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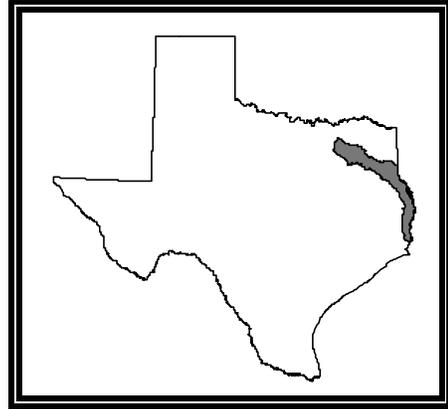
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# Basin 05

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## Sabine River



## Sabine River Basin Narrative Summary

The Sabine River is formed by three tributaries which arise in Collin and Hunt counties. The Sabine River flows eastward and is joined by the South Fork Sabine River. The river then turns southward and becomes the Texas-Louisiana boundary near Logansport, Louisiana, and continues southward to Sabine Lake on the Gulf Coast. Total basin drainage area is 9,756 square miles, of which 7,426 square miles are in Texas. The Sabine River has the largest water discharge at its mouth of any Texas river.

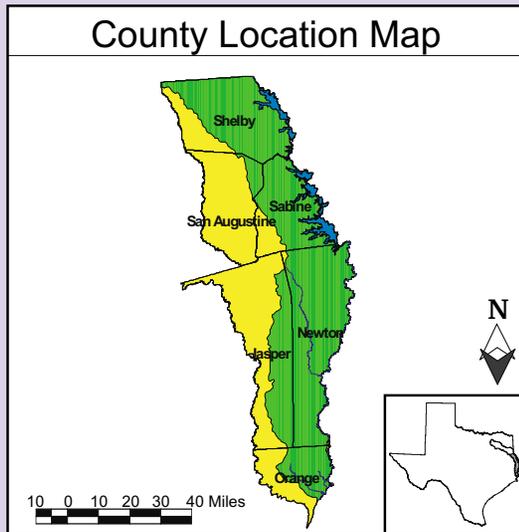
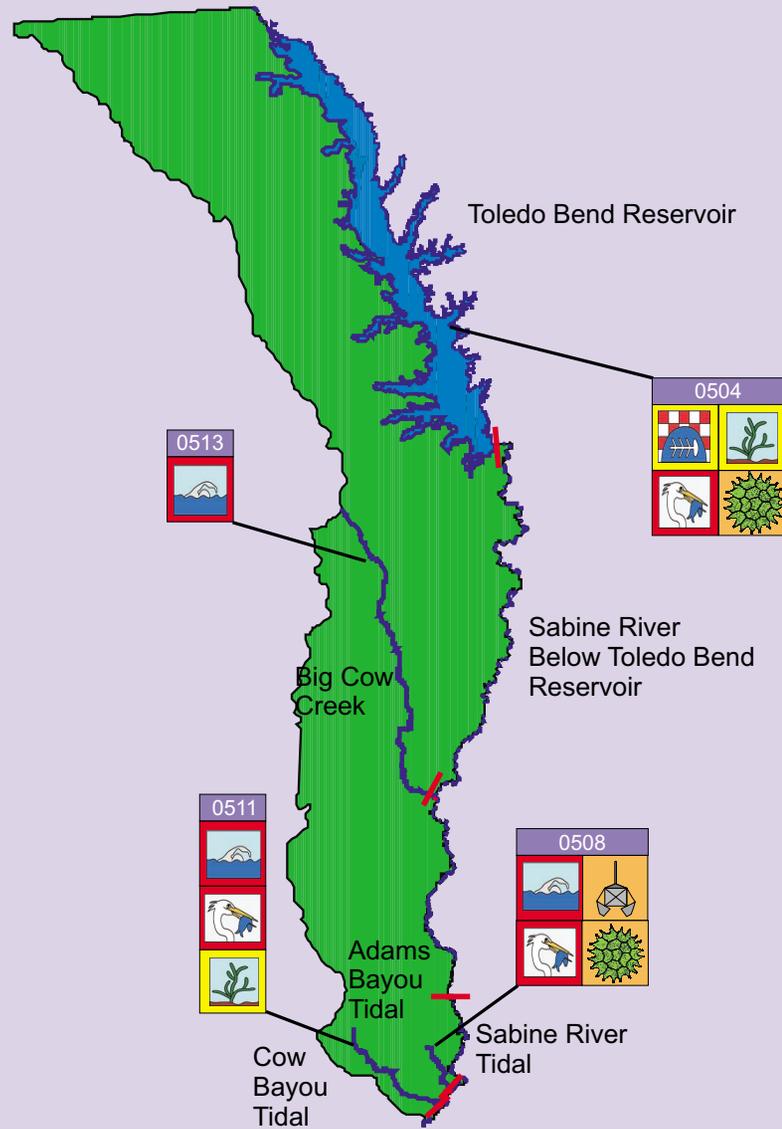
The economy is diversified throughout the basin and is based principally on mineral production, agriculture, manufacturing, recreation, and tourism. The Port of Orange serves as a distribution and shipping center for many of the products produced in the Sabine River Basin.

The Sabine River Basin has been divided into 14 classified segments, including nine stream segments encompassing 480 stream miles and five reservoirs encompassing 253,798 acres. In addition, 17 unclassified water bodies were evaluated for the year 2000 assessment, including 15 stream segments encompassing 209 stream miles and two reservoirs encompassing 6,260 acres. There are 83 active monitoring stations in the Sabine River Basin.

Low dissolved oxygen concentrations occur in three classified segments and ten unclassified water bodies. Point source discharges of treated wastewater, coupled with natural organic loading and sluggish flow, contribute to this problem. pH values that do not conform to criteria ranges occur in three classified segments. Elevated fecal coliform levels occur in three classified segments and ten unclassified water bodies. General uses are not supported in one classified segment due to elevated total dissolved solids concentrations. The public water supply use is not supported in one classified segment due to elevated atrazine concentrations. Concerns exist for nutrients in six classified segments and six unclassified water bodies, and for toxic substances in sediment in two classified segments and one unclassified water body.

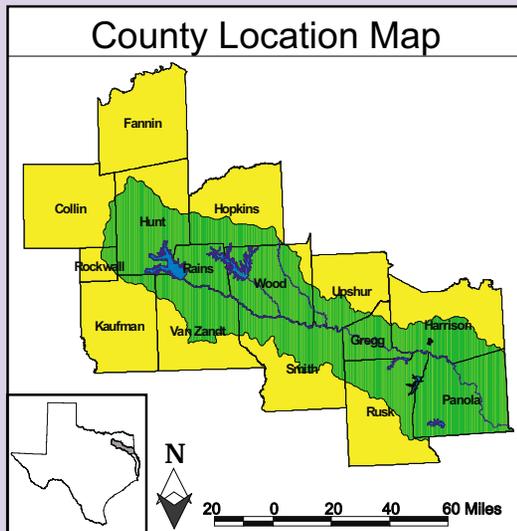
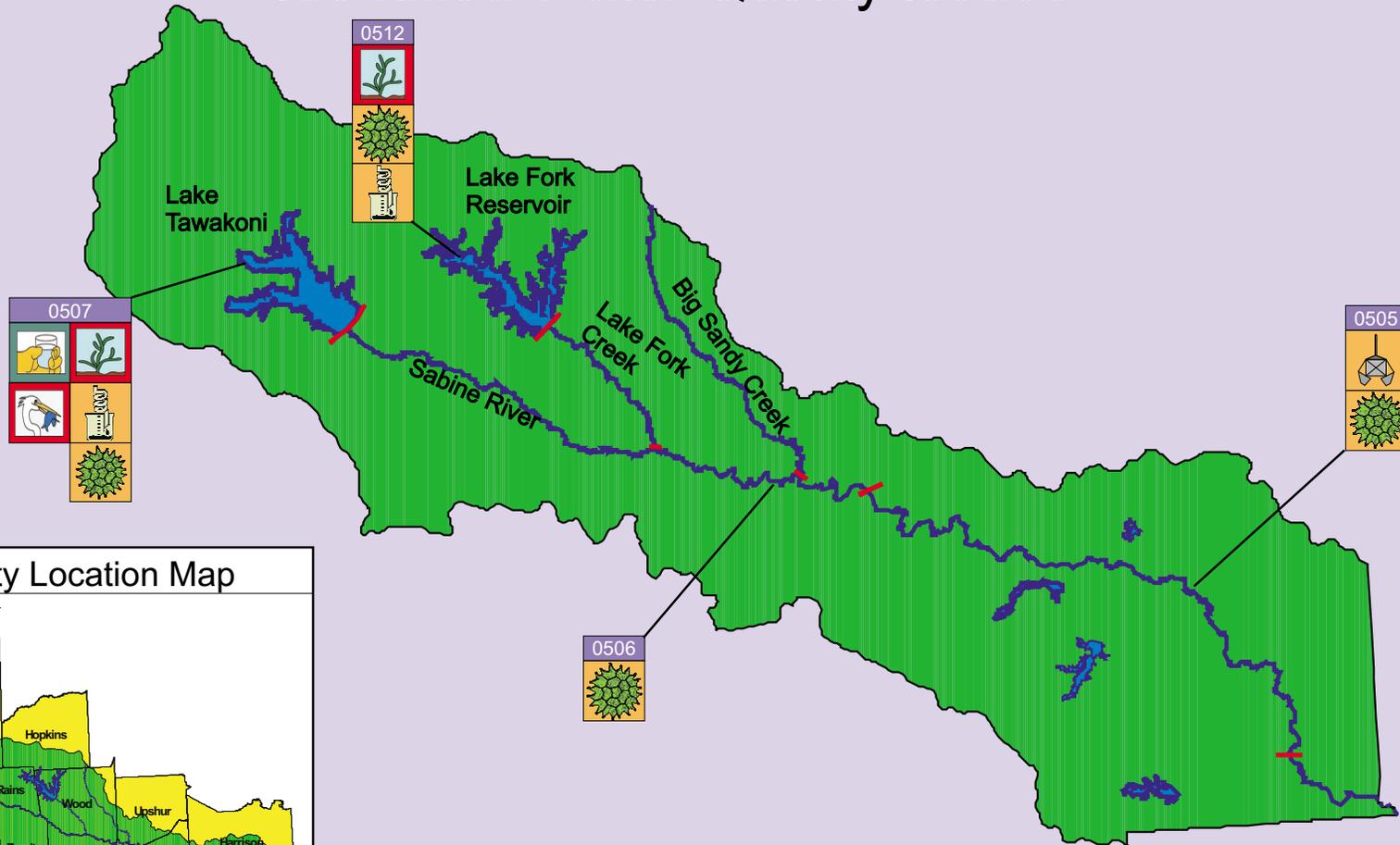
The Texas Department of Health has issued fish consumption advisories for one classified segment due to elevated levels of mercury in fish tissue (Toledo Bend Reservoir), and for two unclassified water bodies due to elevated levels of selenium in fish tissue (Brandy Branch and Martin Creek reservoirs). The advisories apply to largemouth bass and freshwater drum in Toledo Bend, and to all species in Brandy Branch and Martin Creek reservoirs.

