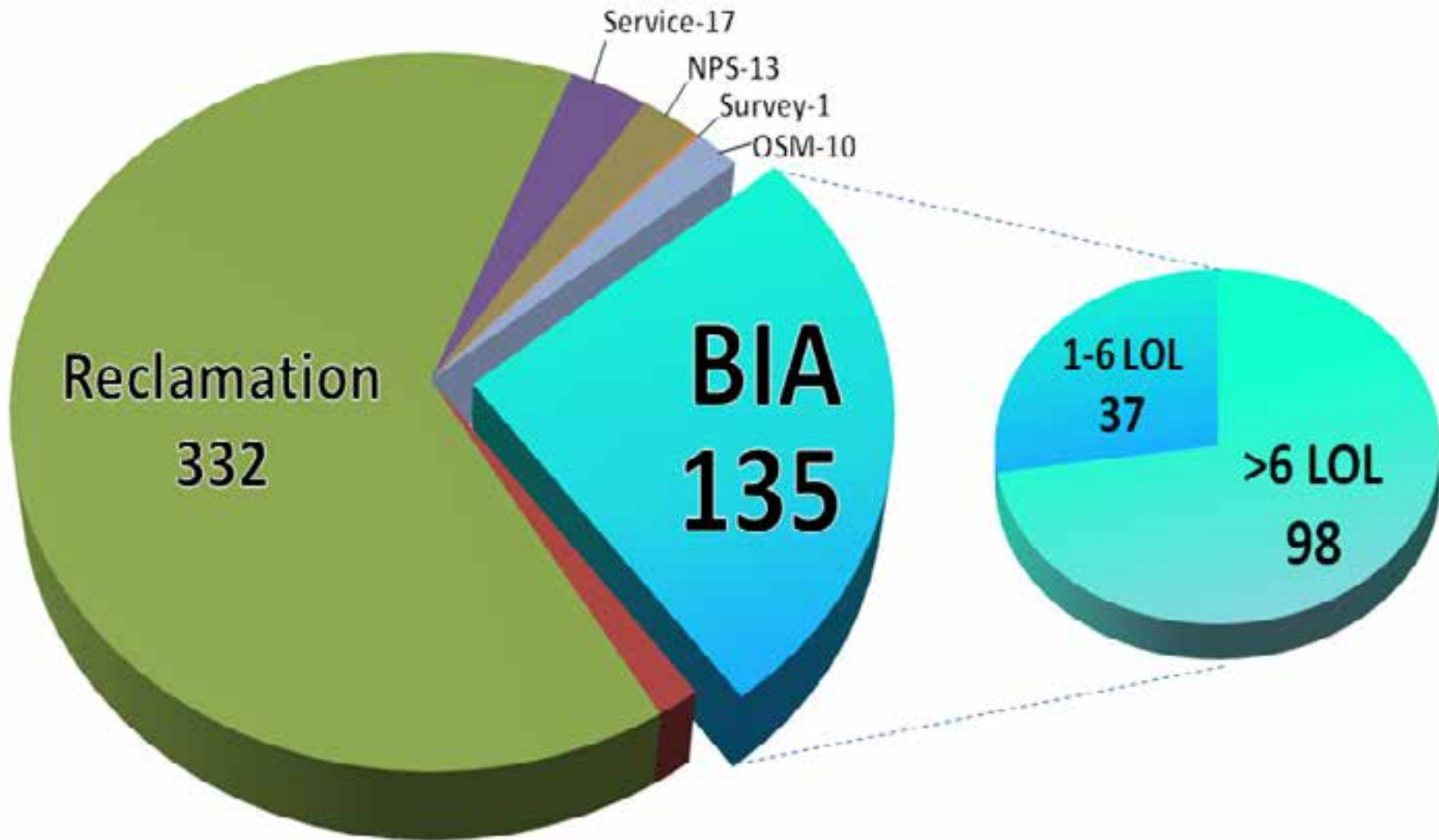


DOI Dam Inventory

Total number of dams Including High, Significant, & Low Hazard Dams



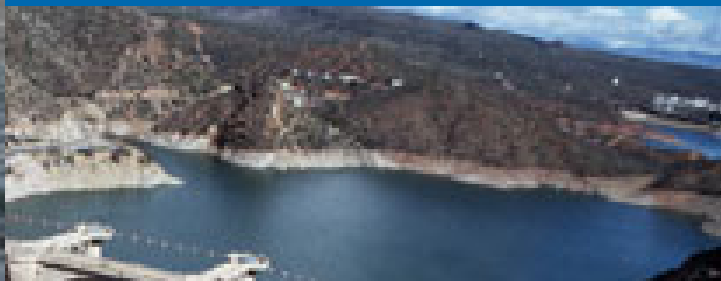
DOI Potential Loss of Life (LOL)



■ BIA Dam Safety Program's Mission

- To protect and preserve life, property and dam related trust resources through the sound management of all BIA's dam related assets.
- 135 High or Significant Hazard Dams in the Conterminous U.S.





