

Sabine River Basin Highlights 2016

Prepared in Cooperation with the Texas Commission on Environmental Quality under the Authorization of the Texas Clean Rivers Act



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Introduction

The Sabine River is approximately 580 miles long extending from the basin divide in Hunt County near Celeste, Texas to its mouth at Sabine Lake. The Sabine Basin (Figure 1) is crescent shaped, with a length of approximately 300 miles and a maximum width of approximately 48 miles. The river extends southeast 165 miles from its source in Hunt County, to the headwaters of Toledo Bend Reservoir at the Texas-Louisiana border in the vicinity of Logansport, Louisiana, comprising the state

line in a southerly direction to Sabine Lake. The watershed area in Texas includes all or part of twenty-one counties. The state of Texas has jurisdiction to the midstream boundary for the state line reach of the Sabine River.

The Sabine River Authority of Texas (SRA-TX) water quality monitoring program was established in 1972. The program was strengthened by the Texas Clean Rivers Program (TCRP) in 1991 and has developed and changed with the needs of the SRA-TX. Under the TCRP. the Texas Commission on Environmental Quality (TCEQ) partners with regional water authorities to coordinate and conduct water quality monitoring, assessment, and stakeholder participation to improve the quality of surface water within each river basin in Texas. This integrated approach to water guality management includes an annual review process which coordinates with other state and local monitoring



programs and provides for the best use of limited resources to meet the goals of the TCRP. Water quality information obtained through the TCRP is collected under a TCEQ-approved Quality Assurance Project Plan and is suitable for evaluation using the Texas Surface Water Quality Standards (TSWQS). The SRA-TX collects water quality data in the Sabine River Basin to identify trends and prioritize water quality concerns. Water quality monitoring results may be found using TCEQ's TCRP Data Tool at http://www80.tceq.texas.gov/SwqmisWeb/public/crpweb.faces.

Figure 1. Sabine River Basin

Water Quality Highlights

This report provides an overview of activities from September 2015 through August 2016 within the Sabine Basin under the TCRP. Inclement weather and flooding conditions prevented sampling at 12 sites during the month of April and 2 sites in May.

During FY2016, the National Ocean and Atmospheric Administration National Weather Service reported annual recorded precipitation totals in the Upper Sabine Basin of 70 to 80 inches, with some areas exceeding 80 inches of rain. In the Lower Sabine Basin, precipitation amounts of 80 to 100 inches were recorded with some areas receiving in excess of 100 inches of rainfall¹. Average annual rainfall in the basin ranges from 44 to 56 inches².

The most commonly exceeded TSWQS parameter within the basin was bacteria, *Enterococcus* or *Escherichia coli (E. coli.).* Potential sources of bacteria include stormwater runoff from natural sources and urban areas, birds and other wildlife, on-site treatment systems (septic systems), and municipal point sources.

The Orange County Total Maximum Daily Load (OCTMDL) Project was initiated in 2002 to address low dissolved oxygen (DO) and elevated bacteria in Adams Bayou (Segment 0508), and to address low DO, low pH, and elevated bacteria in Cow Bayou (Segment 0511). On August 5, 2015, the TCEQ Commissioners approved the **OCTMDL** Implementation Plan (I-Plan). Stakeholders now meet annually to review and evaluate activities over the previous year. The first annual meeting was held on September 22, 2016 at the SRA-TX office in Orange.

Recreational Use Attainability



Analyses (RUAA) to address bacteria impairments have been completed on Nichols Creek (Segment 0502A), Caney Creek (Segment 0502B), Grace Creek (Segment 0505B), South Fork of Sabine River (Segment 0507G), Running Creek (Segment 0512A) and Elm Creek (Segment 0512B).