# Lower Sabine River Basin Identified Water Quality Issues





# Upper Sabine River Basin Identified Water Quality Issues





# Sabine River Basin Graphical Summary

Basin Map	Water Bodies									
	Segment 0501 Sabine River Tidal	Segment 0503 Sabine River Below Toledo Bend Res.	Segment 0503A Nichols Creek	Segment 0504 Toledo Bend Reservoir	Segment 0505 Sabine River Above Toledo Bend Res.	Segment 0505A Bighead Creek	Segment 0505B Grace Creek	Segment 0505C Hawkins Creek	Segment 0505D Rabbit Creek	Segment 0505E Brandy Branch Reservoir
<b>DESIGNATED USE SUPPORT</b>										
Contact Recreation	S	S	N	S	S	NA	N	S	N	NA
Noncontact Recreation	X	X	X	X	X	X	X	X	X	X
Public Water Supply	X	S	X	S	S	X	X	X	X	S
<b>Fish Consumption</b>										
Human Health	NA	S	NA	NA	S	NA	NA	NA	NA	NA
Advisories/Closures	NA	NA	NA	P	NA	NA	NA	NA	NA	N
<b>Aquatic Life</b>										
Dissolved Oxygen (Grab)	S	S	N	N	S	NA	P	S	S	NA
Dissolved Oxygen (24-Hour)	NA	NA	NA	NA	NA	S	NA	NA	N	NA
Metals in Water	S	S	NA	S	S	NA	NA	NA	NA	NA
Organics in Water	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Water Toxicity Tests	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sediment Toxicity Tests	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Macrobenthos	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fish	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>GENERAL USE SUPPORT</b>										
Water Temperature	S	S	X	S	S	X	X	X	X	X
pH	S	S	X	P	S	X	X	X	X	X
Chloride	X	S	X	S	S	X	X	X	X	X
Sulfate	X	S	X	S	S	X	X	X	X	X
Total Dissolved Solids	X	S	X	S	S	X	X	X	X	X

S = Support; P = Partial Support; N = Nonsupport; T = Threatened; NC = No Concern; C = Concern;  
 NA = Not Assessed; X = Not Applicable

**Sabine River Basin Graphical Summary (Continued)**

Basin Map	Water Bodies									
	Segment 0501 Sabine River Tidal	Segment 0503 Sabine River Below Toledo Bend Res.	Segment 0503A Nichols Creek	Segment 0504 Toledo Bend Reservoir	Segment 0505 Sabine River Above Toledo Bend Res.	Segment 0505A Bighead Creek	Segment 0505B Grace Creek	Segment 0505C Hawkins Creek	Segment 0505D Rabbit Creek	Segment 0505E Brandy Branch Reservoir
										
<b>WATER QUALITY CONCERNS</b>										
Contact Recreation	X	X	X	X	X	NA	X	X	X	NA
Noncontact Recreation	X	X	X	X	X	X	X	X	X	X
Fish Tissue	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sediment	NA	NA	NA	NA	C	NA	NA	NA	NA	NA
Narrative	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
<b>Nutrient Enrichment</b>										
Ammonia Nitrogen	NC	NC	NC	NC	NC	NA	C	C	C	NA
Nitrite + Nitrate Nitrogen	NC	NC	NC	NC	NC	NA	NC	NC	NC	NA
Orthophosphorus	NC	NC	NC	NC	NC	NA	NC	NC	NC	NA
Total Phosphorus	NC	NC	NA	NC	NC	NA	NC	NC	NC	NA
Chlorophyll <i>a</i>	NC	NC	NA	C	C	NA	NA	NA	NA	NA
<b>Public Water Supply</b>										
Finished Water Chloride	X	NC	X	NC	NC	X	X	X	X	NC
Finished Water Sulfate	X	NC	X	NC	NC	X	X	X	X	NC
Finished Water TDS	X	NC	X	NC	NC	X	X	X	X	NC
Surface Water Chloride	X	NC	X	NC	NC	X	X	X	X	NA
Surface Water Sulfate	X	NC	X	NC	NC	X	X	X	X	NA
Surface Water TDS	X	NC	X	NC	NC	X	X	X	X	NA
<b>Aquatic Life</b>										
Dissolved Oxygen	X	X	X	X	X	X	X	X	X	NA
Metals in Water	X	X	NA	X	X	NA	NA	NA	NA	NA
Organics in Water	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Water Toxicity Tests	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sediment Toxicity Tests	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

# Sabine River Basin Graphical Summary

Basin Map	Water Bodies									
	Segment 0505F Martin Creek Reservoir	Segment 0505G Wards Creek	Segment 0505H Hatley Creek	Segment 0506 Sabine River Below Lake Tawakoni	Segment 0506A Harris Creek	Segment 0507 Lake Tawakoni	Segment 0507A Cowleech Fork Sabine River	Segment 0507B Long Branch	Segment 0508 Adams Bayou Tidal	Segment 0508A Adams Bayou Above Tidal
<b>DESIGNATED USE SUPPORT</b>										
Contact Recreation	NA	NA	NA	S	S	S	N	N	N	N
Noncontact Recreation	X	X	X	X	X	X	X	X	X	X
Public Water Supply	X	X	X	X	X	T	X	X	X	X
<b>Fish Consumption</b>										
Human Health	NA	NA	NA	S	NA	NA	S	NA	NA	NA
Advisories/Closures	N	NA	NA	NA	NA	S	NA	NA	NA	NA
<b>Aquatic Life</b>										
Dissolved Oxygen (Grab)	NA	P	S	S	N	N	P	S	N	N
Dissolved Oxygen (24-Hour)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals in Water	NA	NA	NA	S	NA	S	S	NA	S	NA
Organics in Water	NA	NA	NA	NA	NA	NA	S	NA	NA	NA
Water Toxicity Tests	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sediment Toxicity Tests	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Macrobenthos	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fish	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>GENERAL USE SUPPORT</b>										
Water Temperature	X	X	X	S	X	S	X	X	S	X
pH	X	X	X	S	X	N	X	X	S	X
Chloride	X	X	X	S	X	S	X	X	X	X
Sulfate	X	X	X	S	X	S	X	X	X	X
Total Dissolved Solids	X	X	X	S	X	S	X	X	X	X

S = Support; P = Partial Support; N = Nonsupport; T = Threatened; NC = No Concern; C = Concern; NA = Not Assessed; X = Not Applicable

