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Currents

REGION 2 – SOUTHWEST REGION

Fisheries Program Highlights

(October – December 2007)

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Edited by Jeremy B. Voeltz, Arizona NFWCO



San Marcos NFHTC SCUBA team supports dive projects throughout Region 2.

Read the complete story on page 5

Southwest Region Fisheries Division

National Fish Hatcheries

The National Fish Hatcheries (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.

National Fish and Wildlife Conservation Offices

The National Fish and Wildlife Conservation Offices (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.

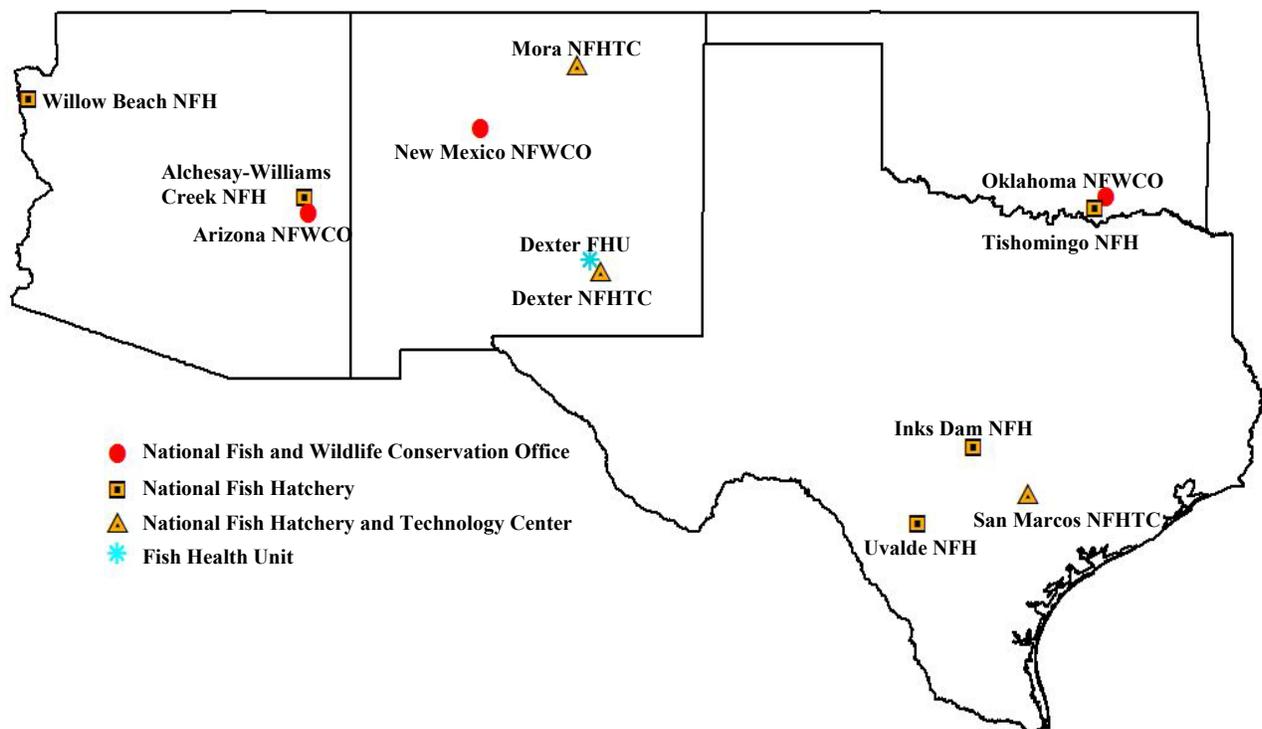
Fish Technology Centers

The Fish Technology Centers (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

Regional Fish Health Unit (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.



Alligator gar released in Missouri's Mingo Basin



Alligator gar, prior to release on the Mingo NWR in Missouri

In 2007, Tishomingo NFH provided over 125 alligator gar to the Missouri Department of Conservation to reestablish a sustainable population in Missouri's Mingo Basin. They were released into isolated waters on the Mingo NWR. Alligator gar were thought to be extirpated from Missouri until a single capture in 2001. Once a sustainable population is reached on the refuge, these gar will be used to reestablish other populations in Missouri waters.

Using various tags and radio telemetry, biologists will collect valuable data on growth and habitat preferences. The project is a cooperative effort among the Tishomingo NFH, Missouri Department of Wildlife Conservation, Mingo NWR, and Private John Allen NFH.

Rebecca Fillmore, Tishomingo NFH

Emerald Canyon golf course gets a facelift

For over five years, the ponds on the Emerald Canyon Golf Course in Parker, Arizona have been used to raise endangered razorback sucker and bonytail large enough to avoid predation prior to their release in the Colorado River. Recently, the Partners for Fish and Wildlife Program funded a pond renovation; cattails were removed, slopes re-contoured, and a cobble-covered liner installed to prevent cattail reinvasion. In November and December 2007, 2,000 razorback suckers and 250 bonytail were stocked into this pond.