¹ <u>http://water.weather.gov/precip/, accessed 10/13/2016.</u>

²<u>http://www.beg.utexas.edu/UTopia/images/pagesizemaps/river_basin.pdf</u>. Accessed 2/09/2017

TCEQ RUAA recommendations concerning these waterbodies can be viewed at the Sabine River Basin Recreational Use Attainability Analysis page on TCEQ's website at <u>https://www.tceq.texas.gov/waterquality/standards/ruaas/ruaassabine</u>. The initial 30-day public comment period has closed for these waterbodies, but the public will have an additional opportunity to comment on TCEQ's recommendations before any changes are made to the recreational use designations in the TSWQS.

The SRA-TX assisted the TCEQ with a 24-hour DO study at site 21590 on Grace Creek (Segment 0505B) to address a DO impairment. The study involved collecting 24-hour DO and flow measurements from October 2014 through October 2015. Data collected will be used to reassess the DO impairment on Grace Creek for the 2016 Texas Integrated Report of Surface Water Quality (IR).

Biological sampling data to address ambient toxicity concerns in Little White Oak Creek and Sabine River at FM2517 was submitted to TCEQ in December 2015. Results showed no toxicity and a high aquatic life use.

The SRA-TX continues to partner with the Texas Parks and Wildlife Department (TPWD) in control efforts and education campaigns within the Sabine Basin to reduce the spread of giant salvinia, water hyacinth, and zebra mussels. The United States Geological Survey (USGS) monitors Lake Fork and Lake Tawakoni Reservoirs for the presence of zebra mussels. The TPWD classified Lake Fork Reservoir as suspect after one zebra mussel veliger (zebra mussel larval stage) was collected and identified by USGS in November 2015. Lake Tawakoni Reservoir is classified as inconclusive.



The first discovery of giant salvinia was reported on Lake Fork Reservoir in the Chaney Branch arm on November 18. 2015. SRA-TX took immediate action to confine the plant in Chaney Branch arm by closing the nearest boat ramp and placing a boom. Mechanical removal efforts began immediately and TPWD performed the initial herbicide treatment within a week of discovery. Monitoring and treatment of giant salvinia in Chaney Branch is ongoing.

In addition to the treatment of giant salvinia on Lake Fork Reservoir, 103 acres of water hyacinth were treated with herbicide. Giant salvinia was first identified in Toledo Bend Reservoir in 1998 and the TPWD has been involved in control efforts since that time. In FY2016, 1,098 acres were treated with herbicide and 141,000 salvinia weevils were released. Additional information concerning Texas invasive species can be found at: <u>http://www.texasinvasives.org/</u> and <u>https://tpwd.texas.gov/huntwild/wild/species/exotic/</u>.

Water Quality Monitoring

The SRA-TX monitoring program included monthly sampling for routine physical and chemical parameters at 37 permanent sites and yearly sampling for metals in water at 32 of those sites. The Sabine Basin 2016 Coordinated Monitoring Schedule can be found at: https://cms.lcra.org/schedule.aspx?basin=5&FY=2016.

2016 Sabine River Basin Water Quality Monitoring Sites				
Sampling Entity	Field	Conventional	Bacteria	Metals in Water
Sabine River Authority of Texas	37 sites monthly			32 sites annually
TCEQ	11 sites quarterly / 1 site annually			
City of Longview	1 site, 9 months per year		1 site annually	





Lower Sabine Basin Coordinated Monitoring Sample Sites

Upper Sabine Basin Coordinated Monitoring Sample Sites



Water Quality Parameters

The water quality parameters listed in the table below are used to measure physical and chemical water quality characteristics.

Water Quality Group	Water Quality Parameters		
Field	Temperature, pH, Dissolved Oxygen (DO), Specific Conductance, Total Dissolved Solids, Salinity, Weather Conditions, Odor, Flow, Secchi Depth, Flow Severity, Turbidity, Days Since Last Precipitation, Recreational Use Observations		
Conventional	Ammonia, Chloride, Chlorophyll a, Nitrate, Nitrite, Sulfate, Total Hardness, Total Kjeldahl Nitrogen, Total Organic Carbon, Total Alkalinity, Total Phosphorus		
Metals	Dissolved – Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Silver, Zinc Total - Selenium		
Bacteria	Enterococcus and Escherichia coli (E. coli)		



The parameters listed in the following table are included in the 2014 TSWQS with numerical criteria for classified segments.

