

Brazos River Basin Summary Report 2017



Brazos River Authority

Executive Summary

Introduction

The principal aim of the Texas Clean Rivers Program (CRP) is to ensure safe, clean water supplies for the future of Texans' drinking water needs, industry, agriculture, healthy ecosystems, and recreation and for all other uses of this valuable state resource. The Brazos River Authority, as a member of the Texas Clean Rivers Program, works to answer questions about the quality of our local streams, rivers and lakes in the *Brazos River Basin Summary Report 2017*. The report also summarizes the results of the ongoing water quality assessment activities in the Brazos River basin under the Texas Clean Rivers Program. Based on an evaluation of recent water quality monitoring data from the Brazos River basin, various impairments and concerns are highlighted for particular rivers, lakes and creeks.

In the 14 major watersheds of the Brazos River Basin one can find examples of both high quality waters, as well as streams that have been degraded by human settlement and development activities. Amid an overall trend of generally good water quality in the basin, there are problem areas to address and issues on which management agencies and stakeholders must focus.

Water Quality Monitoring Activities

Although the Brazos River Authority is the primary agency collecting water quality monitoring data in the Brazos River basin, it also works closely with the Texas Commission on Environmental Quality (TCEQ) and other CRP Partners. All data is collected under TCEQ approved Quality Assurance Project Plans with all laboratory analysis performed by NELAP accredited laboratories and undergoes a rigorous quality assurance and quality control process.

Ambient water quality monitoring is coordinated through the Authority's Clean Rivers Program Technical Advisory Committee. A Coordinated Monitoring Schedule for the Brazos River Basin is developed in the spring of each year and is implemented in September of each year. The purpose of this Coordinated Monitoring Schedule is to reduce duplication of effort between agencies, to maximize limited monitoring funds and ensure monitoring coverage of the entire basin.

Currently, there are approximately 225 active routine, ambient water quality monitoring stations in the 14 watersheds. Parameters monitored vary by station depending on the concerns of the waterbody. A core set of field parameters is collected at each site and includes: water temperature, dissolved oxygen, conductivity, salinity and pH.

In addition to ambient water quality monitoring, the Authority has aided in and conducted special studies throughout the basin that required targeted monitoring to address specific pollutants as well as biological and habitat assessments. Each special study was selected because it was a basin priority.

Data Analysis

Having data to analyze is the objective of these monitoring activities. Data analysis results are shared with the TCEQ and basin CRP Stakeholders on a routine basis and are used to develop future monitoring programs and to identify issues. Data collected through CRP are available to the public at the BRA hosted webpage <http://crpdata.brazos.org/> as well as the TCEQ webpage <https://www80.tceq.texas.gov/SwqmisWeb/public/crpweb.faces> or <https://www80.tceq.texas.gov/SwqmisPublic/public/default.htm>.

Top 10 Water Quality Management Issues Facing the Brazos River Basin

EXCEEDANCE OF STATE STANDARDS

- Concerns for recreation due to elevated bacteria levels are pervasive throughout the Brazos River Basin with 66 waterbody impairments.
- Dissolved oxygen depletion which may negatively impact aquatic life with 8 waterbody impairments.
- Natural salt which impacts the usability of water for human consumption in the Brazos River with 4 waterbody impairments for chloride and/or sulfate and/or TDS.
- Evaluate stream standards to ensure that they are appropriate before listing segments for water quality violations.

DATA NEEDS

- Respond to the listing (support or refute) of waterbodies on the Integrated Report.
- Data elements such as land use, rainfall, flow, and other climatic and geographic conditions to determine if a listed or suspected impairment is naturally occurring, especially in relatively undeveloped watersheds.
- Collection of accurate flow information to correlate with regional water quality data to better understand that data.

NONPOINT SOURCE POLLUTION, STORMWATER DISCHARGE AND RUNOFF

- Work to determine the actual role stormwater conveyances play in the cause of elevated bacteria levels.
- Accumulation of pesticides, fertilizers and animal waste from residential properties and agricultural practices.
- Sedimentation and turbidity from soil and bank erosion, quarrying and construction activities, along with the transport of other pollutants with sediment.
- Accumulation of trash and other debris from littering and illegal dumping.