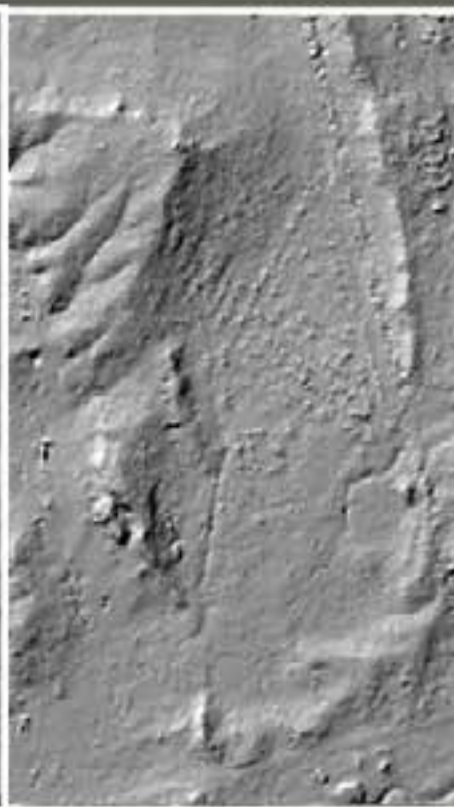
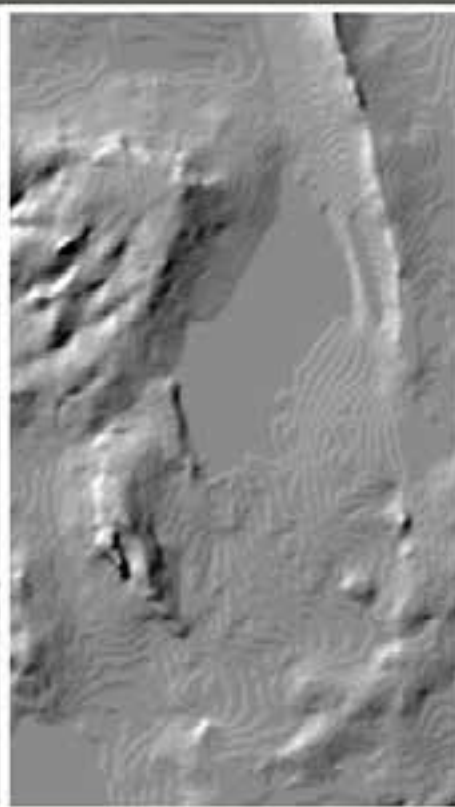
DEM/DTM Urban Comparison

1-arc-second
(30M DEM)

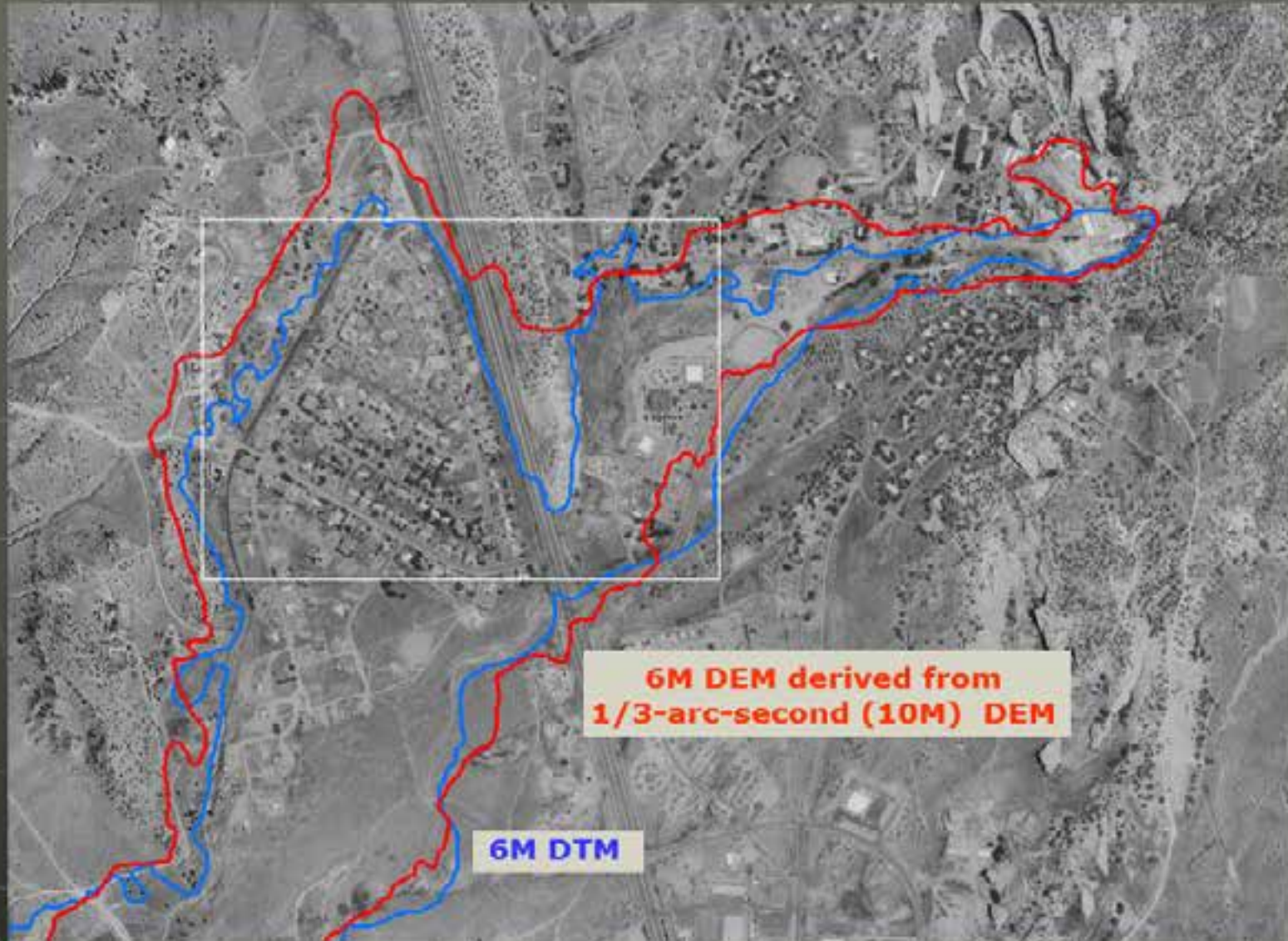
1/3-arc-second
(10M DEM)

