

MANY HANDS MAKE SMALL WORK

NEW STREAM CROSSING BENEFITS PEOPLE AND NATIVE FISHES



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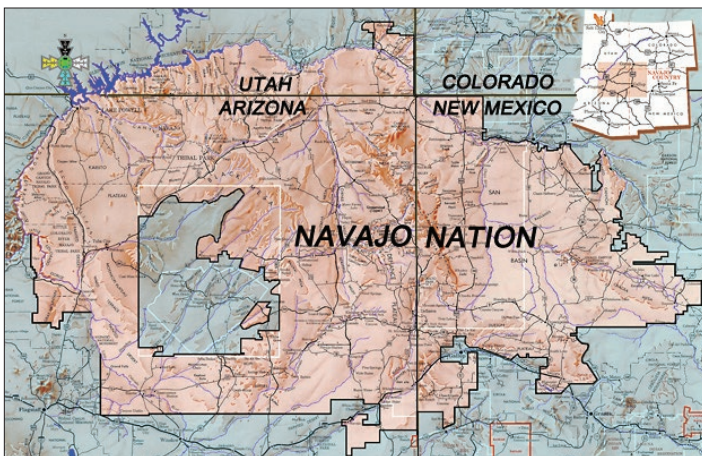
It's fair to say that they earned an honest sweat—one boulder at a time. Staff from the US Fish and Wildlife Service's New Mexico Fish and Wildlife Conservation Office (NMFWCO) along with biologists from the Navajo Nation Department of Fish and Wildlife (NNDFW) teamed up to fix a stream crossing—to get fish upstream and to get people safely across a creek. It all happened in the rugged, high-elevation terrain of the Chuska Mountains inside the homelands of the Navajo Nation on Whiskey Creek.

The stream pours out of the Chuska Mountains into Chaco Wash cutting a path through Canyon de Chelly National Monument, then toward the San Juan River near Mexican Hat, Utah. Along its path these waters afford habitat for two important fish species, Speckled Dace (*Rhinichthys osculus*) and Bluehead Sucker (*Catostomus discobolus*). The latter of the two is considered a candidate for listing under the Navajo Nation Endan-

gered Species List. The cold water of upper Whiskey Creek also supports non-native Brown Trout (*Salmo trutta*), fish renowned for eating other fishes. For the betterment of the native sucker and dace, NNDFW and NMFWCO biologists are removing Brown Trout.

An inadequate road crossing periodically kept folks away from their homes. Whiskey Creek must be crossed by a population of Navajos who call the Chuska's their home. But what can be a trickle can sometimes be a torrent as streams are apt to do in the American Southwest. Whiskey Creek is no exception.

Deep ruts that developed at low flows at the crossing barred spawning fish or fish seeking out seasonal refuges from moving to new waters. The stream crossing was also a source of sediment detrimental to Bluehead Suckers. At higher stream flows, slugs of sediment pulsed downstream filling the spaces in gravels where the



Map of the Navajo Nation. (Map provided by USFWS)



Bluehead Sucker. (Photo by USFWS)



native fishes congregate to spawn and disperse their eggs on the streambed. And given that the sucker makes its living scraping and eating algae from rocks, sediments essentially cover their food source. With less food and fewer places to spawn, the Bluehead Sucker could continue to decline.

Funded by the US Fish and Wildlife Service's National Fish Passage Program and the Bureau of Indian Affairs Endangered Species Program, Whiskey Creek is now a better place for fish and people, but getting there had its challenges. The workers intended to use a manufactured geoweb and textiles to establish a hardened surface. But nature had other designs; bedrock was near the stream bottom and they had to apply ingenuity to identify a solution. Instead of accepting defeat, biologists huddled over their options. After grubbing out the approaches with a skid steer, the crew hand-carried hundreds of football-sized angular boulders as a substitute to fabricated materials. As biologists completed the lining of large rock, a tribal elder whose family resided in the area approached the work site and expressed his appreciation. A second coating of small cobbles covered the football-sized boulders. Bigger boulders lined along both shorelines protect the stream bank from undercutting. The project was completed under budget and on schedule.

"Many hands make for small work," the adage goes and it rang true on Whiskey Creek. With this project done, three other similar stream crossings in the watershed are in the works. In the end, not only will Navajo people benefit, but habitat should be improved for the Bluehead Sucker helping to stave off listing as an endangered species.



Hardening the streambed at the crossing required heavy equipment and a great deal of hard, physical labor (left column), but the final result (right) will benefit local residents, both human and aquatic. (Photos by USFWS)