

CONCHO RIVER BASIN AQUATIC EDUCATION & RESEARCH CENTER

INTERIM REPORT

San Angelo 319(h)

Contract No. 582-8-77056

Prepared by the Upper Colorado River Authority

September 15, 2009

The Concho River Basin Aquatic Education & Research Center, locally referred to as "The Center", is fully operational and meeting the needs of the community. Almost all of the goals and objectives for the center to date have been met, with the finishing touches being made on the newer displays and signage for the demonstration pond area. The UCRA is proud of the partnerships formed with its Stakeholder Group, the San Angelo Museum of Fine Arts (SAMFA), San Angelo Independent School District (SAISD), City of San Angelo (COSA) and its junior stakeholder group, "The Aqua Squad". The constant involvement and commitment from the groups and individuals represented has proved useful in reiterating the necessity for public involvement into any successful program.

The last fiscal year has been full of activity and to follow are the events that have occurred during the period of September 1, 2008-August 31, 2009.

ADMINISTRATION:

On November 20, 2008 (3) UCRA staff met with TCEQ 319 staff in Austin in regards to project milestones and status. UCRA presented a power point on current center features and activities.

UCRA staff, Chuck Brown met with TCEQ Project Manager, Lauren Bilbe in Austin on February 4, 2009 to review project status and discuss any pending issues.

MEETING INFRASTRUCTURE NEEDS:

UCRA worked with the San Angelo Museum of Fine Arts and the San Angelo ISD Texas Research Institute for Young Scholars (Aqua Squad) throughout the year. The visitor interpretive area of the Center now has interactive monitors and other displays that focus on watershed surface and ground water quality and quantity, storm water treatment and interpretation of the aquatic systems and facilities on display with the pond system. During first quarter, an agreement was finalized with SAMFA to provide Center staffing and other necessary services.

On September 3, 2008 the storm water ponds were stocked with additional aquatic plants from the University of North Texas Aquatic Research Facility (Lewisville, Texas).

UCRA Staff, Scott McWilliams prepared and submitted an official request for receipt of the Wal-Mart "Water for Texas Initiative" funds during second quarter. The total funds, in the amount of \$60,000, will be split between the Center Project and another UCRA project. Funds for the center will be used as match dollars to assist with the purchase of displays and services at the center. UCRA Staff, Scott McWilliams submitted an interim report to the Wal-Mart "Water for Texas Initiative" program on April 24.

Planning meetings were held March 6th with UCRA, SAMFA, IMLS and San Angelo Independent School District to continue discussions regarding the interface of Center activities into the TRIYS programming within the school district. At time, center staff was working with (5) TRIYS groups from different elementary & secondary school.

UCRA Staff met with Howard Taylor (SAMFA) and Dr. Christy Youker, Center Director on March 26 to discuss signage for the pond area, the solid terrain model and other displays for the center. Howard Taylor (SAMFA) and Dr. Christy Youker, Center Director met with ASU graphic designer on April 7 to finalize display ideas for the center to be presented to Aqua Squad and UCRA staff. UCRA staff continued to work with Center staff and Aqua Squad on display ideas for the center. Displays are being finalized and it is anticipated that they will be up by EcoFair in October. Student groups also completed the Concho River Fish Mosaics, which will be on display at the center.

During third and fourth quarter, S. McWilliams met with Bill Hodge, a GIS specialist to develop a working arrangement by which he will provide part time services to develop a GIS Geodatabase for the entire Concho Watershed and provide training to UCRA staff on its use. McWilliams also teleconferenced with LCRA representatives for get access to their GIS data in UCRA's areas of interest.

During fourth quarter, all plans for Center displays were finalized and it is anticipated that they will be up in time for Eco Fair in October. UCRA staff worked on specs and pricing for construction of a large watershed display for the center also scheduled to be completed in time for the Eco Fair. Staff also performed facility maintenance on the center aquariums and ponds. An intern was hired to help clean the ponds and trim the plants.

CENTER OPERATIONS/ACVIVITIES:

Organizational Networking:

On September 3, 2008, staff met with COSA officials, TXDOT staff, NRCS staff and representatives of a large local retirement development regarding possible storm water treatment facilities and integration of such facilities into COSA urban storm water plans. A subsequent meeting was held on October 13, 2008 for integration of such facilities into COSA urban storm water plans. The group met again on March 3 and April 22 to discuss WPP BMP as related to Pulliam draw stormwater problems. An onsite inspection of the area was conducted in May with Baptist Memorial staff, COSA representatives and Engineers present. The group met June 17 to continue discussions regarding Pulliam draw stormwater problems, which included engineering proposals solicited and received regarding proposed Stormwater treatment facility for Baptist Memorial. Teagarden has provided on-going assistance to the group relating to the treatment system that would serve the Baptist Memorial Retirement Community and the area around it.