WASTEWATER

- Maintaining the progress made in the quality of municipal and industrial point source discharges.
- Closer oversight and technical assistance to the numerous small wastewater dischargers in the basin.
- Regionalize wastewater treatment facilities whenever possible to reduce the problems caused by inadequately-operated smaller plants that are dispersed across the basin and the problems caused by the high concentration of aging, poorly functioning on-site sewage disposal systems in population growth centers.
- Burden on local governments to finance and accomplish major capital improvements, especially in response to state and federal mandates, budget cuts, and the problems caused by aging infrastructure.

WATERSHED MANAGEMENT

- Watershed-based management strategies built on stakeholder involvement.
- Coordinating and integrating concurrent assessment and management programs whenever possible.
- Focus on microwatershed concerns for nonpoint source runoff, point source discharges, accidental spills and illegal dumping.
- Determine continuous sources of contamination.

ECOSYSTEMS

- Inadequate management of shoreline and riparian areas adjacent to waterways.
- Physical alteration and disruption of waterways and their associated natural drainage systems, wetlands, floodplains, and riparian areas:
 - erosion and sedimentation
 - loss of stabilizing, filtering, and shading vegetation
 - stream diversions
 - man-made, dead-end canals and channels
 - impacts on boating traffic
 - Impacts of degraded water quality on aquatic life and on species abundance and diversity.

FUNDING

- Stable, adequately-funded, long-term water quality monitoring programs.
- Implementation funds to address problems in areas where small communities or low-income residents do not have the resources.
- Funds to help communities improve aging infrastructure.

PUBLIC EDUCATION

- Public education on the role that individual citizens play in pollution prevention and the cumulative effects of individual actions.
- Public resistance to land use regulation and other measures that would impact individuals and private property.
- Effectiveness of voluntary water quality protection efforts on private lands, particularly for agricultural lands and residential properties.
- Importance of basic water aesthetics to the general public.

ENFORCEMENT

- Difficulty of illegal dumping prevention and enforcement of ordinances already in place.
- Difficulty of identifying illegal dischargers and enforcement of regulations already in place.
- Prevention of the proliferation of non-native, invasive species and enforcement on those trading in these species.
- Education of rural law enforcement and judicial personnel regarding environmental laws and prosecution of environmental crimes.

NATURAL SALT

- Brine springs in the upper region of the basin impact the Brazos River with elevated chloride levels affecting water use and availability.
- Burden on local governments and industry to finance advanced treatment technologies to produce potable water from the Brazos River.
- Difficulty of disposal of highly concentrated brine from the advanced treatment process.

Conclusions

Overall, there is a good understanding of the water quality problems that exist in the basin. Focus will remain on the known problems and the process of working with various other state and federal agencies and local governments and stakeholders to address these problems.

Because water quality issues frequently move downstream, watershed-based planning and education will be the cornerstone to addressing water quality issues. When individuals recognize that their actions have an impact on water quality, remarkable changes will be made in the cumulative impact that individuals have on the quality of water in their communities. As the population grows, human impacts to water quality and quantity will increase. It is going to require the continued efforts of every governmental entity, industry and citizen to resolve issues identified in this report.

Elevated chlorides and total dissolved solids affect water usability along the entire mainstem. Bacteria and nutrients are a problem in over one third of the basin's segments. The problems caused by human activity can be controlled through proper management of wastewater systems and through implementing best management practices in the basin. Throughout this report, the Authority has outlined areas that need more detailed analysis or more information to better assess water quality conditions. The Authority will continue to coordinate with the Technical Advisory Committee and local entities to gather this data. As the Authority gains understanding of the dynamics within each of the watersheds, we are able to better inform and educate the public on water quality in their community. To address all the problems identified in this report will require continued participation by local stakeholders in addition to federal, state and regional entities. The most important factor determining the success of activities to improve the waters of the Brazos basin will be the commitment and understanding of individuals in the basin to water quality.

