

# Trinity River Authority Clean Rivers Program

## 2013 Basin Highlights Report

### Watershed Characterizations for the West Fork, Clear Fork, Village Creek, and Mountain Creek Subwatersheds

#### INTRODUCTION

The Texas Clean Rivers Program (CRP) was created in 1991 by Texas Senate Bill 818 and is administered by the Texas Commission on Environmental Quality (TCEQ) which contracts with local planning agencies to conduct the program in each river basin. The program is tasked with protecting the water resources of the state and improving water quality. In the Trinity River basin, the TRA Clean Rivers Program focuses on water quality monitoring, special projects, and public outreach to achieve the goals of the program.

Data collected by the TRA CRP are used for regulatory purposes, such as setting water quality standards, modeling for permit limits, and for water quality assessments. Every two years, TCEQ conducts an assessment of water quality throughout the state and issues a Water Quality Inventory; which identifies impairments and concerns for designated uses. These designated uses include Aquatic Life Use, Contact Recreation, General Use, Fish Consumption, and Public Water Supply Use. The Draft 2012 Texas Water Quality Inventory was used in the development of this report.

#### TRINITY RIVER BASIN

The Trinity River basin covers approximately 18,000 square miles. As discussed in the 2012 Basin Highlights Report, the northern portion of the Trinity River Basin is influenced by the features found in this area—namely the Blackland Prairie and the DFW Metroplex. In contrast, a large portion of the subwatersheds discussed in this report are rural with some urbanization at their downstream ends.

The stream flows in the headwaters are typically low and tributaries may go dry during drought conditions, resulting in low dissolved oxygen in the streams. Forested areas support large wildlife populations while rangeland and pastures are used for



livestock grazing. These populations can contribute to elevated bacteria levels in nearby water bodies.

Many of the reservoirs in West Fork and Clear Fork have been classified as eutrophic to hypereutrophic based on the “Trophic Classification of Texas Reservoir” report by TCEQ ([http://www.tceq.state.tx.us/assets/public/compliance/monops/water/04twqi/04\\_reservoir\\_narrative.pdf](http://www.tceq.state.tx.us/assets/public/compliance/monops/water/04twqi/04_reservoir_narrative.pdf)). This report states that reservoirs become more eutrophic as they age due to a buildup of nutrients within the reservoir, which is the likely cause for Chlorophyll-a issues in these reservoirs.

#### BASIN HIGHLIGHTS REPORT

This report is intended to characterize the watersheds of the Trinity River basin. Features such as land use, soil and vegetation types, and watershed activities are reviewed. Potential sources of impairments and concerns based on the Draft

2012 Texas Water Quality Inventory are identified and recommendations to improve water quality are suggested when known.

This report focuses on the West Fork and Clear Fork Trinity River as well as the Village Creek and Mountain Creek subwatersheds. The 2012 Basin Highlights Report covered the Main Stem Trinity River and the Trinity River below Lake Livingston. The 2014 Basin Highlights Report will conclude the watershed characterizations with the Elm Fork and East Fork Trinity River and the Cedar Creek and Richland-Chambers subwatersheds. Site numbers listed in the text of this report are defined in the Site Glossary at the end of this document. In addition, the sites assigned to each assessment unit are as defined by the Draft 2012 Texas Water Quality Inventory and may change slightly in future water quality inventories.

# West Fork Subwatershed

## **0812 – West Fork Trinity River Above Bridgeport Reservoir**

### **SEGMENT DESCRIPTION**

Segment 0812 begins at a point immediately upstream of the confluence of Bear Hollow in Jack County and continues up to SH 79 in Archer County. There are two assessment units in this segment. 0812\_01 is the lower 25 miles of segment. Sites in this assessment unit include 10972, 18058, and 18059. 0812\_02 is the upper 60 miles of segment.

Figure 0812.1 shows the locations of assessment units, monitoring stations, dischargers, landfills, and confined animal feeding operations (CAFOs). Table 0812.1 lists the stations being monitored in fiscal year 2013 as well as the parameters being collected and the frequency of sampling.

### **HYDROLOGIC CHARACTERISTICS**

The median annual average flow in this segment is 41.5 cubic feet per second (cfs) based on historic values at the USGS flow gage near Jacksboro (08042800). Over the past year, post-rainfall flows have returned to normal in less than a week for short duration rain events. Large magnitude peak flows caused by multiple rain events over several days have generally returned to normal within two weeks. This portion of the river frequently reports 0 cfs flow when not influenced by rainfall.

### **IMPAIRMENT/AREA OF INTEREST DESCRIPTION**

Based on the Draft 2012 Texas Water Quality Inventory, there are impairments in assessment units 0812\_01 and 0812\_02. Details of the assessment are located in Table 0812.2.

### **LAND USE AND NATURAL CHARACTERISTICS**

This segment is largely rural with rangeland dominating the land use. There are smaller areas of cropland, pastures, and forest interspersed throughout the segment. The upper portion of the watershed drains the Broken Red Plains while the remainder flows through the Western Cross Timbers. A few of the tributaries drain the Carbonate Cross Timbers. See Figures 0812.2 to 0812.4 for land covers, soil regions, and vegetative provinces in this segment. There is one small discharger in this segment as well as two confined animal feeding operations (CAFOs) and one landfill. The locations of these can be seen in Figure 0812.1.

### **POTENTIAL CAUSES OF IMPAIRMENT OR INTEREST**

The low dissolved oxygen issue in this segment is most likely due to low stream flows. Dissolved solids issues may be related to natural elements compounded by low flows. Irrigation activities may also contribute to elevated dissolved solids.

### **POTENTIAL STAKEHOLDERS**

Tarrant Regional Water District  
City of Jacksboro

### **RECOMMENDATIONS FOR IMPROVING WATER QUALITY**

Additional monitoring is suggested to determine if dissolved solids issues are natural or anthropogenic.

### **ONGOING PROJECTS**

There are no ongoing projects in this segment.

