2013 Update to Lavaca Basin Clean Rivers Program Report

Little Blue Heron in Lake Texana
(photo by Patricia Kontak)

Prepared by the
Lavaca-Navidad River Authority (LNRA)
PO Box 429, Edna, TX 77957

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CLEAN RIVERS PROGRAM
PO Box 13087, Austin, TX 78711

Introduction:

In 1991 the Texas Legislature passed the Texas Clean Rivers Act in response to concerns that water resource issues were not being addressed in a holistic manner. This legislation requires that water quality assessments be conducted for each river basin in Texas using an approach that integrates water quality issues within a river basin or watershed.

The TCEQ implements the Program by contracting with 15 partner agencies, including the Lavaca-Navidad River Authority (LNRA), to manage the Clean Rivers Program (CRP) in the 23 river and coastal basins of Texas. Each basin is assigned to one of the designated partner agencies. LNRA is responsible for Basin 16, the Lavaca Basin.

The Lavaca Basin CRP involves quality-assured water monitoring and reporting the data to the State's Surface Water Quality Monitoring Information System (SWQMIS) and also making this data accessible to the public in a user-friendly method via the LNRA website. CRP partners also publish annual reports of water quality conditions in the Basin and conduct various aspects of public outreach and education. On the LNRA website (www.LNRA.org) one will find links to both the State and LNRA water quality databases, monitoring schedules, maps of sites within Lavaca Basin, CRP Work Plans, annual Steering Committee meeting minutes, annual reports, and other information.

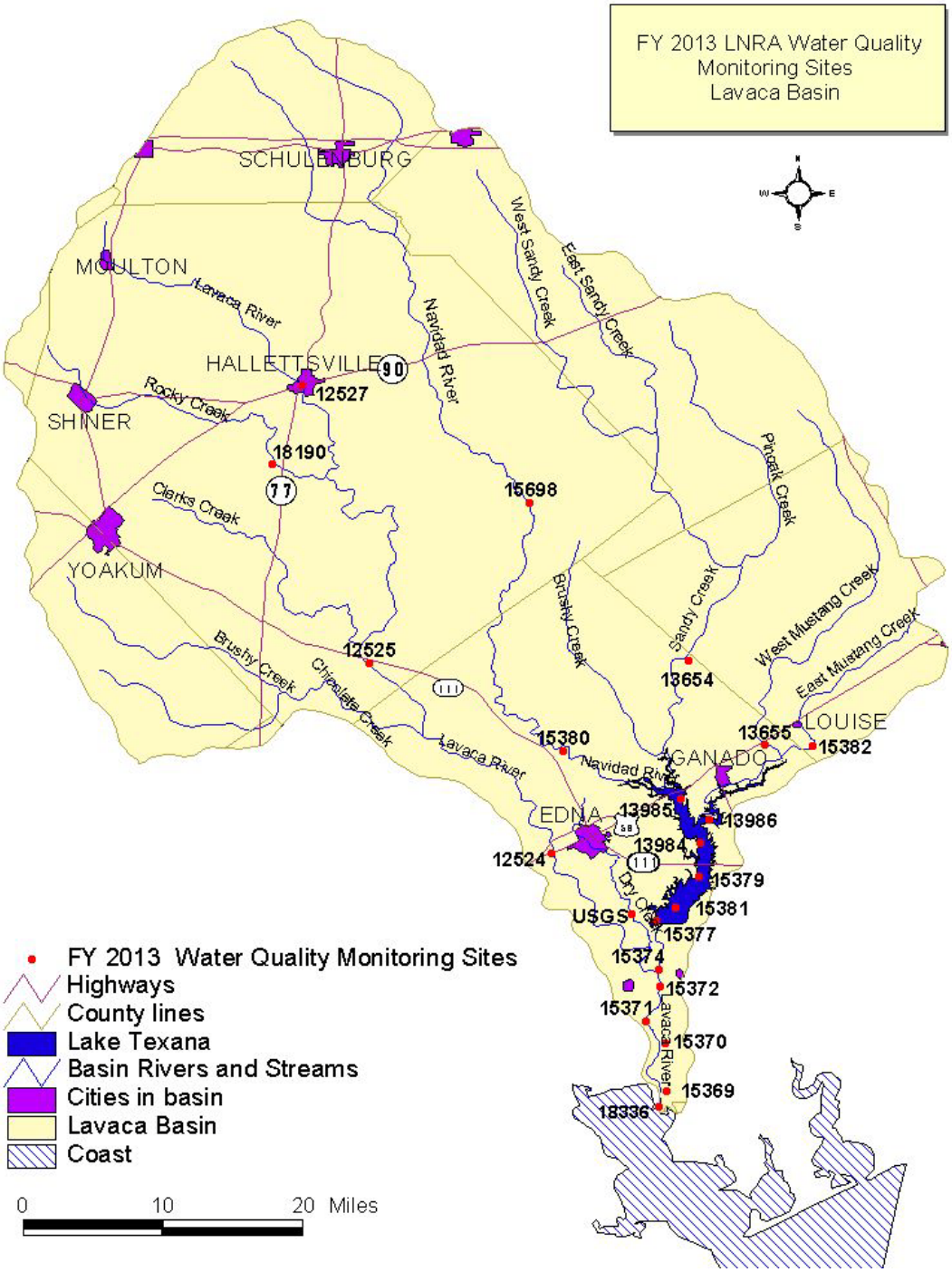
The Year's Highlights:

