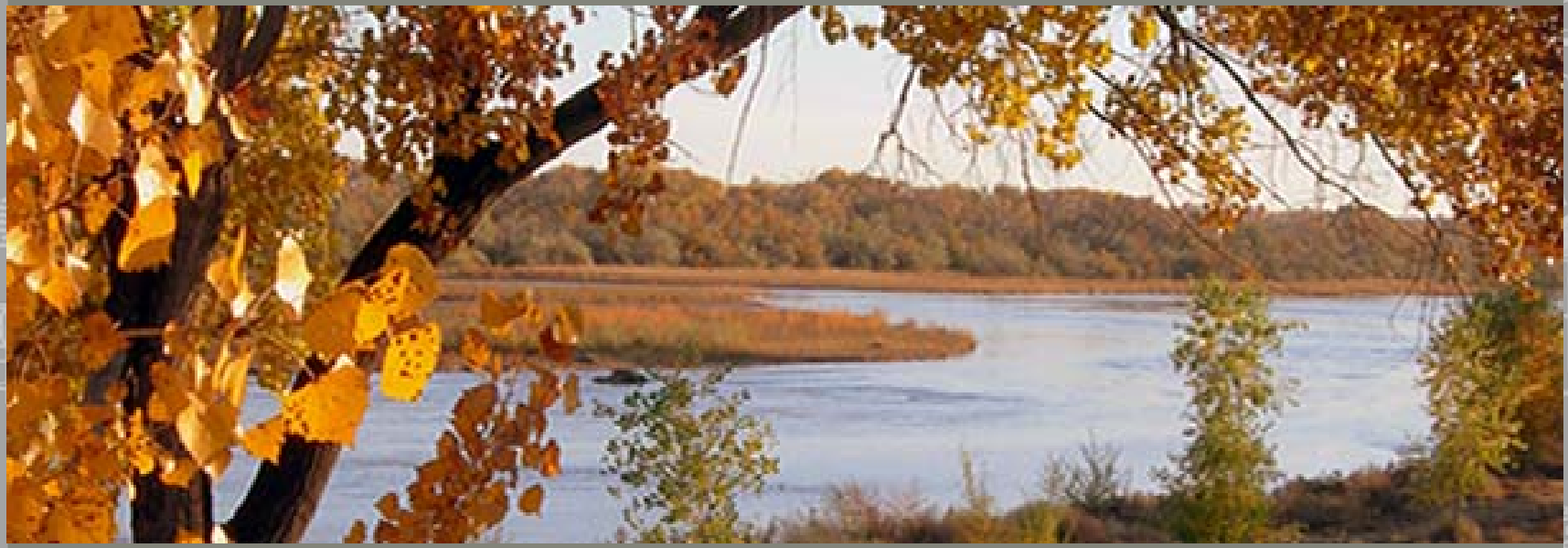
MIDDLE RIO GRANDE ENDANGERED SPECIES COLLABORATIVE PROGRAM



July 2017

"The views, opinions and findings contained in this report are those of the authors(s) and should not be construed as an official Department of the Army position, policy or decision, unless so designated by other official documentation."