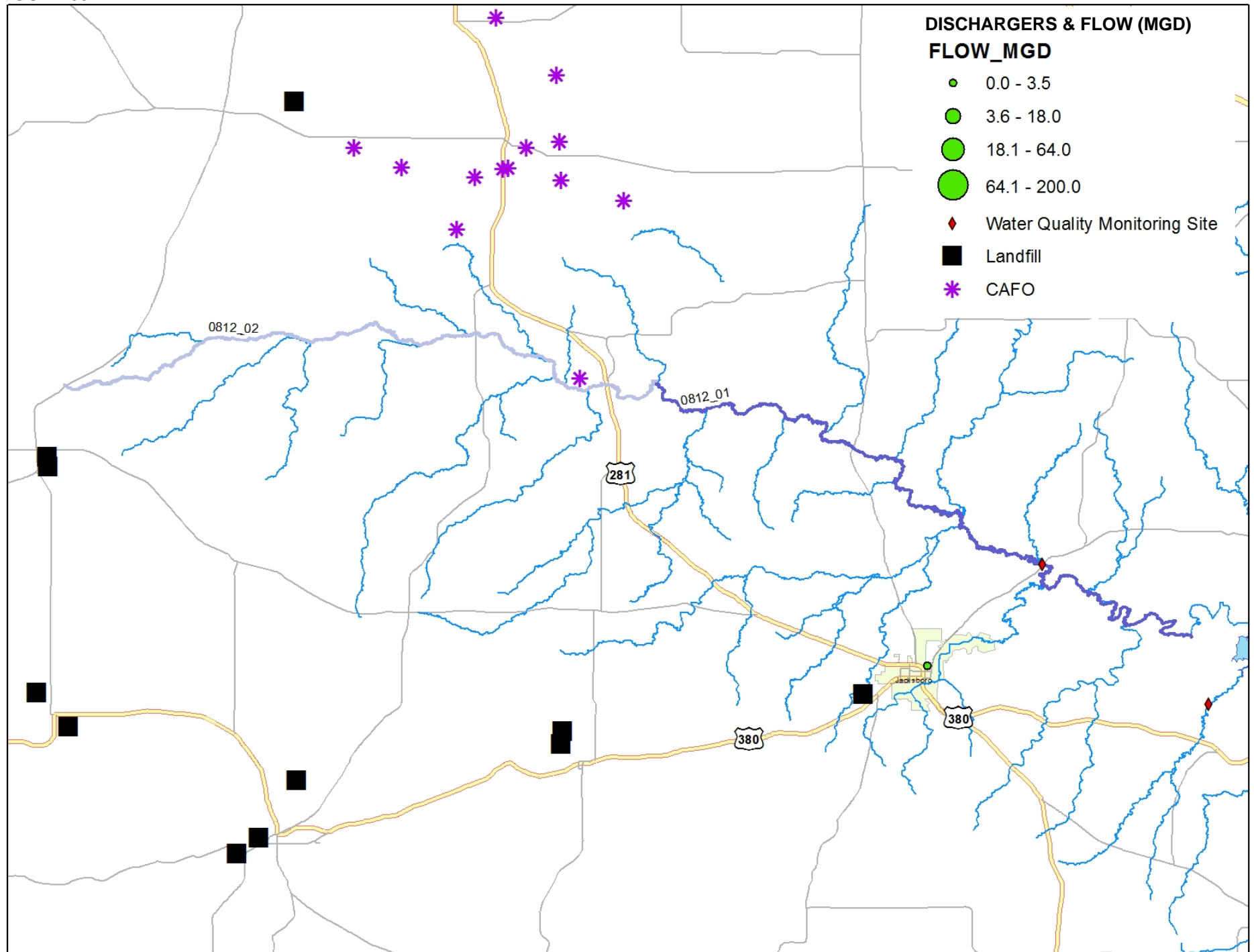
### **MAJOR WATERSHED EVENTS (PRESENT AND FUTURE)**

There are no known or anticipated events that would affect water quality in this segment and it is located above any major dischargers. Without flows from dischargers, it is susceptible to extreme low flows during drought conditions. One discharger renewed their water quality permit in 2011. See Table 0812.3 for details.

### **IMAGES**

See Figures 0812.5 to 0812.7 for images of this segment.

FIGURE 0812.1



**TABLE 0812.1: Fiscal Year 2012 Monitoring**

Monitoring Entity	Segment	AU	Site ID	Site Description	Monitoring Type	24 Hour DO	Metals in Water	Conventionals	Bacteria	Flow	Field
TRWD	0812	0812_01	10972	WEST FORK TRINITY RIVER 30 METERS DOWN-STREAM OF SH 59 NORTH-EAST OF JACKSBORO	RT			12 (TSS, NH3, TKN, NO2+NO3, TP, TOC, Chloride, OP)	12 (E. coli)		12 (Water Temp, Specific Conductance, DO, pH, Flow Severity, Days Since Precipitation Event)

**TABLE 0812.2: Draft 2012 Water Quality Inventory**

Segment and Assessment Unit	Use	Method	Parameter Description	Criteria	Number of samples assessed	Number of samples exceed criteria	Mean of samples assessed (avg or geomean)	Mean of samples that exceed criteria	Dataset Qualifier	Impairment Level	Impairment Category
0812_01	Aquatic Life Use	Dissolved Oxygen grab minimum	Dissolved Oxygen Grab	2	9	0			LD	NS	5c
0812_01	General Use	Dissolved Solids	Total Dissolved Solids	500	17	1	609.88		AD	NS	5c
0812_02	General Use	Dissolved Solids	Total Dissolved Solids	500	17	1	609.88		AD	NS*	5c
0812_02	General Use	Dissolved Solids	Chloride	100	7		44.29		LD	NS	5b

Dataset Qualifier Codes

AD-Adequate Data (10 or more samples)

LD-Limited Data (between 4 and 9 samples)

Impairment Level

NS-Nonsupport

NS\*-Nonsupport carried forward from previous assessments

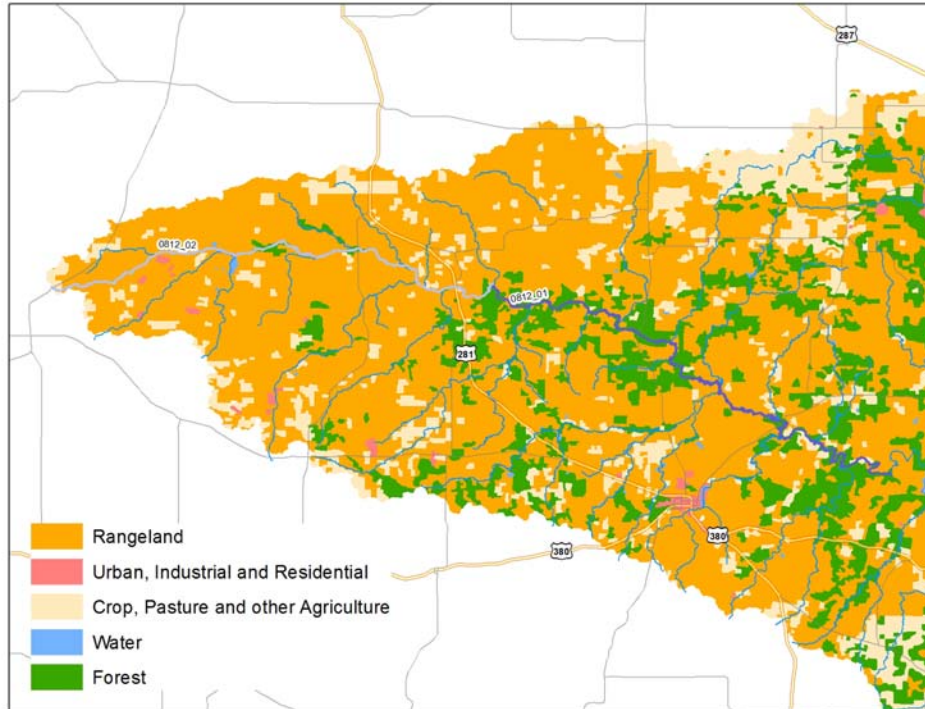
Impairment Category

5b-A review of the water quality standards for this water body will be conducted before a TMDL is scheduled

