



Fiscal Year 2008
Vol. 4 No. 3

U.S. Fish & Wildlife Service

Currents

REGION 2 – SOUTHWEST REGION

Fisheries Program Highlights

(April – June 2008)

September 2008

Edited by Jeremy B. Voeltz, Arizona FWCO



“Connecting Kids with Nature.”

Read the complete stories inside

Southwest Region Fisheries Division

National Fish Hatcheries

The National Fish Hatcheries (NFH) at Willow Beach, Alchesay-Williams Creek, Uvalde, Tishomingo, and Inks Dam, develop and maintain brood stocks of important fish species, both sport fishes and critically imperiled non-game fishes. The hatcheries are the source of fish and eggs distributed to partners with similar aquatic conservation missions, such as native fish restoration or fulfilling federal mitigation responsibilities. Hatcheries are often called upon to provide a place of refuge for imperiled aquatic organisms, such as aquatic plants and amphibians.

Fish and Wildlife Conservation Offices

The Fish and Wildlife Conservation Offices (FWCO) in Arizona, New Mexico, and Oklahoma, evaluate wild native fish stocks and their habitats, and work with partners and other Service programs to restore habitats and fish populations.

These offices provide technical fish and wildlife management assistance to tribes and other partners with a primary focus on native aquatic species.

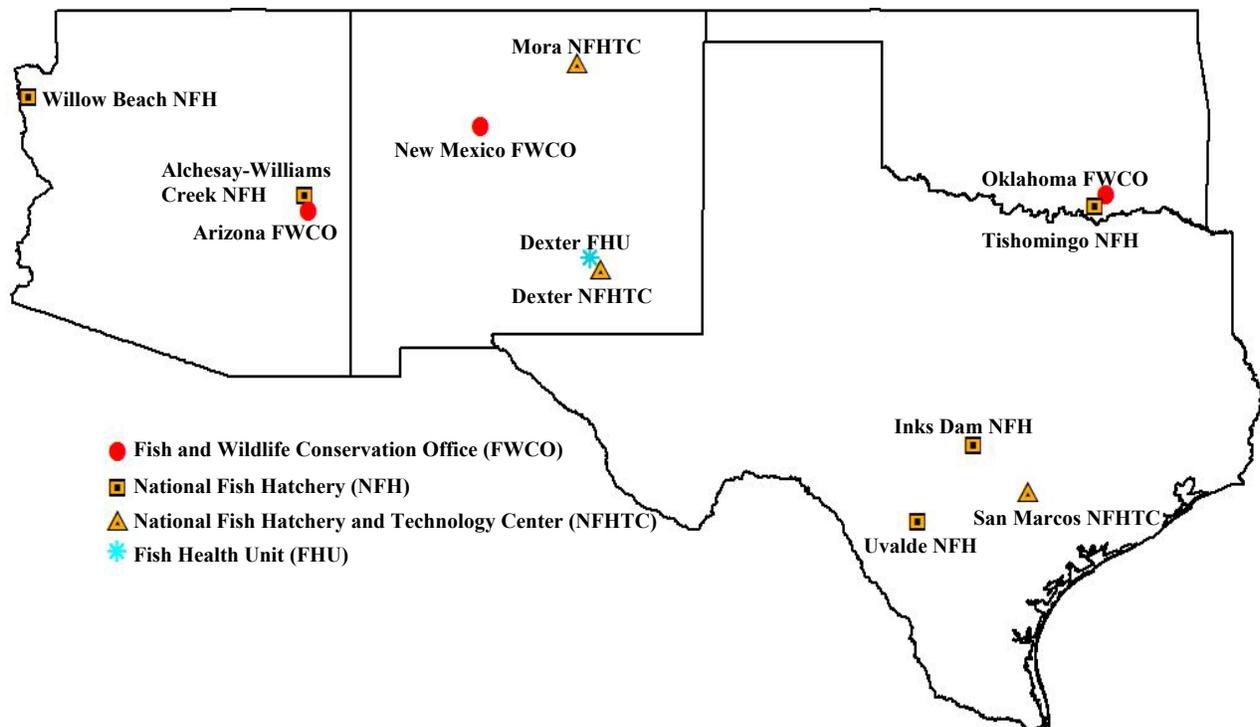
Fish Technology Centers

The Fish Technology Centers (NFHTC) at Dexter, Mora, and San Marcos develop leading-edge technology for use by tribal, state, and federal fish hatcheries and fishery biologists to make fish culture more productive, cost-effective, and scientifically sound.