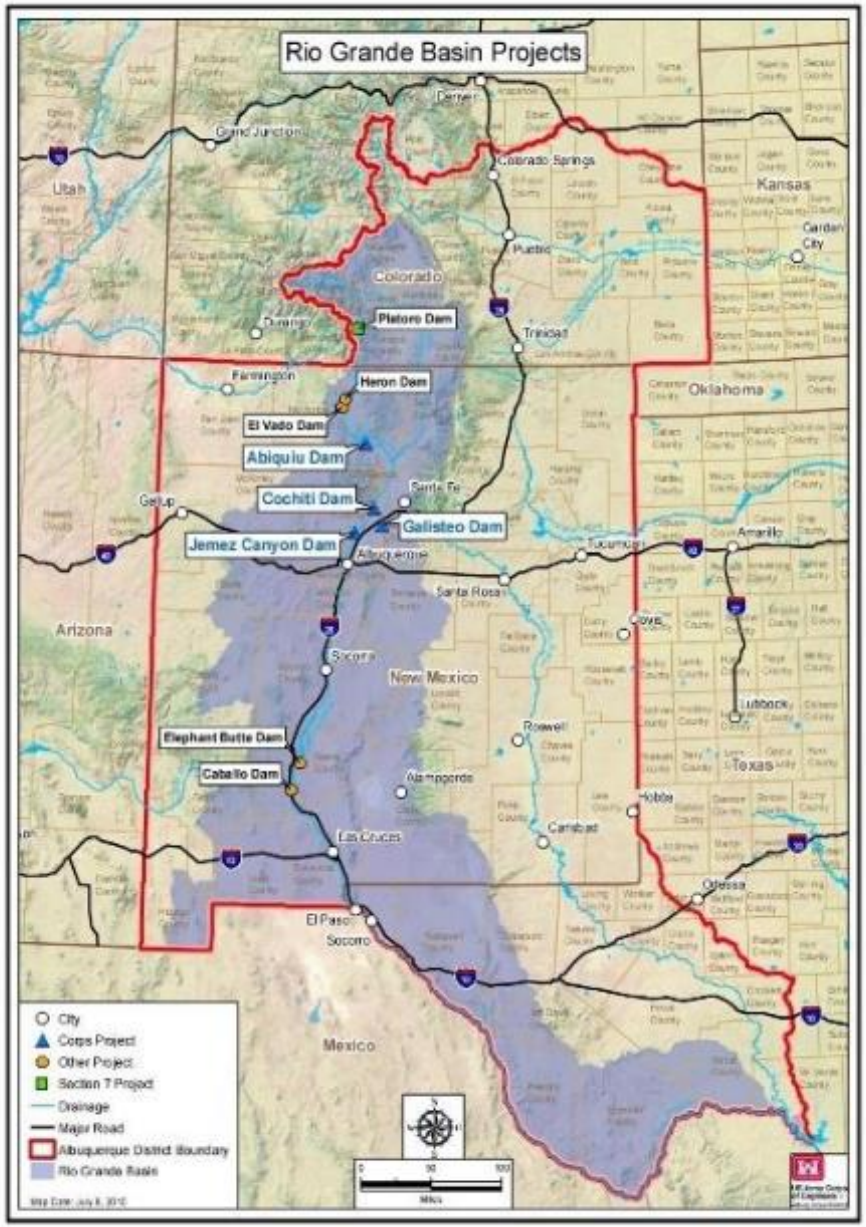
US Army Corps of Engineers®

U.S.ARMY

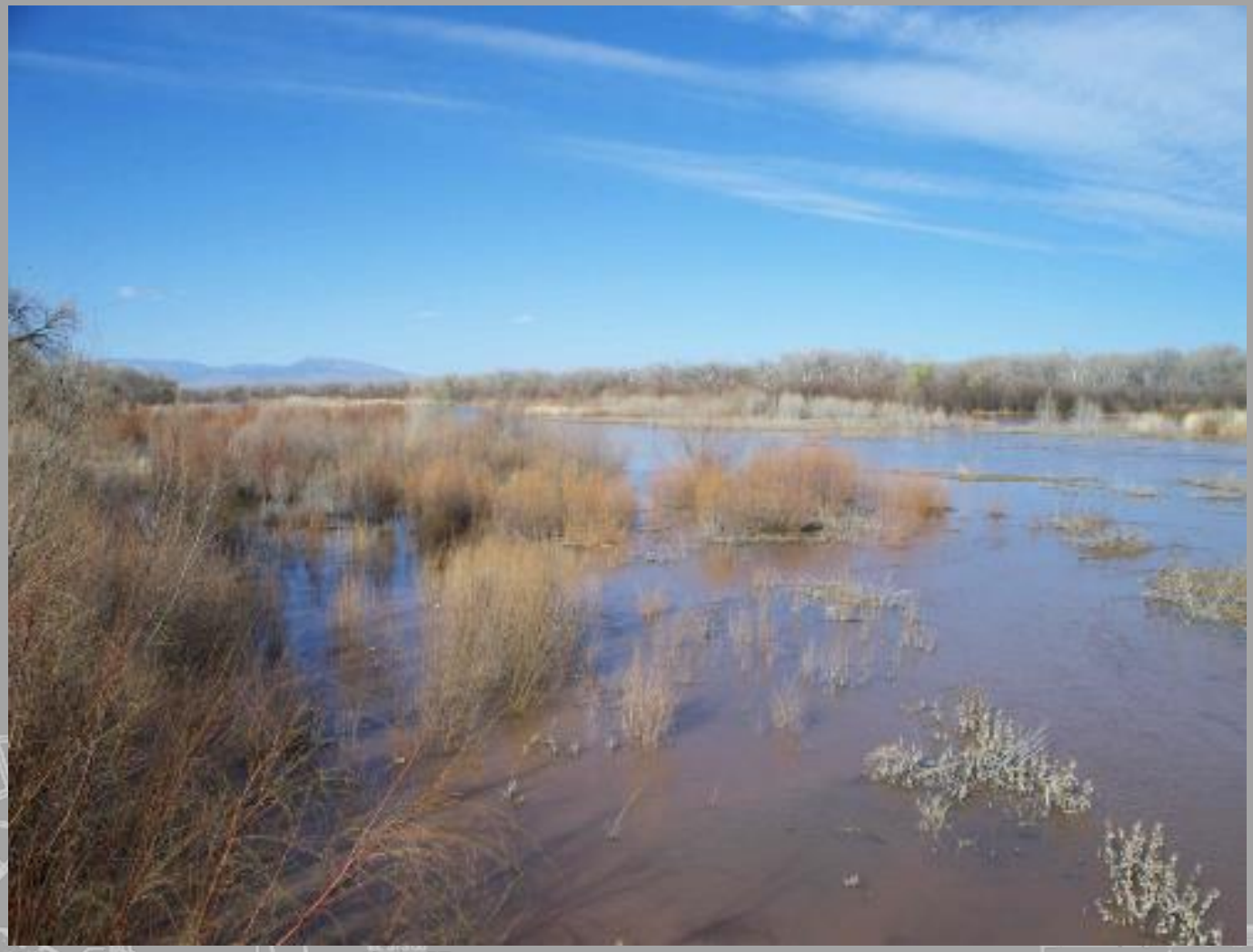
About the Middle Rio Grande

- Rio Grande was an aggrading system

- Water management operations
  Irrigation
  Flood control - dams and levees,
  Alter the river's natural flow and sediment transport
  Decreased overbank flooding.



The Collaborative Program is a partnership involving 16 signatories organized to protect and improve the status of endangered species along the Middle Rio Grande of New Mexico while simultaneously protecting existing and future regional water uses.



Middle Rio Grande
Endangered Species Collaborative Program

- U.S. Bureau of Reclamation
- U.S. Fish and Wildlife Service
- U.S. Army Corps of Engineers

- New Mexico Interstate Stream Commission
- New Mexico Department of Game and Fish
- New Mexico Attorney General's Office

- Santo Domingo Tribe
- Pueblo of Sandia
- Pueblo of Isleta
- Pueblo of Santa Ana

- Middle Rio Grande Conservancy District
- Assessment Payers Association of the Middle Rio Grande Conservancy District
- Albuquerque-Bernalillo County Water Utility Authority
- City of Albuquerque
- New Mexico Department of Agriculture
- University of New Mexico

US Army Corps of Engineers®

U.S.ARMY

Endangered Species on the Middle Rio Grande

Rio Grande silvery minnow (*Hybognathus amarus*)

Requires a spring flood pulse to cue spawning and shallow, slow-moving water in areas Overbank flooding for nursery habitat.
Reduced spring flood volumes in the river
Channel incision reduced frequency of overbank flooding

US Army Corps of Engineers®

U.S.ARMY

Endangered Species on the Middle Rio Grande

Southwestern Willow Flycatcher
(*Empidonax traillii extimus*)

