Uvalde National Fish Hatchery

Monthly Activity Report

August 2014

Staff

Project Leader ● Grant Webber

Engineering Equipment Operator ● Cirilo Alonzo

Maintenance Worker ● Rene Guerra

Fish Biologist ● Rick Echols

Administrative Technician ● Sandra Castañeda

Pathways Student ● Rueben Mendoza

Volunteer ● Ian Westmeyer

Volunteer ● Gwendolyn Powell

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 once again 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 facility in West Virginia.

Uvalde continues to work with the San Marcos Aquatic Resource Center to receive additional F1 Devil's River minnows. We anticipate receiving these fish before the end of September. 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.

The Burket Well monitoring agreement between the Edwards Aquifer Authority and the Fish and Wildlife Service (Uvalde NFH) has been finalized. Efforts are ongoing to coordinate the specifics of the monitoring activities.

Workforce Management

Rueben Mendoza continued his work at Uvalde NFH as a member of the Pathways Program. He received official word this month that he will be able to take a semester off from school so that he can continue working here this fall. Rueben requested to stay longer at Uvalde in an effort to save some additional money before returning to school in January. This will also help Uvalde cover a staffing shortfall without Reuben compromising his status within the Pathways Program.

Reuben Mendoza making fine adjustments to one of the San Marcos Salamander tank systems

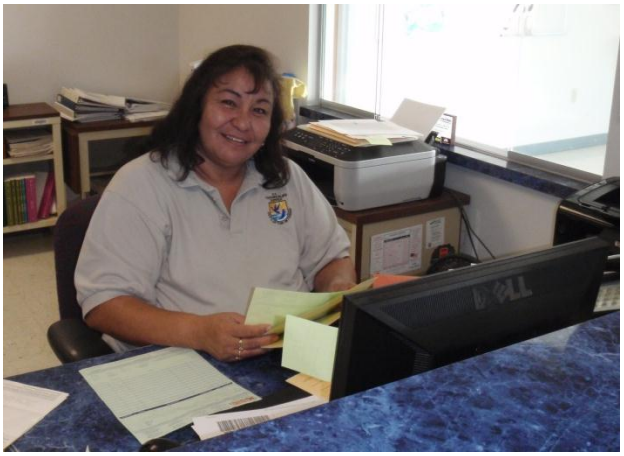
During August, Reuben removed roofing from our original rice structure to allow more light to be available for the light intensity study that

Michele Crawford is conducting through Texas State University. Additionally, he completed construction of a salamander tank system and adjusted grow lights over the Devil's River minnow tank systems.

After more than 25 years of federal employment, Sandra Castaneda has decided to retire. Sandra's early career was spent working as a civil service employee with the Department of Defense. Prior to her work at Uvalde NFH Sandra spent two years at a Veteran Affairs Office, seven years at the Laughlin AFB, and four years at the Kelly Air Force Base. Sandra has spent the past 14 years working at the Uvalde NFH. Her time at Uvalde NFH saw three different project leaders (David Oviedo, Jae Ahn, and Grant Webber).

She observed many changes in her tenure. Her office moved from an old hot / cold building that dated back to the 1930s to the new plush office building that we now occupy. Her most memorable event was the flood of 2002. She has indicated that to perform best in her position she had to be flexible because administrative programs are in a constant state of change.

Sandra's last official day was August 27. We wish Sandra the best in her future endeavors.



Sandra hard at work.

Daniel Huston from SMARC provided assistance for three days of help early this month. He assisted with screen construction and plumbed one of our future Devil's River minnow systems while he was here. We appreciated his help and thank the SMARC for providing the staff assistance.

Ian Westmeyer continued to volunteer with us during the month of July. For the month, he logged 52.5 hours. His responsibilities for the month included cleaning algae from rice plants lowering light fixtures, and designing recirculating systems for rice tanks in addition to his daily care of the fountain darter and Devil's River minnow, and San Marcos Salamander. Ian will be returning to his home school program next month, so we expect to see less of him in the future. We appreciate all that he has done for us over the past 16 months.

Other volunteers this month included Hannah Echols (16 hours) and Gwendolyn Powell. They accomplished tasks ranging from aquarium cleaning to the construction of raceway micro-screens to prevent escapement of eggs and fry.

Aquatic Species Activities

Young of the year channel catfish now average approximately six inches in length. Growth rates this summer have been exceptional.

Our Devil's River minnow proved an old Jurassic Park quote, "Life finds a way", to be true. A recent check of our discharge sand filter showed that we had four new Devil's River minnows. They evidently spawned without the aid of gravel substrate. Eggs, or more likely fry, passed through a mesh screen in the tank and was trapped in the sand filter catch basin that contained a micro-mesh screen, which prevented the fry from escaping the Devils River minnow system. Even though the fry did not escape the system, the interior tank screens were replaced with a micro-mesh screen to

prevent any future fry/egg from escaping the raceway. Chlorine tablets have also been added to the catch basins to immediately kill any fry that may find a way to escape the raceway. This provides additional securities against escapement. All Devils River minnow set-ups have been modified with these changes.

