



Rio Grande Silvery Minnow *Questions and Answers*

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Rio Grande Silvery Minnow Recovery Plan, First Revision

What action is the Service taking?

The U.S. Fish and Wildlife Service (Service) announced release of the Rio Grande Silvery Minnow (*Hybognathus amarus*) Recovery Plan, First Revision. The endangered Rio Grande silvery minnow is a fish native to its namesake river and the Pecos River. The plan includes updated scientific information about the species and provides criteria and actions needed to downlist and delist the species. It was declared a federally endangered species in 1994.

What is a recovery plan?

Based on the best available science, a recovery plan delineates actions that are required to protect and recover a species. Recovery plans include goals, objective and measurable criteria, an implementation schedule, suggested partners, an estimated timeline, and estimated costs. The purpose of a plan is to outline how a species can be moved from endangered to threatened status and then eventually be removed from Endangered Species Act protection.

This plan has been prepared with assistance from many Federal, State and local agencies; academia; Tribal members; and non-governmental organizations.

What does this recovery plan do?

There are three goals for the minnow: prevent extinction; improve the status of the endangered minnow to threatened; and, fully recover the minnow so that it no longer needs the protection of the Endangered Species Act.

The plan describes what is needed in order to consider downlisting and eventual recovery of the species, such as developing a thorough knowledge of the Rio Grande silvery minnow's life history, ecology, and behavior, and the current status of its habitat. Additionally, it is necessary to understand and alleviate threats to the silvery minnow, to ensure the survival of the species in its current habitat and reestablish the species in suitable habitats within its historical range.

The plan recommends three separate fish populations, including a stable middle Rio Grande population and at least two additional populations that are self-sustaining and have been

established within the historical range of the species. There must also be habitat sufficient to support three such populations.

What doesn't a recovery plan do?

While appropriate parties are suggested as the lead for actions in the plan, there is no obligation on those parties to undertake the actions. A recovery plan provides a recovery strategy based on the best available information about the species and adherence is voluntary. For this reason, only estimates of time and costs are calculated.

What is a Rio Grande silvery minnow?

The Rio Grande silvery minnow is a small fish (adults may reach lengths up to 3.5 inches). It is a pelagic (open water) spawner that produces thousands of semi-buoyant eggs that passively drift downstream. Recently hatched larvae remain in the drift by swimming vertically. Larvae soon develop to a free-swimming stage and move horizontally into low velocity nursery habitats (e.g., backwaters, pools, and along the shoreline). Young of year and adult minnows may be found throughout the river, but are most abundant in areas with lower water velocity.

What are the threats to the minnow?

Throughout much of its historic range, the decline of the Rio Grande silvery minnow may be attributed in part to destruction and modification of its habitat due to dewatering and diversion of water, water impoundment, and modification of the river (channelization). Competition and predation by introduced non-native species, water quality degradation, and other factors may also have contributed to its decline.

While efforts to reduce the threats mentioned above have been conducted since the Rio Grande silvery minnow was listed in 1994 as endangered, none of these threats has been eliminated and the species remains endangered.

How is the minnow faring?

Once found throughout the Rio Grande and the Pecos River, the Rio Grande silvery minnow is currently known to occur in one 280-km (174-mi) reach of the Rio Grande in New Mexico, from downstream of Cochiti Dam to the headwaters of Elephant Butte Reservoir. In December 2008, silvery minnows were introduced into the Rio Grande near Big Bend, Texas as a nonessential, experimental population under section 10(j) of the Endangered Species Act. Preliminary monitoring is being conducted to determine whether or not reintroduction has been successful.

Its current habitat is limited to seven percent of its former range. This remnant population continued to steadily decline after its listing in 1994, and has shown a fluctuating but increasing trend since 2004. However, the remaining population is fragmented and isolated, making it vulnerable to natural and human-caused factors further increasing the risk of extinction.

How much will it cost?

Estimated costs are calculated at approximately \$167,500,000 for a minimum of 30 years of efforts.

How long will it take to recover the silvery minnow?

If the implementation schedule is followed and recovery actions are successful, it is estimated that it would take a minimum of 30 years to fully recover the Rio Grande silvery minnow.