**Sabine River Basin Graphical Summary (Continued)**

Basin Map	Water Bodies									
	Segment 0505F Martin Creek Reservoir	Segment 0505G Wards Creek	Segment 0505H Hatley Creek	Segment 0506 Sabine River Below Lake Tawakoni	Segment 0506A Harris Creek	Segment 0507 Lake Tawakoni	Segment 0507A Cowleech Fork Sabine River	Segment 0507B Long Branch	Segment 0508 Adams Bayou Tidal	Segment 0508A Adams Bayou Above Tidal
										
<b>WATER QUALITY CONCERNS</b>										
Contact Recreation	NA	NA	NA	X	X	X	X	X	X	X
Noncontact Recreation	X	X	X	X	X	X	X	X	X	X
Fish Tissue	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sediment	NA	NA	NA	NA	NA	NA	C	NA	C	NA
Narrative	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
<b>Nutrient Enrichment</b>										
Ammonia Nitrogen	NA	NA	NA	NC	NC	NC	NC	NA	NC	NA
Nitrite + Nitrate Nitrogen	NA	NA	NA	NC	NC	C	C	C	NC	NA
Orthophosphorus	NA	NA	NA	NC	NA	NC	C	NA	NC	NA
Total Phosphorus	NA	NA	NA	NC	C	NC	C	NA	NC	NA
Chlorophyll <i>a</i>	NA	NA	NA	C	NA	C	NA	NA	C	NA
<b>Public Water Supply</b>										
Finished Water Chloride	X	X	X	NC	X	NC	X	X	X	X
Finished Water Sulfate	X	X	X	NC	X	NC	X	X	X	X
Finished Water TDS	X	X	X	NC	X	NC	X	X	X	X
Surface Water Chloride	X	X	X	NC	X	NC	X	X	X	X
Surface Water Sulfate	X	X	X	NC	X	NC	X	X	X	X
Surface Water TDS	X	X	X	NC	X	NC	X	X	X	X
<b>Aquatic Life</b>										
Dissolved Oxygen	NA	X	X	X	X	C	X	X	X	X
Metals in Water	NA	NA	NA	X	NA	X	X	NA	X	NA
Organics in Water	NA	NA	NA	NA	NA	NA	X	NA	NA	NA
Water Toxicity Tests	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sediment Toxicity Tests	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

# Sabine River Basin Graphical Summary

Basin Map	Water Bodies									
	Segment 0508B Gum Gully	Segment 0509 Murvaul Lake	Segment 0510 Lake Cherokee	Segment 0511 Cow Bayou Tidal	Segment 0511A Cow Bayou Above Tidal	Segment 0511B Coon Bayou	Segment 0511C Cole Creek	Segment 0512 Lake Fork Reservoir	Segment 0513 Big Cow Creek	Segment 0514 Big Sandy Creek
<b>DESIGNATED USE SUPPORT</b>										
Contact Recreation	N	NA	NA	N	N	N	N	S	N	S
Noncontact Recreation	X	X	X	X	X	X	X	X	X	X
Public Water Supply	X	S	S	X	X	X	X	S	S	S
<b>Fish Consumption</b>										
Human Health	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Advisories/Closures	NA	NA	NA	NA	NA	NA	NA	S	NA	NA
<b>Aquatic Life</b>										
Dissolved Oxygen (Grab)	N	NA	NA	N	N	N	P	S	S	S
Dissolved Oxygen (24-Hour)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Metals in Water	NA	NA	NA	S	NA	NA	NA	S	NA	NA
Organics in Water	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Water Toxicity Tests	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sediment Toxicity Tests	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Macrobenthos	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fish	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>GENERAL USE SUPPORT</b>										
Water Temperature	X	NA	NA	S	X	X	X	S	S	S
pH	X	NA	NA	P	X	X	X	S	S	S
Chloride	X	NA	NA	X	X	X	X	S	S	S
Sulfate	X	NA	NA	X	X	X	X	N	S	S
Total Dissolved Solids	X	NA	NA	X	X	X	X	N	S	S

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**Sabine River Basin Graphical Summary (Continued)**

Basin Map	Water Bodies									
	Segment 0508B Gum Gully	Segment 0509 Murvaul Lake	Segment 0510 Lake Cherokee	Segment 0511 Cow Bayou Tidal	Segment 0511A Cow Bayou Above Tidal	Segment 0511B Coon Bayou	Segment 0511C Cole Creek	Segment 0512 Lake Fork Reservoir	Segment 0513 Big Cow Creek	Segment 0514 Big Sandy Creek
										
<b>WATER QUALITY CONCERNS</b>										
Contact Recreation	X	NA	NA	X	X	X	X	X	X	X
Noncontact Recreation	X	X	X	X	X	X	X	X	X	X
Fish Tissue	NA	NC	NA	NA	NA	NA	NA	NA	NA	NA
Sediment	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Narrative	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC
<b>Nutrient Enrichment</b>										
Ammonia Nitrogen	NA	NA	NA	NC	NA	NA	NA	NC	NC	NC
Nitrite + Nitrate Nitrogen	NA	NA	NA	NC	NA	NA	NA	C	NC	NC
Orthophosphorus	NA	NA	NA	NC	NC	NA	NA	NC	NC	NC
Total Phosphorus	NA	NA	NA	NC	NA	NA	NA	NC	NC	NC
Chlorophyll <i>a</i>	NA	NA	NA	NC	NA	NA	NA	C	NA	NC
<b>Public Water Supply</b>										
Finished Water Chloride	X	NC	NC	X	X	X	X	NC	NC	NC
Finished Water Sulfate	X	NC	NC	X	X	X	X	NC	NC	NC
Finished Water TDS	X	NC	NC	X	X	X	X	NC	NC	NC
Surface Water Chloride	X	NA	NA	X	X	X	X	NC	NC	NC
Surface Water Sulfate	X	NA	NA	X	X	X	X	NC	NC	NC
Surface Water TDS	X	NA	NA	X	X	X	X	NC	NC	NC
<b>Aquatic Life</b>										
Dissolved Oxygen	X	NA	NA	X	X	X	X	X	X	X
Metals in Water	NA	NA	NA	X	NA	NA	NA	X	X	NA
Organics in Water	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Water Toxicity Tests	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sediment Toxicity Tests	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

# Sabine River Basin Graphical Summary

Basin Map	Water Bodies									
	Segment 0515 Lake Fork Creek									
<b>DESIGNATED USE SUPPORT</b>										
Contact Recreation	S									
Noncontact Recreation	X									
Public Water Supply	X									
<b>Fish Consumption</b>										
Human Health	NA									
Advisories/Closures	NA									
<b>Aquatic Life</b>										
Dissolved Oxygen (Grab)	S									
Dissolved Oxygen (24-Hour)	NA									
Metals in Water	NA									
Organics in Water	NA									
Water Toxicity Tests	NA									
Sediment Toxicity Tests	NA									
Macrobenthos	NA									
Fish	NA									
<b>GENERAL USE SUPPORT</b>										
Water Temperature	S									
pH	S									
Chloride	S									
Sulfate	S									
Total Dissolved Solids	S									

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**Sabine River Basin Graphical Summary (Continued)**

Basin Map	Water Bodies										
	 Segment 0515 Lake Fork Creek										
<b>WATER QUALITY CONCERNS</b>											
Contact Recreation		X									
Noncontact Recreation		X									
Fish Tissue		NA									
Sediment		NA									
Narrative		NC									
<b>Nutrient Enrichment</b>											
Ammonia Nitrogen		NC									
Nitrite + Nitrate Nitrogen		NC									
Orthophosphorus	NC										
Total Phosphorus	NC										
Chlorophyll <i>a</i>	NA										
<b>Public Water Supply</b>											
Finished Water Chloride	NC										
Finished Water Sulfate	NC										
Finished Water TDS	NC										
Surface Water Chloride	NC										
Surface Water Sulfate	NC										
Surface Water TDS	NC										
<b>Aquatic Life</b>											
Dissolved Oxygen	X										
Metals in Water	NA										
Organics in Water	NA										
Water Toxicity Tests	NA										
Sediment Toxicity Tests	NA										

# Sabine River Basin

## Segment 0501 - Sabine River Tidal

**Water body description:** From the confluence with Sabine Lake in Orange County to Morgan Bluff in Orange County.

**Water body classification:** Classified

**Water body type:** Tidal Stream

**Water body length / area:** 29.00 Miles

**Use support summary:** Available data indicate that the aquatic life, contact recreation, and general uses are supported. The fish consumption use was not assessed due to insufficient data.

**Water quality concerns summary:** Available data indicate that there are no water quality concerns.

### Monitoring sites used in the assessment

Station	Station Description
10391	Sabine River at channel can 3, 3/4 mile below mouth of New Cow Bayou
10394	Sabine River at IH 10 in Orange
10395	Sabine River 12.00 km upstream of IH 10 (GC-1)

### Published studies

Publication	Date	Author
IS 60 Sabine River	Sept. 1980	Davis, J.
LP 89-07 Sabine River	May 1987	Davis, J.