Parameter	Definition	
Temperature	Temperature is the most common physical assessment of water quality. Temperature impacts both the chemical and biological characteristics of surface water.	
рН	A measurement of hydrogen ion concentration used to describe the acidity or alkalinity of a solution. The pH scale is from 0 to 14, with the neutral point at 7. Values lower than 7 indicate acidic conditions and greater than 7 indicate alkaline conditions.	
Dissolved Oxygen (DO)	The amount of oxygen gas dissolved in a given quantity of water at a given temperature and atmospheric pressure. Dissolved oxygen is one of the most important parameters in aquatic systems.	
Total Dissolved Solids (TDS)	The amount of inorganic and organic material dissolved in water measured by laboratory analysis or estimated using specific conductance multiplied by a conversion factor, typically 0.65.	
Enterococcus and Escherichia coli (E. coli)	These bacteria groups are used as indicators of possible contamination by the fecal material of warm-blooded animals. Although generally not harmful themselves, they indicate the possible presence of pathogenic (disease-causing) bacteria, viruses, and protozoans that also live in human and animal digestive systems. <i>Enterococcus</i> testing is used in tidal and high saline waters. <i>E. coli</i> testing is used in freshwater areas.	
Sulfate (SO4)	Sulfates are salts of sulfuric acid that occur naturally and are often the result of the breakdown of leaves that fall into a stream, water passing through rock or soil containing gypsum and other common minerals, or from atmospheric deposition. Sulfates can also come from agricultural runoff and municipal or industrial discharges.	
Chlorophyll a (Chl-a)	Chlorophyll a is a green pigment found in most plants, algae, and cyanobacteria. Excessive amounts of chlorophyll a can indicate algal blooms, which can cause dissolved oxygen levels to fluctuate and deteriorate to harmful levels. Residential, agricultural and natural non- point sources can contribute to elevated Chl-a levels.	
Chloride (Cl)	Chloride is the ionic form of chlorine usually in the form of salts. Some common chlorides include sodium chloride and magnesium chloride. High chloride concentrations can affect osmoregulation and treatability of water.	

Water Quality Conditions

Every two years, TCEQ assesses water quality data using TSWQS to produce the State of Texas Integrated Report (IR), which is required by Sections 305(b) and 303(d) of the federal Clean Water Act. This assessment enables the public, local governments, state agencies, the Texas Legislature, the US Environmental Protection Agency (EPA), and Congress to make decisions about water quality management. On November 19, 2015, the EPA approved the 2014 Texas IR using water quality data collected from 12/1/2005 through 11/30/2012. To learn more concerning the assessment process or to view the 2014 Texas IR go to: https://www.tceq.texas.gov/waterquality/assessment/305_303.html.

The following is a description of Sabine Basin segments and sampling sites along with summaries of the water quality conditions and recommendations within each segment.

Tidal Segments

Segment 0501 – Sabine River Tidal – From the confluence with Sabine Lake in Orange County to West Bluff in Orange County.

Station 10391 (SRT1) – Sabine River at Channel Can 3 Station 15654 (BB1) – Blacks Bayou in Cameron Parish (LA) Station 15653 (ICW1) – Intracoastal Waterway at Perry Ridge (LA) Station 10394 (SRT2) – Sabine River at IH-10



This segment is on the 2014 Texas IR 303(d) List for bacteria. It was first listed in 2006. In FY2016, the *Enterococcus* geomean of Stations 10391, 15654, and 15653 were all less than the TSWQS. This marks the first year since the tidal surge flooding of Hurricane Ike in September 2008 that these four stations have met the geomean standard. One exceedance for DO and one for temperature were noted in this segment at Station 15654 in FY2016.

