

**Nueces River Authority - Clean Rivers Program
Steering Committee and Stakeholder Update #2
December 2013 - February 2014**

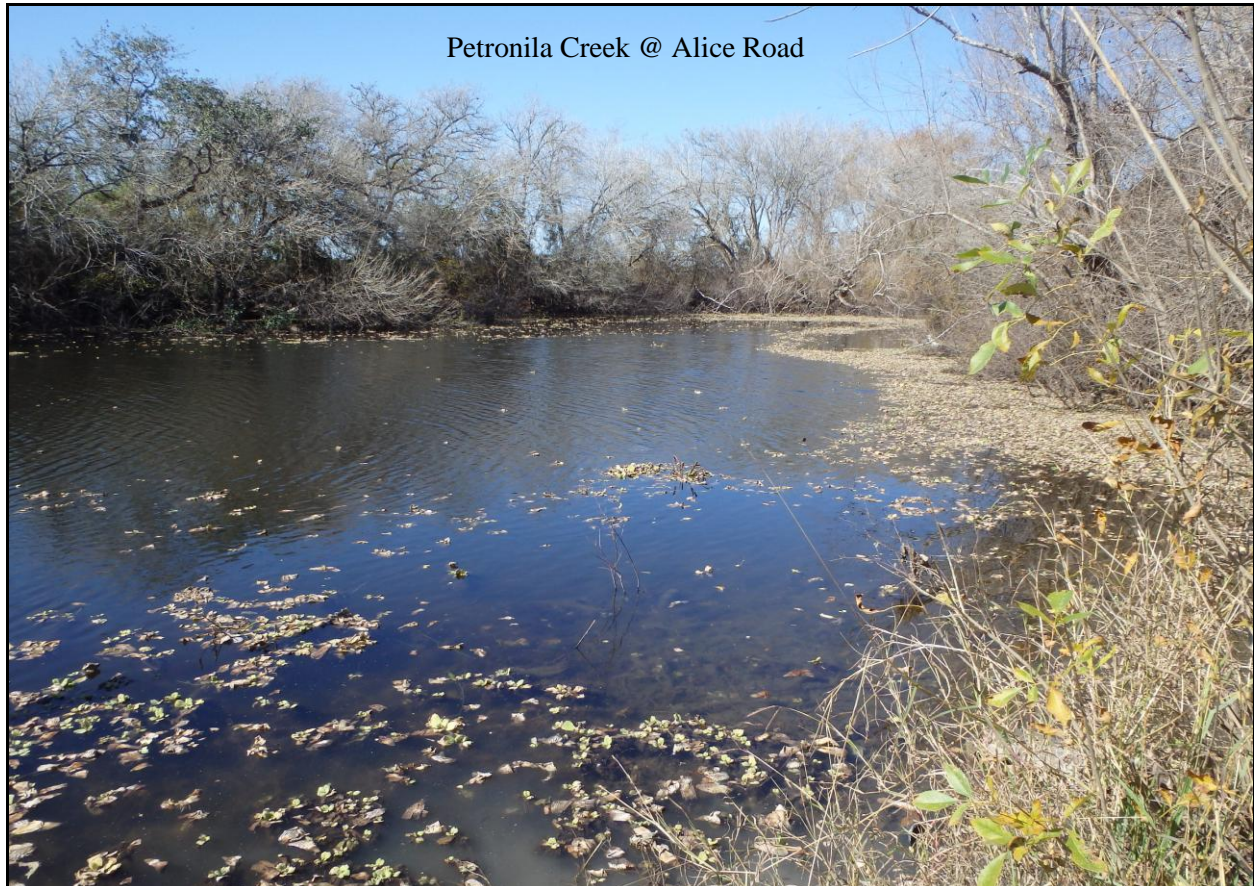
March 11th, 2014

Dear Steering Committee Members and Stakeholders,

This is the second 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.

