

A photograph of a tamarisk tree in a desert landscape. The tree is the central focus, with its characteristic reddish-brown trunk and dense, green and reddish foliage. The background shows a vast, open landscape with low mountains under a blue sky with scattered white clouds. The text is overlaid on the image in a large, bold, black serif font.

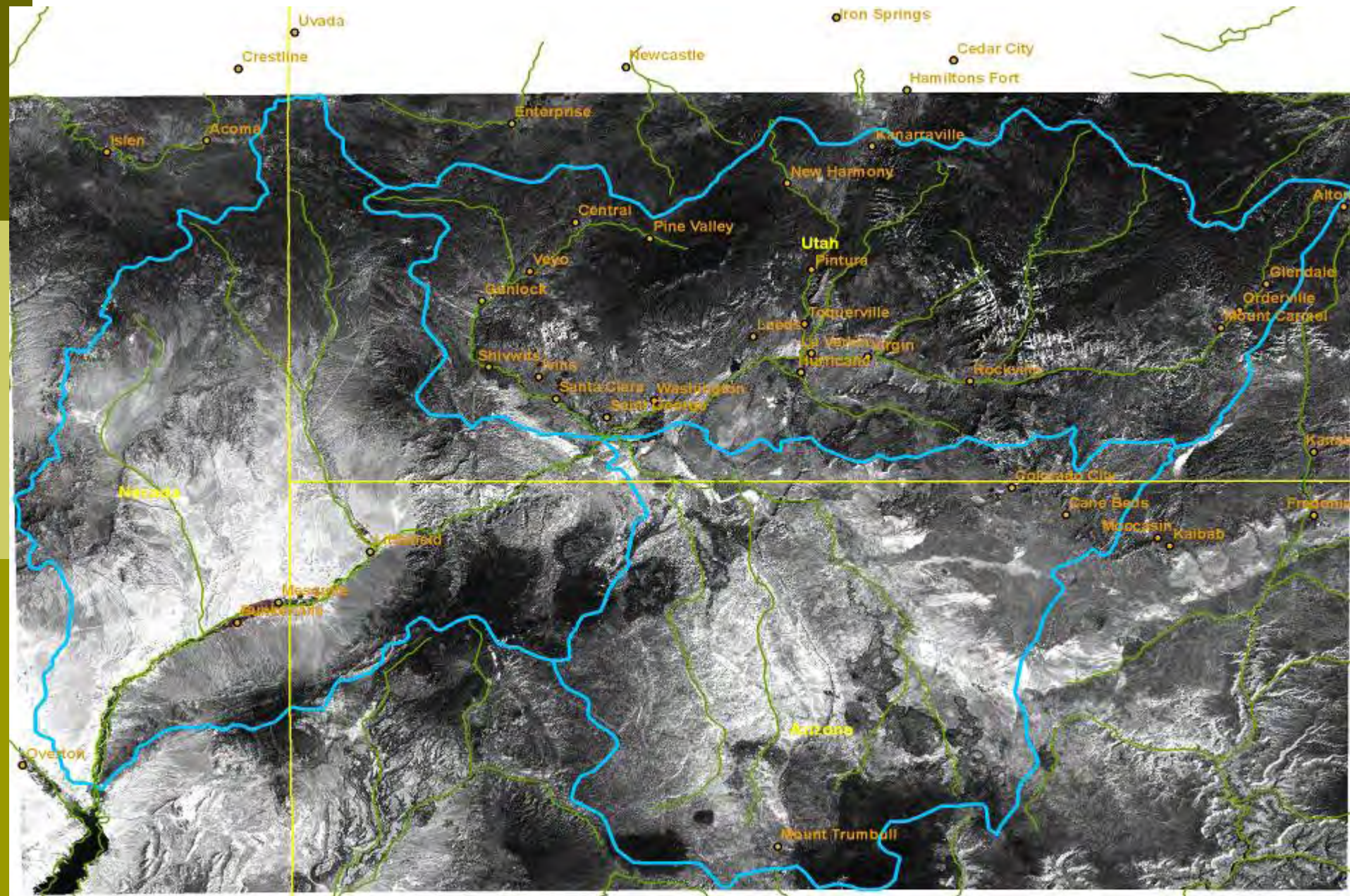
Virgin River Watershed Study Tamarisk Toolbox