Efforts have begun to start control-spawning testing of Devils River minnow. Two gravel baskets were placed into the raceway for suitable spawning habitat. After one week, the baskets were removed from the raceway and placed into a fine mesh screen basket located in a separate recirculating tank with recirculating well water. No chillers were used to alter the water temperatures. After three days approximately 50-F2 generation Devils River fry were observed swimming close to the gravel substrate in the net basket.

As a routine activity to assist in hatchery's fish escapement prevention program, water from the tankhouse was diverted this month from the east wildlife pond to west wildlife pond. This diversion allows for all the water in the previously used retention pond to completely dry out. Since there is no drainage from these retention ponds, any potential escapement from raceways in the tankhouse will die from either drying out or from heat/cold ambient temperatures. The hatchery rotates tankhouse discharges between three different wildlife ponds, all of which have no discharge.

The station continues to hold 850 juvenile fountain darters destined for life history studies at the USGS office in West Virginia. These fish should be shipped by the end of October.

On August 14, Valentin Cantu arrived at our hatchery with 25 San Marcos salamanders. They were placed in a tank system that he had previously designed and seem to be doing well. Val has been extremely helpful over the past few months in helping us fine tune the salamander systems to maintain stable water quality for rearing these fragile creatures, most notably super saturation of dissolved gasses. With our issues resolved, we expect to be producing offspring very soon.

Newly arrived San Marcos Salamander adjusting to its new home

Michelle Crawford's Texas wild rice light intensity, PhD project, continued this month. Shade cloth was installed over outdoor tanks to reduce intensity during the germination process. It is now thought that early life stages might benefit from shading that mimics the natural environment where mature plants provide shade to seedlings. She is now on target to start trials in early October.

Reuben Mendoza and Ian Westmeyer installing shade cloth over outdoor Texas wild rice tanks.

Additional Facility Activities

Rene Guerra and Cirilo Alonzo assisted the San Juan RIP and Southwestern Native Aquatic Resource and Recovery Center (SNARRC) by

hauling two trailer loads of circular and rectangular fiberglass tanks to SNARRC. Despite some truck troubles, the tanks reached their destination. Only two large tanks belonging to the San Juan River Basin Recovery Implementation Program remain at Uvalde.

Feral hogs have been observed on the hatchery grounds. Updates will be forthcoming.

Facility Maintenance

Faulty outlets and breakers, supplying power to the station's south Texas wild-rice tanks, have now been replaced. An additional tank has also been added bringing our small tank total to nine.

Reuben replaced a ½ HP Delta Star chiller with a ¾ HP model for the San Marcos salamanders. Ambient temperatures over 100°F pushed the cooling limits of the original chiller. The new chiller provides 50% more cooling capacity than the previous unit.

Grant worked with the Contracting Office to amend the soffit project contract to include the tornado damaged tankhouse wall. Work is anticipated to begin in September.

With the hatchery's transition to intensive culture and recirculation systems for imperiled, Texas endemic, federally listed species has created a shortfall in electricity outlets/circuits in the station's tankhouse. The species within the intensive culture systems require chiller units, lighting, and recirculation pumps, which require isolated electrical circuits. The existing electrical design of the tankhouse building will not support the higher amperage needs so the station secured funding to improve the electrical system within the tankhouse. Grant has been working with Tom Ketchum, Contracting and General Services, and Mark Orton, Engineering in the Regional Office, to design and contract the necessary work to meet the station's new needs. We are currently awaiting bids from contractors for the work. We anticipate completion of the project sometime this fall.

Safety

All safety issues reported during the station's annual safety inspection have been corrected. Paperwork has been submitted to the Regional Safety Officer.

Recycling Efforts

Staff recycled 310 pounds of scrap metal, a computer monitor, 25 pounds of cardboard, 18 pounds of paper, 10 pounds of glass, and 12 pounds of plastic this month.

Facility Visitors

Michele Crawford brought her biology students from Southwest Texas Junior College on two separate occasions. Students helped Michele with maintenance of her rice plants while they learned about her project in detail.

On a separate occasion, Michele brought her statistician, Dr. Jesus Cuellar, to the hatchery to gain a better understanding of her project so that he can better provide her with statistical assistance.

In total, the hatchery hosted approximately 50 visitors for the month of August.

Weather

Temperatures for July ranged from a low of 69°F to a high of 103°F. Overall, high temperatures were above normal with the reported observed average high for the month at 98.2°F compared to the 110 year average of 96°F. Low temperatures were above normal as well with the long term average for the month at 71°F versus the observed 73.8°F. Measurable rainfall occurred on 6 days in August with precipitation totaling 2.26 inches. According to

The Weather Channel reports the August monthly precipitation average for Uvalde to be 2.62 inches. Year to date rainfall is currently at 14.57 inches compared to the 110 year average of 14.20 inches. Crop irrigation typically slows during the month of July. The Edward's Aquifer stabilized a bit by the end of August and is currently at 826.0', compared to 836.1' this time last year.

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http://www.fws.gov/southwest/fisheries/uvalde/index.html