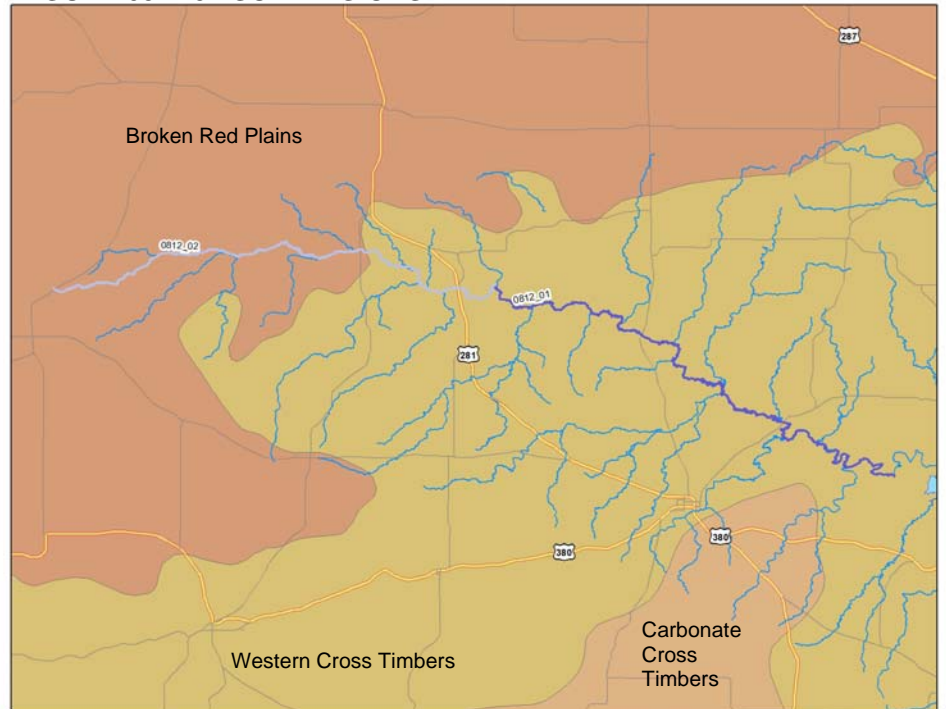
5c-Additional data and information will be collected before a TMDL is scheduled



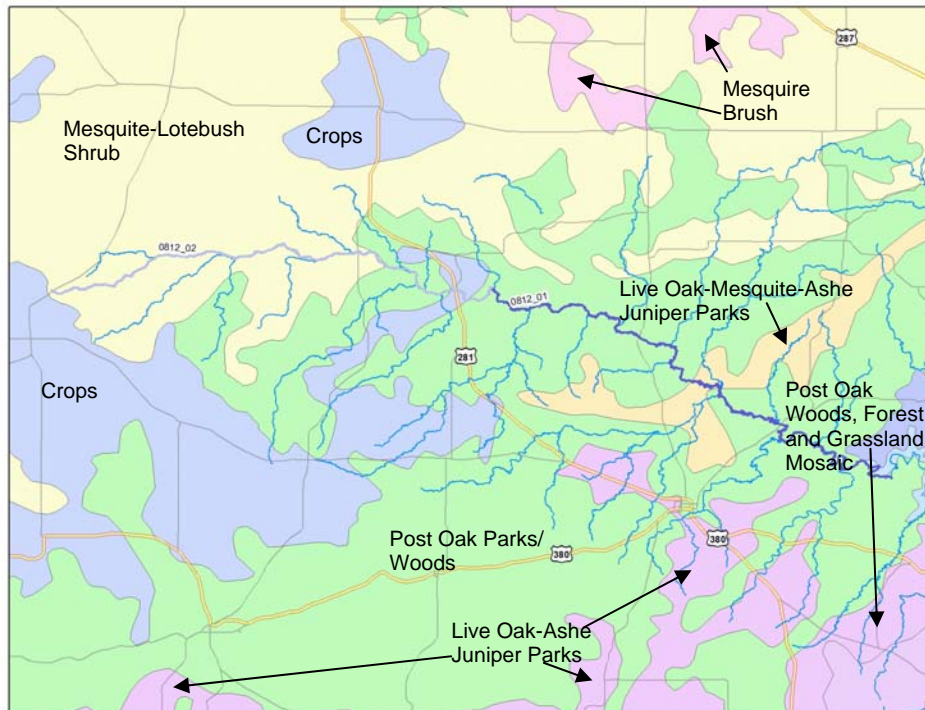
**FIGURE 0812.2: LAND COVER**



**FIGURE 0812.3: SOIL REGIONS**



**FIGURE 0812.4: VEGETATIVE PROVINCES**



**TABLE 0812.3: New and Renewed Discharge Permits**

Segment	Notice received by TRA on	Permitee/Facility	County	Permit Type	Action	Status	Permit Number
812	4/25/2011	LUMINANT GENERATION CO LLC	Young	Water Quality	Renewal	Final	00551-000



**FIGURE 0812.5: West Fork Trinity River at SH 59 northeast of Jacksboro**



**FIGURE 0812.6: West Fork Trinity River at SH 59 northeast of Jacksboro, upstream**



**FIGURE 0812.7: West Fork Trinity River at SH 59 northeast of Jacksboro, downstream**



## **0811 – Bridgeport Reservoir**

### **SEGMENT DESCRIPTION**

Segment 0811 begins at Bridgeport Dam in Wise County and continues up to a point immediately upstream of the confluence of Bear Hollow in Jack County. It impounds the West Fork Trinity River up to the normal pool elevation of 836 feet. There are five assessment units in this segment. 0811\_01 is the southeast portion of the main body of the reservoir. Sites in this assessment unit include 16762 and 16764. 0811\_02 is the southwest portion of main body of reservoir. Sites in this assessment unit include 15165 and 16763. 0811\_03 is the central portion of main body of reservoir. Sites in this assessment unit include 10970. 0811\_04 is the northern portion of main body of reservoir. Sites in this assessment unit include 15164. 0811\_05 is the remainder of reservoir. Sites in this assessment unit include 16736, 16759, 16760, 16765, and 16761.

Figure 0811.1 shows the locations of assessment units, monitoring stations, dischargers, landfills, and confined animal feeding operations (CAFOs). Table 0811.1 lists the stations being monitored in fiscal year 2013 as well as the parameters and the frequency of sampling.

### **HYDROLOGIC CHARACTERISTICS**

Bridgeport Reservoir has a conservation pool elevation of 836 feet and is fed by the West Fork Trinity River. This reservoir is used for flood control, water supply, and recreational activities. At the time of writing, the reservoir is at 820 feet—the lowest point in the past three years.

### **IMPAIRMENT/AREA OF INTEREST DESCRIPTION**

Based on the Draft 2012 Texas Water Quality Inventory, there are no impairments or concerns in this segment.

### **LAND USE AND NATURAL CHARACTERISTICS**

A majority of this segment is rangeland with small areas of cropland and pasture and larger areas of forest. There is some residential urbanization around the reservoir with a significant residential development at the south end. The entire segment drains the Western Cross Timbers. See Figures 0811.2 to 0811.4 for land covers, soil regions, and vegetative provinces in this segment. There is one small discharger in this segment. The location of can be seen in Figure 0811.1.

### **POTENTIAL CAUSES OF IMPAIRMENT OR INTEREST**

There are no impairments or concerns in this segment.

### **POTENTIAL STAKEHOLDERS**

Tarrant Regional Water District  
City of Jacksboro  
City of Chico  
City of Runaway Bay  
City of Lake Bridgeport

City of Bridgeport  
City of Decatur

### **RECOMMENDATIONS FOR IMPROVING WATER QUALITY**

There are no impairments or concerns in this segment.