### Wastewater dischargers

Permit type	Number of outfalls
Domestic	8
Industrial	12

### Historical fish kills

Start date	Location	Fish killed	Suspected cause
03/09/1997	DuPont outfall canal to Sabine River Tidal - Between Adams Bayou & Cow Bayou	200	Low Dissolved Oxygen
05/08/1998	FM 1008 and Sabine River in Orange	500,000	Low Dissolved Oxygen
06/05/1998	DuPont Sabine River Works, Orange, TX, in canal 101	3,554,000	Low Dissolved Oxygen

# Sabine River Basin

## Segment 0503 - Sabine River Below Toledo Bend Reservoir

**Water body description:** From Morgan Bluff in Orange County to Toledo Bend Dam in Newton County

**Water body classification:** Classified

**Water body type:** Freshwater Stream

**Water body length / area:** 116.00 Miles

**Use support summary:** Available data indicate that all uses are supported.

**Water quality concerns summary:** Available data indicate that there are no water quality concerns.

### Monitoring sites used in the assessment

Station	Station Description
10397	Sabine River at SH 12 north of Deweyville, TX. (GC-2)
10398	Sabine River at US 190 east of Bon weir, TX. (GC-3)
10399	Sabine River at SH 63 east of Burkeville, TX. (TB-5)
10400	Sabine River immediately below powerhouse for Toledo Bend Reservoir

### Wastewater dischargers

Permit type	Number of outfalls
Domestic	1
Industrial	6

## Sabine River Basin

### Segment 0503A - Nichols Creek (unclassified water body)

**Water body description:** From the confluence of the Sabine River to the upstream perennial portion of the stream south of Kirbyville in Newton and Jasper Counties.

**Water body classification:** Unclassified

**Water body type:** Freshwater Stream

**Water body length / area:** 31.50 Miles

**Use support summary:** The aquatic life use is not supported due to depressed dissolved oxygen concentrations. The contact recreation use is not supported due to elevated fecal coliform densities. Use nonsupport extends through the lower 25 miles of the stream.

**Water quality concerns summary:** Available data indicate that there are no water quality concerns.

**Additional information:** A project is underway for fecal coliform bacteria to do one or more of the following: assess the relevant water quality standard; to confirm the impairment; to conduct a total maximum daily load (TMDL) to evaluate the causes and sources and allocate the allowable loading; or to correct the impairment under another program.

A project is scheduled for dissolved oxygen to do one or more of the following: assess the relevant water quality standard; to confirm the impairment; to conduct a total maximum daily load (TMDL) to evaluate the causes and sources and allocate the allowable loading; or to correct the impairment under another program.

For more information on specific TMDL projects, visit the TNRCC Web site at [www.tnrcc.state.tx.us/water/quality/tmdl/](http://www.tnrcc.state.tx.us/water/quality/tmdl/).

#### Monitoring sites used in the assessment

Station	Station Description
15652	Nichols Creek at FM 253, 16.1 km north of Deweyville, TX

# Sabine River Basin

## Segment 0504 - Toledo Bend Reservoir

**Water body description:** From Toledo Ben Dam in Newton County to a point immediately upstream of the confluence of Murvault Creek in Panola County, up to the normal pool elevation of 172 feet (impounds the Sabine River)

**Water body classification:** Classified

**Water body type:** Reservoir

**Water body length / area:** 181,600 Acres

**Use support summary:** The aquatic life use is not supported in the Tenaha Creek arm near FM 139 due to depressed dissolved oxygen concentrations. The fish consumption use is only partially supported through the entire reservoir because of a restricted consumption advisory issued in November 1995 by the Texas Department of Health, due to elevated levels of mercury in fish tissue. General uses are only partially supported in the SH 21 and FM 276 areas because pH values are outside the criteria range (greater than the range at SH 21; less than and greater than the range at different times at FM 276). The public water supply and contact recreation uses are supported.

**Water quality concerns summary:**

Chlorophyll *a* is a concern in the US 84 area.

**Additional information:**

Projects are scheduled for dissolved oxygen, mercury in fish tissue, and pH to do one or more of the following: assess the relevant water quality standard; to confirm the impairment; to conduct a total maximum daily load (TMDL) to evaluate the causes and sources and allocate the allowable loading; or to correct the impairment under another program. For more information on specific TMDL projects, visit the TNRCC Web site at [www.tnrcc.state.tx.us/water/quality/tmdl/](http://www.tnrcc.state.tx.us/water/quality/tmdl/).

### Monitoring sites used in the assessment

Station	Station Description
10402	Toledo Bend Reservoir at SH 21 northeast of Milam (TB-6H)
10403	Toledo Bend Reservoir at US 84 near Loganport, LA (TB-8)

**Monitoring sites, continued**

<b>Station</b>	<b>Station Description</b>
10404	Toledo Bend Reservoir main lake above the dam at the old river channel (TB-6A)
10407	Toledo Bend Reservoir in six mile boat lane at SH 87 (TB-6CN)
10411	Toledo Bend Reservoir in Sunshine Bay near FM 3121 Bridge (TB-6F)
10412	Toledo Bend Reservoir in Tenaha Creek arm at FM 139 (TB-6I)
15655	Toledo Bend Reservoir Patroon Bayou branch at FM 276

**Wastewater dischargers**

<b>Permit type</b>	<b>Number of outfalls</b>
Domestic	20
Industrial	6

**Historical fish kills**

<b>Start date</b>	<b>Location</b>	<b>Fish killed</b>	<b>Suspected cause</b>
10/04/1996	Mill Creek and Socagee Creek	12,897	Inorganic compound

## Sabine River Basin

### Segment 0505 - Sabine River Above Toledo Bend Reservoir

**Water body description:** 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

**Water body classification:** Classified

**Water body type:** Freshwater Stream

**Water body length / area:** 104.00 Miles

**Use support summary:** Available data indicate that all uses are supported.

**Water quality concerns summary:** Chromium in sediment is a concern through the upper 31 miles. Chlorophyll *a* is a concern through the entire segment.

**Additional information:** A fish kill occurred through a 2-mile reach near FM 1804 in July, 1996, attributed to brine contamination.

A wasteload evaluation (WLE) for dissolved oxygen was approved in 1986 and has been incorporated into the state Water Quality Management Plan. Advanced waste treatment is required for one or more dischargers.

#### Monitoring sites used in the assessment

Station	Station Description
10415	Sabine River at FM 2517 west of Deadwood, TX.(TB-10)
10418	Sabine River at SH 43 South of Darco (northeast of Tatum, Panola County)
10423	Sabine River at SH 149 South of Longview, TX. (SR-14)
10426	Sabine River at US 259 near Longview, RK 267.6
10427	Sabine River at SH 42 near Kilgore, RK 283.9
13628	Sabine River at US 59, 8.4 mi. NE of Beckville, 0.9 mi. upstream from Eightmile Creek

### Published studies

Publication	Date	Author
AS 121/SR Sabine River Basin	Jan 1993	Crowe, A (Region 5)
IMS 31 Sabine River	Aug. 1975	Twidwell, S.
IS 62 Sabine River	Sept. 1981	Davis, J.
IS 85-01 Sabine River	Sept. 1984	Respass, D.
LP 89-07 Sabine River	Oct. 1987	Davis, J.

### Wastewater dischargers

Permit type	Number of outfalls
Agriculture	1
Domestic	35
Industrial	75

### Historical fish kills

Start date	Location	Fish killed	Suspected cause
08/02/1994	East Potter Creek - at Norit Americas plant or 5 mi upstream from I-20 at Dale Creek	1,000	Inorganic compound
08/21/1994	Indian Creek - Winnsboro Municipal Treatment Plant at Indian Creek	2,465	Low Dissolved Oxygen
11/02/1995	Hawkins Creek between Harrison Rd. and White Oak's water treatment plant.	1,782	Inorganic compound
07/07/1996	Turkey Creek at Woodlawn Dr. in Kilgore	4	Inorganic compound
07/11/1996	Hawkins Creek at Bacle Rd	6,474	Inorganic compound
01/29/1997	Hawkins Creek	917	Organic compound
03/24/1997	Prairie Creek - HWY 135 north of Kilgore to right on 2207 to left on Cole Bottom Rd	1	Organic compound

## Sabine River Basin

### Segment 0505A - Bighead Creek (unclassified water body)

**Water body description:** From the confluence of Rabbit Creek in Gregg County to the upstream perennial portion of the stream in south Kilgore in Rusk County

**Water body classification:** Unclassified

**Water body type:** Freshwater Stream

**Water body length / area:** 11.00 Miles

**Use support summary:** Available data indicate that all uses are supported.

**Water quality concerns summary:** Available data indicate that there are no water quality concerns.

#### Monitoring sites used in the assessment

Station	Station Description
14802	Bighead Creek at FM 349 northeast of Kilgore
15007	Bighead Creek at FM 2204 east of Kilgore, subwatershed 5.19
15760	Bighead Creek at FM 1249 in Kilgore

## Sabine River Basin

### Segment 0505B - Grace Creek (unclassified water body)

**Water body description:** From the confluence of the Sabine River in Gregg County to the upstream perennial portion of the stream in Longview in Gregg County.

