Invasive Species Management in the Southwestern U.S.

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Some Species of Concern...

- Zebra mussel
- Perennial pepperweed
- Arundo
- Salt cedar
- Hydrilla
- Yellow star thistle
Why are invasive species problematic?

- Most of the woody species are phreatophytes – root systems into water table – *may* use more water than native species
- Outcompete native species (habitat value)
- Change soil characteristics
- Weeds take over (either under woody species or when woody species are removed) – little to no food or habitat value
- Affects on T&E species
- Affects on Corps and Reclamation missions at Projects (reservoirs) – affects relationship with tribes, negative input form public, economic loss at Lakes – loss of public use and/or can create maintenance issues

Salt cedar roots in adits at Abiquiu Dam
• *Arundo donax*, Giant Cane  
  – (CA, Los Angeles) Dry Dams and River Channels
• *Arundo* can displace native plants and associated wildlife species, alter hydrological regimes, alter channel morphology, create fire danger, and become a dominant component of the riparian ecosystem. Several special status species are associated with California's semi-arid riparian zones, including Least tern, Bell’s vireo, Southwestern willow flycatcher and Yellow-billed cuckoo.
• Beginning in 2000, removal of *Arundo* from dry dams and channels in the LA area. Ongoing treatment and maintenance. Limited funding.
• SPA – Albuquerque District
  – NM, southeastern CO, western TX
  – 6 reservoirs in NM
  – 2 reservoirs in CO
  – Civil Works projects
  – Military projects
Similar to *Arundo* in terms of effects on the ecosystem

- Rio Grande:
  - Cochiti Dam - ~300 acres of mixed non-native with willow in flood pool; upstream (non-Corps managed land) – 15 miles of salt cedar
  - Jemez Dam - ~2000 acres of salt cedar in pool that was evacuated in 2001; working on Management Plan with Santa Ana Pueblo – no physical disturbance due to archaeological sites
– Colorado:
  • John Martin Dam – Arkansas River – 12,000 acres of salt cedar; 10,000 acres of cocklebur and Russian thistle
  • Trinidad – Purgatoire River
– Pecos River:
  • Santa Rosa Dam – 80 miles of salt cedar shoreline
  • Two Rivers – Rio Hondo ~100 acres of salt cedar

• Total Acres of salt cedar at SPA Reservoirs = ~25,000 acres and 80 miles of shoreline
Galisteo Dam Salt Cedar Eradication Project

- Tributary to the Rio Grande
- 300 acres of salt cedar upstream of Dam with some Russian olive
- Began treatment in September 2006
- Phases of extraction, retreatment, revegetation
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Middle Rio Grande Bosque Restoration Projects – have treated 700 acres in Albuquerque Reach of Middle Rio Grande (MRG); all 4 woody species (Salt cedar, Russian olive (Elaeagnus angustifolia), Tree of Heaven (Ailanthus altissima), Siberian elm) (Ulmus pumila); weeds now coming in to some areas
Bosque prior to thinning in Corrales, NM
- Coordination with other agencies (i.e.: NISC, USBR, etc.)
- Coordination within ISLT; dissemination to Divisions and Districts
- Sharing of information and lessons learned
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