**Status of Water Bodies
in the Brazos River Basin
(from the 2014 Integrated Report)**

NS - indicates a segment is non-supporting for a designated use, or impaired
 CS - indicates a segment has a concern for water quality based on screening levels
 CN - indicates a segment has concern for near-nonattainment of applicable water quality standards
 Entries in BOLD are newly listed in 2014
 Strike throughs are removals from the list in 2014

Watershed of the Salt and Double Mountain Forks

| Water Body | Segment | Parameter(s) Impairment and/or Concern |
|--|----------------|--|
| North Fork Double Mountain Fork Brazos River | 1241A_01 | Nutrients and/or Chl a – CS |
| | 1241A_02 | Bacteria —NS MEETS Nutrients and/or Chl a – CS |
| Buffalo Springs Lake | 1241C_01 | Nutrients and/or Chl a – CS |
| Lake Alan Henry | 1241B_01 | Mercury in Edible tissue – NS |
| White River Lake | 1240_01 | TDS, Cl – NS |
| Double Mountain Fork Brazos River | 1241_01 | Bacteria – NS |
| Croton Creek | 1238A_01 | Bacteria – CN |
| Miller's Creek Reservoir | 1208A_01 | Bacteria – CN DO – CS |
| Brazos River Above Possum Kingdom Lake | 1208_02 | Bacteria – NS |
| | 1208_04 | |
| | 1208_05 | |
| | 1208_05 | Nutrients and/or Chl a – CS |

Watershed of the Clear Fork

| Water Body | Segment | Parameter(s) Impairment and/or Concern |
|-------------------------|----------------|--|
| Clear Fork Brazos River | 1232_02 | Nutrients and/or Chl a – CS pH - CN |
| | 1232_03 | Nutrients and/or Chl a – CS |
| | 1232_04 | DO – CS Nutrients and/or Chl a – CS |
| California Creek | 1232A_01 | Bacteria – NS Nutrients and/or Chl a – CS Fish/ Macrobenthics – CN |

Water shed of the Clear Fork (Continued)

| Water Body | Segment | Parameter(s) Impairment and/or Concern |
|-------------------------|----------------|--|
| Deadman Creek | 1232B_01 | Bacteria—NS MEETS Nutrients and/or Chl a – CS |
| | 1232B_02 | Bacteria – CN |
| Paint Creek | 1232C_01 | Nutrients and/or Chl a – CS |
| Hubbard Creek Reservoir | 1233_02 | DO – CS |
| Big Sandy Creek | 1233A_01 | Bacteria – CN |

Upper Watershed

| Water Body | Segment | Parameter(s) Impairment and/or Concern |
|--|-------------------------------|--|
| Brazos River Above Possum Kingdom Lake | 1208_01 | Bacteria – NS Nutrients and/or Chl a – CS |
| Brazos River Below Possum Kingdom Lake | 1206_01 | Nutrients and/or Chl a – CS |
| | 1206_01 1206_02 | Habitat – CS Macrobenthics – CN |
| Lake Granbury | 1205_02 1205_03 | Nutrients and/or Chl a – CS |
| | 1205_05 | DO – CS Nutrients and/or Chl a – CS |
| Walnut Creek | 1205C | Nutrients and/or Chl a – CS |
| Brazos River Below Granbury | 1204_02 | Nutrients and/or Chl a – CS Habitat – CS |
| Camp Creek | 1204A_01 | Bacteria – NS |
| Squaw Creek Reservoir | 1229A_01 | Nutrients and/or Chl a – CS |
| Nolan River | 1227_01 1227_02 | TDS, SO ₄ – NS Nutrients and/or Chl a – CS |
| Buffalo Creek | 1227A_01 | Nutrients and/or Chl a – CS |
| Lake Pat Cleburne | 1228_01 | Nutrients and/or Chl a – CS |
| Whitney Lake | 1203_01 | DO – CN |
| | 1203_03 1203_05 1203_06 | Nutrients and/or Chl a – CS |
| | 1257_01 | Nutrients and/or Chl a – CS |