Requires dense riparian habitats dominated by native willows for nesting and rearing its young.
Historically, floods on the river produced a mosaic of shifting sandbars that favored the establishment of such willow stands; however, Water management has led to stabilization of sandbars
Willow communities have been replace with non-native shrubs

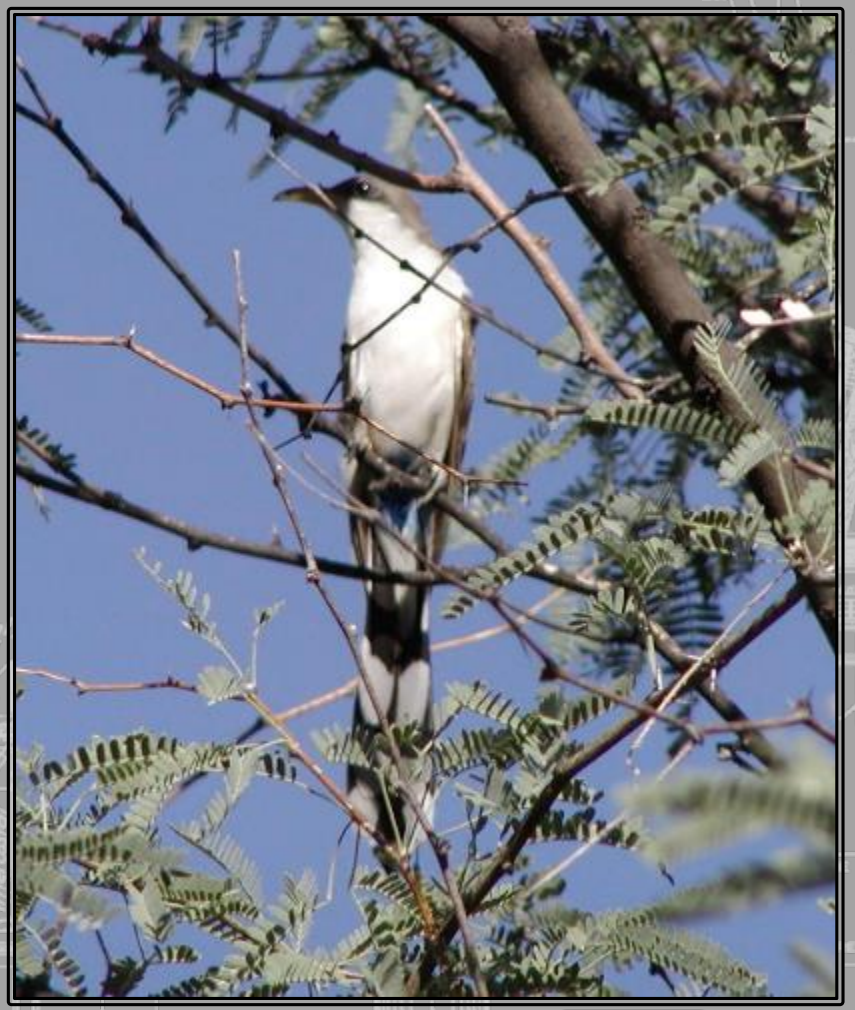
US Army Corps of Engineers ®

U.S.ARMY

Endangered Species on the Middle Rio Grande

Western Yellow-billed Cuckoo
(*Coccyzus americanus occidentalis*)

Riparian habitat mosaic dominated by cottonwoods for nesting and rearing its young.
Opportunistic foraging for insect outbreaks and nesting



