

**Nueces River Authority - Clean Rivers Program
Steering Committee and Stakeholder Update #5
September 2014 - November 2014**

December 8th, 2014

Dear Steering Committee Members and Stakeholders,

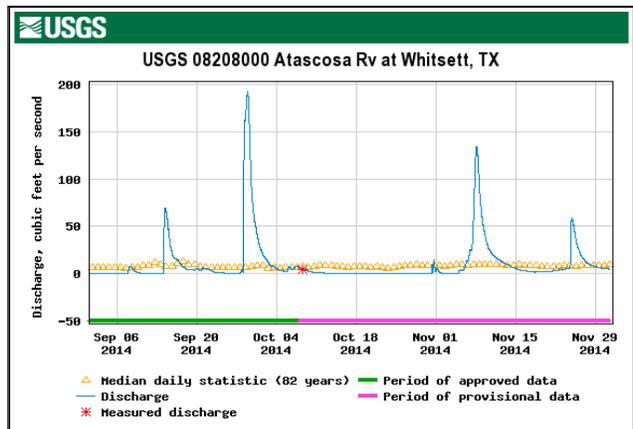
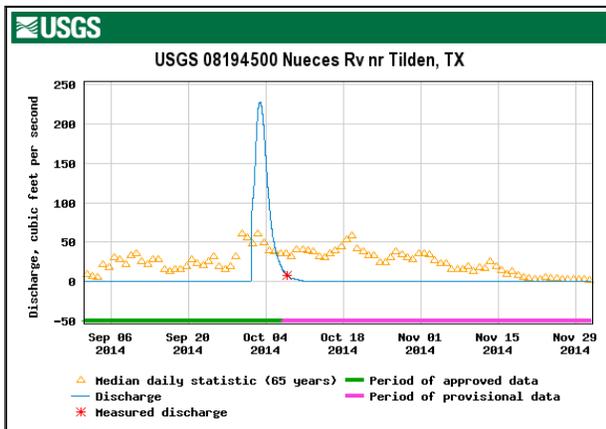
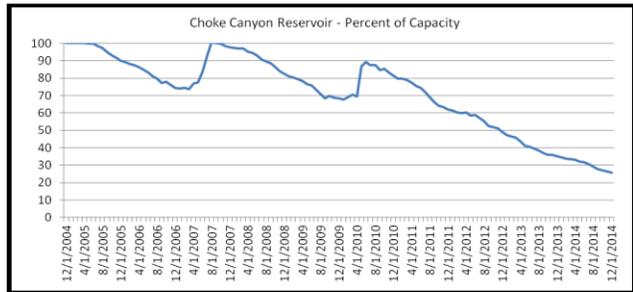
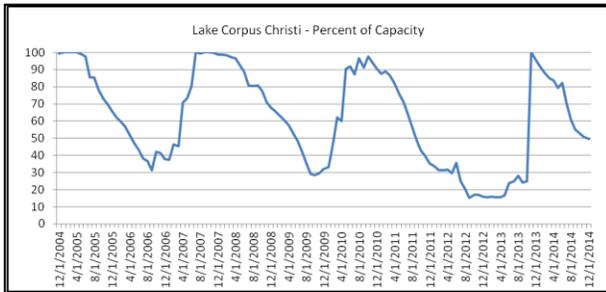
This is the fifth of an ongoing series of quarterly email updates for the Nueces River Authority's FY 2014 – 2015 Clean Rivers Program. Related activities throughout the area are also discussed.

CRP Routine Monitoring

During the 5th Quarter (September through November 2014), NRA conducted routine monitoring at 38 stations. Poesta Creek in Beeville and Leona River near Uvalde were both dry. Quarterly monitoring in Lake Corpus Christi was conducted in October but the water was getting very shallow in the upper portion of the reservoir. NRA added a new quarterly station for FY 2015; Hondo Creek at SH-173 Southeast of Hondo (Station ID#18408).

Drought Status in the Nueces River Basin

Another quarter has come to a close and another drought status update to report. The last time the Reservoir System (Choke Canyon + Lake Corpus Christi) was at 100% of combined capacity was September 24th 2007. The combined capacity on November 30th was 32.1% (down from 35.0%). Although much of the Nueces River Basin and adjoining basins did receive significant precipitation this Fall, most of the rain fell slowly and did not result in a significant amount of runoff.