This project was a collaborative effort among the Partners for Fish and Wildlife Program, Arizona Fish and Wildlife Conservation Office, Uvalde NFH, Colorado River Indian Tribes Reservation, and the Arizona Game and Fish Department.

Marty Underwood, Arizona NFWCO



Endangered razorback sucker and bonytail stocked into a golf course pond near Parker, Arizona

Alligator snapping turtle research yields results at Tishomingo

A student from Murray State College assisted Tishomingo NWR staff with an 11-week study that compared growth and weight gain in newly hatched alligator snapping turtles fed live fish versus an artificial diet. The results indicated no significant differences in growth between the two treatments, and all the turtles in the study had a successful weight gain of 14.5 g by the end of the study.

Also, a new recirculation system was assembled inside an incubator used for alligator snapping turtle hatchlings. This new system allows biologists to manipulate temperature and photoperiods to increase growth rates over the winter, yielding larger turtles in the spring.

Rebecca Fillmore, Tishomingo NFH



Alligator snapping turtle recirculation system at Tishomingo NFH

Apache trout recovery efforts charge ahead



An Apache trout from the Fort Apache Indian Reservation

During October 2007, Arizona NFWCO staff and its partners completed several critical recovery actions for the threatened Apache trout. Two new wild populations were established using stream-to-stream translocations; three existing populations were augmented using wild fish; tissue samples were taken from five locations to analyze for genetic purity; and populations were assessed at several streams on the Fort Apache Indian Reservation and Apache-Sitgreaves National Forest.

Jeremy Voeltz, Arizona NFWCO

San Marcos NFHTC SCUBA team dives for Region 2

The San Marcos NFHTC has used SCUBA dive teams since 2005 to assist with many projects benefiting threatened and endangered species in the Edwards Aquifer region of Texas. Projects to date include working to eradicate an invasive plant that encroaches on endangered Texas wild-rice habitat, surveying springs for endangered Comal Springs riffle beetle, and collecting threatened San Marcos salamanders from deep spring habitats for refugia at the NFHTC.

The dive team had to complete an open-water diving certification program, a diving skills and physical fitness evaluation, undergo a diving medical examination, and become certified in CPR, first-aid, and oxygen administration. If any other facilities would like to begin a diving program, please contact Mara Alexander, the Region 2 dive officer, at San Marcos NFHTC.



Mara Alexander, San Marcos NFHTC

Region 2 dive team searching for San Marcos salamanders

Gila River becoming a little friendlier for native fishes



Upper Gila River in New Mexico; site of nonnative removal effort to benefit native fishes

In 2006, New Mexico FWCO began a multi-year project to remove nonnative species in a three-mile section of the upper Gila River in the Gila National Forest. Each year, the removal effort also aids researchers in evaluating the response of rare native fishes such as spinedace, loach minnow, and headwater chub.

The nonnative bullhead, bass, sunfish, and catfish are removed with electrofishing units and seines by biologists from NMFWCO, U.S. Forest Service and New Mexico Department of Game and Fish. In conjunction with this study, Kansas State University is determining changes in community food web structure due to removal of nonnatives using stable isotope analysis.

Stephanie Coleman, New Mexico NFWCO

Inks Dam NFH raises fish, and “raises” employees

In November, Inks Dam NFH stocked 45,000 channel catfish on the Quechan and Hualapai Indian Reservations and 10,000 largemouth bass on the San Carlos Apache Tribe. In addition, the hatchery provided 10,000 largemouth bass to the Arizona Game and Fish Department to restore fisheries in Apache, Canyon, and Saguaro Lakes in central Arizona that suffered recent fish kills due to golden alga blooms. The bass were fed with oxytetracycline-enriched feed, which causes visible fluorescent marks on the skeletons of fish, allowing for tracking of the population over time.

Inks Dam NFH also held its first annual employee retreat at Camp Buckner, and the staff enjoyed many team building exercises, including completion of a Ropes Course.

Marc Jackson, Inks Dam NFH



An employee from Inks Dam NFH participates in a team building exercise during the 1st annual employee retreat

Willow Beach NFH aids in pupfish research and recovery



Devil's Hole pupfish research aquaria at Willow Beach NFH

Willow Beach NFH staff continued captive propagation to help save the Devils Hole pupfish from extinction. The Devils Hole pupfish is restricted in the wild to a 70 x 10-foot pool in Ash Meadows NWR – the smallest range of any known vertebrate species.

To prevent extinction of the species, biologists from Willow Beach NFH are experimenting with propagation techniques that will help with future management of captive pupfish populations. Hatching success has been improved using incubated flow-through jars with eggs hatching directly on yarn mops and sand and gravel. The hatchery is also experimenting on disease treatment techniques and egg and larvae transport protocols.

Mark Olson, Willow Beach NFH

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