The Texas Department of State Health Services (TDSHS) issued a fish consumption advisory in December 2011 for the gafftopsail catfish (PCB's in edible

tissue) for all Texas waters of Sabine Lake and all contiguous Texas waters. Additional information regarding fish consumption advisories can be found at <u>http://www.dshs.texas.gov/seafood/advisories-bans.aspx</u>.

Little Cypress Bayou (Segment 0501B) is on the 2014 Texas IR 303(d) List for DO, bacteria, and toxicity in water. These parameters were first listed in 2006. It also has a new listing of impaired fish community in Assessment Unit (AU) 0501B_02 only. AU 0501B_02 also has a concern for impaired habitat. A RUAA on Little Cypress Bayou (Segment 0501B) has been completed and is under review by TCEQ. The RUAA findings are slated to be considered and possibly incorporated in the 2020 standards revision.

Segment 0511 – Cow Bayou Tidal – From the confluence with the Sabine River in Orange County to a point 4.8 kilometers (3.0 miles) upstream of IH-10 in Orange County.

Station 10449 (CB1) – Cow Bayou at Roundbunch Rd.

This segment is included in the OCTMDL Project for bacteria, DO and pH. In FY2016, Station 10449 had one single grab exceedance for both DO and pH, and four for bacteria. A concern for DO is listed for AU 0511_04 and Segments 0511A, 0511B, 0511C, and 0511E. Potential bacteria sources in this segment include channelization, point source discharge, municipal runoff, residential districts, and on-site sewage treatment systems.



Segment 0508 – Adams Bayou Tidal – From the confluence with the Sabine River in Orange County to a point 1.1 kilometers (0.7 mile) upstream of IH-10 in Orange County.

Station 10441 (AB2) – Adams Bayou at FM 1006

This segment is included in the OCTMDL Project for bacteria and low DO. In FY2016, Station 10441 had two DO single grab exceedances and four single grab exceedances for bacteria. A concern is listed in AU 0508_04 for pH. Potential sources bacteria sources in this segment include channelization, point source discharges, municipal runoff, residential districts, and upstream sources.



Lower Basin Segments

Segment 0502 – Sabine River above Tidal – From West Bluff in Orange County to the confluence with Caney Creek in Newton County.

Station 10395 (SR1) – Sabine River 12.0 kilometers upstream of IH-10 Station 10397 (SR2) – Sabine River at SH 12 north of Deweyville, TX

The 2014 Texas IR indicates no impairments in this segment. In FY2016, Station 10395 had one single grab exceedance for DO and two for bacteria. A screening level concern for DO is listed in Segment 0502_01.

Nichols Creek (Segment 0502A), first listed in 2002, is on the 2014 Texas IR 303(d) List for bacteria and DO. A RUAA has been completed on this creek to address these impairments. The RUAA findings support the revision of Nichols Creek from primary contact recreation (PCR) to secondary contact recreation 1 (SCR1).



Caney Creek (Segment 0502B_02), first listed in 2006, is on the 2014 Texas IR 303(d) List for bacteria. An RUAA has been completed on this creek to address these impairments. The RUAA identified the presumed use of PCR for Caney Creek is appropriate.

Cypress Creek (Segment 0502E), first listed in 2010, is on the 2014 Texas IR 303(d) List for DO. A concern is also listed in this segment for impaired habitat and microbenthic community.

Segment 0503 – Sabine River above Caney Creek - From a point immediately upstream of the confluence with Caney Creek in Newton County up to Toledo Bend Dam in Newton County.

Station 10398 (SR3) – Sabine River at US 190 east of Bon Wier, TX Station 10340 (BA4) – Anacoco Bayou at LA Hwy 111 crossing southwest of Knight, LA Station 10399 (SR5) – Sabine River at SH 63 east of Burkeville, TX Station 10401 (TB6S) – Sabine River below Toledo Bend Reservoir at right abutment of spillway for dam (LA) Station 15660 (BT1) – Bayou Toro at LA SH 392 in Sabine Parish SW of Hornbeck, LA

The 2014 Texas IR 303(d) List indicates no impairments in this segment. In FY2016, bacteria was the only water quality parameter that exceeded the TSWQS in this segment. Three exceedances for bacteria were noted at Station 10340, two at Stations 10398 and 10399, and one at Station 15660. Inclement weather and flooding prevented sampling twice at Station 10399 and three times at Station 10401 during FY2016.

