FY 2015

TXFWCO Activity Report: May

Salado Salamander Monitoring

Texas Fish and Wildlife Conservation Office

U.S. Fish & Wildlife Service

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Monthly Report

Fish and Wildlife Conservation Office Activities

Emphasis Areas 2
Rio Grande Emphasis Area Project 2
East Texas and Oklahoma Emphasis Area 3
Salado Salamander Monitoring 4
Uvalde National Fish Hatchery 5
June Schedule of Activities: 5

Emphasis Areas

The U.S. Fish and Wildlife Service is charged with a large responsibility to steer conservation of myriad species in a multitude of ecosystems - the conservation issues that persist or will arise in the southwest region are varied and diverse and require a focused attention to address. The Southwest Region identified five geographies or "Emphasis Areas" whereby we can best achieve meaningful and measurable outcomes for fish and wildlife conservation: The Mogollon Rim, the Rio Grande, the Great Plains, the Gulf Coast, and the East Texas/Oklahoma areas.

The Southwest Region is currently steering resources to these five geographies that encompass much, but not the entire Region. Each area has been assigned leadership teams to develop conservation priorities and projects that support strategic conservation in each of the areas.

Rio Grande Emphasis Area Project

Rio Grande Big Bend Recovery and Restoration Project: The Rio Grande silvery minnow (*Hybognathus amarus*; RGSM) is one of the most endangered fishes in North America. Creating a self-sustaining population of RGSM in the Big Bend reach of the Rio Grande (Big Bend reach) could ultimately lead to the down-listing of the species. Reduced flows and sediment surplus together with invasive plant species have led to increased channelization of the main channel and reduced aquatic and riparian habitat diversity. Efforts to reestablish this endangered fish in the Big Bend reach can be enhanced by aquatic and riparian habitat restoration through reforestation of riparian zones. This project will also contribute to conservation of other trust resources, such as migratory birds and mussels.

We propose to meet the stocking recommendations for the Big Bend reach of an additional 182,000 RGSM by beginning captive propagation at Uvalde National Fish Hatchery (UNFH). The Rio Grande team will monitor the success of the restocking effort, as well as other ecological and habitat parameters throughout the 300-mile Big Bend reach. To enhance aquatic and riparian habitat and contribute to the resiliency of the river, we propose to promote healthy water and watersheds through reforestation within tributaries of the Big Bend reach. This will increase riparian habitat for species such as the yellow-billed cuckoo and the gray hawk, and will also increase resilience to climate change by promoting channel aggradation and increasing the depth and extent of the riparian aquifer. Riparian reforestation reduces sediment transport and can help decrease the sediment surplus that together with invasive plant species leads to increased channelization of the main channel of the Rio Grande. Avian monitoring has been shown to be a cost-effective and highly sensitive method to track riparian habitat restoration and health of the ecosystem, and will be employed in this project. The collection of habitat use data during ecohydrology monitoring, as well as habitat restoration, will benefit RGSM and other imperiled fish species like the Chihuahua shiner (*Notropis Chihuahua*), and the Rio Grande shiner (*Notropis jemezanus*), and may help to prevent listing of these species in the future.

East Texas and Oklahoma Emphasis Area

Cypress River Basin and Caddo Lake Watershed Project: The only natural lake in Texas, Caddo Lake encompasses many habitats including bottomland hardwood forests and Bald Cypress swamp. The wetlands of Caddo Lake, part of Bird Conservation Region 25 (BCR 25 West Gulf Coastal Plain/Ouachitas), are very important to migratory bird species and have been globally recognized as an important bird area. The area supports one of the highest breeding populations of wood ducks, prothonotary warblers and other birds in the United States. In 1993, the Caddo Lake Ramsar Wetlands became the 13th site in the United States designated as "wetlands of international significance" under the Ramsar Convention. The Caddo Lake Ramsar Site, approximately 20,000 acres on the Texas-Louisiana border, includes both public and private lands, in and along Caddo Lake and some of its tributaries.

The project addresses restoration and protection of fish and wildlife habitat in the Cypress River Basin and Caddo Lake, related wetlands and watersheds through permanent changes in the release patterns from Lake 'O the Pine that promote environmentally healthy flows and watersheds, and control of invasive species to promote wetland and forest health on a landscape scale.

Salado Salamander Monitoring

On 14 May 2015, Pete Diaz (TXFWCO) and Randy Gibson (SMARC), traveled to Salado for deployment of passive water samplers and to collect salamander and phreatic invertebrate samples. Passive samplers were deployed at two sites within the Salado area.

Aquatic invertebrates were collected using drift nets and a juvenile salamander was captured and photographed for individual identification. This is the third salamander captured from Big Boiling during the last two months.

Figure 1Salamander captured at Big Boiling Spring.

An opportunistic sampling trip was conducted on 28 May 2015, after a large storm event. The springs had opened up a large opening within Little Boiling and water was flowing steadily from that opening. No salamanders were collected during this event, however drift nets were set and aquatic invertebrates were collected.

Uvalde National Fish Hatchery

Uvalde National Fish Hatchery (UNFH) has been selected to produce up to 200,000 Rio Grande silvery minnow to meet stocking requests for the Lower Rio Grande effort to recover the RGSM in Texas. A Pathways student, Rueben Mendoza, has been hired to care for the minnows in four ponds at UNFH. Rueben will conduct all activities on the four ponds and report back to Mike Montagne on water quality, feeding and all other aspects that involve the RGSM at Uvalde. Thanks to Manuel Ulibarri and his staff at the Southwestern Aquatic Resource and Recovery Center (SWARRC) for producing and transferring the larvae to UNFH.

June Schedule of Activities:

2-7 June 2015: Boquillas Canyon Eco-hydrology trip on the Rio Grande
3 June 2015: Ottine Dam Site Visit
5 June 2015: Rio Grande Silvery Minnow stocked into Uvalde NFH
16-19 June 2015: Pecos pupfish, Phantom spring, and Cibilo Creek monitoring
22 June 2015: Emphasis Area priorities, goals, and objectives due
June 2015: Continue Salado salamander monitoring