

US EPA ARCHIVE DOCUMENT



Targeted Watersheds Grant Torreon Wash, NM



Arid conditions and sparse vegetation lead to high rates of soil erosion.

Photo by NRCS, Jeff Vanuga



Trash dumped into an arroyo, just yards from Torreon Wash.

Photo by Craig Conley



Water quality issues are discussed with members of the Rio Puerco Management Committee, during a public meeting at the Ojo Encino Chapter House.

Photo by Steve Fischer

Rio Puerco Alliance

The Watershed

The Torreon Wash in the Arroyo Chico drainage basin is a subset of the larger Rio Puerco watershed, located in northwestern New Mexico. The area's ephemeral to semi-ephemeral streams rely on spring snowmelt and summer storms for recharge. Because of the local geology, the streams are high in sodium and sulfates. The salinity of the water increases as the water flows downstream. In this arid climate, riparian areas depend on adjacent waterways. Vegetation along waterways is almost exclusively upland species, except in areas receiving surface runoff. Mesas, buttes, and rock terraces separated by broad, open valleys and occasional canyons characterize this majestic landscape.

Issues

Because the soils in the area are primarily sandy loam, excessive erosion is prevalent. Unpaved roads cause further erosion and act as a conduit for runoff during rain events. Overgrazing by feral and wild horses compounds the erosion problems. Studies by the Army Corps of Engineers show that Arroyo Chico has the highest soil erosion rate of any watershed in the country. Stream channel modification has lead to straightening, bank collapse, and accelerated uplands and tributary headcutting processes, altering the natural river's natural hydrology and contributing to excessive erosion and sedimentation.

Project Activities

The Rio Puerco Alliance, the Rio Puerco Management Committee, and the Ojo Encino Ranchers Committee are partnering with federal, state and local agencies and organizations to undertake several projects to address the water quality issues facing the watershed.

- **“Water Harvesting” and Erosion Prevention Structures:** To help with erosion control and water retention, several proven low technology “water harvesting” and erosion prevention structures will be installed in drainage areas and adjacent landscapes. These include wicker weirs, log head-cut structures and one-rock dams.



Torreón Wash Watershed

Project Partners:

- Bureau of Indian Affairs
- Bureau of Land Management
- Hub RC&D
- Navajo Nation
- New Mexico Environment Department
- New Mexico State Land Office
- New Mexico Energy, Minerals and Natural Resources Department
- Natural Resource Conservation Service Quivira Coalition
- Sandoval and McKinley Counties

Leveraged Resources:

EPA Grant: \$839,727

Match in non-federal funds and in kind services: \$433,123

For More Information Contact:

Barbara Johnson

Rio Puerco Alliance

Lunah3@comcast.net

www.riopuerco.org/index.html

www.riopuerco.org/Rio_Puerco_Alliance/index.html

- **Road Maintenance and Improvements:**

Better management of unpaved roads and the proper closing of abandoned roads will help reduce erosion and reclaim water from the roads and spread it to the surrounding land.

- **Invasive Plant Removal:** Invasive plants are outcompeting native vegetation in some riparian areas. Invasive salt cedar will be removed and replaced with native cottonwood and willow to stabilize drainage channels. Exclusions will be built to prevent livestock and wildlife from grazing prior to plant establishment.

- **Improved Grazing Management:** Individual ranch management plans will be developed to help ranchers develop a 5-year vision for infrastructure improvements, stocking rates, and range conditions. Additionally, a Grassbank will be established to provide relief during drought and allow for recovery time in revegetated areas.

- **Trash Clean-up and Education:** Illegal trash dumps will be cleaned up and the areas treated to reduce erosion. Five Navajo chapters are working together to develop a transfer station in the area. Presentations will be given at Chapter meetings to educate residents about the water quality impairments from illegal trash dumping.



EPA's Targeted Watersheds Grant program is a competitive grant program designed to encourage collaborative, community-driven approaches to meet clean water goals.

For more information about the selected watersheds, please visit:
<http://www.epa.gov/twg>

840-F-08-001H