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Components of Toolbox

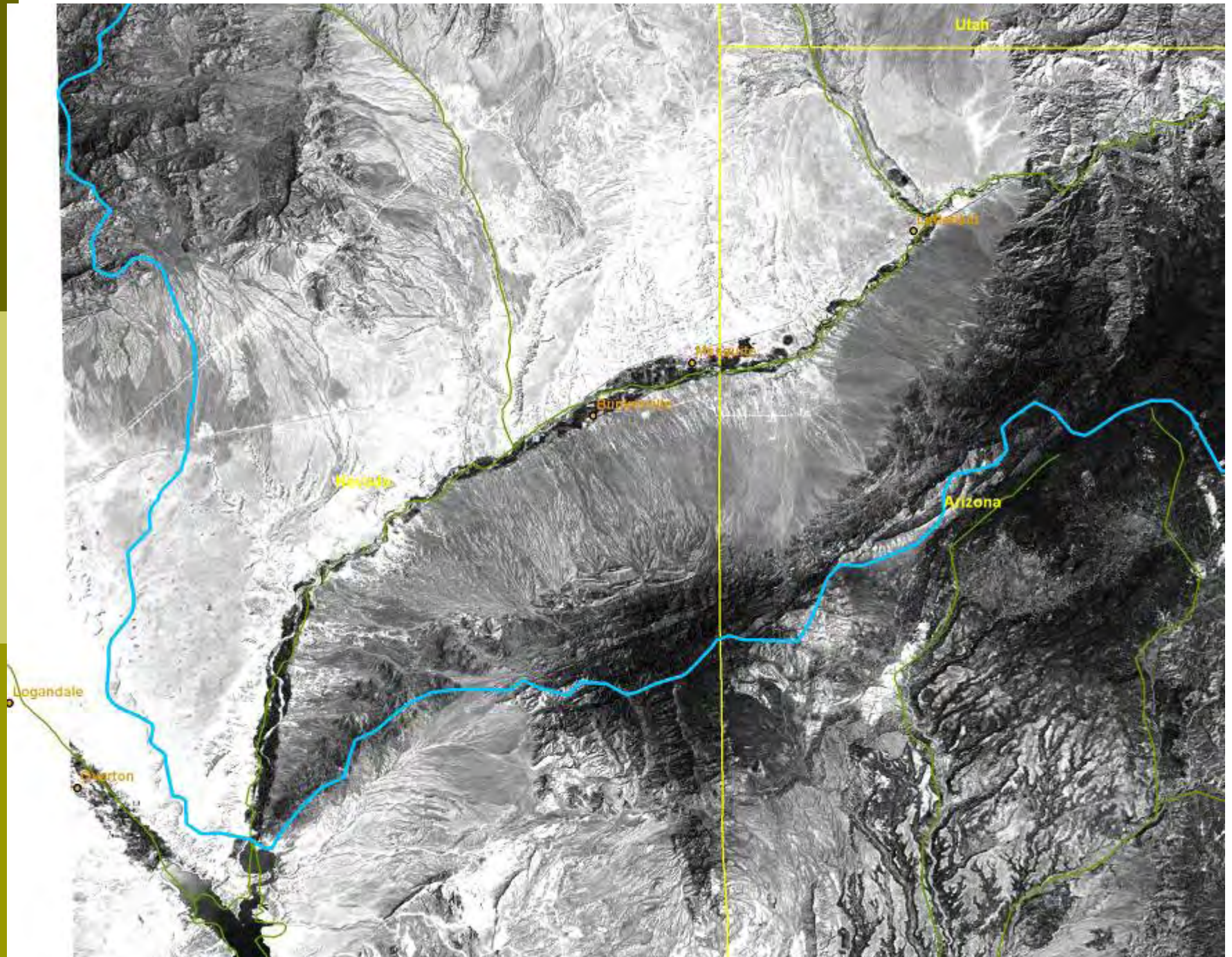
- Overview of current removal/control efforts in the watershed
 - Locations, type of treatment, costs, etc.
- Extent of tamarisk throughout watershed
- Lessons Learned
- Technical considerations
- Policy/Regulatory Considerations