### **ONGOING PROJECTS**

There are no ongoing projects in this segment.

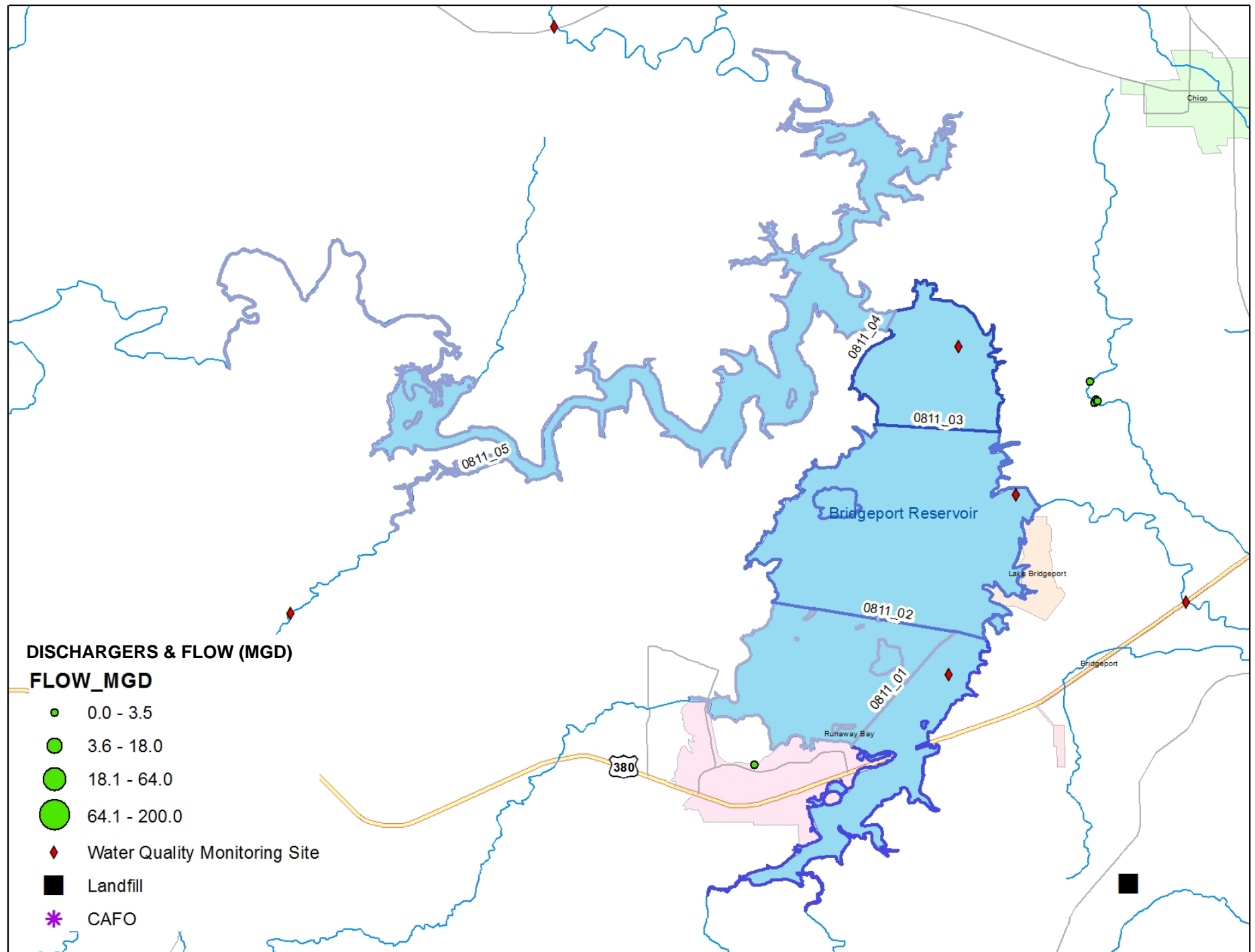
### **MAJOR WATERSHED EVENTS (PRESENT AND FUTURE)**

Zebra mussel DNA has been found in this reservoir. However, at this time, no actual mussels have been found. Due to their ability to reproduce quickly and filter large amounts of water, zebra mussels can dramatically change the food web of a reservoir. In addition, they selectively reject blue-green algae which can lead to blooms of these algae which are associated with taste and odor problems in finished drinking water. One discharger renewed their water quality permit in 2012. See Table 0811.2 for details.

### **IMAGES**

See Figures 0811.5 to 0811.6 for images of this segment.