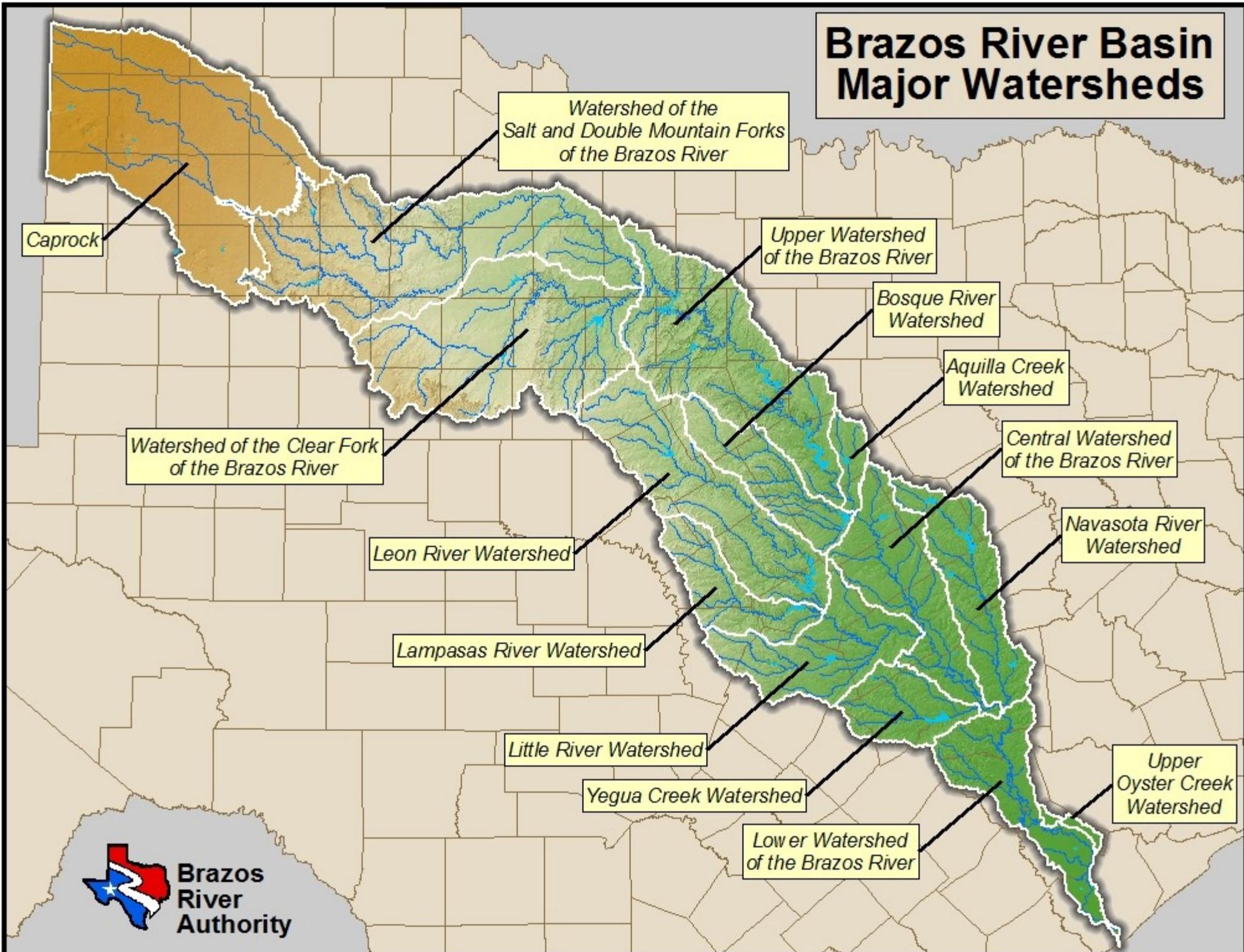
Aquilla Creek Watershed

| Water Body | Segment | Parameter(s) Impairment and/or Concern |
|-------------------|--------------------|---|
| Aquilla Reservoir | 1254_01 1254_02 | Nutrients and/or Chl a – CS |
| | 1254_03 | Nutrients and/or Chl a – CS Sediment – CS |
| Hackberry Creek | 1254A_01 | DO – CS Nutrients and/or Chl a – CS |

