



Uvalde National Fish Hatchery

Monthly Activity Report

October 2014



Staff

Project Leader • Vacant

Fish Biologist /Acting Project Leader • Rick Echols

Engineering Equipment Operator • Cirilo Alonzo

Maintenance Worker • Rene Guerra

Administrative Technician • Vacant

Pathways Student • Rueben Mendoza

Volunteer • Ian Westmeyer

Volunteer • Catherine Baxter

Currently, we could support 2,400 additional Devil's River minnow.

Roberto Esquilin, senior hydrologist with the Edwards Aquifer authority visited the hatchery to take measurements and pictures of the Burkett well. He will be formulating a monitoring plan that will encompass water level and water quality. The results of this monitoring will create a sharper picture of how water usage affects the aquifer at least locally.

Workforce Management

Rueben Mendoza continued his work at Uvalde NFH as a member of the Pathways Program. In addition to his regular activities, he has been attempting to trap wild hogs that have been spotted on the hatchery. Thus far he has only captured raccoons.

Ian Westmeyer's last day of service to the hatchery was October 17th. In two stints with us, Ian logged 771.75 hours. He continues being home schooled and has recently landed a paying job. We will miss his dedication and hard work.

Grant's last day was October 3rd. His lasting legacy will be updating and improving the infrastructure of the hatchery. We wish him well in his new job at the Pensacola, Florida Environmental Services Office. Rick Echols will be serving as acting project leader until a replacement is hired.

Catherine Baxter donated 30 hours of time to the hatchery this month. She has spent much of her time cleaning and tagging rice and moving fountain darters in preparation for tank cleaning.

Partnerships and Accountability

As identified in approved Recovery Plans, refugia efforts continue for the Texas Wild-rice, Fountain Darter, Comanche Springs pupfish, Devil's River minnow, and San Marcos salamander. All species are performing well. The station continues to maintain communications with the San Marcos Aquatic Resource Center (SMARC) and Edwards Aquifer Recovery Implementation Program for existing and upcoming refugia activities of threatened and endangered species native to the Edwards Aquifer system. In addition, an agreement is in place for the Uvalde National Fish Hatchery to provide 700-F1 juvenile fountain darters to the USGS's Leetown Science Center in West Virginia.

We continue to coordinate with the Texas Fish and Wildlife Conservation Office in preparation to receive emergency transfers of additional Devil's River Minnow should the need arise.

Aquatic Species Activities

Young of the year channel catfish now average approximately 8 to 9 inches in length. Fish remain healthy and growth rates continue to be good.

The wildlife pond went completely dry in early October. No evidence of escaped Devil's River minnow was ever found. This allowed us to divert water back to this pond. As a result, there should be ample water in the wildlife pond this winter to make our birder friends happy.

The latest Devil's River spawning efforts have been more successful than our first attempt. We currently have nearly 200 fry. They seem to be growing well on an alga formulation developed at the San Marcos Aquatic Resources Center. Our 24 fingerlings have been released into their own tank and are growing at an amazing rate.

The station continues to hold 812 juvenile fountain darters destined for life history studies at the USGS Leetown Science Center in West Virginia. These fish should be shipped by the end of the year.

Newly arrived San Marcos salamanders continue to do well. Males and females have been paired for spawning purposes. We await the arrival of our first eggs.

Our last rice inventory revealed that we were short on rice plants in two geographic groups. In early October Rick Echols, Rueben Mendoza, and Ian Westmeyer were joined by Jeff Hutchison from the San Marcos Aquatic Resource Center for a day of Texas wild rice collection on the San Marcos River. Twenty plants were collected from each group to augment our numbers and retain genetic diversity in the hatchery stock.



