

SHOWCASE SPECIES: MISSOURI

UPPER MISSOURI INTERIOR LEAST TERN

The Issue

Loss of river habitat to dam construction, annual operation of the dams and channelization are the main threats to the least tern along the Upper Missouri River, which runs from the headwaters in Montana through the Dakotas. Dams can also alter water temperature downstream, affecting the availability of the bird's fish prey.

Natural History

The smallest tern species in North America, the least tern grows to about 9 inches long from beak tip to tail tip. Grayish back and wings contrast sharply with a black crown on the head and a snow-white underside and forehead. The bill is yellow with a black tip. Slender in body and wings, the least tern sports an aerodynamic look and catches its prey—small fish—by hovering over water.

The least tern ranged historically in two distinct groups, one along U.S. marine coasts and the other along the Mississippi, Missouri and Rio Grande rivers. The latter group constitutes the interior population, which may number about 8,000 terns today. Before dams and diversions altered habitat along the Missouri River, the least tern was found throughout the watershed in North Dakota. Today, it nests there mainly between Garrison Dam and Lake Oahe.

The interior terns winter along the Gulf of Mexico and on Caribbean islands. In summer it nests on sparsely vegetated sandbars on the Missouri River and on the Yellowstone River, a Missouri tributary in Montana. Least terns favor sandbars free of vegetation because lack of cover allows them to see approaching predators. The birds nest in colonies, laying eggs in shallow holes they scrape in sand or gravel.

Prior to dam construction, high, fast seasonal pulses of water scoured sandbars and shorelines clean of vegetation. In recent decades, dams have limited these pulses and also have altered the habitat needed by the fish species on which terns prey.



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Wide river channels punctuated with scattered sand bars have been turned into narrower, forested corridors. Moreover, dam managers keep water at unnaturally high levels during part or all of nesting season, inundating nesting areas. With loss of habitat and diminishment of prey, tern numbers have dwindled persistently in recent years. They rallied in the late 1990s and early 2000s after unusually heavy snow melt from the mountains filled the river with rushing water that restored sand bars and flats, indicating that the birds would improve rapidly if a more natural water regimen were restored. A U.S. Army Corps of Engineers river restoration project recently initiated for the Upper Missouri promises hope for the least terns of the region (*see below under "Management"*).

Listing

The U.S. Fish and Wildlife Service in 1985 listed the interior least tern as endangered.

Management

Least terns are among a handful of species that serve as indicators of habitat health. The U.S. Army Corps of Engineers, which manages dams along the Upper Missouri, during the past three years has launched a plan to restore the Missouri River, a project presently being funded to the tune of about \$30 million a year. The project is designed to restore Missouri habitat not only along the upper reaches of the river but also along the lower portions, starting roughly at Sioux City, Iowa,

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and ending 750 miles downstream at St. Louis, Missouri. The project, which ranks in size with the magnum effort to restore the Florida Everglades, is in its initial stages. Planners hope restoration will revive native fish populations and recreate 20,000 of the 100,000 acres of Lower Missouri shallow-water habitat lost to agricultural and water development. Presently, the Upper Missouri supports a \$100-million recreational industry that is likely to increase in size when native sport fish, such as sauger and paddlefish, return as the river is restored. Restoration also is likely to support a remunerative recreational industry along the Lower Missouri.

One sign of successful Missouri restoration will be recovery of the least tern, as well as other indicator species such as the piping plover and pallid sturgeon. If these species are returned to healthy numbers, then other jeopardized species, such as sicklefin chub and sturgeon chub, will also be positioned to recover at least a portion of past numbers.

The least tern, as well as other Upper Missouri River species, received a boost in 1997, when unusually high water flow from dense snow pack melt around the headwaters restored nesting habitat and probably boosted prey fish populations. During the past two or three years, however, the conditions created by the 1997 waterflow have been regressing, and tern numbers have again been declining.

The Missouri River Project, however, offers great promise for the future, with an influx of funds for river and tern recovery.

Funding

Funding from all government sources for interior least tern recovery nationwide ranks the species at 63 out of 1,311 species, according to the U.S. Fish and Wildlife Service fiscal year 2004 report (the most recent available) to Congress, *Federal and State Endangered and Threatened Species Expenditures*.^{*} Total recovery funding for the bird from all government sources that year was about \$2.9 million, with \$477,000 million coming from the Service.

The key to the species' future recovery lies in the U.S. Army Corps of Engineers Missouri River project. Until recently, the project received funding only on

the order of about \$2 million to \$3 million yearly, but in 2003 funding skyrocketed into the \$30 million range. During the next fiscal year, it is likely to reach \$55 million.

Because the least tern is being managed as an indicator species for Missouri restoration, funding of the bird's recovery will be substantially increased. However, this money will come from the Corps rather than from Fish and Wildlife Service budgets. "Thanks to monitoring and management of this species, it has maintained a toe hold on existence along the Missouri," says John Kostyack, director of Wildlife Conservation Campaigns at the National Wildlife Federation. Although the upcoming surge in funding for tern recovery suggests that the future is brighter for this species than it has been for a while, Congress must ensure that U.S. Fish and Wildlife—the lead federal wildlife agency—has in its budget the funding needed for recovery of least terns and other endangered species along the Upper Missouri. Among federal agencies, only the Service is mandated to recover, rather than simply maintain, listed species. Only full, fair funding for endangered species management will save listed species from extinction and restore healthy ecosystems."

Local Contacts

Tom France, National Wildlife Federation Northern Rockies Natural Resource Center, 406-721-6705; Fish and Wildlife Region 6, Ecological Services Division, 303-236-4255; North Dakota, Game and Fish Department, 701-328-6300; South Dakota Game, Fish, and Parks Department, 605-773-3387.

Other Threats

Loss of river habitat to dam construction, annual operation of the dams and channelization persist as threats to the least tern along the Missouri River from the headwaters in Montana through the Dakotas, but these threats may be mitigated as the Army Corps of Engineers progresses on its river restoration project.

See page 13 for Threats from Global Warming.

^{*} The U.S. Fish and Wildlife *Federal and State Endangered and Threatened Species Expenditures* report incorporates subjective estimates provided by regulated entities without any independent verification and without effort to segregate Endangered Species Act expenditures from other related expenditures. However, for most listed species, no other funding data is available.