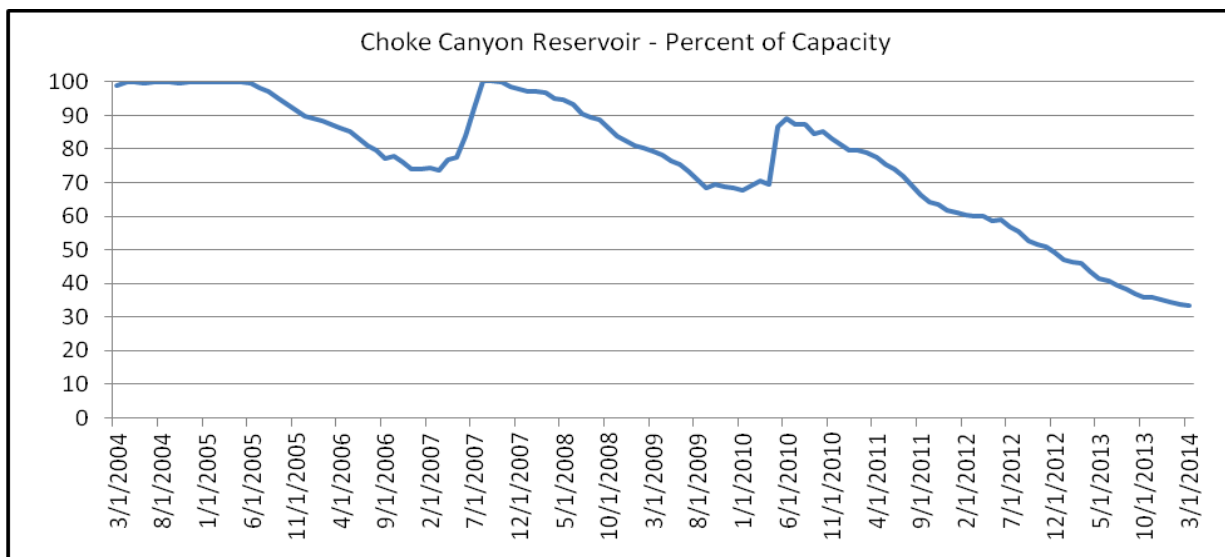
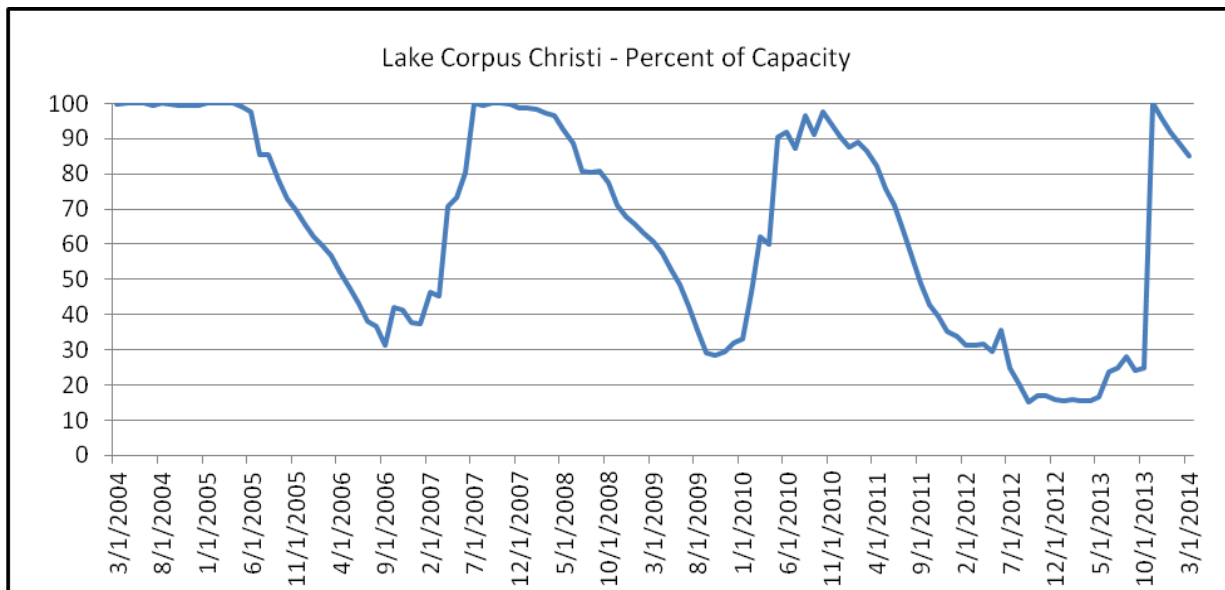
CRP Routine Monitoring