FIGURE 0811.1



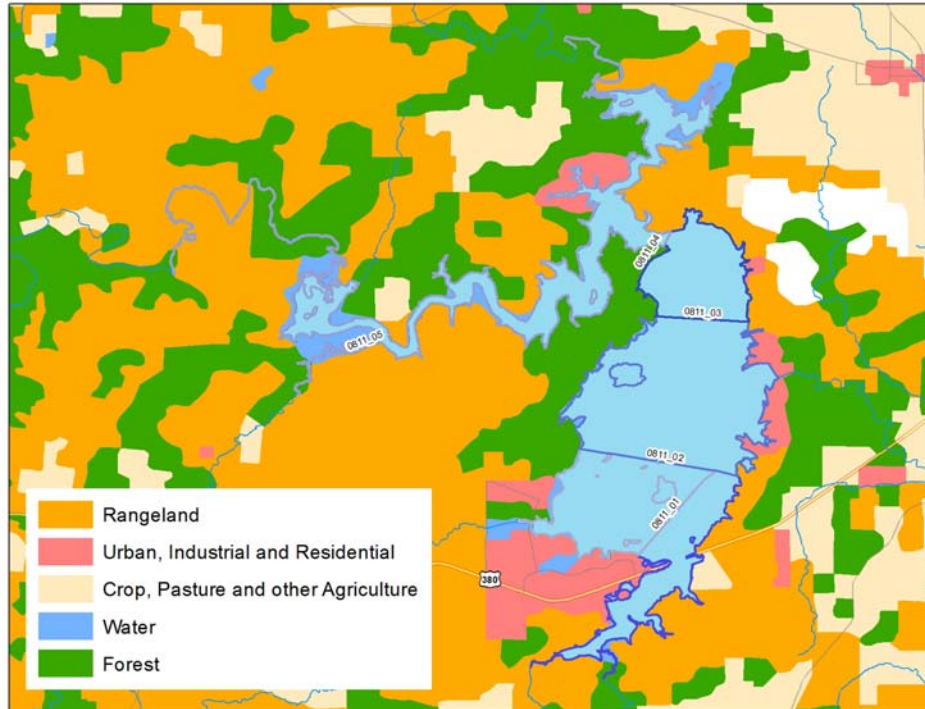


**TABLE 0811.1: Fiscal Year 2012 Monitoring**

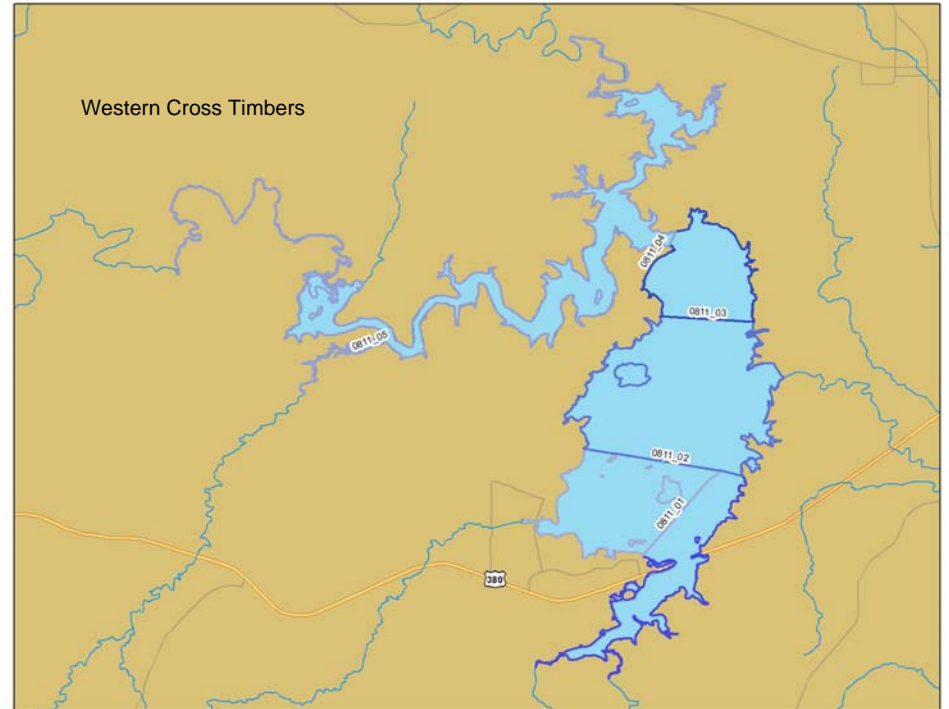
Monitoring Entity	Segment	AU	Site ID	Site Description	Monitoring Type	24 Hour DO	Metals in Water	Conventionals	Bacteria	Flow	Field
TRWD	0811		16737	BEANS CREEK AT FM 1156 5.2KM UPSTREAM OF BRIDGEPORT LAKE EAST OF WIZARD WELLS	RT			12 (TSS, NH3, TKN, NO2+NO3, TP, TOC, Chloride, OP)	12 (E. coli)		12 (Water Temp, Specific Conductance, DO, pH, Flow Severity, Days Since Precipitation Event)
TRWD	0811		16768	BIG CREEK AT FM 1810 UPSTREAM OF LAKE BRIDGEPORT	RT			12 (TSS, NH3, TKN, NO2+NO3, TP, TOC, Chloride, OP)	12 (E. coli)		12 (Water Temp, Specific Conductance, DO, pH, Flow Severity, Days Since Precipitation Event)
TRWD	0811	0811_01	16762	LAKE BRIDGEPORT MAIN CHANNEL 0.8KM EAST OF RATTLESNAKE ISLAND 636 M N AND 180 M W OF INTERSECTION OF E BAY DR AND PRIVATE RD 1505	RT			5 (Total Alkalinity, TSS, NH3, TKN, NO2+NO3, TP, TOC, DOC, Chloride, Chlorophyll-a, TDS, OP)	4 (E. coli)		5 (Water Temp, Secchi Depth, Specific Conductance, DO, pH)
TRWD	0811	0811_03	10970	LAKE BRIDGEPORT 178 METERS WEST AND 187 METERS SOUTH OF NORTH EDGE OF DAM	BS	2					
TRWD	0811	0811_03	10970	LAKE BRIDGEPORT 178 METERS WEST AND 187 METERS SOUTH OF NORTH EDGE OF DAM	RT		5 (Total Calcium, Magnesium, Sodium, Potassium, Arsenic, Iron, Manganese)	5 (Total Alkalinity, TSS, NH3, TKN, NO2+NO3, TP, TOC, DOC, Chloride, Sulfate, Chlorophyll-a, TDS, OP, Phytoplankton)	4 (E. coli)		5 (Water Temp, Secchi Depth, Specific Conductance, DO, pH)
TRWD	0811	0811_04	15164	LAKE BRIDGEPORT AT NORTH END OF MAIN BODY OF RESERVOIR 10 METERS NORTH AND 1.21 KM WEST OF INTERSECTION OF VALLEY STREET AND FM 2952	RT			5 (Total Alkalinity, TSS, NH3, TKN, NO2+NO3, TP, TOC, DOC, Chloride, Chlorophyll-a, TDS, OP)	4 (E. coli)		5 (Water Temp, Secchi Depth, Specific Conductance, DO, pH)



**FIGURE 0811.2: LAND COVER**



**FIGURE 0811.3: SOIL REGIONS**



**FIGURE 0811.4: VEGETATIVE PROVINCES**

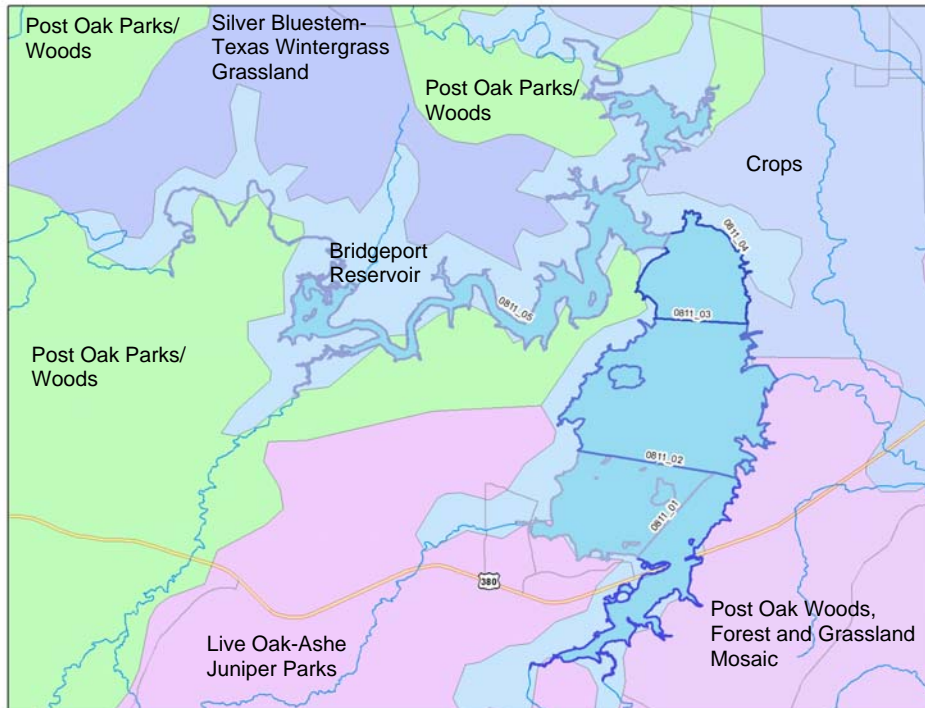


TABLE 0811.2: New and Renewed Discharge Permits

Segment	Notice received by TRA on	Permitee/Facility	County	Permit Type	Action	Status	Permit Number
811	1/30/2012	RUNAWAY BAY, CITY OF	Wise	Water Quality	Renewal	Final	10862-001

**FIGURE 0811.5: Bridgeport Reservoir boat ramp south of dam**



**FIGURE 0811.6: Bridgeport Reservoir south of dam**



## **0810 – West Fork Trinity River Below Bridgeport Reservoir**

### **SEGMENT DESCRIPTION**

Segment 0810 begins at a point 0.6 km (0.4 miles) downstream of the confluence of Oates Branch in Wise County and continues up to Bridgeport Dam in Wise County. There are two assessment units in this segment. 0810\_01 is the lower 25 miles of segment. Sites in this assessment unit include 10967, 10968, 10969, 14246, and 17844. 0810\_02 is the upper 11 miles of segment. Sites in this assessment unit include 14904 and 20840.