Floating Plants in the Nueces River

Duckweed (*Lemna minor*) and Mosquito Fern (*Azolla caroliniana*) were abundant at the Nueces River at SH-16 South of Tilden (Station ID #12973) on November 4th (bottom left) at Mikeska Bridge at CR-151 (Station ID #17648) on October 16th (bottom right). According to the Aquaplant website hosted by Texas A&M Agrilife Extension, mosquito fern and duckweed can be quite aggressive and can result in oxygen depletion in some cases. Dissolved oxygen values recorded on that site visit were very low (0.81 mg/L). Duckweed and mosquito fern are not invasive and generally occur in quiet ponds protected from wind action. Although they can result in fish kills due to decreased dissolved oxygen, they provide habitat for micro and macro invertebrates which are then eaten by fish, reptiles and waterfowl. More information on these aquatic plants can be found at: <http://aquaplant.tamu.edu/plant-identification/>



Outreach and Education

NRA's Education and Outreach Program reached out to 3,865 people from September through November using custom made tools including NRA's watershed, rainwater, and groundwater models. For more information about outreach and education, contact slewey@nueces-ra.org.

Arroyo Colorado Watershed Partnership

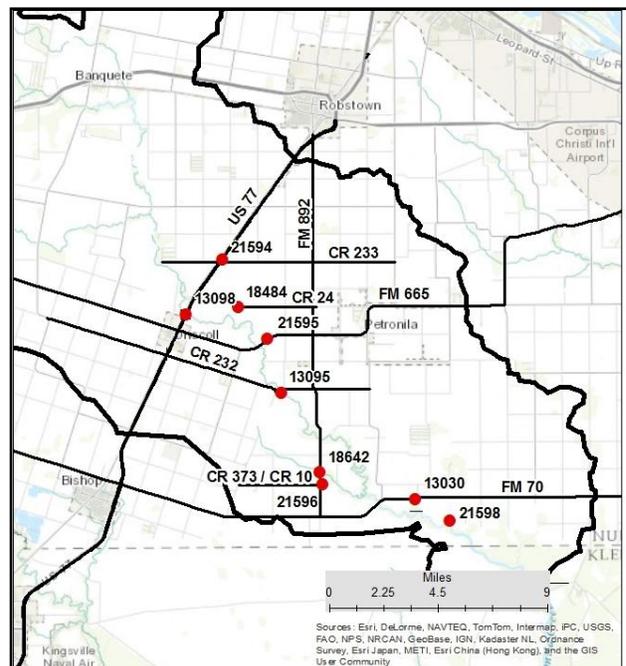
The Arroyo Colorado Watershed Partnership hosted the Steering Committee meeting on October 23th at the Estero Llano Grande World Birding Center located at 3301 S. FM 1015. The group discussed the progress of Phase 2 of the Arroyo Colorado Watershed Protection Plan. Topics of discussion included: 1) A review of existing milestones and to identify remaining implementation activities, 2) Identify proposed/planned activities to be implemented in the next 5-10 years. 3) Identify new BMPs that were not in Phase 1. An update on agricultural activities included news of a 1 year



grant for free soil testing for nutrients in Hildago and Cameron Counties to avoid unnecessary application of fertilizer. The group also visited some wastewater plants in the area. La Feria is in the process of hooking up colonias to the wastewater “grid”. Habitat discussions included projects that turn areas that are prone to flooding into habitat and recreational areas using Restore Act Funding acquired after Hurricane Dolly. The second annual “Save the Arroyo” fiesta will take place on October 9th at the Dargel Boats showroom in Donna, Texas. Be sure to check out the event next year. For more information please email Jaime Flores at jjflores@ag.tamu.edu.