Bosque River Watershed

| Water Body | Segment | Parameter(s) Impairment and/or Concern |
|---|--------------------|---|
| Upper North Bosque River | 1255_01 | Bacteria – NS Nutrients and/or Chl a – CS |
| | 1255_02 | Bacteria – NS DO – NS Nutrients and/or Chl a – CS |
| Goose Branch | 1255A_01 | Bacteria – NS Nutrients and/or Chl a – CS |
| North Fork Upper North Bosque River | 1255B_01 | Bacteria – NS Nutrients and/or Chl a – CS |
| Scarborough Creek | 1255C_01 | Bacteria – NS Nutrients and/or Chl a – CS |
| South Fork North Bosque River | 1255D_01 | Bacteria – NS Nutrients and/or Chl a – CS |
| Unnamed Tributary of Goose Branch | 1255E_01 | Bacteria – NS Nutrients and/or Chl a – CS |
| Unnamed Tributary of Scarborough Creek | 1255F_01 | Bacteria – NS |
| Woodhollow Branch | 1255G_01 | Bacteria – NS |
| South Fork Upper North Bosque River Reservoir | 1255H_01 | DO – CS |
| Dry Branch | 1255I_01 | Bacteria – NS Nutrients and/or Chl a – CS |
| Goose Branch Reservoir | 1255J_01 | Nutrients and/or Chl a – CS |
| Scarborough Creek Reservoir | 1255K_01 | Nutrients and/or Chl a – CS |
| North Bosque River | 1226_01 1226_03 | Nutrients and/or Chl a – CS |
| | 1226_02 | DO – CN Nutrients and/or Chl a – CS |
| | 1226_04 | Nutrients and/or Chl a – CS Macrobenthics – CN |
| Duffau Creek | 1226A_01 | Bacteria – NS |
| Green Creek | 1226B_01 | DO – NS Nutrients and/or Chl a – CS |
| Indian Creek | 1226E_01 | Bacteria – NS Nutrients and/or Chl a – CS |
| Sims Creek | 1226F_01 | Bacteria – NS Nutrients and/or Chl a – CS |
| Alarm Creek | 1226H_01 | Bacteria – NS Nutrients and/or Chl a – CS |
| Little Duffau Creek | 1226K_01 | Bacteria – NS Nutrients and/or Chl a – CS |
| Little Green Creek | 1226M_01 | Bacteria – NS |
| Indian Creek Reservoir | 1226N_01 | Nutrients and/or Chl a – CS |
| Sims Creek Reservoir | 1226O_01 | DO – CS Nutrients and/or Chl a – CS |
| Waco Lake | 1225_03 | Nutrients and/or Chl a – CS |
| Middle Bosque/South Bosque River | 1246_02 | Nutrients and/or Chl a – CS |
| Tonk Creek | 1246D_01 | Nutrients and/or Chl a – CS |
| Wasp Creek | 1246E_01 | Bacteria – NS Nutrients and/or Chl a – CS |