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Segment 0513 – Big Cow Creek – From the confluence with the Sabine River in Newton County to a point 4.6 kilometers (2.9 miles) upstream of R 255 in Newton County.

Station 10465 (BCC1) – Big Cow Creek at FM 1416 south of Bon Wier, TX

The 2014 Texas IR 303(d) List indicates no impairments in this segment. In FY2016, Station 10465 had two bacteria exceedances and one pH exceedance. A concern was noted in AU 0513_01 for lead in water. Potential sources for lead in water include non-point and upstream sources.



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Segment 0504 – Toledo Bend Reservoir – From Toledo Bend Dam in Newton County to a point immediately upstream of the confluence of Murvaul Creek in Panola County, up to a normal pool elevation of 172 feet (impounds the Sabine River).

Station 10404 (TB6A) – Toledo Bend Reservoir main lake above the dam at the old river channel. Station 10406 (TB6C) – Toledo Bend Reservoir in Six Mile boat lane 0.8 kilometers east of SH 87. Station 18054 (TB6Q) – Toledo Bend Reservoir in Negreet Bayou (LA) Station 10411 (TB6F) – Toledo Bend Reservoir in Sunshine Bay near FM 3121 bridge Station 10402 (TB6H) – Toledo Bend Reservoir at SH 21 northeast of Milam, TX Station 15659 (TB6K) – Toledo Bend Reservoir Lanana Bayou at LA SH 191 in Sabine Parish west of Many, LA Station 15655 (TB6J) – Toledo Bend Reservoir in Patroon Bayou Branch at FM 276 Station 18053 (TB6LN) – Toledo Bend Reservoir in San Miguel arm boat lane (LA) Station 18052 (TB6R) – Toledo Bend Reservoir at Ragtown recreation area

The 2014 Texas IR 303(d) List indicates no water quality impairments in this segment, although there has been a TDSHS issued a fish consumption advisory for Toledo Bend Reservoir since 1998 for largemouth bass and freshwater drum due to elevated levels of mercury in fish tissue. Clear Lake (Segment 0504E) also has a fish consumption advisory due to elevated levels of mercury in fish tissue that was first issued in 2006. In FY2016, Station 10406 had one single grab exceedance for bacteria.

The 2014 IR listed screening level concerns in the following AU's: 0504_07 for DO, nitrate, and Chl-a; 0504_09 for pH; 0504_10 for DO; and 0504_11 for Chl-a.



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Upper Basin Segments

Segment 0505 - Sabine River Above Toledo Bend Reservoir - From a point immediately upstream of the confluence of Murvaul Creek in Panola County to a point 100 meters (110 yards) downstream of US 271 in Gregg County.

Station 10415 (SR10) – Sabine River at FM 2517 Station 13628 (SR11) – Sabine River at US 59 Station 10427 (SR16) – Sabine River at SH 42

Water quality parameters measured in this segment during FY2016 meet the TSWQS with the exception of bacteria. Each site exceeded single grab TSWQS numeric criteria twice for bacteria. These exceedances occurred during increased flows and elevated turbidity levels from rainfall runoff. Potential bacteria sources include natural and urban storm water runoff, wildlife, on-site



sewage treatment systems, and municipal point source discharges. The Sabine River from Hatley Creek upstream to Grace Creek in Gregg County (AU 0505_04) was removed from the 2014 Texas IR 303(d) List for bacteria. Inclement weather prevented sampling in April at all three stations. Biological sampling data to address ambient toxicity concerns at Station 10415 (SR10) was submitted to TCEQ in December 2015. Results showed no toxicity and a high aquatic life use.