During the December through February 2014 quarter, NRA conducted routine monitoring at 37 stations. Three sites were dry: Frio River at Fowlerton, San Miguel Creek at SH 16, and the Leona River near Uvalde. No 24-hour dissolved oxygen monitoring took place during the quarter on the middle Nueces River. A notable water quality observance occurred at an impoundment on Petronila Creek at Alice Road (station ID 20806 - Upstream of US 77). Dissolved oxygen values were the lowest recorded by NRA (0.40 mg/L, and 3.7% saturation). An additional reading from a bucket recorded 0.00mg/L. As you can see from the picture below, a lot of organic material (leaves) rotting on the bottom could be a contributing factor.



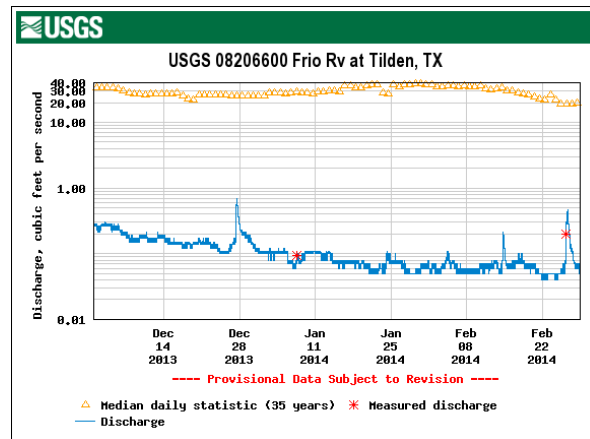
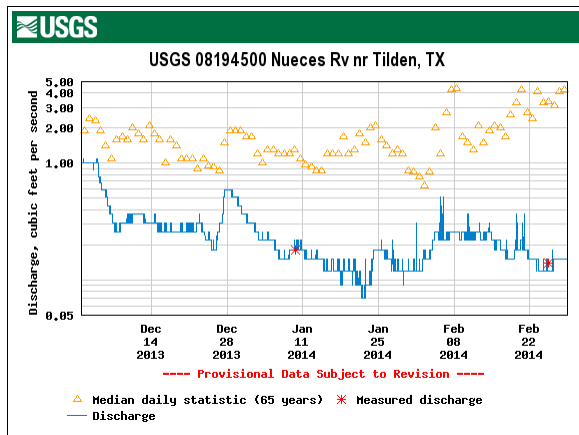
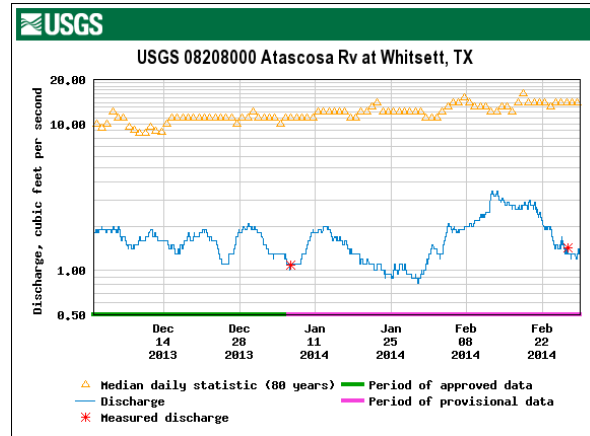
Reservoir System Details

The winter quarter is generally not a time of the year for significant precipitation in South Texas. At the end of February 2014, Lake Corpus Christi was at 85.3% of capacity (down from 95.8%); Choke Canyon Reservoir was at 33.4% (down from 35.1%). Total Dissolve Solids (TDS) concentrations, which are of great concern, were recorded on February 17th at both reservoirs. TDS values at Choke Canyon Reservoir were 623 mg/L and 256 mg/L at Lake Corpus Christi. Turbidity (murkiness) values at Lake Corpus Christi have been very low since the reservoir filled last Fall. Historically, Secchi values range from 0.15 to 0.30 meters. NRA recorded Secchi values in the 0.50+ meter range along with water stained yellow/orange that is most likely tannins in the water. Dissolved Oxygen values returned to healthy levels (10+ mg/L).



