

Los Lunas Habitat Restoration Project

Visit the west bank of the Rio Grande in Los Lunas, New Mexico to see how a formerly burned stand of vegetation has been reconstructed to support aquatic and riparian habitat for threatened and endangered species.

What was done and why?

The area that was restored suffered a severe fire in April of 2000. As such, the site offered the opportunity to conduct a large-scale, mechanically driven restoration project that would avoid disturbance of intact habitat for a variety of species. The objective of the project was to improve habitat conditions for the Rio Grande silvery minnow and the southwestern willow flycatcher, both of which are listed as endangered species on the federal register. A secondary objective of the project was to prevent post-fire establishment of non-native plants, such as tamarisk and Russian olive. The project design mandated the use of heavy equipment and large construction crews. The levee adjacent to the site was fortified with the root wads of large cottonwood trees that had burned in the fire. The levee fortification was conducted to provide for the opportunity to increased flooding of the restoration site while protecting public and private property located behind the levee. 1,300 jetty jacks were removed from the banks of the Rio Grande to promote bank destabilization and channel widening. About 40 acres of the floodplain was excavated to lower the bank elevation, thus promoting the increased chance of overbank flood events in periods of high river flow (greater than or equal to 2,500 cubic feet per second). A number of side channels also were excavated to different depths to provide for inundation at a lesser river flows (less than 2,500 cubic feet per second) and to promote backwater spawning grounds and refugia for the Rio Grande silvery minnow. The floodplain was re-vegetated with native plants such as cottonwoods and coyote willow. Some dead cottonwood trees were left standing to provide perch and roost sites for the Bald Eagle and other birds of prey.

Who was involved?

The U.S. Army Corps of Engineers and the U.S. Bureau of Reclamation were the major project sponsors. These federal agencies were involved in order to mitigate for water management operations that have impacted the endangered species, according to a U.S. Fish and Wildlife Service biological opinion of 2001. Native plant materials used for re-vegetation were obtained from the USDA Natural Resources Conservation Service Los Lunas Plant Materials Center. Other agencies consulted on the project included the U.S. Fish and Wildlife Service, New Mexico Game and Fish, New Mexico Interstate Stream Commission, Middle Rio Grande Conservancy District, New Mexico State Historic Preservation Bureau, Valencia County Planning and Zoning Office, University of New Mexico, U.S. Department of Agriculture Forest Service Rocky Mountain Research Station.

Where can I see the restoration project?

Tours of the project can be arranged on request of the U.S. Army Corps of Engineers.

Why is this a model project?

The project demonstrated how a catastrophic event like a crown fire of native cottonwood gallery forest can be turned into an opportunity to regenerate the forest while providing additional habitat for species in jeopardy. Furthermore, it is estimated the project will actually conserve water resources within the semi-arid Rio Grande system by saving approximately 500 acre feet of water over the course of 15 years. The project also provided the opportunity for long-term study of wildlife and plant population response to restoration as monitoring will be conducted at the site for 15 years. To date, the U.S. Department of Agriculture Forest Service Rocky Mountain Research Station has incorporated the site into a study on the effects of fuels reduction and non-native plant removal on vertebrates, vegetation, and water resources. The U.S. Army Corps of Engineers and the U.S. Bureau of Reclamation are conducting other monitoring activities, such as the success of planted riparian vegetation, rates of channel widening and bank erosion, levee structural integrity, and use of habitat by wildlife (with emphasis on the species of concern). Many researchers from the University of New Mexico and other academic institutions are conducting studies of fish populations and food web dynamics at the site.

Who can be contacted about this project?

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Cottonwood root wads used to fortify the levee. Burned cottonwood trees are in the background.



Removing a jetty jack from the riverbank.



Looking upstream from the restoration site.