Unclassified water bodies in this segment include those listed below.

0810A—Big Sandy Creek—A fifteen mile stretch of Big Sandy Creek running from the confluence with Waggoner Creek to FM 1810, west of Alvord in Wise County. This segment includes site 15688.

0810B—Garrett Creek—An eighteen mile stretch of Garrett Creek running upstream from the confluence with Salt Creek to Wise County Road approximately 14 miles upstream of SH114 in Wise County. This segment includes site 16767.

0810C—Martin Branch—An eight mile stretch of Martin Branch running upstream from the confluence with Center Creek to FM 730, south of Decatur in Wise County. This segment includes site 17848.

0810D—Salt Creek—An eleven mile stretch of Salt Creek running upstream from the confluence with Garrett Creek in Wise County. This segment includes site 16766.

Figure 0810.1 shows the locations of assessment units, monitoring stations, dischargers, landfills, and confined animal feeding operations (CAFOs). Table 0810.1 lists the stations being monitored in fiscal year 2013 as well as the parameters being collected and the frequency of sampling.

### **HYDROLOGIC CHARACTERISTICS**

Based on the historic data at the USGS flow gage near Boyd (08044500), the median annual average flow in this segment is 159.6 cfs. Flow regimes in this segment are characterized by the releases from Bridgeport Reservoir with plateaus in flow extending as long as flood control releases occur.

### **IMPAIRMENT/AREA OF INTEREST DESCRIPTION**

Based on the Draft 2012 Texas Water Quality Inventory, there are impairments in assessment units 0810\_01, 0810A\_01, 0810B\_01, 0810C\_01, and 0810D\_01. Details of the assessment are located in Table 0810.2.

### **LAND USE AND NATURAL CHARACTERISTICS**

This segment is generally rural with large areas of both rangeland and cropland. There are some forested areas throughout the segment especially along the river and tributary channels. The segment flows mainly through the Western Cross Timbers with the upper portions of some of the tributaries near the downstream end of the

segment draining the Grand Prairie. See Figures 0810.2 to 0810.4 for land covers, soil regions, and vegetative provinces in this segment. There are many small dischargers throughout the segment. In addition, there is one CAFO and six landfills. The locations of these can be seen in Figure 0810.1.

### **POTENTIAL CAUSES OF IMPAIRMENT OR INTEREST**

Low dissolved oxygen issues in this segment are most likely due to low flows during drought conditions while bacterial issues are probably related to non-point source runoff.

### **POTENTIAL STAKEHOLDERS**

Tarrant Regional Water District  
City of Bridgeport  
City of Decatur  
City of Paradise  
Town of Boyd  
City of Rhome

### **RECOMMENDATIONS FOR IMPROVING WATER QUALITY**

Landowner education and implementation of best management practices (BMPs) may help reduce bacteria levels in this segment.

### **ONGOING PROJECTS**

There are no ongoing projects in this segment.

### **MAJOR WATERSHED EVENTS (PRESENT AND FUTURE)**

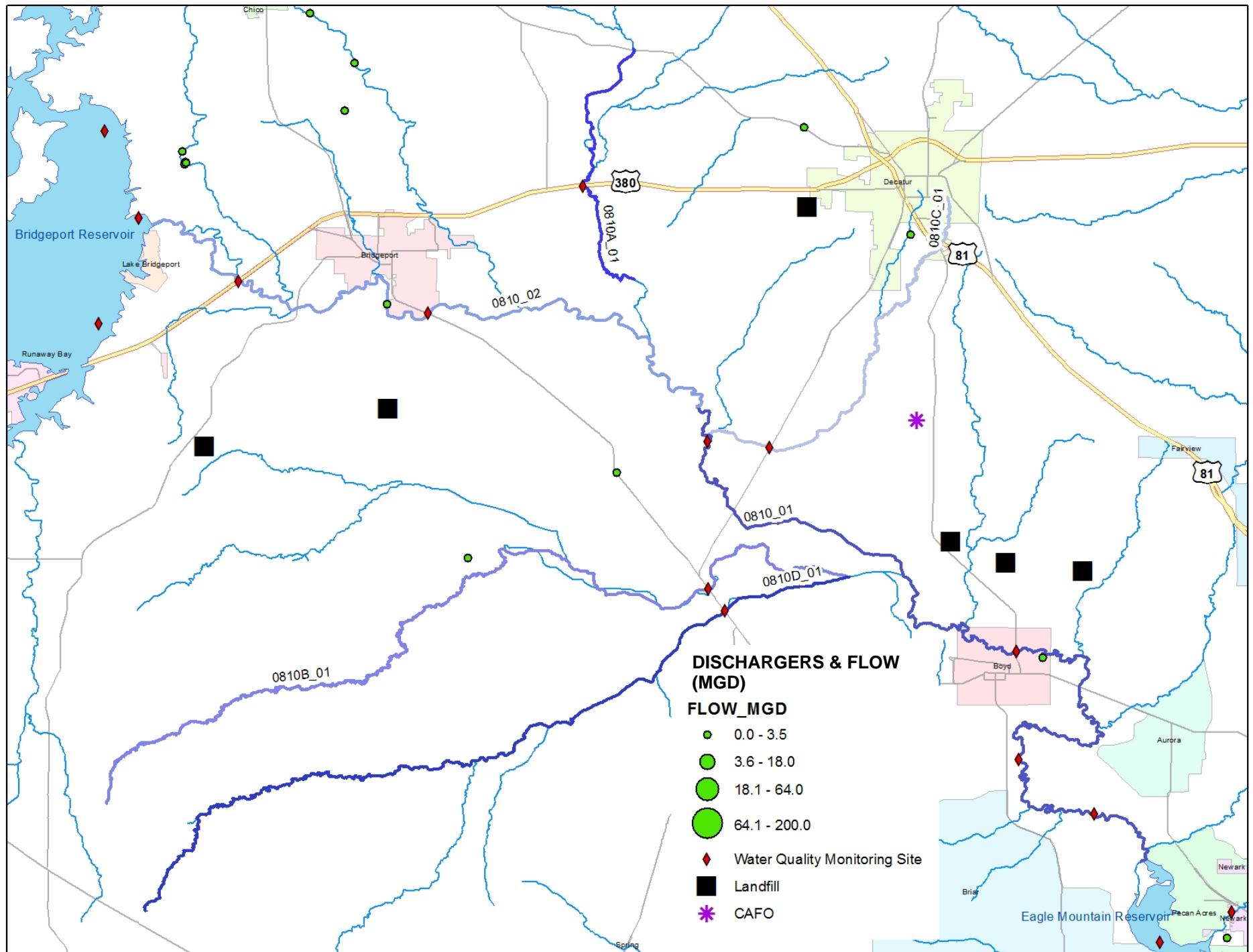
There are no known or anticipated events that would affect water quality in this segment. Waste from wildlife and livestock can build up on land during prolonged dry weather and be wasted in during rain events leading to elevated bacteria levels. Six dischargers in 2011 and one in 2012 renewed their water quality permits. See Table 0810.3 for details.