Technology improves hatchery efficiency; helps assure the genetic integrity of fishes, at the same time minimizing the effects of hatchery fish on wild fish stocks.

Fish Health Unit at Dexter

The Regional Fish Health Unit (FHU) at Dexter assesses the well-being of fish that live in the wild or are raised at hatcheries. Fish health biologists are highly trained in various scientific disciplines, like immunology, epidemiology, toxicology, and genetics. They apply that knowledge in fish health assessments that might lead to early detection of potentially devastating diseases, prescribing preemptive measures.



“Kids Gone Wild” in Arizona



Kids display their “Fashion-A-Fish” artwork at the Big Lake Visitor’s Center in Arizona

Arizona FWCO and U.S. Forest Service (USFS) staff participated in the USFS’ “Kids Gone Wild” Program this summer. “Kids Gone Wild” is a series of free summer programs designed to give kids the opportunity to learn and have fun in the outdoors. This year the program was held at the Big Lake Visitor Center, near Springerville, AZ, with events scheduled Thursday through Saturday from June through early August. Arizona FWCO’s “Fashion-A-Fish” focused on fish anatomy and morphology as well as native fish conservation. After an intense game of “Fish Bingo,” participants helped in labeling the internal and external parts of a fish on a large poster. Using their newly acquired knowledge, the kids designed trout prints and created stuffed trout, which many turned into fashionable necklaces. This project reached over 700 children and supported several Service programs and initiatives, including “Connecting Kids with Nature.”

Jennifer Johnson, Arizona FWCO

300 Kids Fish at Uvalde NFH’s Annual Fishing Derby

Uvalde NFH’s annual fishing derby was held in June in support of National Fishing and Boating week. It was yet again a great success with over 300 children and senior citizens taking part. Volunteers from local businesses helped serve hotdogs and hand out water and sodas, while eight game wardens from the Texas Parks and Wildlife Department and one law enforcement representative from the Uvalde police force were present to assist with awarding prizes donated by local businesses and to insure local rules were followed.

*Dave Hampton and Grant Webber,
Uvalde NFH*



A nice catfish caught at Uvalde NFH’s annual fishing derby

Fishing Derby on the Fort Apache Indian Reservation

The White Mountain Apache Tribe's Wildlife and Outdoor Recreation Department hosted a free fishing day Bog Tank in June. Prior to the event, Alchesay NFH staff delivered 2,000 rainbow trout to Bog Tank and to two children's fishing tanks set up for the event. The tanks, staffed by members of the Tribe and the Hatchery were accessible only to young children, and they each had an opportunity to attempt to catch a trout. A few trout at a time were placed in each tank from the stocking truck and were replaced as they were caught by the children. The event was a great success with more than 700 people attending to try their luck at catching a trout.

Phil Hines, Alchesay-Williams Creek NFH



Over 700 people participated in the annual fishing derby at Bog Tank on the Fort Apache Indian Reservation

Tishomingo NFH Annual Fishing Derby



An excited youth at the Tishomingo NFH fishing derby displays his catch

In early June the Tishomingo NFH held their annual Kid's Fishing Derby. More than 400 children enjoyed fishing for channel catfish from two large ponds. The kids and their families were offered fishing bait and provided with nutritional snacks and beverages throughout the event. A drawing was held where 50 kids were awarded prizes donated by local businesses and individuals. Resources and assistance were provided in a cooperative effort among the Chickasaw Nation, the Oklahoma Department of Wildlife Conservation, Tishomingo NFH and National Wildlife Refuge (NWR) staff, and TREES (Friend's Group). The derby introduces children to outdoor education and activity, and provides an excellent opportunity for the economically disadvantaged communities of southern Oklahoma.