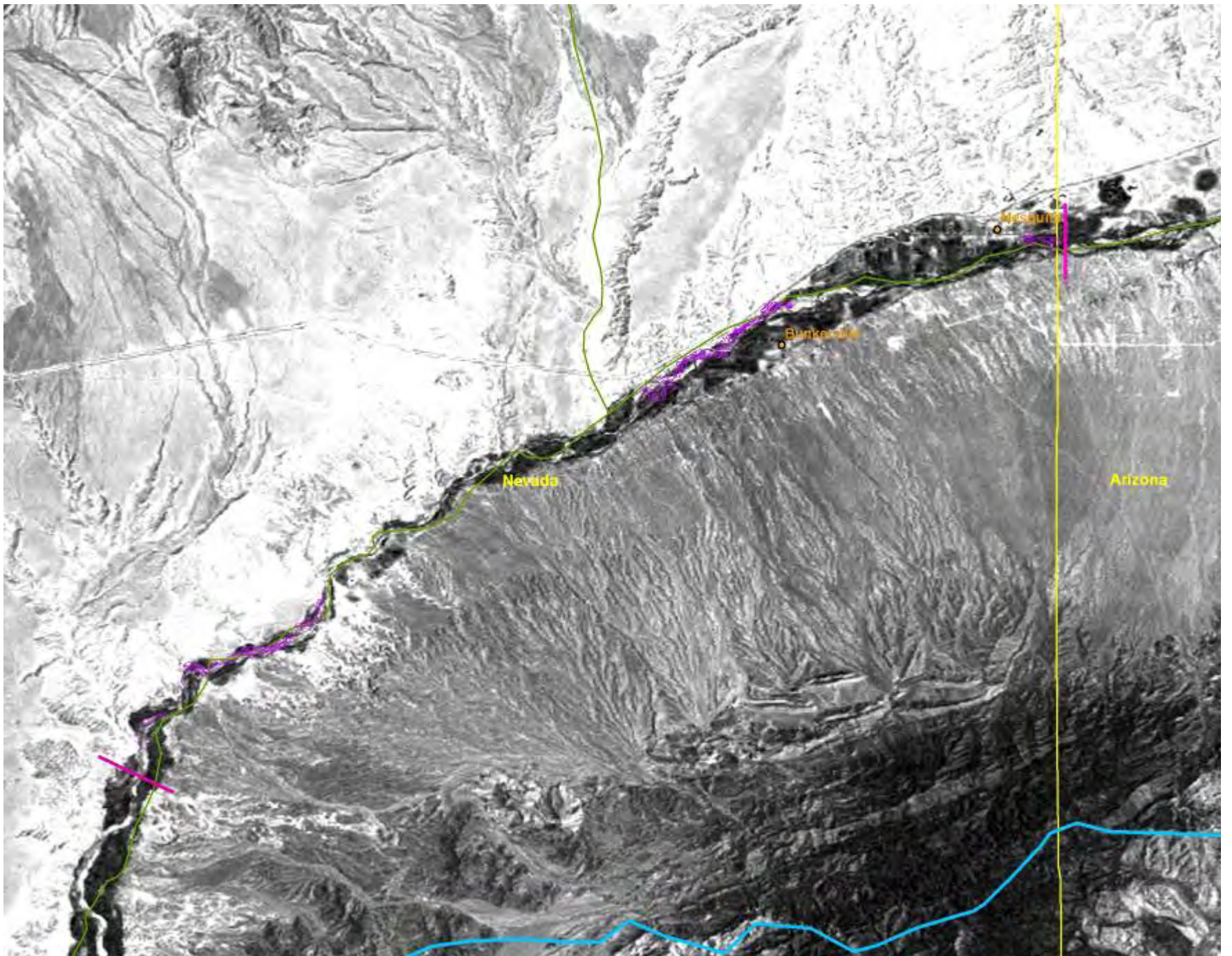
Current efforts in the watershed



Nevada

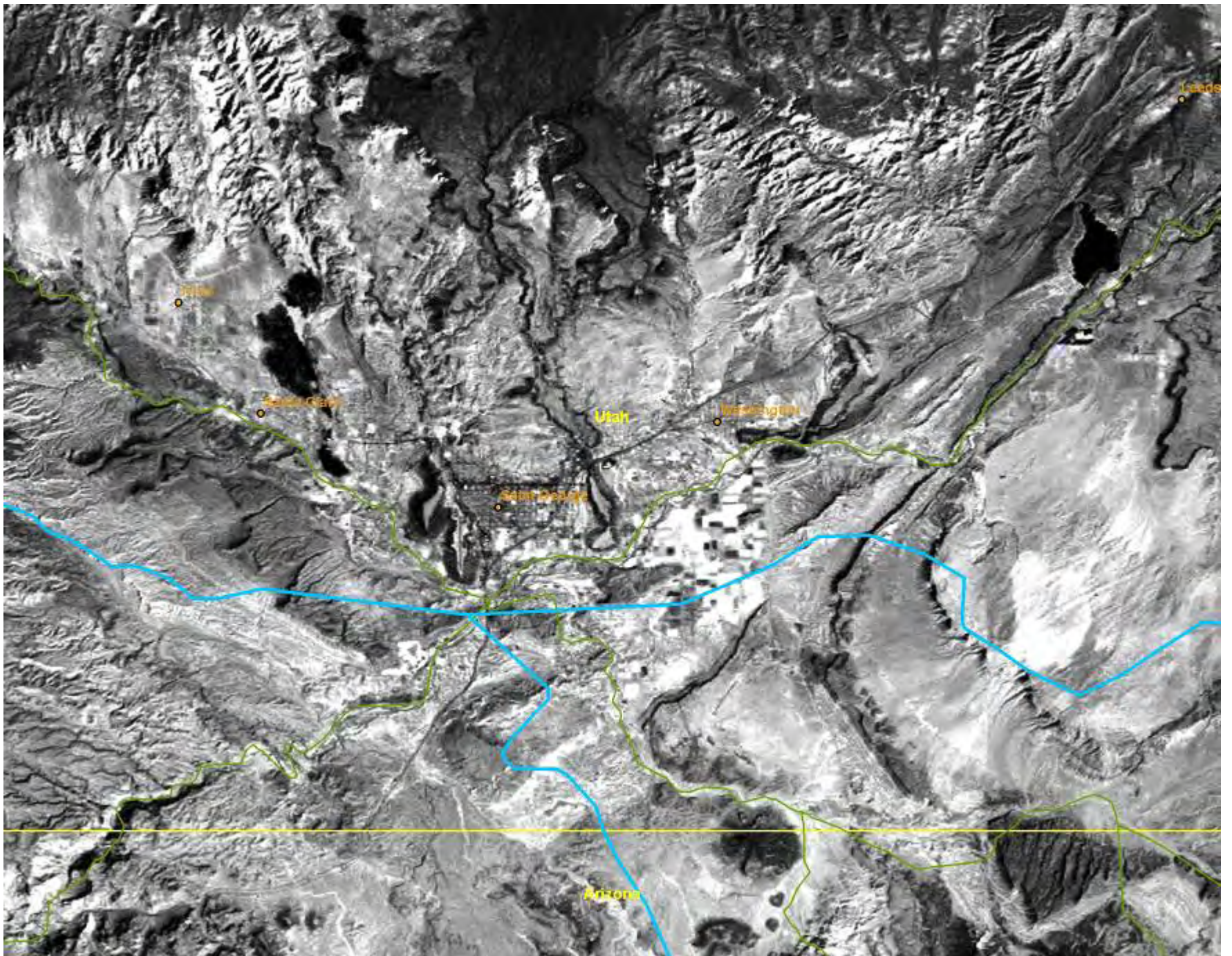
- ❑ National Park Service, Lake Mead, Curt Deuser
- ❑ Bureau of Land Management, Las Vegas Field Office, Tim Rash
 - Coordinated projects between NPS and BLM from AZ-NV stateline downriver to Halfway Wash (~1300 acres)
 - Tamarisk, Russian olive, camelthorn, perennial pepperweed
- ❑ Nevada Department of Transportation, Carson City, NV, Lori Bellis
 - Malta star thistle