6M DTM

1M DOQQ

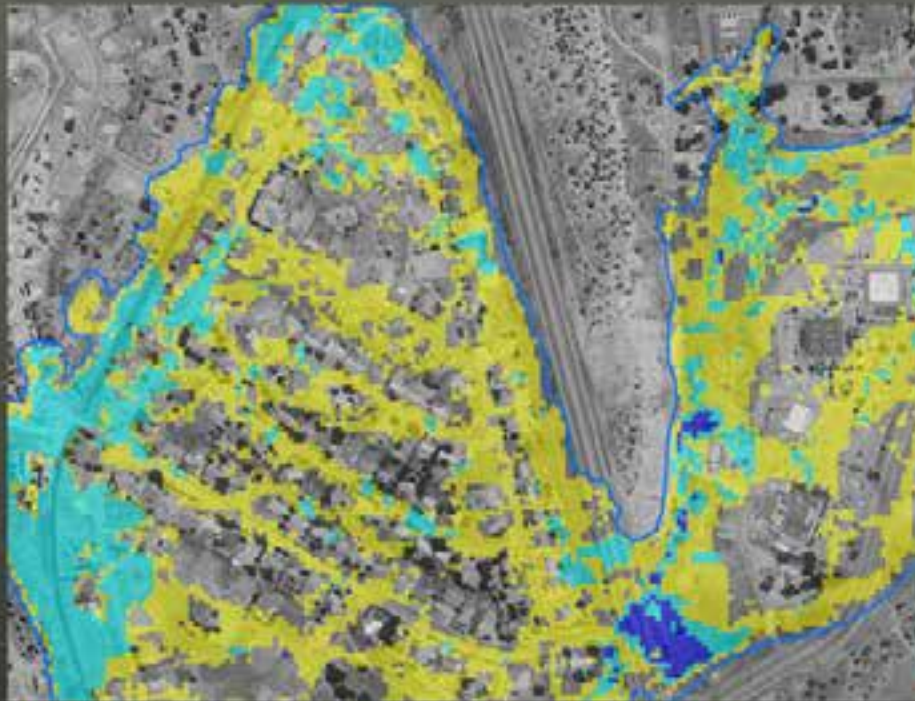


DEM/DTM Inundation Comparison



DEM/DTM

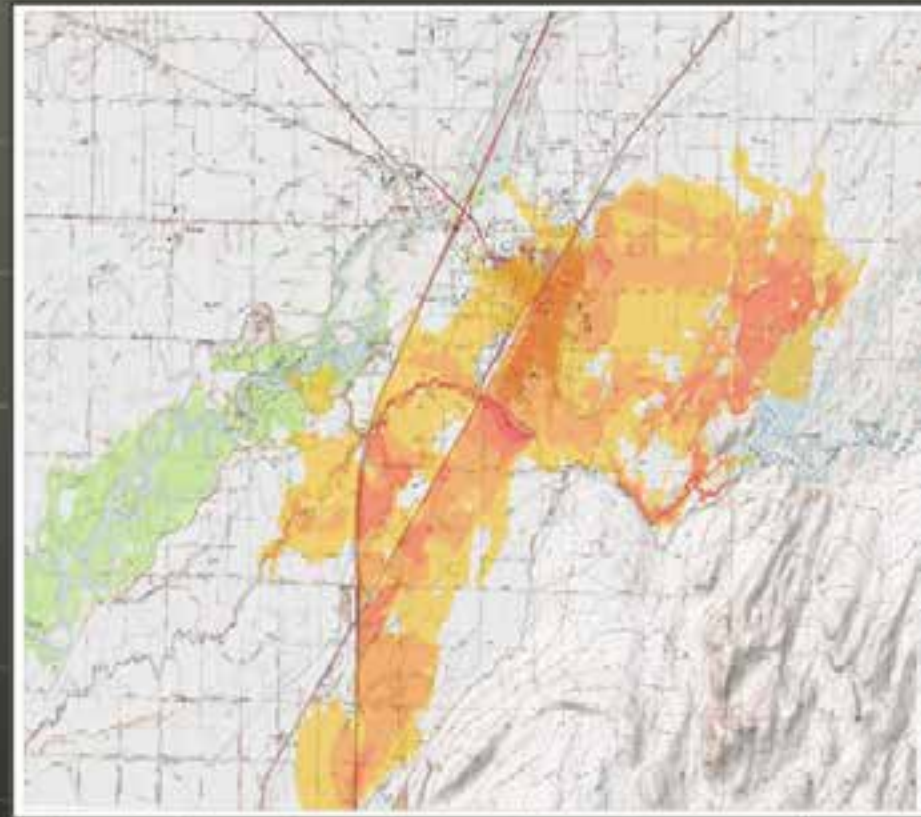
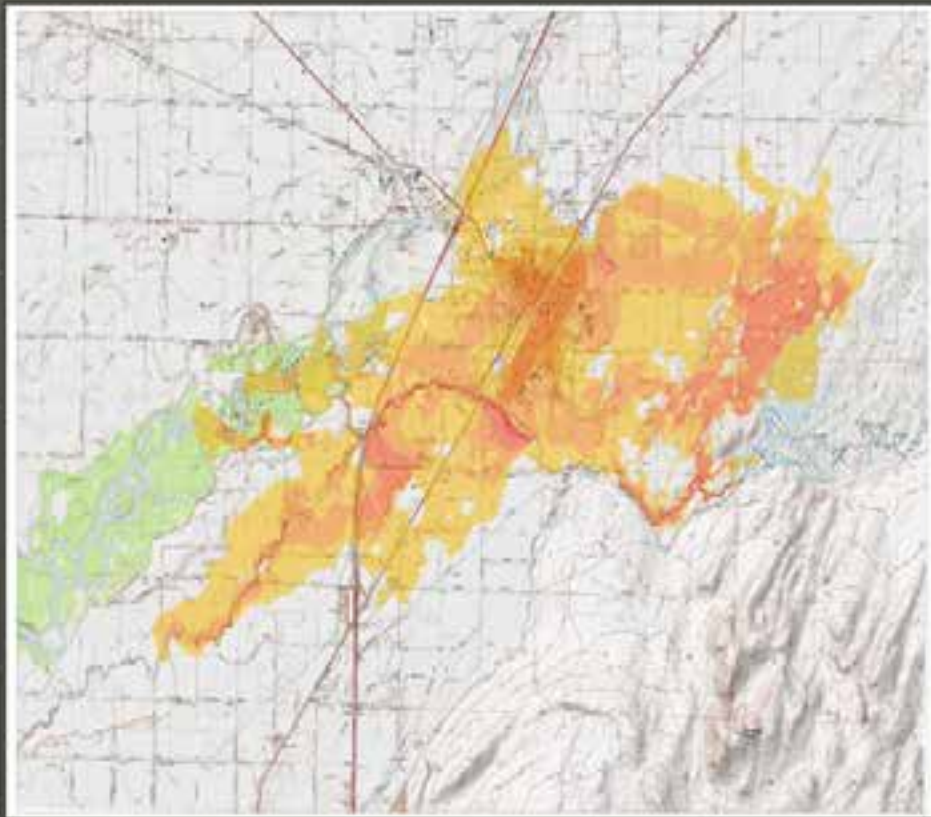
6M DTM



6M DEM derived from
1/3-arc-second (10M) DEM



Comparison of Flood With and Without Road Elevation Data



- Hydrology as a Fundamental for Hydraulics and Dam Safety
 - Foundational Elevation Data as a Key Component for Hydrology and Resulting Hydraulics

- Arc Hydro vs. Tool Box Method Demo (Results as a Comparative Tool)