Brazos River Basin Major Watersheds



Leon River Watershed

| Water Body | Segment | Parameter(s) Impairment and/or Concern |
|---|--|---|
| Nolan Creek/South Nolan Creek | 1218_02 | Bacteria – NS Nutrients and/or Chl a – CS |
| Unnamed Tributary to Little Nolan Creek | 1218A_01 | Bacteria – CN |
| Little Nolan Creek | 1218C_01 | Bacteria – NS |
| Leon River Below Belton Lake | 1219_01 | Nutrients and/or Chl a – CS |
| Cowhouse Creek | 1220A_03 | Bacteria – NS MEETS |
| Leon River Below Proctor Lake | 1221_01 1221_04 1221_05 | Bacteria – NS MEETS |
| | 1221_03 1221_06 | Bacteria – NS |
| | 1221_01 1221_04 1221_05 1221_07 | DO – CS Nutrients and/or Chl a – CS |
| | 1221_02 1221_03 1221_06 | Nutrients and/or Chl a – CS |
| Resley Creek | 1221A_01 | Bacteria – NS DO – NS Nutrients and/or Chl a – CS |
| | 1221A_02 | Bacteria – NS Nutrients and/or Chl a – CS |
| South Leon River | 1221B_01 | Bacteria – NS MEETS Habitat – CS |
| Pecan Creek | 1221C_01 | Nutrients and/or Chl a – CS |
| Indian Creek | 1221D_01 | Bacteria – NS DO – CS Nutrients and/or Chl a – CS |
| | 1221D_02 | Bacteria – NS Nutrients and/or Chl a – CS |
| Walnut Creek | 1221F_01 | Bacteria – NS Nutrients and/or Chl a – CS |
| Proctor Lake | 1222_01 1222_02 1222_03 | Nutrients and/or Chl a – CS |
| Duncan Creek | 1222A_01 | Bacteria – NS Nutrients and/or Chl a – CS DO – CN |
| Rush-Copperas Creek | 1222B_01 | Bacteria – NS Nutrients and/or Chl a – CS |
| Sabana River | 1222C_01 | Bacteria – NS |
| Sowells Creek | 1222D_01 | Bacteria – CN |
| Sweetwater Creek | 1222E_01 | Bacteria – NS |
| Hackberry Creek | 1222F_01 | Bacteria – CN DO – CN |
| Leon River Below Leon Reservoir | 1223_01 | Bacteria – NS DO – NS Nutrients and/or Chl a – CS |
| Armstrong Creek | 1223A_01 | Bacteria – NS Nutrients and/or Chl a – CS |
| Cow Creek | 1223B_01 | Bacteria – CN |

Lampasas River Watershed

| Water Body | Segment | Parameter(s) Impairment and/or Concern |
|-------------------|--------------------|---|
| Trimmier Creek | 1216A_01 | Bacteria – NS MEETS Macrobenthics – CN |
| Sulphur Creek | 1217B_02 | DO – CS |
| North Rocky Creek | 1217D_01 | DO – NS |
| Clear Creek | 1217G_01 | Nutrients and/or Chl a – CS |
| Salado Creek | 1243_01 1243_02 | Nutrients and/or Chl a – CS |

Little River Watershed

| Water Body | Segment | Parameter(s) Impairment and/or Concern |
|--|-------------------------------|--|
| Little River | 1213_01 | Bacteria – NS MEETS Nutrients and/or Chl a – CS |
| | 1213_02 1213_03 | Nutrients and/or Chl a – CS |
| | 1213_04 | Bacteria – NS Nutrients and/or Chl a – CS |
| Big Elm Creek | 1213A_01 | Bacteria – NS |
| Little Elm Creek | 1213B_01 | Nutrients and/or Chl a – CS DO – CN |
| Unnamed Tributary of Little Elm Creek | 1213C_01 | Nutrients and/or Chl a – CS Habitat – CS |
| San Gabriel River | 1214_01 | Bacteria – NS MEETS Cl ⁻ – NS SO ₄ – NS Nutrients and/or Chl a – CS |
| | 1214_02 | Cl ⁻ – NS SO ₄ – NS Bacteria – CN |
| Brushy Creek | 1244_01 | Bacteria – CN Nutrients and/or Chl a – CS |
| | 1244_03 | Bacteria – NS Nutrients and/or Chl a – CS |
| | 1244_04 | Bacteria – NS |
| Granger Lake | 1247_01 1247_02 1247_03 | Nutrients and/or Chl a – CS |
| Willis Creek | 1247A_01 | Bacteria – NS Nutrients and/or Chl a – CS |
| San Gabriel/North Fork San Gabriel River | 1248_01 | Cl ⁻ – NS TDS – NS Nutrients and/or Chl a – CS |
| Huddleston Branch | 1248B_01 | Bacteria – CN Nutrients and/or Chl a – CS |
| Mankins Branch | 1248C_01 | Bacteria – NS Nutrients and/or Chl a – CS Habitat – CS |
| South Fork San Gabriel River | 1250_03 | DO – CS |