Grace Creek (Segment 0505B) first listed in 2000, is on the 2014 Texas IR 303(d) List for bacteria and DO. A joint TCEQ and SRA-TX 24-hour DO Study at site 21590 on Grace Creek (Segment 0505B) was completed in October 2015 and will be used in the reassessment of the DO impairment on Grace Creek. A RUAA to address elevated bacteria concerns has been completed on Grace Creek (Segment 0505B). The RUAA findings support the revision of Grace Creek from a PCR to SCR1.

Rabbit Creek (Segment 0505D), an unclassified water body first listed in 2000, remains on the 2014 Texas IR with a screening level concern for bacteria. Ward's Creek (Segment 0505G) first listed in 2000, remains on the 2014 303(d) List for DO and has a concern for impaired habitat. Depressed DO levels are not uncommon in unclassified, rural, low gradient streams with seasonal flow. Hills Lake (Segment 0505O), an oxbow lake 13 miles east of Carthage, was first listed in 2006 and remains on the 2014 Texas IR 303(d) List due to a TDSHS fish consumption advisory for mercury in edible fish tissue for freshwater drum and largemouth bass.

Segment 0509 Murvaul Lake – From Murvaul Dam in Panola County up to the normal pool elevation 266.3 feet (impounds Murvaul Bayou).

The TCEQ 2014 Texas IR indicates no impairments to the reservoir's designated uses, but there is a screening level concern for Chl-a.

Segment 0510 – Lake Cherokee – From Cherokee Dam in Gregg/Rusk County up to normal pool elevation 265.3 (impounds Cherokee Bayou).

Lake Cherokee is a new listing on the 2014 Texas IR 303(d) List for low pH and a screening level concern for depressed DO was indicated. Depressed pH in Lake Cherokee and Tiawichi Creek has been investigated by SRA-TX, TCEQ, and City of Longview personnel and is normally observed following periods of extended drought. Local geography and natural conditions are potential sources for depressed pH in Lake Cherokee.

The City of Longview monitored Station 15514 nine months in FY2016 under the SRA-TX Quality Assurance Project Plan (QAPP).

Segment 0506 - Sabine River below Lake Tawakoni - From a point 100 meters (110 yards) downstream of US 271 in Gregg County to Iron Bridge Dam in Rains County.

Station 10428 (SR17) – Sabine River at US 271 Station 10429 (SR19) – Sabine River at SH 14 south of Hawkins Station 10430 (SR21) – Sabine River at US 69

Water quality parameters measured in this segment during FY2016 meet the TSWQS with the exception of bacteria. Stations 10428 and 10430 each exceeded the bacteria single grab TSWQS numeric criteria once and Station 10429 had two single grab exceedances. Biological sampling data to address ambient toxicity concerns in Little White Oak Creek was submitted to TCEQ in December 2015. Results showed no toxicity and a high aquatic life use. Screening level concerns were noted for Chl-a in AU 0506_02 and depressed DO in AU's 0506_03 and 0506_04. Harris Creek (Segment 0506A), first listed in 2000, is on the 2014 303(d) List for depressed DO and a screening level concern was noted for bacteria and depressed DO. To address these concerns, quarterly monitoring was conducted on Harris Creek by TCEQ Region 5 personnel in FY2015 and included conventional parameters, flow, bacteria and 24-hour DO measurements.

Screening level concerns for ammonia and depressed DO were noted for Wiggins Creek (Segment 0506C) and Chl-a on Lake Gladewater (Segment 0506H).



Segment 0514 – Big Sandy Creek – From the confluence with the Sabine River in Upshur County to a point 2.6 kilometers (1.6 miles) upstream of SH 11 in Hopkins County.

Station 10468 (BS1) – Big Sandy at SH 155

Water quality parameters measured in this segment during FY2016 meet the TSWQS with the exception of bacteria. Station 10468 exceeded the TSWQS single grab numeric criteria twice for bacteria.