Petronila Creek Tributary Study

Petronila Creek (Segment 2204), is a stream approximately 44 miles long that flows into Alazan Bay, a small bay opening onto Baffin Bay. The creek was listed on the 2000 Texas 303(d) list of impaired water bodies for exceeding the standards for chloride (1,500 mg/l), sulfate (500 mg/l), and total dissolved solids (TDS) (4,000 mg/l). Field investigations identified that excessive chloride, sulfate, and TDS concentrations occur in the downstream section of the creek, southeast of US 77, in an area where man-made nonpoint sources such as produced water, brine pits, and brine injection wells, related to oil and gas production, are most numerous. In support of the Implementation Plan (I-Plan) for Petronila Creek, NRA began a monthly monitoring project that examines the amount of chloride, sulfate, and TDS present in surface waters of Petronila Creek and many of the tributaries that drain into it. Field and lab data collected so far indicates the contribution of salts to be a widespread occurrence downstream of US-77.



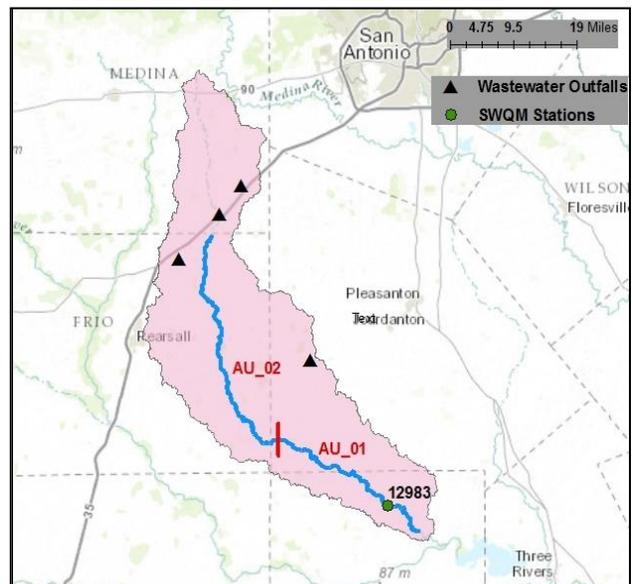
CBBEP Nueces Delta Flow Control Structure



In 2007, a pipeline and pump station were constructed to divert the first 3000 acre-feet of pass through water into the Upper Rincon Bayou in the Nueces Delta. In October 2014, a flow control structure (left) was completed in the Nueces Delta Preserve which is managed by the Coastal Bend Bays and Estuaries Program (CBBEP). The structure was built to enhance the effectiveness of freshwater diversions to the Nueces Delta by preventing backflow of pumped water back to the Nueces River Tidal Portion during normal flow conditions.”The project was made possible by a grant from the Coastal Management Program administered by the GLO. Coastal Conservation Association Texas and the Coastal Bend Bays & Estuaries Program contributed matching funds to the project.” said Jake Herring, Director of Land Conservation the CBBEP. Good job to everybody for maximizing the benefit of our freshwater resources!

San Miguel Recreational Use Attainability Analysis

In 2006, San Miguel Creek (Segment 2108), which flows 66 miles from Choke Canyon Reservoir in McMullen County to the confluence of Perez Creek and Chacon Creek in Frio County was identified as being impaired for having *E. coli* bacteria concentrations that exceed state water quality standards. To determine if the correct standard is being applied to the water body, the Texas State Soil and Water Conservation Board (TSSWCB) contracted with NRA to conduct a Recreation Use Attainability Analysis (RUAA) to determine if recreation is occurring on the stream. The project kicked off in November 2013. The QAPP was submitted for review at the end of November 2014. Sites surveys would take place in late Spring/Early Summer. For more information please visit the project website. <https://www.nueces-ra.org/SMC/>



Oso Creek Total Maximum Daily Load

Since 2002, Oso Creek (Segment 2485A), which flows 28 miles to the confluence of Oso Bay in Nueces County has been identified as being impaired for having bacteria concentrations that exceed state water quality standards. Since 2003, the TCEQ and the TSSWCB have conducted studies of bacteria sources and quantities in the Oso Creek watershed. Based on the results of those studies, a TMDL for Oso Creek is being developed to address the contact recreation impairment. Staff from the Center for Coastal Studies at Texas A&M University – Corpus Christi and the Coastal Bend Bays Foundation is disseminating information to the public.