Central Watershed

| Water Body | Segment | Parameter(s) Impairment and/or Concern |
|-----------------------------------|-------------------------------|--|
| Brazos River/Lake Brazos | 1256_02 | Nutrients and/or Chl a – CS |
| | 1256_03 | DO – CS |
| Brazos River Above Navasota River | 1242_02 1242_04 1242_05 | Nutrients and/or Chl a – CS |
| Marlin City Lake System | 1242A_01 1242A_02 | Nutrients and/or Chl a – CS |
| Cottonwood Branch | 1242B_01 | Bacteria – NS Nutrients and/or Chl a – CS |
| | 1242B_02 | Bacteria – NS |
| Still Creek | 1242C_01 | Bacteria – NS Nutrients and/or Chl a – CS |
| | 1242C_02 | Bacteria – NS |
| Thompson Creek | 1242D_01 | Bacteria – NS Nutrients and/or Chl a – CS Fish – CN |
| | 1242D_02 | Bacteria – NS DO – NS Nutrients and/or Chl a – CS Macrobenthic – CS |
| Pond Creek | 1242F_01 | Bacteria – NS |
| Tradinghouse Reservoir | 1242H_01 | Harmful Algal Bloom /Golden Algae – CN |
| Campbells Creek | 1242I_01 | Bacteria – NS DO – CS |
| Deer Creek | 1242J_01 | Bacteria – NS Macrobenthic – CN |
| Mud Creek | 1242K_01 | Bacteria – NS |
| Pin Oak Creek | 1242L_01 | Bacteria – NS |
| Spring Creek | 1242M_01 | Bacteria – NS DO – CS |
| Tehuacana Creek | 1242N_01 | Nutrients and/or Chl a – CS Macrobenthic – CN Fish Kill Report – CN |
| Walnut Creek | 1242O_01 | Bacteria – NS |
| Big Creek | 1242P_01 | Bacteria – NS |
| Bullhide Creek | 1242Q_01 | Nutrients and/or Chl a – CS |

Navasota River Watershed

| Water Body | Segment | Parameter(s) Impairment and/or Concern |
|-------------------------------------|--------------------|---|
| Navasota River Below Lake Limestone | 1209_01 | Nutrients and/or Chl a – CS DO – CS |
| | 1209_02 | DO – CS |
| | 1209_03 1209_05 | Bacteria – NS |
| Country Club Lake | 1209A_01 | Sediment – NS Nutrients and/or Chl a – CS |
| Fin Feather Lake | 1209B_01 | Sediment – NS Nutrients and/or Chl a – CS |

Navasota River Watershed (cont.)

| Water Body | Segment | Parameter(s) Impairment and/or Concern |
|---------------------------------|----------------------|--|
| Carters Creek | 1209C_01 | Bacteria – NS- TMDL Nutrients and/or Chl a – CS |
| Country Club Branch | 1209D_01 | Bacteria – NS TMDL |
| Wickson Creek | 1209E_01 | Bacteria – NS |
| Cedar Creek | 1209G_01 | Bacteria – NS- MEETS |
| Duck Creek | 1209H_01 1209H_02 | Bacteria – NS DO – NS |
| Gibbons Creek | 1209I_01 | Bacteria – NS DO – CN |
| | 1209I_02 | Bacteria – CN |
| Shepherd Creek | 1209J_01 | Bacteria – NS |
| Steele Creek | 1209K_02 | Bacteria – NS |
| Burton Creek | 1209L_01 | Bacteria – NS- TMDL Nutrients and/or Chl a – CS |
| Normangee Lake | 1209O_01 | Sediment – CS |
| Lake Mexia | 1210_01 | DO – CS Nutrients and/or Chl a – CS |
| | 1210_02 | Nutrients and/or Chl a – CS |
| Navasota River Above Lake Mexia | 1210A_01 | Bacteria – NS |
| Lake Limestone | 1252_01 | Nutrients and/or Chl a – CS |
| | 1252_02 | |
| | 1252_03 | |
| | 1252_05 | |
| Navasota River Below Mexia | 1253_01 | Nutrients and/or Chl a – CS DO – CS |
| | 1253_02 | DO – CS |
| Springfield Lake | 1253A_01 | DO – CN Nutrients and/or Chl a – CS |