Staff continues to address WPP BMPs related to agricultural NPS (Seg 1421 CAFO permit applications) which included preparation of written comments for submittal to TCEQ and attendance at a Public Meeting on October 30. During first quarter fy09, UCRA staff worked with COSA stormwater personnel and received approval of the revised MOU from the City Council which appoints UCRA as project manager of the North Concho River Improvement

Project. UCRA staff also prepared a grant application to implement a nutrient management and water conservation education program within stream segment 1421 (which is part of the WPP BMPs).

Staff prepared written comments for submittal to TCEQ and attended a Public Meeting held October 30. Staff also worked with COSA stormwater personnel and received approval of the revised MOU from the City Council which appoints UCRA as project manager of the North Concho River Improvement Project. UCRA staff prepared a grant application to implement a nutrient management and water conservation education program within stream segment 1421 (which is part of the WPP BMPs).

On December 9, 2008 UCRA staff met with COSA officials and project consultants for a planning and strategy session regarding the North Concho River Improvement project. UCRA is project lead. This project is a high priority task as identified in the Concho River WPP. UCRA staff and consultant met with the USACOE in Ft. Worth regarding permitting issues on January 30, 2009 to resolve any potential permitting problems. UCRA staff continues to coordinate efforts for additional funding for this project and others. The downtown North Concho dredging project proposal has passed the first application review and has the potential to receive funding. On January 29, 2009 UCRA met with USDA NRCS staff regarding potential funding of water conservation efforts through a new cost share program. The new program would target landowners along the Concho River below San Angelo.

Minda Borun, with the Franklin Institute, and coordinator of the existing Institute of Museum & Library Services (IMLS) Grant, was in San Angelo from March 4-6 to lead focus groups with parents, student and stakeholders in discussions for potential funding of a Leadership or NSF grant to continue program development. UCRA Staff, Ellen Groth met with a focus group on March 5th at the Center that included area SAISD principals, Superintendent Bonds, SAISD Administrators, Howard Taylor, SAMFA, and Center Director Youker. Grants would be submitted in the fall for funding in 2010. UCRA would be able to partner on this grant.

On July 16, Christy Youker (Center Director) met with SAMFA Rep. and Dr. Bonds (SAISD) to discuss next steps for the IMLS Leadership Grant (match funds) to be submitted Feb 1 based on the planning grant just completed. There are three components to this: 1. TRIYS support through mentor connections and helping to host summer sessions; 2. Career Ladder Program where high school students work in summer with UCRA, SAMFA and others; 3. Elementary program through Fort Concho Elementary in which classes are actually held at SAMFA and UCRA Water Ed Center - focus is on art and science - teachers work closely with SAMFA and UCRA educators. Dr. Bonds is enthusiastic about this - especially students doing internships in the summer with UCRA. We have her support in having students from Fort Concho hold classes here (SAMFA and Center as available) on a regular basis.

UCRA Staff, Center Director and SAMFA Director met on July 20 to discuss upcoming programs and plan future events. UCRA Staff continued work toward implementation of additional BMPs pertaining to the Downtown River Project and the San Angelo Storm Water Program, meeting with COSA on July 9, 16 and 23 regarding a formal proposal for the city storm water program.

UCRA staff Scott McWilliams attended a Texas Watershed Coordinator meeting in Temple on July 7-8, 2009 at the TSSWCB offices. Scott McWilliams also attended and completed the Texas Watershed Planning short course in Bandera on August 17-25, 2009. The demonstration ponds will be featured in a September 2nd Green Scene story on the local NBC affiliate KSAN.

UCRA staff attended City Council meetings and participated in planning with city staff to assist in its stormwater program. UCRA staff hosted a meeting on August 7 with N. Van Buren Pond owners and COSA Engineers regarding stormwater issues.

Basin Stakeholder Participation:

A stakeholder meeting was held on October 23, 2008 at the center to address several issues including the public meeting scheduled for October 30, 2008 to receive input on the planned Hogg Dairy. Also discussed was the recent fish kill on the downtown Concho River, grant applications in progress and the Center grand opening on October 25 to be held in conjunction with the SAMFA Eco-Fair.

UCRA staff participated in the annual Upper Basin Steering Committee Meeting, held on May 21 at the Education Center, in partnership with the CRBWPP Stakeholder group. The meeting included presentations by UCRA Staff Scott McWilliams, Chuck Brown, Fred Teagarden, Center Staff, Dr. Christy Youker, CRMWD Staff and LCRA Staff. The meeting was moderated by CRBWPP Stakeholder Chairman, Dan McClung. Mr. Robert Hogg, Dairy owner was in attendance and has been invited to be an active member of the Stakeholder Committees. Approximately 26 were in attendance.

The next stakeholder meeting has been scheduled for October 22, 2009 in conjunction with a Public Forum.