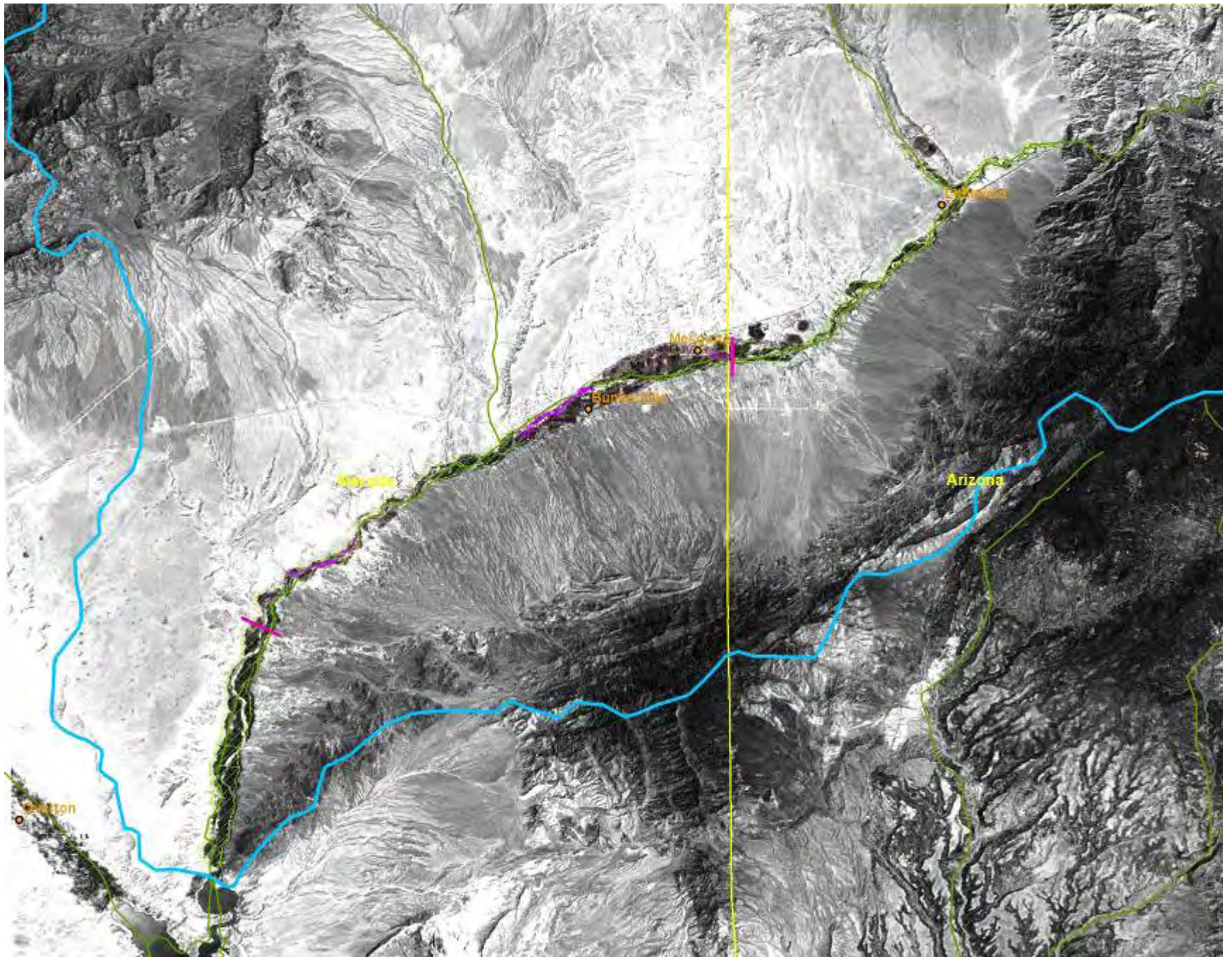
Utah

- City of St. George, Randy Halverson
 - Treated salt cedar and Russian olive in Santa Clara River watershed in city limits, Fort Pierce Watershed, San Halo Wash, St. James area
 - ~1500 acres total