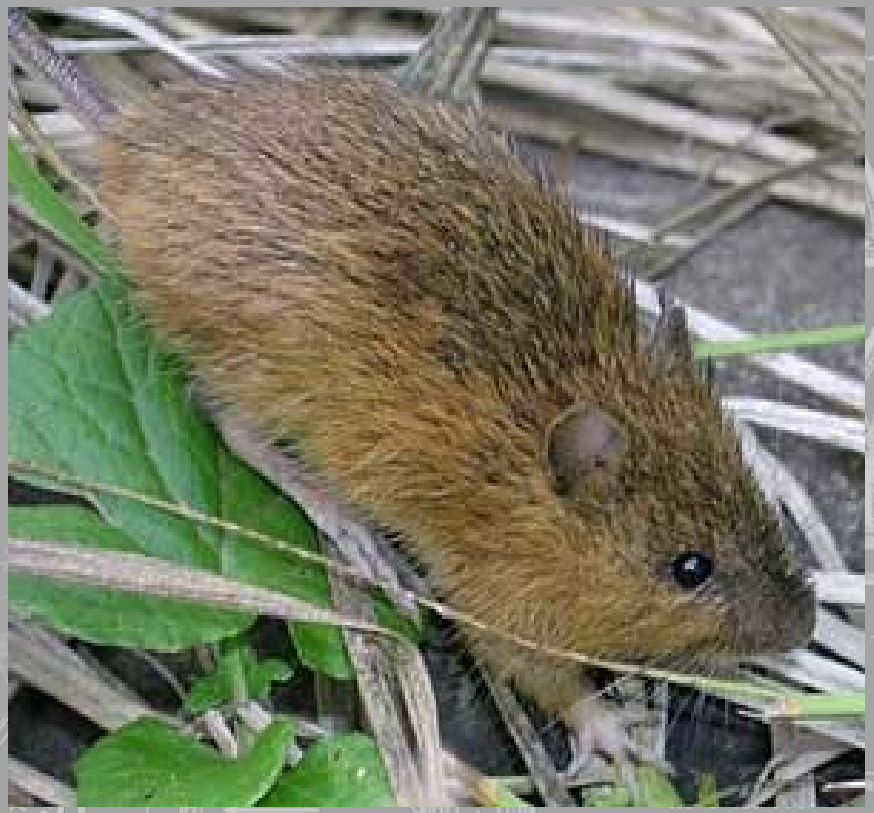
US Army Corps of Engineers ®

U.S.ARMY

Endangered Species on the Middle Rio Grande

New Mexico Meadow Jumping Mouse (*Zapus hudsonius luteus*)

Emergent herbaceous wetlands with sedge or reed canarygrass
Riparian Scrub-shrub dominated by willows
Historic range along Rio Grande
Mostly upland streams



US Army Corps of Engineers ®

U.S.ARMY

US BUREAU OF RECLAMATION
COLLABORATIVE PROGRAM AUTHORITY

Reclamation serves the leadership role

Activities include:

- Water acquisition and management
- Habitat restoration
- Endangered species monitoring
- Rio Grande silvery minnow propagation

US Army Corps of Engineers®

U.S.ARMY

USACE
COLLABORATIVE PROGRAM AUTHORITY

…USACE..may carry out and fund planning studies at 100 percent Federal expense to accomplish the purposes of the 2003 Biological Opinion …or any related subsequent biological opinion, and the Collaborative Program long-term plan. In carrying out a study, survey, or assessment under this subsection…USACE…shall consult with Federal, State, tribal and local governmental entities, as well as …other…entities participating in the Collaborative Program. USACE..may also provide planning and administrative assistance to the …Collaborative Program…

US Army Corps of Engineers®

U.S.ARMY

Collaborative Program goals (April, 2013)

Conserve and contribute to recovery of the listed species.

Support the development of self-sustaining populations through implementation of the RIP Action Plan and Annual Work Plan.

Continually identify the critical scientific questions and uncertainties that will be addressed through adaptive management.

Assist in avoiding jeopardy to the species and adverse modification of designated critical habitat within the Program area.

Protect existing and future water uses.

Provide a mechanism for ESA compliance for non-federal actions that are the subject of Reclamation's January 16, 2013 Biological Assessment.

Provide a process for streamlined Section 7 consultation for future water uses needing compliance with the ESA.

Obtain hydrologically sustainable solutions for the species.

US Army Corps of Engineers ®

U.S.ARMY