This segment, first listed in 2006, is on the 2014 IR 303(d) List for bacteria, as well as screening level concerns for depressed DO and Chl-a. Elevated bacteria levels are consistently observed during periods of increased flows, increased turbidity, and reduced Secchi transparencies from rainfall runoff. Non-point bacteria sources within this watershed include urban runoff, agriculture practices, wildlife, and private septic systems. Lake Winnsboro also had a screening level concern for Chl-a.

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Segment 0515 – Lake Fork Creek - From the confluence with the Sabine River in Wood County to Lake Fork Dam in Wood County.

Station 10469 (LF20) - Lake Fork Creek at US80

The TCEQ 2014 Texas IR indicates no impairments in this segment and water quality parameters measured in this segment during FY2016 meet the TSWQS. Station 10469 exceeded the TSWQS single grab numeric criteria once for bacteria. Lake Quitman (Segment 0515A) had a screening level concern for Chl-a.

Segment 0512 – Lake Fork Reservoir – From the Lake Fork Dam in Wood County up to the normal pool elevation of 403 feet (impounds Lake Fork Creek).

Station 10458 (LF2) – Lake Fork Reservoir near dam in creek channel Station 10462 (LF4) – Lake Fork Reservoir mid-cove in Lake Fork Creek arm at FM 515 Station 10461 (LF3) – Lake Fork Reservoir mid-arm in Caney Creek arm at FM 515



Water quality parameters measured by SRA-TX in this segment during FY2016 meet TSWQS and fully support this segment's designated uses. The 2014 Texas IR indicated no impairments in Lake Fork Reservoir. Screening level concerns were indicated in the Canev Creek arm (AU 0512 02) for Chl-a, and concerns for pH and Chl-a in the upper portion of the Lake Fork Creek arm (AU 0512 05).

Running Creek (Segment 0512A) and Elm Creek (Segment 0512B) first listed in 2002 are on the 2014 Texas IR 303(d) List for bacteria. A RUAA to address elevated bacteria concerns has been completed on each of these creeks. The RUAA findings support the revision of Running and Elm Creeks from PCR to SCR1.

Running Creek (Segment 0512A) also had screening level concerns for DO, nitrate, and ammonia and Elm Creek had screening level concerns for DO and ammonia.

Segment 0507 – Lake Tawakoni – From the Iron Bridge Dam in Rains County up to normal pool elevation of 437.5 feet.

Station 10434 (LT23A) – Lake Tawakoni in the main lake near the dam Station 10435 (LT23D) – Lake Tawakoni in Kitsee Inlet near White Point Causeway Station 10437 (LT23B) – Lake Tawakoni at SH 276

Water quality parameters measured in this segment during FY2016 meet TSWQS. The 2014 Texas IR indicates a screening level concern for Chl-a in Lake Tawakoni (Segment 0507). The Cowleech Fork of the Sabine River arm (AU 0507_04) first listed in 2008, is on the 2014 Texas IR 303(d) List for elevated pH and has a screening level concern for Chl-a. A special study to address the elevated pH has been completed and data supports the removal of this 303(d) listing.

The 2014 Texas IR indicated a concern for depressed DO, nitrate, and Chl-a in the Cowleech Fork of the Sabine River (Segment 0507A). Long Branch (Segment 0507B) was included on the 2014 Texas IR with a screening level concern for nitrate. The South Fork of the Sabine River (Segment 0507G), first listed in 2006, is listed on the 2014 Texas IR 303(d) List for bacteria. An RUAA has been completed on the South Fork of the Sabine River to address these bacteria concerns. The RUAA findings support the revision of the South Fork of the Sabine River from PCR to SCR1. A screening level concern for depressed DO was indicated for Caddo Creek (Segment 0507H). The Cowleech Fork of the Sabine River, Long Branch, South Fork of the Sabine River, and Caddo Creek are all unclassified waterbodies.