Learn more about the Oso Bay TMDL and/or the Oso Creek Watershed Public Outreach at the TCEQ project pages: A TMDL Project for the Oso Bay TMDL to Protect Recreational Use <http://www.tceq.texas.gov/waterquality/tmdl/67-osobaybacteria.html>; You may also go to the CBBF web site at www.baysfoundation.org, email Teresa Carrillo at tcarrillo@baysfoundation.org or call 361-882-3439.

Cole and Ropes Park Bacteria Reduction Total Maximum Daily Load and Implementation Plan

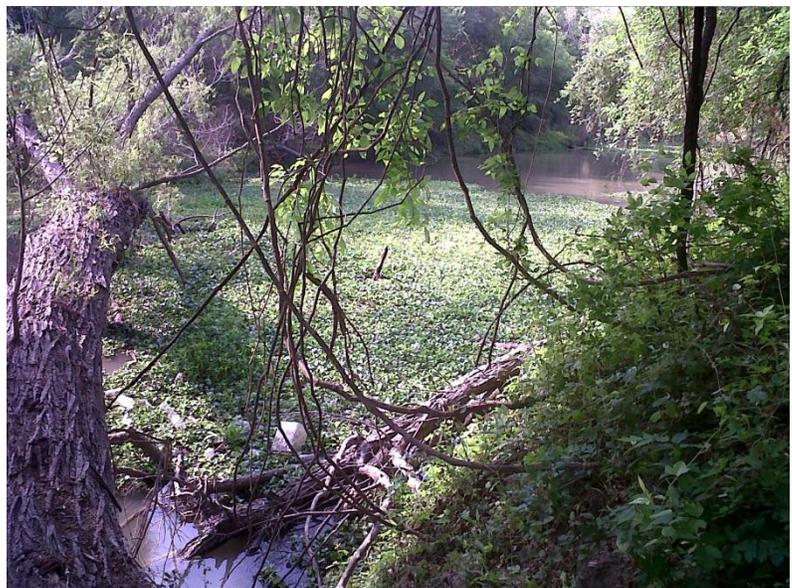
The Coastal Bend Bays Foundation has been hosting numerous public meetings with stakeholders concerned about elevated bacteria concentrations at Cole and Ropes Park along Corpus Christi Bay. An Implementation Team was formed to develop strategies aimed at reducing bacteria concentrations. The Coordination Committee meeting took place on July 18th at the Del Mar College Center for Economic Development at 3209 S. Staples Street in Corpus Christi. For more comprehensive information about the Corpus Christi Bay Beaches TMDL, including an Interim Monitoring Report, and a Historical Data Review and Site Assessment, please visit:

<http://www.tceq.texas.gov/waterquality/tmdl/97-corporbeachesbacteria.html>

Nueces River Watershed Partnership - Development of the Lower Nueces River Watershed Protection Plan

The final results of the side-scan sonar that was conducted in April 2014 by the Blackland Research Center have been compiled and are available to the public at <https://www.nueces-ra.org/sonar/index.php>. A subcommittee met on September 24, 2014 to review and identify as many of the objects as possible. The committee will prioritize items that need to be removed. The good news is that there is not as much hazardous items as was expected.

Texas A&M AgrilLife Extension hosted a Texas Watershed Steward Workshop on December 4, 2014 in Corpus Christi



<http://today.agrilife.org/2014/11/04/tws-training-dec-4-in-corpus/>. The workshop was targeted toward the Oso Creek and Oso Bay watersheds, but the information is applicable to all watersheds.

Meetings of the Nueces River Watershed Partnership are held quarterly with the next one scheduled for March 3, 2015. A survey of the hyacinth infestation is scheduled to be completed by then and the results will be presented to the stakeholders. For more information about the Partnership and the development of the Watershed Protection Plan, visit <http://www.nuecesriverpartnership.org> or contact Rocky Freund at (361) 653-2110 or rfreund@nueces-ra.org.

NRA has added an ‘Announcements, Meetings, and Workshops’ section on our homepage, <http://www.nueces-ra.org>, so help keep everyone informed on local events related to our Mission and contract obligations.

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