**Water body classification:** Unclassified

**Water body type:** Freshwater Stream

**Water body length / area:** 14.00 Miles

**Use support summary:** The aquatic life use is partially supported due to depressed dissolved oxygen concentrations in the upper 12.3 miles. The contact recreation use is not supported due to elevated fecal coliform densities in the same reach. The fish consumption use was not assessed due to insufficient data.

**Water quality concerns summary:** Ammonia nitrogen is a concern.

**Additional information:** Projects are scheduled for dissolved oxygen and fecal coliform bacteria to do one or more of the following: assess the relevant water quality standard; to confirm the impairment; to conduct a total maximum daily load (TMDL) to evaluate the causes and sources and allocate the allowable loading; or to correct the impairment under another program. For more information on specific TMDL projects, visit the TNRCC Web site at [www.tnrcc.state.tx.us/water/quality/tmdl/](http://www.tnrcc.state.tx.us/water/quality/tmdl/).

#### Monitoring sites used in the assessment

Station	Station Description
10386	Grace Creek 0.2 km upstream of Sabine River confluence
14499	Grace Creek at South Loop 281, formally known at FM 1845 in Longview, TX
15011	Grace Creek at pipeline crossing, 1.0 km downstream of FM 1845, south of Longview, TX, subwatershed 5.18
15012	Grace Creek 1.0 km upstream of confluence with Sabine River at highline crossing, 0.8 km north of IH 20, south of Longview, TX

# Sabine River Basin

## Segment 0505C - Hawkins Creek (unclassified water body)

**Water body description:** From the confluence of the Sabine River in Gregg County to the upstream perennial portion of the stream north west of Longview in Gregg County

**Water body classification:** Unclassified

**Water body type:** Freshwater Stream

**Water body length / area:** 14.00 Miles

**Use support summary:** Available data indicate that the aquatic life and contact recreation uses are supported. The fish consumption use was not assessed due to insufficient data.

**Water quality concerns summary:** Ammonia nitrogen is a concern.

**Additional information:** Three fish kills have been documented since 1995, two attributed to brine contamination and one to crude oil contamination.

### Monitoring sites used in the assessment

Station	Station Description
10383	Hawkins Creek at FM 2206
10384	Hawkins Creek at Whatley Road approximately 1.25 mi. ENE of Whiteoak and approximately 1.0 mi. north of HWY 80

## Sabine River Basin

### Segment 0505D - Rabbit Creek (unclassified water body)

**Water body description:** From the confluence of the Sabine River near Kilgore in Gregg County to the upstream perennial portion of the stream west of Overton in Smith County

**Water body classification:** Unclassified

**Water body type:** Freshwater Stream

**Water body length / area:** 29.40 Miles

**Use support summary:** The aquatic life use is not supported through the middle 2.7 miles and only partially supported through the upper 21 miles due to depressed dissolved oxygen concentrations. The contact recreation use is not supported through the lower 5.7 miles due to elevated fecal coliform densities. The fish consumption use was not assessed due to insufficient data.

**Water quality concerns summary:** Ammonia nitrogen is a concern.

**Additional information:** A project is scheduled for bacteria to do one or more of the following: assess the relevant water quality standard; to confirm the impairment; to conduct a total maximum daily load (TMDL) to evaluate the causes and sources and allocate the allowable loading; or to correct the impairment under another program. For more information on specific TMDL projects, visit the TNRCC Web site at [www.tnrcc.state.tx.us/water/quality/tmdl/](http://www.tnrcc.state.tx.us/water/quality/tmdl/).

Data associated with the current proposal to revise the Texas Surface Water Quality Standards indicate that the appropriate criterion for evaluating dissolved oxygen concentrations in this segment varies according to the flow conditions. Although dissolved oxygen concentrations do not meet the current criterion, dissolved oxygen concentrations do meet the revised criterion. Consequently, the TNRCC will defer listing depressed dissolved oxygen concentrations as an impairment pending adoption and approval of the revised Standards.

## Monitoring sites used in the assessment

Station	Station Description
10371	Rabbit Creek at county road, 0.1km upstream of IH 20
14807	Rabbit Creek at US 259 northeast of Kilgore
15008	Rabbit Creek 0.8 km downstream of the confluence with Bighead Creek at pipeline crossing, NE of Kilgore, subwatershed 5.19
15009	Rabbit Creek 1.0 km upstream of its confluence with Sabine River at pipeline crossing, subwatershed 5.19
15759	Rabbit Creek at SH 42 north of Kilgore

## Sabine River Basin

### Segment 0505E - Brandy Branch Reservoir (unclassified water body)

**Water body description:** From Harrison County Dam up to normal pool elevation of 340.0 feet southwest of Marshall in Harrison County (impounds Brandy Branch)

**Water body classification:** Unclassified

**Water body type:** Reservoir

**Water body length / area:** 1,240 Acres

**Use support summary:** The fish consumption use is not supported through the entire reservoir because of a no-consumption advisory issued for sensitive subpopulations in May 1992 by the Texas Department of Health, due to elevated levels of selenium in fish tissue. Other uses were not assessed due to insufficient data.

**Water quality concerns summary:** Water quality concerns were not assessed due to insufficient data.

**Additional information:** A project is underway for selenium in fish tissue to do one or more of the following: assess the relevant water quality standard; to confirm the impairment; to conduct a total maximum daily load (TMDL) to evaluate the causes and sources and allocate the allowable loading; or to correct the impairment under another program. For more information on specific TMDL projects, visit the TNRCC Web site at [www.tnrcc.state.tx.us/water/quality/tmdl/](http://www.tnrcc.state.tx.us/water/quality/tmdl/).

## Sabine River Basin

### Segment 0505F - Martin Creek Reservoir (unclassified water body)

**Water body description:** From Rusk County Dam up to normal pool elevation of 306.0 feet northeast of Henderson in Rusk County

**Water body classification:** Unclassified

**Water body type:** Reservoir

**Water body length / area:** 5,020 Acres

**Use support summary:** The fish consumption use is not supported through the entire reservoir because of a no-consumption advisory for sensitive subpopulations issued in May 1992 by the Texas Department of Health, due to elevated levels of selenium in fish tissue. Other uses were not assessed due to insufficient data.

**Water quality concerns summary:** Water quality concerns were not assessed due to insufficient data.

**Additional information:** A project is underway for selenium in fish tissue to do one or more of the following: assess the relevant water quality standard; to confirm the impairment; to conduct a total maximum daily load (TMDL) to evaluate the causes and sources and allocate the allowable loading; or to correct the impairment under another program. For more information on specific TMDL projects, visit the TNRCC Web site at [www.tnrcc.state.tx.us/water/quality/tmdl/](http://www.tnrcc.state.tx.us/water/quality/tmdl/).

## Sabine River Basin

### Segment 0505G - Wards Creek (unclassified water body)

**Water body description:** From the confluence of Hatley Creek to the upstream perennial portion of the stream east of Hallsville in Harrison County

**Water body classification:** Unclassified

**Water body type:** Freshwater Stream

**Water body length / area:** 5.00 Miles

**Use support summary:** The aquatic life use is only partially supported due to depressed dissolved oxygen concentrations.

**Water quality concerns summary:** Water quality concerns were not assessed due to insufficient data.

**Additional information:** A project is scheduled for dissolved oxygen to do one or more of the following: assess the relevant water quality standard; to confirm the impairment; to conduct a total maximum daily load (TMDL) to evaluate the causes and sources and allocate the allowable loading; or to correct the impairment under another program. For more information on specific TMDL projects, visit the TNRCC Web site at [www.tnrcc.state.tx.us/water/quality/tmdl/](http://www.tnrcc.state.tx.us/water/quality/tmdl/).

#### Monitoring sites used in the assessment

Station	Station Description
15188	Ward Creek at US 80, 0.5 mi. east of Hallsville

## Sabine River Basin

### Segment 0505H - Hatley Creek (unclassified water body)

**Water body description:** From the confluence of the Sabine River in Harrison County to the confluences of Wards and Sewell Creeks southeast of Hallsville in Harrison County

**Water body classification:** Unclassified

**Water body type:** Freshwater Stream

**Water body length / area:** 8.00 Miles

**Use support summary:** Available data indicate that the aquatic life use is supported. Other uses were not assessed due to insufficient data.

**Water quality concerns summary:** Water quality concerns were not assessed due to insufficient data.

#### Monitoring sites used in the assessment

Station	Station Description
15187	Hatley Creek at FM 968, 2.5 mi. from FM 450 SE of Hallsville

# Sabine River Basin

## Segment 0506 - Sabine River Below Lake Tawakoni

**Water body description:** From a point 100 meters (110 yards) downstream of US 271 in Gregg County to Iron Bridge Dam in Rains County.