Stakeholder Participation and Public Outreach

SRA-TX plans and coordinates monitoring efforts with other basin entities, the TCEQ monitoring staff, and other interested participants annually within the Sabine Basin. All entities collecting water quality data in the Sabine Basin are encouraged to coordinate their efforts with SRA-TX and participate under the SRA-TX QAPP. Currently, TCRP sampling of Lake Cherokee is performed by the City of Longview.

The Sabine Basin Steering Committee meetings allow stakeholders to have input on water quality concerns and prioritizing water quality monitoring in the Sabine River Basin. The 2016 Sabine Basin Steering Committee and Coordinated Monitoring meetings were held in the cities of Emory, Longview, and Orange. Members of the public, water supply corporations, permitted dischargers, councils of government, SRA-TX laboratory customers, and city and county officials are invited annually to become steering committee members. Prior Steering Committee discussions have included the current TCEQ Texas IR assessment, water quality updates and concerns, the SRA-TX water conservation and contingency plans, the SRA-TX Community Assistance Program, special studies, future monitoring needs, and invasive species management. For more information about participating in the Sabine Basin Steering Committee meetings please contact Terry Wilson, Upper Basin Field Office Coordinator, at (903) 878-2420 or twilson@sratx.org.

The SRA-TX continues to promote participation in the OCTMDL Project by publicizing and facilitating the annual stakeholders meetings. The first such stakeholder meeting since the I-Plan was approved was held on September 22, 2016 at the SRA-TX offices in Orange.

The SRA-TX participated in the TCEQ-facilitated Surface Water Quality Standards Advisory Workgroup which offers input on water quality standards implementation and development.

The SRA-TX attended a Texas Watershed Steward (TWS) program workshop for the Lake Fork, Lake Tawakoni and area watersheds. The TWS program was started to provide science based, watershed education to help stakeholders identify and address local water quality impairments. Additional information concerning the TWS program can be found at: <u>http://tws.tamu.edu/</u>.

Additional public outreach includes providing presentations at area schools, civic groups, and environmental events as well as tours of SRA-TX facilities. Examples include Sabine County Ag Day, information booths at Shangri-La Botanical Garden's Eco-Fest, and the City of Longview's East Texas Outdoor Expo.

How to Get Involved

Stakeholders and other interested parties are encouraged to stay informed about water quality in the Sabine Basin through an electronic mailing group. Periodic e-mails are sent to group members to keep them up to date on water-related topics and other activities. Those interested can sign up at: http://www.sratx.org/aboutsra/constant_contact/sratxinfo.asp

The SRA-TX continues to support the Texas Stream Team, a citizen monitoring program of The Meadows Center for Water and the Environment at Texas State University. This group is a cooperative partnership of TCEQ, Texas State University, and the United States Environmental Protection Agency (USEPA).

SRA-TX provides sampling kits and supplies to volunteers within the Sabine Basin. Additional information is available at <u>http://www.meadowscenter.txstate.edu/Service/TexasStreamTeam.html</u>

Spills, fish kills, or illegal dumping may be reported to the TCEQ at: <u>https://www.tceq.texas.gov/p2/dont-mess-with-texas-water-a-way-to-report-illegal-dumping</u>, or to the TPWD at <u>https://tpwd.texas.gov/landwater/water/environconcerns/kills_and_spills/regions/</u>.

Web Site

The SRA-TX's website, <u>http://www.sratx.org/</u>, provides TCRP stakeholders with access to information regarding water resource topics within the Sabine Basin including the following:

- TCRP program, TCRP meetings, and links to the TCEQ and other TCRP Planning Partner websites are available at: <u>http://www.sratx.org/srwmp/tcrp/default.asp</u>.
- State of the Basin page, <u>www.sratx.org/srwmp/tcrp/state_of_the_basin/</u>, is a portal to the latest water quality information for the Sabine River Basin. Available documents include current Monthly Water Quality Monitoring Program Reports, Sabine Basin Highlights Reports, and Sabine Basin Summary Reports. The page also includes web links to the SRA-TX Coordinated Monitoring Schedule and the TCEQ TCRP CRP Data Tool.