Public Outreach:

The first activity of the year involved the UCRA staff hosting a tour of the pond area for approximately 80 elementary students and teachers from Ft. Concho Elementary school on September 4, 2008. Ft. Concho is located adjacent to the pond area. UCRA formally kicked off the year with Eco-Fair held October 25, 2008 which included a Center Open House and utilization of the Aqua Squad as Center ambassadors. Numerous stations were set up within the building and the pond site for interpretation of NPS issues, treatment systems, water conservation and other pertinent topics. The fair was attended by several thousand people and well received by the public. Center days and hours of operation were published as M-W-F from 8-12 in January. While the center is officially open on those days, it is also available outside that time frame for special presentations, meetings and programs as reported below.

- A photography exhibit opening was held on January 9 at the Center, was well attended and received media attention. The exhibit, featuring the river photography of Artist, Jon Smith, was open to the public and ran through mid-February which allowed additional exposure and publicity for the center (see attachment). Mr. Smith has agreed to leave the panels up through May.
- UCRA staff mentored a group of local elementary school students with a pond clean up project in a city neighborhood during the month of January. The cleanup effort was

featured on the front page of the January 28 San Angelo Standard Times (see attachment). A Mertzon Cub Scout Group participated in a program at the Center on February 9th with hands on activities and a trip to the demonstration ponds.

- On February 13th, Center staff worked with a group from Glenn Junior High TRIYS (Texas Research Institute of Young Scholars) about water issues and demonstrated the NPS model. The students are interested in taking the model to 6th grade classrooms and discussing watersheds with other students. Center staff will provide training to students.
- SAMFA held its monthly Family Day at the Museum on February 14 and the Center was open all day with staff and Aqua Squad available to hand out materials and demonstrate the interactive models. The day also offered people an opportunity to view the River photography exhibit.
- On February 18, 2009 a local television station interviewed and filmed the Aqua Squad group for a new series featuring environmental issues on the nightly news. This series of segments will focus on the Center and the Aqua Squad and cover water quality protection topics.
- UCRA staff, C. Brown and Center Director worked with the TRIYS (Texas Research Institute of Young Scholars) on March 3, 9, 11, 2009. Groups, which included fourth, fifth and eighth graders, did simple hands on activities and worked on their research projects.
- On March 26-27 & April 2-3, Lee Middle School held a TAKS Boot Camp at the center.
- The Center was open on April 11 for SAMFA Family Day. The Aqua Squad presented information through various stations and a Santa Rita TRIYS group presented their project on soil erosion throughout the day. Approximately (50) visited the center.
- The center was used to host a Region Science and Math Team event on April 17, 2009.
- On April 23, Aqua Squad and Center staff participated in Ft. Concho Family Match and science night (Ft. Concho is located adjacent to the center) and presented the NPS watershed model along with other water activities. Approximately (400) people participated in the event.
- A program was held at the Center on April 29 for (40) Ft. Concho Elementary Kindergarten students on the basic concepts of water resources.
- Center Director and Aqua Squad Members presented information to 4th graders at Bowie Elementary for Science Enrichment Days, May 12 & 14, 2009, which focused on watersheds, non-point source pollution, water conservation and assessment of water quality based on benthic macroinvertebrate monitoring.
- F. Teagarden, C. Brown and C. Youker participated in pilot programming for secondary school use involving wet and instrumental chemical analysis of water. A lab was set up at the Center on May 7th and a test session involving AP chemistry students from Water Valley ISD was held on May 13 at the Center. The all day workshop was highly successful and staff plans to offer the same program to other rural school groups in the future.
- Adult Program Outreach: Christy Youker and Aqua Squad presented to the Tom Green County Democrats monthly meeting in July. Approximately 65 people were present.
- "Summer for Kids" As part of SAMFA's summer program kids came to the Water Education Center after their art class where visiting presenters spoke to them about animals - this included Dr. Terry Maxwell from ASU Biology, the Tom Green County Humane Society, San Angelo Nature Center and Pet Smart. The kids went fishing one day with Chuck Brown and Scott McWilliams on the river and brought back some fish for

the tanks. Each group also learned the basics of what non-point source pollution, watersheds, and toured the ponds and learned about the storm water filtration system. This involved approximately 65 kids. We plan to expand this next year and have our own Water Camp.

- Presentation July 2 at the Annual Meeting of the Texas Regional Collaborative for Excellence in Science and Mathematics Teaching: Christy presented "Out of the Classroom and Beyond! With Debbie Junk, Math Coordinator for TRC focusing on partnerships in working with schools in science education. The UCRA Water Education was highlighted and used as a model of collaboration. Administrators, teachers, museum educators from across Texas were present.

MEASURES OF SUCCESS:

Numbers served since October 2008 are as follows:

- 250 students participated in tours of ponds, and center programs
- 275 middle schools students participated in 20 minute sessions which included detailed discussion of center mission, pond tour and explanation of NPS filtration systems during TAKS boot camp
- 340 adults and students participated in outreach programs
- 1350 citizens walked through center during Family Day, Art Walks, Eco Fair & General Visits
- 170 Professionals attended general meetings and grant planning meetings
- 135 Presentations were made to Boards and Professional organizations.