Rebecca Fillmore and Mary Davis, Tishomingo NFH

“Connecting Kids with Nature” in Texas

During the National Fishing and Boating Week in June, Inks Dam NFH participated in several events to help connect children with nature. Fishing derbies were held in Webster, Texas; Georgetown, Texas; and at the Aransas NWR. The events were attended by more than 700 children and their families. In addition, Inks Dam NFH conducted the 2nd Annual Turtle Races at the Burnet Elementary School, in part to educate the kids about aquatic species conservation.

These events were a partnership with the Clear Lake Ecological Services Field Office; Harris County, Texas; Precinct One Parks Department; the Junior Anglers and Hunters of America; the Girl Scouts of America; Georgetown Parks and Recreation Department; and Aransas NWR.

Marc Jackson, Inks Dam NFH



A young angler struggles to hold up the large catfish that she caught at a fishing derby in Texas

Inks Dam NFH Partners with States and Tribes



Staff from Inks Dam and the San Carlos Apache Tribe distribute channel catfish into stocking trucks for distribution on the San Carlos Apache Indian Reservation

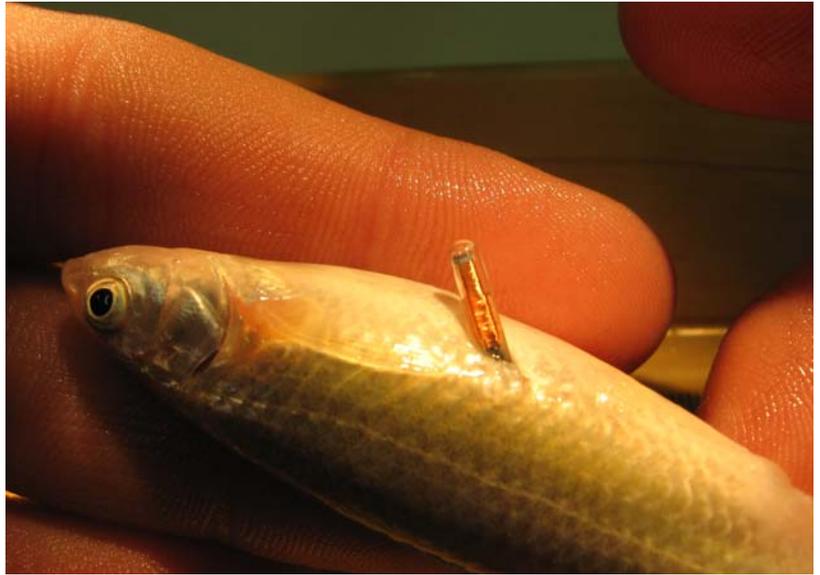
Inks Dam NFH continued to provide assistance to partners by providing fish for Tribal and State fishery management programs. More than 40,000 catchable catfish were stocked on six different reservations. Nearly 145,000 fingerling largemouth bass were distributed within Arizona to assist the Arizona Game and Fish Department with restoring fisheries that have been devastated by golden alga. Inks Dam NFH also partnered with Burnet County, Texas and the Lake Buchanan Conservation Corporation to stock more than 107,000 hybrid striped bass into Lake Buchanan to assist the state with recreational fisheries management in Lake Buchanan.

Marc Jackson, Inks Dam NFH

Research Reduces Mortality of Rio Grande Silvery Minnows

New Mexico FWCO recently conducted a study on different methods for PIT-tagging the endangered Rio Grande silvery minnow. Biologists compared PIT tag-induced mortality by two different tagging methods, surgical and injection, and then held fish in aquaria for 32 days for observation. Mean survival for injected fish was 50%, compared to 90% for surgically implanted fish. In a second experiment, 280 fish that were tagged by surgical implant had 90% survival after 49 days.

New Mexico FWCO biologists will use the tagged fish to test a passive monitoring station installed on a fish passage structure located on the Rio Grande, in Albuquerque.



A Rio Grande silvery minnow is implanted with a PIT-tag.