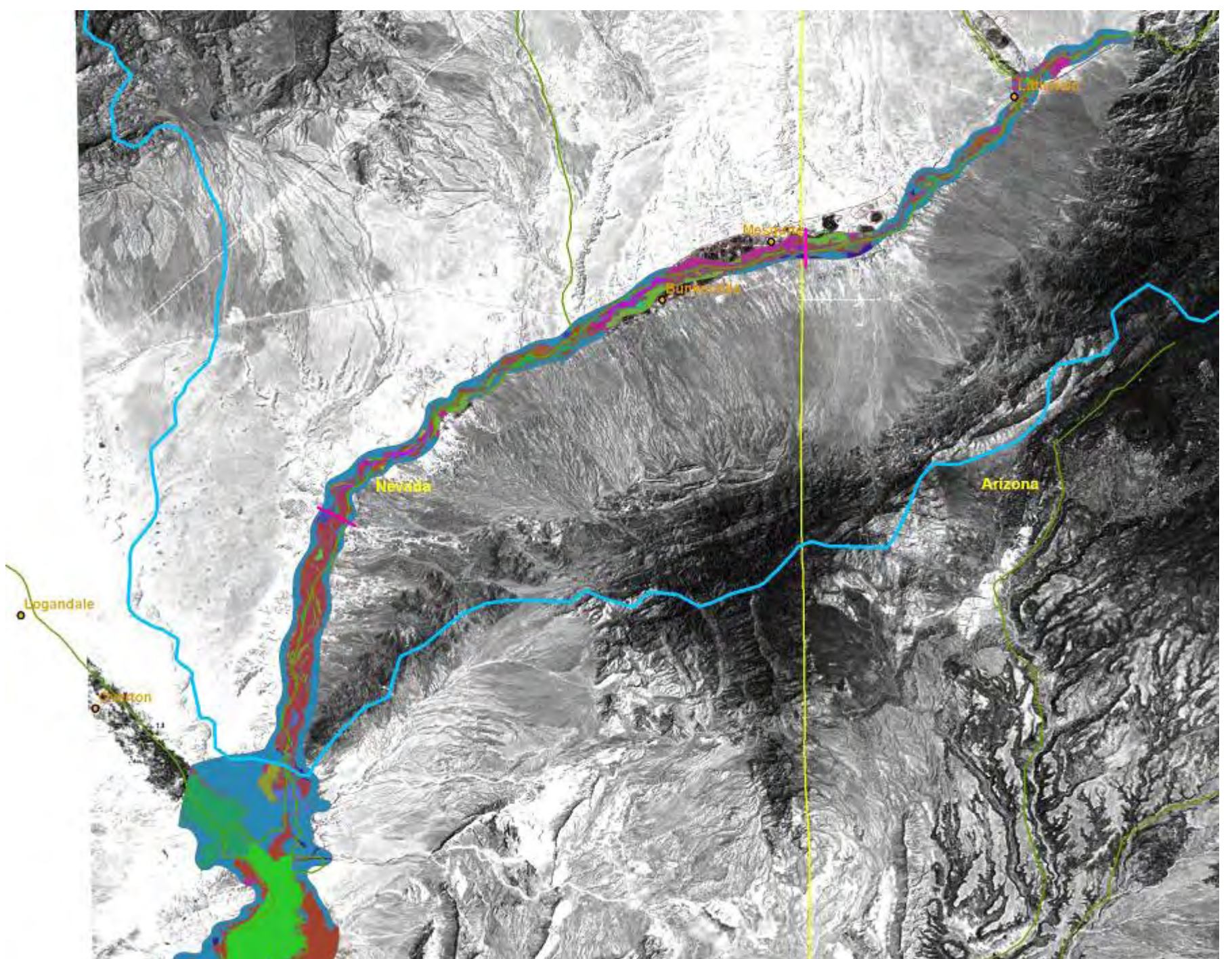
Extent of tamarisk throughout watershed

- Virgin River Habitat Conservation & Recovery Program
 - The Virgin River Habitat Conservation Plan (VRHCP) development process was initiated in June 2004 and involves the City of Mesquite (City), Clark County (County), U.S. Fish and Wildlife Service (FWS), and other cooperating agencies and/or entities. The VRHCP is being developed jointly by the City, County and FWS and will cover activities conducted by the City and County that will affect the mainstem of the Virgin River and surrounding watershed.
 - <http://dev.fargeo.com/vrhcp/>
 - Farallon Geographics



Extent of tamarisk throughout watershed

- ▣ 2004 Lower Colorado Region Vegetation Type Mapping, Backwaters Delineation, Orthophotography, and GIS Development – Bureau of Reclamation, Boulder City, NV, Ray Ahlbrandt



Lessons Learned/ Technical Considerations

- What has worked, what hasn't worked
 - Types of treatment
 - Mechanical
 - Chemical
 - Aerial, foliar and basal applications
 - Biocontrol
 - Combinations
 - Species and/or geographic dependent lessons learned
 - Restoration efforts – native species that are working, aren't working, substrate issues?
- Acceptable kill percentages?

Lessons Learned/ Technical Considerations

- Tools that are lacking?
 - Aerial application
 - Biocontrol
 - Water monitoring equipment
 - Publicity

Policy/Regulatory Considerations

- Overall Watershed Issues
 - Biological Opinion
 - Programmatic EA for whole watershed
- T&E Species
 - Southwestern Willow Flycatcher
 - Yuma clapper rail
- 404 Issues



Status of Toolbox components

- ❑ Overview of current removal/control efforts in the watershed
 - Data available on locations, type of treatment, costs, etc. (GIS especially)
- ❑ Extent of tamarisk throughout watershed
 - Data/mapping (GIS) available on vegetation classifications, tamarisk mapping, etc.
- ❑ Lessons Learned/Technical considerations
 - Will start to fill out and ask for input
- ❑ Policy/Regulatory Considerations
 - Will start to fill out and ask for input

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