

Biological Opinion

As stated in the March 2003 Biological Opinion, restoration of riparian habitat, terrace lowering and restoring the river's connectivity with the floodplain in order to enhance habitat are prime objectives. This project will meet those needs through manipulation in order to create aquatic habitat suitable for the silvery minnow, reconnect an old channel to the river and allow regeneration of native vegetation suitable for the willow flycatcher.



Fish Sampling in the high-flow channel

Recovery

Successful recovery of the silvery minnow and willow flycatcher depends on the cooperation of multiple federal and state agencies providing sufficient water and habitat to maintain viable populations

The Rio Grande Nature Center

The Rio Grande Nature Center is a New Mexico State Park. The Nature Center provides learning opportunities for citizens and school kids to learn about the Rio Grande bosque riparian forest ecosystem. The Nature Center has year-round programs for kids, including school fieldtrips and summer programs, such as Nature Discovery and Junior Rangers

The Friends of the Rio Grande Nature Center is a volunteer organization that supports the state park mission of education and stewardship. The Friends organization has assisted with water quality monitoring of the project during spring runoff since 2008.

For further information, please visit our website at <http://mrgesa.com>.



Rio Grande Nature Center Habitat Restoration Project

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Background

The Rio Grande Nature Center Habitat Restoration Project was constructed to benefit the Rio Grande silvery minnow and southwestern willow flycatcher in the Albuquerque Reach. The project includes re-establishment of the hydrological connection between the river and existing channel-like topography in the bosque at the Rio Grande Nature Center in Albuquerque, New Mexico.

This project has created habitat that has been utilized by the silvery minnow since its completion in 2008. It will also create potential habitat for willow flycatcher after vegetation becomes suitable (in approximately 5 years). This project also meets overall goals to restore the riparian mosaic and enhance habitat for endangered species.



Opening of the high-flow channel in March 2008

Design

The Rio Grande Nature Center Habitat Restoration Project uses two concepts developed by the U.S. Army Corps of Engineers (Corps) and the U.S. Bureau of Reclamation (Reclamation). The high flow channel reconnects an abandoned river channel with the river at normal spring runoff flow. The channel carries water into the interior of the riparian forest to support regeneration of the bosque. The embayment features along the high flow channel provide slackwater spawning and rearing habitat for Rio Grande silvery minnows.



Aerial view of the Rio Grande habitat restoration site

Habitat

Silvery minnows and willow flycatchers both depend on riparian floodplain habitat for successful reproduction. Decreased floodplain connectivity has resulted from sediment storage in flood control reservoirs and channel management.

Construction

Construction began in the fall of 2007 and was completed April 30, 2008. The project reconnected the existing channel system by excavating an opening on either end and grading within the center of the channel as needed. Coyote willow was planted along the banks and Gooding's willow and cottonwood were planted in the upland areas adjacent to the banks of the channel. Embayments were also constructed off of the sides of the channel. Overall, approximately 15 acres of habitat (open channel and riparian) was restored.

Funding

The Middle Rio Grande Endangered Species Collaborative Program provided funding for design and construction of the project. The Collaborative Program along with the Corps have provided funding for monitoring the effectiveness of the project for supporting riparian vegetation and use by silvery minnows for recruitment.



Rio Grande silvery minnows collected in an embayment