### **IMAGES**

See Figures 0810.5 to 0810.8 for images of this segment.



FIGURE 0810.1



**TABLE 0810.1: Fiscal Year 2012 Monitoring**

Monitoring Entity	Segment	AU	Site ID	Site Description	Monitoring Type	24 Hour DO	Metals in Water	Conventionals	Bacteria	Flow	Field
TRWD	0810	0810_01	10967	WEST FORK TRINITY RIVER AT WISE CR 4757/VAN METER BRIDGE	RT				4 (E. coli)		4 (Water Temp, Specific Conductance, DO, pH, Flow Severity, Days Since Precipitation Event)
TRWD	0810	0810_01	10969	WEST FORK TRINITY RIVER 30 METERS DOWN-STREAM OF FM 730 NE OF BOYD	RT			12 (TSS, NH3, TKN, NO2+NO3, TP, TOC, Chloride, OP)	12 (E. coli)	12	12 (Water Temp, Specific Conductance, DO, pH, Flow Severity, Days Since Precipitation Event)
TRWD	0810	0810_01	10969	WEST FORK TRINITY RIVER 30 METERS DOWN-STREAM OF FM 730 NE OF BOYD	RT				4 (E. coli)		4 (Water Temp, Specific Conductance, DO, pH, Flow Severity, Days Since Precipitation Event)
TRWD	0810	0810_01	14246	WEST FORK TRINITY RIVER 281 METERS DOWN-STREAM OF CONFLUENCE WITH MARTIN BRANCH 2.2 MI SE OF PARADISE	RT				4 (E. coli)		4 (Water Temp, Specific Conductance, DO, pH, Flow Severity, Days Since Precipitation Event)
TRWD	0810	0810_01	17844	WEST FORK TRINITY RIVER AT BOBO BRIDGE ON WISE CR 4668 SOUTH OF BOYD	RT				4 (E. coli)		4 (Water Temp, Specific Conductance, DO, pH, Flow Severity, Days Since Precipitation Event)
TRWD	0810	0810_02	14904	WEST FORT TRINITY RIVER IMMEDIATELY DOWN-STREAM OF US 380 1.8 MI SW OF BRIDGEPORT	RT				4 (E. coli)		4 (Water Temp, Specific Conductance, DO, pH, Flow Severity, Days Since Precipitation Event)
TRWD	0810	0810_02	20840	WEST FORK TRINITY RIVER BELOW BRIDGEPORT RESERVOIR AT SH 114 APPROX 333 METERS SOUTH AND 647 METERS EAST OF THE INTERSECTION OF SH 114 AND INDUSTRIAL BOULEVARD IN WISE COUNTY	RT				4 (E. coli)		4 (Water Temp, Specific Conductance, DO, pH, Flow Severity, Days Since Precipitation Event)



**TABLE 0810.1 Continued: Fiscal Year 2012 Monitoring**

Monitoring Entity	Segment	AU	Site ID	Site Description	Monitoring Type	24 Hour DO	Metals in Water	Conventionals	Bacteria	Flow	Field
TRWD	0810A	0810A_01	15688	BIG SANDY CREEK 42 METERS DOWNSTREAM OF US 380 4.0 MI EAST OF BRIDGEPORT	RT				4 (E. coli)		12 (Water Temp, Specific Conductance, DO, pH, Flow Severity)
TRWD	0810B	0810B_01	16767	GARRETT/RUSH CREEK AT SH 114 NORTH OF EAGLE MOUNTAIN RESERVOIR NW OF BOYD	RT				4 (E. coli)		12 (Water Temp, Specific Conductance, DO, pH, Flow Severity)
TRWD	0810C	0810C_01	17848	MARTIN BRANCH CENTER CREEK AT FM 51 EAST OF PARADISE	RT				4 (E. coli)		12 (Water Temp, Specific Conductance, DO, pH, Flow Severity)
TRWD	0810D	0810D_01	16766	SALT CREEK AT SH 114 NORTH OF EAGLE MOUNTAIN RESERVOIR NW OF BOYD	RT				4 (E. coli)		12 (Water Temp, Specific Conductance, DO, pH, Flow Severity)

**TABLE 0810.2: Draft 2012 Water Quality Inventory**

Segment and Assessment Unit	Use	Method	Parameter Description	Criteria	Number of samples assessed	Number of samples exceed criteria	Mean of samples assessed (avg or geomean)	Mean of samples that exceed criteria	Dataset Qualifier	Impairment Level	Impairment Category
0810_01	Recreation Use	Bacteria Geomean	E. coli	126	183	1	257.82		AD	NS	5b
0810A_01	Recreation Use	Bacteria Geomean	E. coli	126	35	1	276.04		AD	NS	5b
0810B_01	Recreation Use	Bacteria Geomean	E. coli	126	49	1	223.89		AD	NS	5b
0810C_01	Recreation Use	Bacteria Geomean	E. coli	126	53	1	1029.24		AD	NS	5b
0810D_01	Aquatic Life Use	Dissolved Oxygen grab screening level	Dissolved Oxygen Grab	3	35	6		1.92	AD	CS	

Dataset Qualifier Codes

AD-Adequate Data (10 or more samples)