**Water body classification:** Classified

**Water body type:** Freshwater Stream

**Water body length / area:** 118.00 Miles

**Use support summary:** Available data indicate that all uses are supported.

**Water quality concerns summary:** Chlorophyll *a* is a concern through the lower 78 miles.

### Monitoring sites used in the assessment

Station	Station Description
10428	Sabine River at US 271 at Gladewater ,TX (SR-17)
10429	Sabine River at FM 14, 4.17 km south of Hawkins, TX (LF-19)
10430	Sabine River at US 69, northwest of Lindale (5.6 km south of Mineola, Wood County)

### Wastewater dischargers

Permit type	Number of outfalls
Agriculture	4
Domestic	30
Industrial	8

### Historical fish kills

Start date	Location	Fish killed	Suspected cause
06/23/1996	Grand Saline Creek at HWY 80	62	Inorganic compound
07/02/1997	Mill Creek at CR 452 NE of Lindale	40	Low Dissolved Oxygen

## Sabine River Basin

### Segment 0506A - Harris Creek (unclassified water body)

**Water body description:** From the confluence of the Sabine River Winona in Smith County to the upstream perennial portion of the stream east of Tyler in Smith County

**Water body classification:** Unclassified

**Water body type:** Freshwater Stream

**Water body length / area:** 21.00 Miles

**Use support summary:** The aquatic life use is not supported through the lower 9 miles due to depressed dissolved oxygen concentrations. The contact recreation use is supported. The fish consumption use was not assessed due to insufficient data.

**Water quality concerns summary:** Total phosphorus is a concern through the lower 9 miles.

**Additional information:** A project is scheduled for dissolved oxygen to do one or more of the following: assess the relevant water quality standard; to confirm the impairment; to conduct a total maximum daily load (TMDL) to evaluate the causes and sources and allocate the allowable loading; or to correct the impairment under another program. For more information on specific TMDL projects, visit the TNRCC Web site at [www.tnrcc.state.tx.us/water/quality/tmdl/](http://www.tnrcc.state.tx.us/water/quality/tmdl/).

#### Monitoring sites used in the assessment

Station	Station Description
14500	Harris Creek at FM 16 east of Winona
14501	Harris Creek at IH 20 south on Winona

## Sabine River Basin

### Segment 0507 - Lake Tawakoni

**Water body description:** From Iron Bridge Dam in Rains County up to normal pool elevation of 437 feet (impounds Sabine River).

**Water body classification:** Classified

**Water body type:** Reservoir

**Water body length / area:** 36,700 Acres

**Use support summary:** The aquatic life use is not supported in the area near the dam due to depressed dissolved oxygen concentrations. All water quality measurements currently support use as a public water supply. However, atrazine concentrations in finished drinking water exceed 50% of the maximum contaminant level, indicated that the use is threatened. General uses are not supported in the Kitsee Inlet and Cowleech Fork areas due to elevated pH values.

**Water quality concerns summary:**

Dissolved oxygen is a concern in the South Fork Sabine River and Caddo Creek areas. Nitrite + nitrate nitrogen is a concern near the dam. Chlorophyll *a* is a concern in the Kitsee Inlet arm, the Cowleech Fork arm, and dam areas.

**Additional information:**

A project is underway to assess the threat of impairment from atrazine to do one or more of the following: assess the relevant water quality standard; to confirm the impairment; to conduct a total maximum daily load (TMDL) to evaluate the causes and sources and allocate the allowable loading; or to correct the impairment under another program.

Projects are scheduled for dissolved oxygen and pH to do one or more of the following: assess the relevant water quality standard; to confirm the impairment; to conduct a total maximum daily load (TMDL) to evaluate the causes and sources and allocate the allowable loading; or to correct the impairment under another program.

For more information on specific TMDL projects, visit the TNRCC Web site at [www.tnrcc.state.tx.us/water/quality/tmdl/](http://www.tnrcc.state.tx.us/water/quality/tmdl/).

**Additional information,  
continued:**

A fish kill encompassing about 50 acres at an unspecified location on the reservoir occurred in September, 1995, attributed to low dissolved oxygen.

Data associated with the current proposal to revise the Texas Surface Water Quality Standards indicate that the appropriate range for evaluating pH in this segment is 6.0 to 9.0. Although the pH does not support the general use when evaluated under current range of 6.0 to 8.5, it only partially supports the general use under the revised, more appropriate criterion. Consequently, the TNRCC will list pH as partially supporting the general use pending adoption and approval of the revised standards.

**Monitoring sites used in the assessment**

Station	Station Description
10434	Lake Tawakoni in the main lake near the dam in the old river channel (LT-23A)
10435	Lake Tawakoni in Kitsee Inlet near White Point Causeway (LT-23D)
10436	Lake Tawakoni in South Fork Sabine River Cove at SH 34 west of Quinlan (LT-28N)
10439	Lake Tawakoni headquarters Caddo Creek at SH 34 bridge east of Quinlan TX. (LT-27)
10440	Lake Tawakoni in the upper lake (Cowleech Fork) at the old river channel near Wind Point Park (LT-23C)

**Published studies**

Publication	Date	Author
IMS 3 Lake Tawakoni	Jan. 1974	Twidwell, S.

**Wastewater dischargers**

Permit type	Number of outfalls
Domestic	37
Industrial	7

**Historical fish kills**

Start date	Location	Fish killed	Suspected cause
03/23/1995	Greenville City Lake (at the power plant)	533	Temperature

## Sabine River Basin

### Segment 0507A - Cowleech Fork Sabine River (unclassified water body)

**Water body description:** From the confluence of Lake Tawakoni southeast of Greenville in Hunt County to the upstream perennial portion of the stream south of Celeste in Hunt County

**Water body classification:** Unclassified

**Water body type:** Freshwater Stream

**Water body length / area:** 30.00 Miles

**Use support summary:** The aquatic life use is only partially supported due to depressed dissolved oxygen concentrations in the upper 20 miles. The contact recreation use is not supported due to elevated fecal coliform densities. The fish consumption use is supported.

**Water quality concerns summary:** Arsenic in sediment is a concern. Nitrite + nitrate nitrogen, orthophosphorus, and total phosphorus are concerns in the lower 10 miles.

**Additional information:** Projects are scheduled for dissolved oxygen and fecal coliform bacteria to do one or more of the following: assess the relevant water quality standard; to confirm the impairment; to conduct a total maximum daily load (TMDL) to evaluate the causes and sources and allocate the allowable loading; or to correct the impairment under another program. For more information on specific TMDL projects, visit the TNRCC Web site at [www.tnrcc.state.tx.us/water/quality/tmdl/](http://www.tnrcc.state.tx.us/water/quality/tmdl/).

#### Monitoring sites used in the assessment

Station	Station Description
10343	Cowleech Fork Sabine River at US 69 south of Greenville and 5.5km NW of Lone Oak (LT-24)
10344	Cowleech Fork Sabine River at unnumbered county road east of Dixon Community, TX (LT-25)
14493	Cowleech Fork at US 69, northwest of Greenville

**Monitoring sites, continued**

<b>Station</b>	<b>Station Description</b>
15661	Cowleech Fork at Hunt CR 1083, 1.2 km west of US 69 and 1.3 km SW of Kingston
15989	Cowleech Fork at FM1562, 3.6 km downstream of basin divide and 1.4 km west of Celeste

## Sabine River Basin

### Segment 0507B - Long Branch (unclassified water body)

**Water body description:** From the confluence of Cowleech Branch Sabine River to the upstream perennial portion of the stream in Greenville in Hunt County

**Water body classification:** Unclassified

**Water body type:** Freshwater Stream

**Water body length / area:** 8.50 Miles

**Use support summary:** The contact recreation use is not supported due to elevated fecal coliform densities. The aquatic life use is supported. The fish consumption use was not assessed due to insufficient data.

**Water quality concerns summary:** Nitrite + nitrate nitrogen is a concern.

**Additional information:** A project is scheduled for fecal coliform bacteria to do one or more of the following: assess the relevant water quality standard; to confirm the impairment; to conduct a total maximum daily load (TMDL) to evaluate the causes and sources and allocate the allowable loading; or to correct the impairment under another program. For more information on specific TMDL projects, visit the TNRCC Web site at [www.tnrcc.state.tx.us/water/quality/tmdl/](http://www.tnrcc.state.tx.us/water/quality/tmdl/).

#### Monitoring sites used in the assessment

Station	Station Description
15983	Long Branch 100m downstream of Greenville WWTP outfall (permit# WP0010485-002) and approx. 1 km upstream of the confluence with Cowleech Fork Sabine River
15993	Long Branch at IH 30 access road south of IH 30 and 1.8km upstream of Greenville WWTP outfall (permit# wq0010485-002)

# Sabine River Basin

## Segment 0508 - Adams Bayou Tidal

**Water body description:** From the confluence with the Sabine River in Orange County to a point 1.1 km (0.7 miles) upstream of IH 10 in Orange County

**Water body classification:** Classified

**Water body type:** Tidal Stream

**Water body length / area:** 8.00 Miles

**Use support summary:** The aquatic life use is not supported due to depressed dissolved oxygen concentrations. The contact recreation use is not supported due to elevated fecal coliform densities. General uses are supported. The fish consumption use was not assessed due to insufficient data.