Yegua Creek Watershed

| Water Body | Segment | Parameter(s) Impairment and/or Concern |
|--------------------|-------------------------------|---|
| Yegua Creek | 1211_01 | Nutrients and/or Chl a – CS |
| Davidson Creek | 1211A_02 | Bacteria – NS DO – NS |
| Somerville Lake | 1212_01 1212_03 1212_04 | High pH – NS Nutrients and/or Chl a – CS |
| Middle Yegua Creek | 1212A_02 | Bacteria – NS DO – CS Habitat – CS |
| East Yegua Creek | 1212B_01 | Bacteria – NS |
| Nail Creek | 1212C_01 | Nutrients and/or Chl a – CS DO – CS |
| Burns Creek | 1212F_01 | Nutrients and/or Chl a – CS DO – CS |
| Brushy Creek | 1212K_01 | Nutrients and/or Chl a – CS |
| Yegua Creek | 1212L_01 | Nutrients and/or Chl a – CS |

Lower Watershed

| Water Body | Segment | Parameter(s) Impairment and/or Concern |
|-------------------------------------|--------------------|---|
| Brazos River Tidal | 1201_01 | Nutrients and/or Chl <i>a</i> – CS |
| Brazos River Below Navasota River | 1202_02 1202_05 | Nutrients and/or Chl <i>a</i> – CS |
| Allen's Creek | 1202H_01 | Bacteria – NS DO – CS Nutrients and/or Chl <i>a</i> – CS |
| Big Creek | 1202J_01 | Bacteria – NS Habitat – CS Nutrients and/or Chl <i>a</i> – CS |
| | 1202J_02 | DO – CS Nutrients and/or Chl <i>a</i> – CS |
| Mill Creek | 1202K_01 | Bacteria – NS Habitat – CS |
| Bullhead Bayou | 1245C_01 | Bacteria – NS |
| Unnamed Tributary of Bullhead Bayou | 1245D_01 | Bacteria – NS |
| Alcorn Bayou | 1245F_01 | Bacteria – NS Nutrients and/or Chl <i>a</i> – CS |
| Steep Bank Creek | 1245I_01 | Bacteria – NS Nutrients and/or Chl <i>a</i> – CS DO – CS |

Upper Oyster Creek Watershed

| Water Body | Segment | Parameter(s) Impairment and/or Concern |
|--------------------|----------|---|
| Upper Oyster Creek | 1245_01 | DO – CS |
| | 1245_02 | Nutrients and/or Chl <i>a</i> – CS |
| | 1245_03 | Nutrients and/or Chl <i>a</i> – CS |
| Red Gully | 1245A_01 | Bacteria – CN Nutrients and/or Chl <i>a</i> – CS |
| Flewellen Creek | 1245E_01 | Bacteria – CN |
| Stafford Run | 1245J_01 | Bacteria – CN |

Basin Summary Report CD Contents

Chapters

Acknowledgements is a section thanking all those who have participated in the Brazos River Basin Clean Rivers Program (CRP).

Introduction contains a review of the CRP, its goals, priorities, and the purpose of this report. It also contains a description of the Brazos River Basin's characteristics and water quality management issues.

Public Involvement reviews the Authority's public outreach programs.

Water Quality Review provides descriptions of water quality parameters and terminology, and a brief description of the data analysis process used to develop conclusions regarding water quality in various parts of the basin. Watershed summaries are also in this chapter, providing summaries of watershed characteristics, water resource issues, and water management issues facing each watershed. This section also allows interested individuals to drill more deeply into the water quality of specific watersheds of the Brazos River basin.

Findings, Recommendations and Conclusions summarizes the water quality issues identified and makes recommendations for future water quality monitoring and activities.



Brazos River
Authority

THE TEXAS
CLEAN
CRIVERS
PROGRAM



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under the authorization of the Texas Clean Rivers Act.