Ian Westmeyer, Jeff Hutchison, and Rueben Mendoza after a hard day of collecting Texas wild rice plants on the San Marcos River

Pond sampling of Comanche Springs pupfish to estimate numbers was conducted in late October over three days. Twenty trap nights revealed that the hatchery population estimate is 170,382 fish spread over three ponds. This number is down from a June 2014 high of 294,952. The current estimate is likely a more realistic long term number that can be supported by pond primary production. Spring estimates were made soon after the spring flush of spawning and likely is cause for high numbers. Fish from one pond will be transferred to a new pond on a warm day in January when vegetation is at a minimum. Moving fish produces a bump in numbers as invertebrate predators have not yet become established in the new pond.

Michelle Crawford's Texas wild rice light intensity, PhD project, continued this month. Depth, water flow, and light intensity are now set. She will be germinating more seeds and starting light intensity trials in the near future.

Additional Facility Activities

Feral hog trapping activities continued this month. To date, efforts have not borne any fruit, or barbeque.

Facility Maintenance

Cirilo Alonzo and Rene Guerra have been busy increasing retention capacity of a fourth overflow pond that will receive effluent water from our tankhouse. With the completion of this last pond, effluent water from our tankhouse should never leave the property because of our large retention capacity and high evaporation and leaching rates. This is phase 2 and will complete a project that was begun this past spring.



Rene and Cirilo work on our 4th retention pond.

The soffit / wind damage repair work got underway on October 27. Structural ceiling support was added and metal soffit installed replacing what had been a drop ceiling. Progress was fast and the work was of high quality. In fact the work was completed before the end of the month.



Soffit repair in progress

For the past 6 months or so, Cirilo has been mapping various underground water lines and utilities at the hatchery. He and Rene have

been meticulously searching through old photographs and digging to expose lines. This information will prove to be tremendously valuable to the next generation of employees at the hatchery.

Facility Visitors

Two couples were given tours of the hatchery in October. Two birders voiced concerns about the lack of water in the wildlife pond. They were given an explanation and assured that water would soon be returned. In total, the hatchery hosted approximately 16 visitors this month.

Weather

Temperatures for October ranged from a low of 48°F to a high of 93°F. Overall, high temperatures were well above normal with the observed average high for the month at 87°F compared to the 110 year average of 83°F. Low temperatures were slightly above normal with the average for the month at 59°F and long term averages for the month at 58°F. Measurable rainfall occurred on 3 days in October with precipitation totaling 0.26 inches. According to The Weather Channel, October monthly precipitation averages 2.38 inches. Year to date rainfall is currently at 18.54 inches compared to the 110 year average of 21.30 inches. The Edward's Aquifer level began falling again this month and is currently at 825.7', compared to 826.4' at the end of last month and 837.2' this time last year.

Uvalde National Fish Hatchery

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Uvalde National Fish Hatchery October 2014			
Species	Year Class	Geographic Origin	Approximate Number
Channel Catfish Broodstock	2013	Domestic Strain	136
Channel Catfish	2014	Domestic Strain	3,000
Comanche Springs Pupfish	Mixed	Phantom Springs	170,382
Devil's River Minnow	2013	San Felipe Springs	269
Devil's River Minnow	2014	San Felipe Springs	178
Fountain Darter	2012	Upper Comal River	39
Fountain Darter	2013	Upper Comal River	28
Fountain Darter	2012	Lower Comal River	65
Fountain Darter	2013	Lower Comal River	31
Fountain darter	2013/2014	Comal River	797
San Marcos Salamander (M)	2013	San Marcos River	11
San Marcos Salamander (F)	2013	San Marcos River	11
Texas Wild Rice	N/A	San Marcos R. (A)	42
Texas Wild Rice	N/A	San Marcos R. (B)	31
Texas Wild Rice	N/A	San Marcos R. (C)	17
Texas Wild Rice	N/A	San Marcos R. (D)	13
Texas Wild Rice	N/A	San Marcos R. (F)	19
Texas Wild Rice	N/A	San Marcos R. (G)	17
Texas Wild Rice	N/A	San Marcos R. (J)	3
Texas Wild Rice	N/A	San Marcos R. (K)	11
Texas Wild Rice	N/A	SMR (Unknown)	24

Species and number at Uvalde NFH at the end of the month.