Thomas Archdeacon and Jason Remshardt, New Mexico FWCO

Research Improves Use of Tags for Marking Fish



PIT-tags of all sizes are used to track individual fish

PIT-tags are commonly used in identification and monitoring programs with fisheries projects. However, transponders of different frequencies, sizes, and code formats, as well as from different manufacturers, are not always compatible with all PIT-tags. Given the high cost of PIT-tag systems and the importance of accurate data collection, staff from Mora NFHTC and partners evaluated the performance of 20 transponder models and 11 transceiver models currently used in the United States.

Compatibility among transceivers ranged from 14% to 81% when evaluated with the 20 transponders in this study. There were also significant differences among reader and tag type combinations for maximum distance read. These results should assist resource managers with decisions regarding the coordination of tagging efforts that use PIT tag systems, and the full study was recently published in the *North American Journal of Fisheries Management*.

John Seals, Mora NFHTC

Matagorda Island Marsh Habitat Restored



Replaced culverts allow for tidal flow to refill important marsh habitat

The Aransas NWR Complex is completing the Mullet Pass restoration project on Matagorda Island in Calhoun County, Texas. Three 36-inch culverts have been replaced to restore tidal flow to more than 64 acres of highly productive feeding and nursery habitat. The project, funded in part through the Service's National Fish Passage Program, will not only enhance precious habitat but also engage local students in monitoring the physical changes taking place in the marshes after the restoration.

During Matagorda Island's transition from a military bombing range to a NWR, the island was also used as a site for cattle production. Large areas of the island's estuarine marsh were sectioned off

with constructed levees so they could be drained. In the late 1970s, dozens of culverts were installed through the levees to restore natural water flow to the marshes. Since then, the culverts have fallen into disrepair, blocking the tidal exchange and disrupting the ecosystem. After completion of this project, the island is one step closer to becoming a tranquil refuge for coastal wildlife.

For further information about the Fish Passage Program, please contact Quincy Pence, Southwest Fish Passage Program Coordinator, at 512-353-0011 ext. 235 or Quincy_Pence@fws.gov.

Amanda Diaz, Aransas NWR

Disinfecting Equipment to Eliminate an Invasive Snail

The red-rim melania is an invasive aquatic snail that poses a serious threat to our fishery resource due to its ability to transmit potentially lethal parasites to fishes. For six years, Service biologists have teamed with researchers to evaluate methods to restrict the snail's spread. This team has produced effective disinfection methods for contaminated nets (a source of the snail's spread) but the techniques are not always practical. The latest study found that all sizes of snails were killed when submersed for two hours in large insulated containers filled with a mixture of water (6.7 parts by weight), ice (3.3 parts), and salt (1 part). The components for this treatment are easy to obtain and relatively easy and safe for handling, mixing, and disposal.

Tom Brandt, San Marcos NFHTC



The red-rim melania, an invasive snail, can be transported inadvertently on field gear

Alligator Snapping Turtle Conservation Continues at Tishomingo NFH



An alligator snapping turtle, prior to release into the Caney River

Tishomingo NFH staff released 90 juvenile alligator snapping turtles into parts of the Caney River which drains into Lake Hulah in northern Oklahoma. Previous studies revealed alligator snapping turtle populations in decline and near non-existence in the Caney River and its tributaries where the turtles have existed historically. Each turtle was PIT tagged in the fleshy part of the upper leg before release. Sampling of the turtles will occur next spring to identify growth, location, and habitat preference. This project could not have been completed without the assistance from Missouri State University, Oklahoma State University, and Sequoyah NWR staff.

*Rebecca Fillmore and Mary Davis,
Tishomingo NFH*

New Water Lines Double Flow to Uvalde NFH

This summer, the security and the output of water available for the Uvalde National Fish Hatchery doubled. A new well, capable of pumping 1,500 gallons per minute, was connected to the existing well and water supply line, increasing the total volume of water available for the hatchery to 3,000 gallons per minute. A new computer controlled system allows staff to start, stop, and adjust water flows from the hatchery administration building. The new system will save both time, fuel, and energy costs.