**Water quality concerns summary:** Nickel, copper, lead, chromium, and selenium in sediment are concerns. Chlorophyll *a* is also a concern.

**Additional information:** A wasteload evaluation (WLE) for dissolved oxygen was approved in 1986 and has been incorporated into the state Water Quality Management Plan. Advanced waste treatment is required for one or more dischargers.

Projects are scheduled for dissolved oxygen and fecal coliform bacteria to do one or more of the following: assess the relevant water quality standard; to confirm the impairment; to conduct a total maximum daily load (TMDL) to evaluate the causes and sources and allocate the allowable loading; or to correct the impairment under another program. For more information on specific TMDL projects, visit the TNRCC Web site at [www.tnrcc.state.tx.us/water/quality/tmdl/](http://www.tnrcc.state.tx.us/water/quality/tmdl/).

### Monitoring sites used in the assessment

Station	Station Description
10441	Adams Bayou at FM 1006 in Orange, TX, subwatershed 1.03 (AB2)
10442	Adams Bayou at Western Ave. in Orange, TX, subwatershed 1.03 (AB3)
10443	Adams Bayou at IH 10 in Orange, TX

**Monitoring sites, continued**

<b>Station</b>	<b>Station Description</b>
14990	Adams Bayou at Park Ave. in Pinehurst, TX, 1.4 km downstream of IH 10 subwatershed 1.03 (AB5)
15107	Adams Bayou at FM 3247 NW of Orange, TX, subwatershed 1.03 ( AB7)
16059	Adams Bayou at Green Ave. in Orange (1.03 AB4)

**Published studies**

<b>Publication</b>	<b>Date</b>	<b>Author</b>
IMS 14 Adams Bayou	June 1974	Twidwell, S.
IS 65 Adams Bayou	Sept. 1982	Werkenthin, F.

**Wastewater dischargers**

<b>Permit type</b>	<b>Number of outfalls</b>
Domestic	2
Industrial	7

## Sabine River Basin

### Segment 0508A - Adams Bayou Above Tidal (unclassified water body)

**Water body description:** From a point 1.1 km (0.7 miles) upstream of IH 10 in Orange County to the upstream perennial portion of the stream northwest of Orange in Orange County

**Water body classification:** Unclassified

**Water body type:** Freshwater Stream

**Water body length / area:** 8.00 Miles

**Use support summary:** The aquatic life use is not supported due to depressed dissolved oxygen concentrations. The contact recreation use is not supported due to elevated fecal coliform densities. The fish consumption use was not assessed due to insufficient data.

**Water quality concerns summary:** Water quality concerns were not assessed due to insufficient data.

**Additional information:** Projects are scheduled for dissolved oxygen and fecal coliform bacteria to do one or more of the following: assess the relevant water quality standard; to confirm the impairment; to conduct a total maximum daily load (TMDL) to evaluate the causes and sources and allocate the allowable loading; or to correct the impairment under another program. For more information on specific TMDL projects, visit the TNRCC Web site at [www.tnrcc.state.tx.us/water/quality/tmdl/](http://www.tnrcc.state.tx.us/water/quality/tmdl/).

#### Monitoring sites used in the assessment

Station	Station Description
14964	Adams Bayou at FM 1078 NW of Orange subwatershed 1.03 (AB8)
15742	Adams Bayou at FM1130 SE of Mauriceville, TX, subwatershed 1.03 (AB9)

## Sabine River Basin

### Segment 0508B - Gum Gully (unclassified water body)

**Water body description:** From the confluence of Adams Bayou to the upstream perennial portion of the stream northwest of Orange in Orange County

**Water body classification:** Unclassified

**Water body type:** Freshwater Stream

**Water body length / area:** 3.50 Miles

**Use support summary:** The aquatic life use is not supported due to depressed dissolved oxygen concentrations. The contact recreation use is not supported due to elevated fecal coliform densities. The fish consumption use was not assessed due to insufficient data.

**Water quality concerns summary:** Water quality concerns were not assessed due to insufficient data.

**Additional information:** Projects are scheduled for dissolved oxygen and fecal coliform bacteria to do one or more of the following: assess the relevant water quality standard; to confirm the impairment; to conduct a total maximum daily load (TMDL) to evaluate the causes and sources and allocate the allowable loading; or to correct the impairment under another program. For more information on specific TMDL projects, visit the TNRCC Web site at [www.tnrcc.state.tx.us/water/quality/tmdl/](http://www.tnrcc.state.tx.us/water/quality/tmdl/).

#### Monitoring sites used in the assessment

Station	Station Description
16049	Gum Gully at Halliburton Rd 1.1km upstream of confluence with Adams Bayou (1.03 GG)

## Sabine River Basin

### Segment 0509 - Murvaul Lake

**Water body description:** From Murvaul Dam in Panola County up to the normal pool elevation of 265.3 feet (impounds Murvaul Bayou).

**Water body classification:** Classified

**Water body type:** Reservoir

**Water body length / area:** 3,827 Acres

**Use support summary:** Available data indicate the public water supply use is supported. Other uses were not assessed due to insufficient data.

**Water quality concerns summary:** Available data indicate that there are no water quality concerns.

#### Monitoring sites used in the assessment

Station	Station Description
10444	Lake Murvaul near dam

# Sabine River Basin

## Segment 0510 - Lake Cherokee

**Water body description:** From Cherokee Dam in Gregg/Rusk County up to the normal pool elevation of 280 feet (impounds Cherokee Bayou).

**Water body classification:** Classified

**Water body type:** Reservoir

**Water body length / area:** 3,981 Acres

**Use support summary:** Available data indicate the public water supply use is supported. Other uses were not assessed due to insufficient data.

**Water quality concerns summary:** Available data indicate that there are no water quality concerns.

### Monitoring sites used in the assessment

Station	Station Description
10445	Lake Cherokee mid-lake
15192	Lake Cherokee at boat ramp near spillway on the north side of dam

### Published studies

Publication	Date	Author
AS-36/SR Tiawichi Creek	Sept. 1992	Crowe, A (Region 5)

### Wastewater dischargers

Permit type	Number of outfalls
Domestic	2
Industrial	3

## Sabine River Basin

### Segment 0511 - Cow Bayou Tidal

**Water body description:** From the confluence with the Sabine River in Orange County to a point 4.8 km (3.0 miles) upstream of IH 10 in Orange County.

**Water body classification:** Classified

**Water body type:** Tidal Stream

**Water body length / area:** 20.00 Miles

**Use support summary:** The aquatic life use is not supported due to depressed dissolved oxygen concentrations, and the contact recreation use is not supported due to elevated fecal coliform densities. General uses are only partially supported through the upper 14 miles due to low pH values.

**Water quality concerns summary:** Available data indicate that there are no water quality concerns.

**Additional information:** Projects are scheduled for dissolved oxygen, pH, and fecal coliform bacteria to do one or more of the following: assess the relevant water quality standard; to confirm the impairment; to conduct a total maximum daily load (TMDL) to evaluate the causes and sources and allocate the allowable loading; or to correct the impairment under another program. For more information on specific TMDL projects, visit the TNRCC Web site at [www.tnrcc.state.tx.us/water/quality/tmdl/](http://www.tnrcc.state.tx.us/water/quality/tmdl/).

#### Monitoring sites used in the assessment

Station	Station Description
10449	Cow Bayou at FM1442 (downstream crossing, Round Bunch Rd) east of Bridge City, TX , SW 1.02 (CB1)
10453	Cow Bayou at FM 105 west of Orange, TX, subwatershed 1.02 (CB3)
10457	Cow Bayou at IH 10 west of Orange, TX, subwatershed 1.02 (CB5)
13781	Cow Bayou at FM 1442 (north crossing) between FM 105 and IH 10, subwatershed 1.02 (CB4)

### Published studies

<b>Publication</b>	<b>Date</b>	<b>Author</b>
IS 77 Cow Bayou	Aug. 1985	Kirkpatrick, J.
IS 88-02 Cow Bayou	Sept. 1986	Kirkpatrick, J.

### Wastewater dischargers

<b>Permit type</b>	<b>Number of outfalls</b>
Domestic	13
Industrial	12

## Sabine River Basin

### Segment 0511A - Cow Bayou Above Tidal (unclassified water body)

**Water body description:** From a point 4.8 km (3.0 miles) upstream of IH 10 in Orange County to the upstream perennial portion of the stream northeast of Vidor in Orange County

**Water body classification:** Unclassified

**Water body type:** Freshwater Stream

**Water body length / area:** 10.60 Miles

**Use support summary:** The aquatic life use is not supported through the upper 5.3 miles due to depressed dissolved oxygen concentrations. The contact recreation use is not supported through the lower 5.3 miles due to elevated fecal coliform densities. The fish consumption use was not assessed due to insufficient data.