Streamflow in the Nueces River Basin

The winter quarter is generally not a time of the year for significant precipitation in South Texas. These streamflow charts from USGS seem to agree. The three rivers in the Nueces River Basin (Nueces, Frio, and Atascosa Rivers) flirted with discharge in the 1.0 cubic foot per second range for the entire quarter. Although much of the river basin did receive precipitation, it was not enough to result in any measurable increases in streamflow.

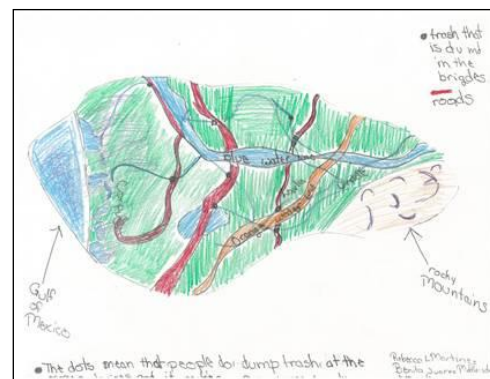


Arroyo Colorado Watershed Partnership

The Arroyo Colorado Watershed Partnership hosted the Steering Committee meeting on February 20th at the Estero Llano Grande World Birding Center located at 3301 S. FM 1015. The group discussed the success of some farmers using a no-till farming strategy. The group also discussed habitat issues including the restoration of Estero Llano Grande Lake (the spring has been silted in), wetland projects, permeable pavement, and rainwater collection. An update of the Arroyo Colorado Watershed Protection Plan was also provided. Wastewater Treatment Facilities will get new permits that allow for enhanced treatment of wastewater. Old permits were 20/20/3 and 30/90/3 which refers to mg/L of BOD, TSS and NH₃-N respectively; the new permits will be 7/12/2.

Outreach and Education

NRA's Education and Outreach Program reached out to 4,337 people from December through February using custom made tools including NRA's watershed, rainwater, and groundwater models. That is the second highest amount of people reached in a quarter. A student drawn picture (right) shows that the education/outreach efforts are producing results. Thank you to the Education/ Outreach staff for your hard work! For more information about outreach and education, contact slewey@nueces-ra.org.



Petronila Creek Chloride, Sulfate, and Total Dissolved Solids Implementation Plan (I-Plan)

Rocky Freund from Nueces River Authority hosted a public meeting on February 25th at the Johnny Calderon County Building in Robstown to review the draft Implementation Plan (I-Plan) for the Total Maximum Daily Load for Chloride, Sulfate, and TDS in Petronila Creek occurred.

Petronila Creek (Segment 2204) is a 44-mile “freshwater” stream in Kleberg and Nueces County located southwest of Corpus Christi in the Baffin Bay watershed. In 2000, water quality testing found elevated levels of chloride, sulfate, and TDS in the creek. Elevated dissolved salt concentrations are attributed to produced water discharged in open pits and ditches which were outlawed in 1969 and 1987 respectively. NRA conducts monthly sampling for impaired parameters and maintains a continuous water quality monitoring site (CAMS 731) hosted by the TCEQ which can be viewed at:

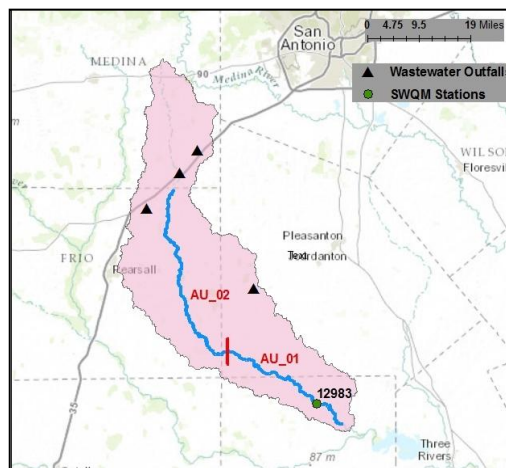
http://www.tceq.state.tx.us/cgi-bin/compliance/monops/water_daily_summary.pl?cams=731