In 2012 LNRA published the extensive **2012 Lavaca Basin Summary Report--** which is available in its entirety (as a pdf) on the LNRA website under both the Clean Rivers page and the Water Quality page. This year (2013) LNRA will publish this more abbreviated CRP Update Report in accordance with our Work Plan.

The terrible drought of 2011 and early 2012 has relented, and Lake Texana reservoir currently (as of February 2013) is only ~1.5 feet short of being full. The reservoir reached its lowest level in early January of 2012 when it was 13.6 feet low, but by the end of 2012 this area had received a closer to normal rainfall total of 43.8 inches with 13 inches of that falling in the month of July. Most of the Basin's streams are again flowing except occasionally Rocky Creek in the northern Basin, the Navidad above Lake Texana and often the upper Lavaca cease to flow, dependent upon rainfall.

LNRA continues its monthly field monitoring and quarterly water quality sampling at the sites shown below. For details of Segment descriptions and monitoring

parameters please see the 2010 Lavaca Basin Highlights Report (available on-line at http://www.lnra.org/education_and_programs/2010_BHR.pdf)



The Coordinated Monitoring Schedule for the Lavaca Basin for FY 2013 is available on-line at https://cms.lcra.org/schedule.aspx?basin=16&FY=2013. There one can access maps (both road and aerial) of the Segments that make up the Lavaca Basin and maps of the individual monitoring sites. The schedule lists the parameters that are monitored at each site and the frequency of this monitoring.

Water quality remains relatively good in Lavaca Basin. There were no new issues discovered and reported in the 2012 Texas Water Quality Integrated Report (see below and the tables in the addendum attached).

2012 Texas Water Quality Integrated Report:

During the review of the 2010 Texas Surface Water Quality Standards, the Environmental Protection Agency (EPA) did not approve the proposed revisions to the Dissolved Oxygen (DO) standards in the upper Lavaca River that were recommended by TCEQ as a result of the Use Attainability Analysis (UAA) conducted in 2005-2006 by TCEQ with assistance from Texas Parks & Wildlife and LNRA. The EPA did approve removal of the upper 29 miles of the Lavaca from the perennial lower portion of Segment 1602 and acknowledged the intermittent nature of the upper portion of the river, but they disapproved the site-specific seasonal change in DO standards that were proposed by TCEQ for the hotter months of March 15th through October 15th. In summary, the proposed segment boundary shift was approved, but the revised standards were not. TCEQ had recommended as follows: "The upper portion of Lavaca River from the confluence of Campbells Creek northwest of the City of Hallettsville upstream to the confluence with West Prong Lavaca River downstream of the City of Moulton has been added to Appendix D of the Water Quality Standards as an intermittent stream with perennial pools supporting a high Aquatic Life Use (ALU) with a 5.0 mg/L DO except from March 15th through October 15th when a site-specific DO criteria of 2.0 mg/L as a 24-hour average and 1.0 mg/L as a minimum apply." This seasonal DO standard change is the part that the EPA would not approve. Upstream of the West Prong confluence the stream was designated as intermittent.

EPA approval would have established a new aquatic life use criterion for various time periods. The TCEQ would have reassessed the data and recommended removal from the 303(d) list because the appropriate standard would have been met. This portion of the Lavaca has seen little or no water in recent years due to repeated drought in an already intermittent (at best) portion of the Lavaca.

The freshwater bacterial geometric mean standard for Primary Contact Recreation streams remains at 126 colonies per 100 mL. As a result, portions of Segment 1602 (Lavaca above tidal influence) remain listed as impaired for

indicator bacteria (see attached Addendum). The 2012 Integrated Report found a bacterial (*E. coli*) geomean in Segment 1602_02 at 142 (most probable number of colonies in 100 mL of water) and in Segment 1602_03 at 209 per 100 mL.

Segment 1604 (Lake Texana reservoir) remains listed for nutrient concerns in sometimes exceeding screening levels of total phosphorus, nitrate and orthophosphorus. Both Ammonia and Chlorophyll-a numbers are within screening levels. No exceedences in bioaccumulative, acute or chronic toxics or in Public Water Supply parameters were found in the 2012 Integrated Report.