**Water quality concerns summary:** Available data indicate that there are no water quality concerns.

**Additional information:** Projects are scheduled for dissolved oxygen and fecal coliform bacteria to do one or more of the following: assess the relevant water quality standard; to confirm the impairment; to conduct a total maximum daily load (TMDL) to evaluate the causes and sources and allocate the allowable loading; or to correct the impairment under another program. For more information on specific TMDL projects, visit the TNRCC Web site at [www.tnrcc.state.tx.us/water/quality/tmdl/](http://www.tnrcc.state.tx.us/water/quality/tmdl/).

#### Monitoring sites used in the assessment

Station	Station Description
10337	Cow Bayou at SH 12 SW of Mauriceville, TX, subwatershed 1.02 (CB6)
16058	Cow Bayou at Jasper CR 826, 7.3km north of Mauriceville (1.02 CB7)

## Sabine River Basin

### Segment 0511B - Coon Bayou (unclassified water body)

**Water body description:** From the confluence of Cow Bayou northeast of Bridge City in Orange County to the upstream perennial portion of the stream west of Orange in Orange County

**Water body classification:** Unclassified

**Water body type:** Tidal Stream

**Water body length / area:** 4.70 Miles

**Use support summary:** The aquatic life use is not supported due to depressed dissolved oxygen concentrations. The contact recreation use is not supported due to elevated fecal coliform densities. The fish consumption use was not assessed due to insufficient data.

**Water quality concerns summary:** Water quality concerns were not assessed due to insufficient data.

**Additional information:** Projects are scheduled for dissolved oxygen and fecal coliform bacteria to do one or more of the following: assess the relevant water quality standard; to confirm the impairment; to conduct a total maximum daily load (TMDL) to evaluate the causes and sources and allocate the allowable loading; or to correct the impairment under another program. For more information on specific TMDL projects, visit the TNRCC Web site at [www.tnrcc.state.tx.us/water/quality/tmdl/](http://www.tnrcc.state.tx.us/water/quality/tmdl/).

#### Monitoring sites used in the assessment

Station	Station Description
16052	Coons Bayou at SH 87, 2.4km NE of Bridge City, 2.1km upstream of the confluence with Cow Bayou (1.02 CNB)

## Sabine River Basin

### Segment 0511C - Cole Creek (unclassified water body)

**Water body description:** From the confluence of Cow Bayou west of Orange in Orange County to the upstream perennial portion of the stream south of Mauriceville in Orange County

**Water body classification:** Unclassified

**Water body type:** Tidal Stream

**Water body length / area:** 9.50 Miles

**Use support summary:** The aquatic life use is only partially supported due to depressed dissolved oxygen concentrations. The contact recreation use is not supported due to elevated fecal coliform densities. The fish consumption use was not assessed due to insufficient data.

**Water quality concerns summary:** Water quality concerns were not assessed due to insufficient data.

**Additional information:** Projects are scheduled for dissolved oxygen and fecal coliform bacteria to do one or more of the following: assess the relevant water quality standard; to confirm the impairment; to conduct a total maximum daily load (TMDL) to evaluate the causes and sources and allocate the allowable loading; or to correct the impairment under another program. For more information on specific TMDL projects, visit the TNRCC Web site at [www.tnrcc.state.tx.us/water/quality/tmdl/](http://www.tnrcc.state.tx.us/water/quality/tmdl/).

#### Monitoring sites used in the assessment

Station	Station Description
16060	Cole Creek at IH 10, 6km upstream of the confluence with Cow Bayou and 6.4km west of Orange (1.02 CC)

# Sabine River Basin

## Segment 0512 - Lake Fork Reservoir

**Water body description:** From Lake Fork Dam in Wood County up to normal pool elevation of 403 feet (impounds Lake Fork Creek).

**Water body classification:** Classified

**Water body type:** Reservoir

**Water body length / area:** 27,690 Acres

**Use support summary:** General uses are not supported through the entire reservoir due to elevated average sulfate and total dissolved solids concentrations. All other uses are supported.

**Water quality concerns summary:** Nitrite + nitrate nitrogen is a concern in the FM 2966 area. Chlorophyll *a* is a concern in the Caney Creek arm and FM 514 areas.

**Additional information:** A project is scheduled for total dissolved solids to do one or more of the following: assess the relevant water quality standard; to confirm the impairment; to conduct a total maximum daily load (TMDL) to evaluate the causes and sources and allocate the allowable loading; or to correct the impairment under another program. For more information on specific TMDL projects, visit the TNRCC Web site at [www.tnrcc.state.tx.us/water/quality/tmdl/](http://www.tnrcc.state.tx.us/water/quality/tmdl/).

Data associated with the current proposal to revise the Texas Surface Water Quality Standards indicate that the appropriate criterion for evaluating the average concentration of sulfate in this segment is 50 mg/L. Although the average concentration of sulfate exceeds the current criterion, it does not exceed the revised criterion. Consequently, the TNRCC will defer listing sulfate as an impairment pending adoption and approval of the revised Standards.

### Monitoring sites used in the assessment

Station	Station Description
10458	Lake Fork Reservoir near dam, 300m NW of spillway at mid-reservoir (LF-2)
10461	Lake Fork Reservoir mid-arm in Caney Creek arm at FM 515 (LF-3)

**Monitoring sites, continued**

<b>Station</b>	<b>Station Description</b>
10462	Lake Fork Reservoir mid-cove in Lake Fork Creek arm at FM 515 (LF-4)
13704	Lake Fork Reservoir at FM 2966 approximately 3.5-4.0 mi. east of Yantis

**Wastewater dischargers**

<b>Permit type</b>	<b>Number of outfalls</b>
Agriculture	20
Domestic	9

**Historical fish kills**

<b>Start date</b>	<b>Location</b>	<b>Fish killed</b>	<b>Suspected cause</b>
10/15/1994	Lake Fork	9,000,000	Disease
09/05/1995	Lake Fork Reservoir near dam.	2,000	Low Dissolved Oxygen

# Sabine River Basin

## Segment 0513 - Big Cow Creek

**Water body description:** From the confluence with the Sabine River in Newton County to a point 4.6 km (2.9 miles) upstream of CR 255 in Newton County.

**Water body classification:** Classified

**Water body type:** Freshwater Stream

**Water body length / area:** 30.00 Miles

**Use support summary:** The contact recreation use is not supported through the entire segment due to elevated fecal coliform densities. The aquatic life, public water supply, and general uses are supported. The fish consumption use was not assessed due to insufficient data.

**Water quality concerns summary:** Available data indicate that there are no water quality concerns.

**Additional information:** A project is scheduled for fecal coliform bacteria to do one or more of the following: assess the relevant water quality standard; to confirm the impairment; to conduct a total maximum daily load (TMDL) to evaluate the causes and sources and allocate the allowable loading; or to correct the impairment under another program. For more information on specific TMDL projects, visit the TNRCC Web site at [www.tnrcc.state.tx.us/water/quality/tmdl/](http://www.tnrcc.state.tx.us/water/quality/tmdl/).

### Monitoring sites used in the assessment

Station	Station Description
10465	Big Cow Creek at FM 1416, south of Bon weir

### Wastewater dischargers

Permit type	Number of outfalls
Domestic	1

## Sabine River Basin

### Segment 0514 - Big Sandy Creek

**Water body description:** From the confluence with the Sabine River in Upshur County to a point 2.6 km (1.6 miles) upstream of SH 11 in Hopkins County.

**Water body classification:** Classified

**Water body type:** Freshwater Stream

**Water body length / area:** 34.00 Miles

**Use support summary:** Available data indicate that all uses are supported.

**Water quality concerns summary:** Available data indicate that there are no water quality concerns.

#### Monitoring sites used in the assessment

Station	Station Description
10467	Big Sandy Creek at US 80 west of Gladewater
10468	Big Sandy Creek at SH 155 northwest of Big Sandy, TX (BS-1)

#### Wastewater dischargers

Permit type	Number of outfalls
Agriculture	4
Domestic	6

# Sabine River Basin

## Segment 0515 - Lake Fork Creek

**Water body description:** From the confluence with the Sabine River in Wood County to Lake Fork Dam in Wood County.

**Water body classification:** Classified

**Water body type:** Freshwater Stream

**Water body length / area:** 21.00 Miles

**Use support summary:** Available data indicate that all uses are supported.

**Water quality concerns summary:** Available data indicate that there are no water quality concerns.

### Monitoring sites used in the assessment

Station	Station Description
10469	Lake Fork Creek at US 80, 12 km east of Mineola

### Wastewater dischargers

Permit type	Number of outfalls
Domestic	1