More information about the Petronila I-Plan can be found at:

<http://www.tceq.texas.gov/assets/public/waterquality/tmdl/32petronila/32-petronila.pdf>

San Miguel Recreational Use Attainability Analysis (RUAA)

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 address the impairment, the Texas State Soil and Water Conservation Board (TSSWCB) contracted with NRA to conduct a RUAA to confirm the degree of recreation occurring there. The project kicked off in November 2013. More information, including a website which will be hosted by the Nueces River Authority will be forthcoming.



Texas Water Quality Standards

A number of changes to water quality standards have occurred recently. A new use designation known as Aquifer Protection (AP) now applies to the contributing, recharge, and transition zones of the Edwards Aquifer. In the Nueces River Basin, this new use would apply to rivers like the Upper Nueces, Upper Frio, Upper Sabinal, Leona River, Hondo and Seco Creeks.

The Atascosa River has been divided into multiple segments. The previous designation (2107) now applies to the lower Atascosa from around Campbelton downstream to the confluence of the Frio River. A new segment (2118) flows from just east of Pleasanton (technically, at the confluence of Galvan Creek) to Borrego Creek near Campbelton. Primary Contact Recreation remains the Recreational Use Criteria for segment 2107 and 2118. The upper end of the watershed has been divided into 2 portions as well. From the headwaters to the confluence of Palo Alto creek is now an undescribed portion with minimal aquatic life use (the stream is intermittent in this area). From Palo Alto Creek to Galvan Creek is now known as the Appendix D portion with limited aquatic life use (the stream is intermittent with perennial pools). Both of these upper portions now have reduced dissolved oxygen standards.

The Laguna Madre segment designations have changed as well. Laguna Madre segment 2491 only applies to Lower Laguna Madre while the Upper Laguna Madre will be known as segment 2490.

Arundo Pull. Kill. Plant.

Pull Kill Plant, a landowner driven *Arundo donax* control and riparian restoration project has been underway on the upper Nueces, Frio, Sabinal and Dry Frio rivers for several years. A total of 90 stream miles are under treatment with 200 landowners participating in the project. 266 acres of *Arundo* have been treated and 2.2 million sprouting nodes have been removed from the floodplain of these pristine headwater streams. USFWS, TCEQ, TPWD, EAA, and USGS, have partnered with NRA to collect data, study water quality and quantity impacts. For more information visit <http://www.pullkillplant.org> or contact Sky Lewey at (830) 278-6810 or slewey@nueces-ra.org.



Nueces River Watershed Partnership

Projects and activities are moving forward. Meetings are held quarterly with the next one scheduled for April 8, 2014. NRA will present the results of an historical data review and the on-site sewage facility (OSSF) inventory. A subcommittee will be appointed to develop a manage plan to address possibly failing systems.

NRA hosted an OSSF workshop for homeowners in early March presented by Texas AgriLife Extension. A second workshop will be offered August 19, 2014 in conjunction with the Texas Water Resources Institute Texas Well Owners Network education program.

On April 12, 2014, the Nueces River Preservation Association will be holding their 3rd Annual Nueces River Cleanup. The side-scan sonar survey of the Nueces River is scheduled to be conducted during the week of April 14, 2014.

Funding for the development and support of the Lower Nueces River Watershed Protection Plan (WPP) is through a Clean Water Act grant provided by the Texas State Soil and Water Conservation Board and U.S. Environmental Protection Agency.

For more information about the Lower Nueces River Watershed Partnership and the WPP, visit <http://www.nuecesriverpartnership.org> or contact Rocky Freund at (361) 653-2110 or rfreund@nueces-ra.org.

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