In addition to the new well and computer system, a new water line serves two functions; the first is to provide a much needed back up water supply line for the hatcheries main water supply. The second function allows staff, for the first time ever, to deliver water from two different wells to select ponds simultaneously. Now, either one or both wells can be used to provide water to the 50 lined and unlined earthen ponds, six outside raceways, new 6,300 square foot tank house, and other future aquaculture needs.

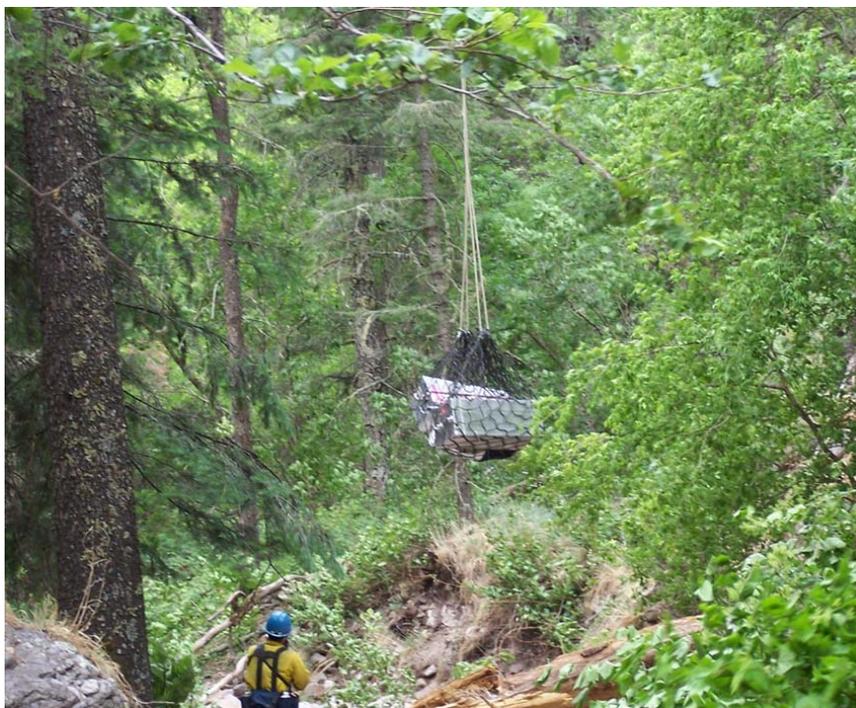


The new well at Uvalde NFH doubles the hatchery's water supply

Dave Hampton, Uvalde NFH

Gila Trout Collected from Spruce Creek for Broodstock Development

The New Mexico FWCO, in cooperation with New Mexico Department of Game and Fish and U.S. Forest Service, collected Gila trout from Spruce Creek in the Gila Wilderness. Personnel from each agency packed into the wilderness and hiked to Spruce Creek while a U.S. Bureau of Reclamation helicopter slung in electrofishing equipment and a heli-tank. Gila trout were collected and held overnight in a net pen; loaded in the heli-tank the next morning; long-lined from Spruce Creek to the Glenwood Ranger District; and finally to the Mora NFHTC to begin broodstock production of this unique lineage of Gila trout. Gila trout produced from this stock will be used for restoration and recreation in Arizona and New Mexico. This effort exemplifies the importance of existing cooperation between agencies working to recover Gila trout.



Gila trout are air-lifted from Spruce Creek to Mora NFHTC

Stephanie Coleman, New Mexico FWCO

Arizona FWCO Assists Partners in a “Shocking” Way



A very large channel catfish collected from Talkalai Lake on the San Carlos Apache Indian Reservation

In May, biologists from the Arizona FWCO assisted our Tribal and State partners with electrofishing seven lakes on the Fort Apache Indian Reservation, San Carlos Apache Indian Reservation, and U.S. Forest Service’s Apache-Sitgreaves National Forest.

The surveys are conducted every spring and summer to analyze the sportfishing communities at several lakes in Arizona. In addition, Arizona FWCO loaned our electrofishing boat for use in similar surveys in New Mexico, and both offices follow protocols to ensure that no non-target organisms are transported between lakes in the two states.

Jeremy Voeltz, Arizona FWCO

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