Public involvement:

LNRA encourages public involvement by holding an annual Clean Rivers Program Steering Committee meeting every summer and widely advertising the meeting and inviting members of the public and stakeholders to attend. LNRA asks for public input in topics to be covered at these seminars/meetings which provide an opportunity to find out about water quality issues in Lavaca Basin. LNRA also supports Texas Stream Team water quality monitoring volunteers. A link to more information about Texas Stream Team can be found on the LNRA home page or by logging onto: http://txstreamteam.meadowscenter.txstate.edu/. Texas Stream Team is a state-wide network of volunteer water monitors. We currently have in Lavaca Basin a long-time volunteer monitor in Lake Texana. Ken Barton, the former science teacher of Edna schools, has been monitoring since 1993. His steadfast commitment is appreciated.

In addition, LNRA officially took over Lake Texana State Park from Texas Parks & Wildlife Department (TPWD) on September 1, 2012. The property has long belonged to LNRA, but was managed by TPWD until they experienced financial cut-backs. LNRA hired the previous TPWD Nature Interpreter from the park to expand public outreach for LNRA. Her name is Cindy Baker (cell phone 361-308-0153 and e-mail: cbaker@lnra.org). Ms Baker writes a monthly nature column for the Edna newspaper, teaches weekend nature programs at the park, and she travels to Basin schools to teach workshops for school children on a wide range of environmental education and water quality topics. She also teaches the home-schoolers of the area the *Major Rivers* water education program which LNRA purchases for all 4th grade students in schools throughout Lavaca Basin.

Anyone who wishes to receive more information on the Clean Rivers Program or local water quality issues is invited to contact Sylvia Balentine, LNRA Director of Environmental Services via e-mail at sbalentine@LNRA.org or telephone: 361-782-5229 or via postal mail c/o LNRA, PO Box 429, Edna, TX 77957.

Addendum to 2013 Basin Highlights Update Report showing results of 2012 Texas Water Quality Integrated Report and 303(d) List

Segments Assessed

Segment ID	Description	Comments & Details	Support Status
1601	Lavaca River Tidal	-	Fully supporting *
1601A	Catfish Bayou	-	Fully supporting *
1601B	Redfish Bayou	-	Fully supporting *
1602_01	Lavaca River above tidal Upper 29 miles of segment	EPA did not approve new standards proposed by UAA	Non-supporting for dissolved oxygen
1602_02	Middle 34 miles of segment	Geomean 142 (>126 criteria)	Non-supporting for *E. coli*
1602_03	Lower 31 miles of segment	Geomean 209 (>126 criteria)	Non-supporting for *E. coli*
1603	Navidad River Tidal	-	Fully supporting *
1604	Lake Texana reservoir	Nitrate, phosphorus & orthophosphorus above screening levels	Fully supporting *
1604A	East Mustang Creek	-	Fully supporting *
1604B	West Mustang Creek	-	Fully supporting *
1604C	Sandy Creek	-	Fully supporting *
1605	Navidad River above Lake	-	Fully supporting *

* Fully supporting of general use and aquatic life use (ALU)

303(d) Listings

Water Body and location	Flow Status	Parameter(s)	Possible Sources in the Watershed	Possible Reasons for Impairment and/or Concern	Special Study Y/N
Lavaca River upstream of Hallettsville 1602_01	**Intermittent with pools**	**Dissolved oxygen**	**Moulton, town of <2000 pop. with small WWTP, <0.242 MGD Poultry operations Range land**	**Insufficient flow during summer months, especially during drought years**	**Y-UAA 2005-2006 by TCEQ to assess suitability of standards and flow status**
Middle 34 miles of segment between US 90 and SH 111 1602_02	**Perennial, but low flow**	***E. coli***	**Hallettsville WWTP <0.8 MGD Livestock and wildlife in stream**	**Overflow of WWTP, feral hogs, birds and livestock in stream**	**N**
Lower 31 miles of segment between SH 111 and to tidal segment 1602_03	**Perennial flow**	***E. coli***	**Livestock and wildlife in stream and possible septic system problems?**	**Livestock and feral hogs High bacterial counts only after significant rainfall**	**N**

Concerns

Water Body and location	Flow Status	Parameter(s)	Possible Sources in the Watershed	Possible Reasons for Impairment and/or Concern	Special Study Y/N
Lake Texana reservoir 1604	**n/a**	**Nitrate, orthophosphorus, and total phosphorus**	**Small WWTPs at Ganado (<0.35 MGD) & Louise (<0.15 MGD) , septic systems, nutrients from livestock & wildlife feces**	**Agricultural run-off, WWTPs, faulty septic systems, livestock & wildlife—no ammonia or chlorophyll-a problems**	**N**

No exceedences in bioaccumulative, acute or chronic toxics or in Public Water Supply parameters.