Impairment Level

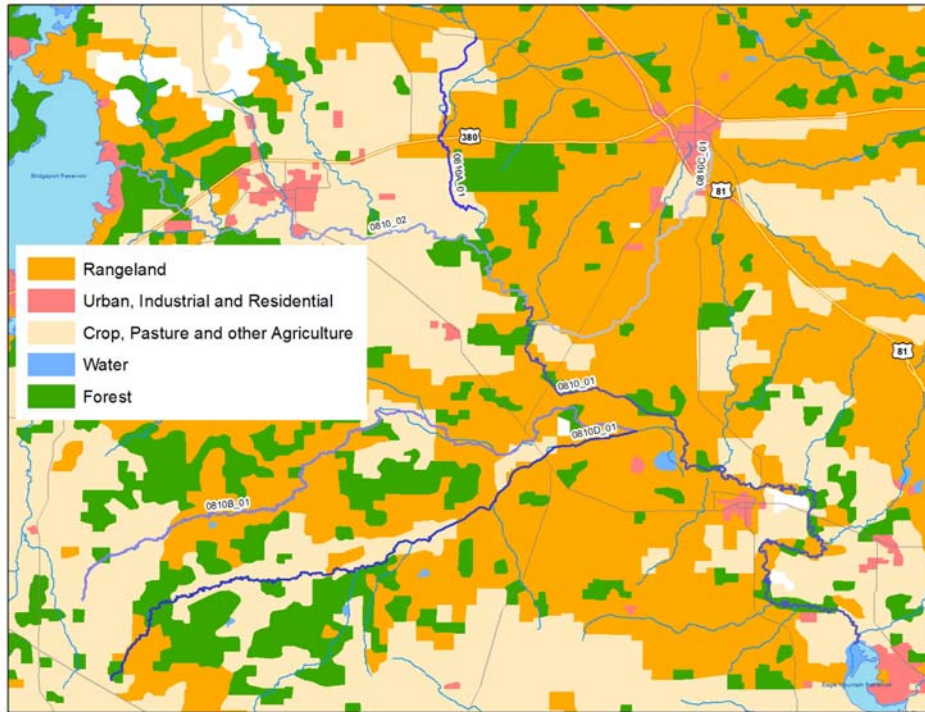
CS-Screening level concern

NS-Nonsupport

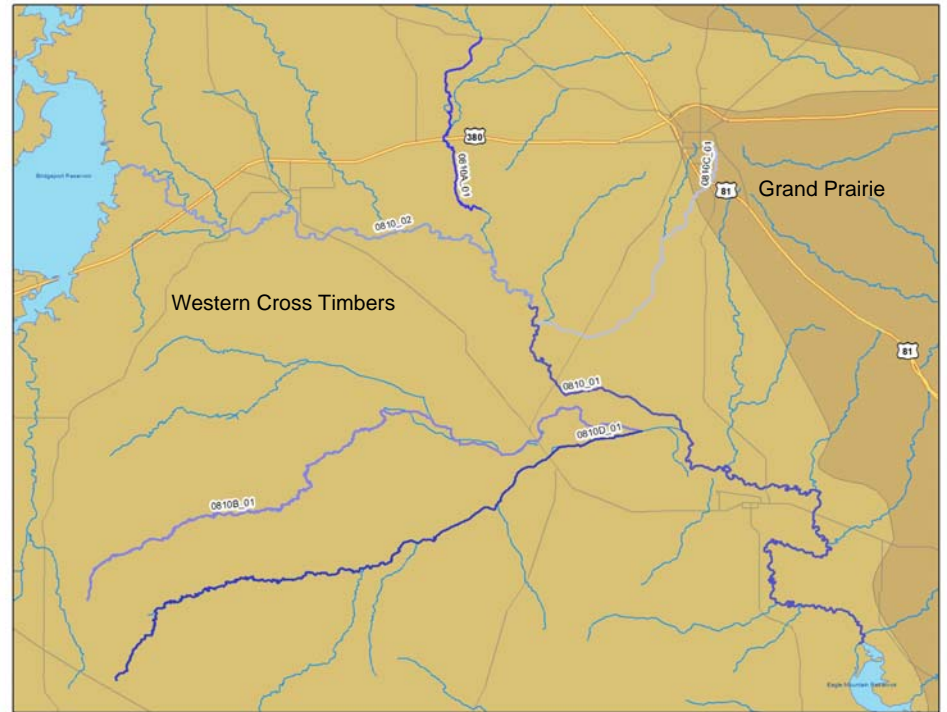
Impairment Category

5b-A review of the water quality standards for this water body will be conducted before a TMDL is scheduled

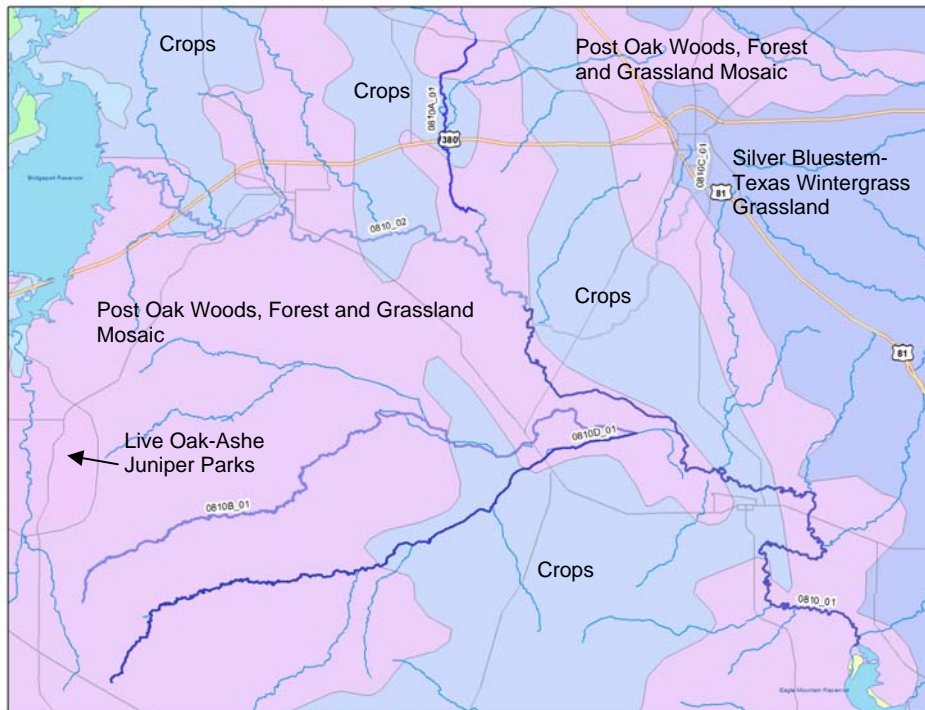
**FIGURE 0810.2: LAND COVER**



**FIGURE 0810.3: SOIL REGIONS**



**FIGURE 0810.4: VEGETATIVE PROVINCES**



**TABLE 0810.3: New and Renewed Discharge Permits**

Segment	Notice received by TRA on	Permitee/Facility	County	Permit Type	Action	Status	Permit Number
810	3/17/2011	RHOME, CITY OF	Wise	Water Quality	Renewal	Final	10701-002
810	9/19/2011	WISE COUNTY SPECIAL UTILITY DISTRICT	Wise	Water Quality	Renewal	Final	15002-001
810	10/17/2011	PARADISE ISD - STP	Wise	Water Quality	Renewal	Draft	13439-001
810	12/16/2011	BOWIE, CITY-STP	Montague	Water Quality	Renewal	Final	10071-003
810	12/16/2011	BOYD, CITY - STP	Wise	Water Quality	Renewal	Final	10131-001
810	12/16/2011	GARRETT CREEK RANCH INC - STP	Wise	Water Quality	Renewal	Final	13427-001
810	1/9/2012	DECATUR, CITY - STP	Wise	Water Quality	Renewal	Final	10009-001



**FIGURE 0810.5: West Fork Trinity River downstream of Bridgeport Dam**



**FIGURE 0810.7: West Fork Trinity River at SH 114 east of Boyd, upstream**



**FIGURE 0810.6: West Fork Trinity River at SH 114 west of Bridgeport**



**FIGURE 0810.8: West Fork Trinity River near Van Meter Crossing Road, downstream**





## **0809 – Eagle Mountain Reservoir**

### **SEGMENT DESCRIPTION**

Segment 0809 begins at Eagle Mountain Dam in Tarrant County and continues up to a point 0.6 km (0.4 miles) downstream of the confluence of Oates Branch in Wise County. It impounds the West Fork Trinity River up to a normal pool elevation of 649.1 feet. There are 14 assessment units in this segment. 0809\_01 is the lower-most portion of the reservoir near the east end of the dam. Sites in this assessment unit include 10944. 0809\_02 is Dosier Slough cove. Sites in this assessment unit include 14904 and 20840. Sites in this assessment unit include 10947. 0809\_03 is Ash Creek cove. Sites in this assessment unit include 10949, 10950, and 10951. 0809\_04 is the lowermost portion of reservoir near the west end of the dam. Sites in this assessment unit include 10945. 0809\_05 is the lower portion of reservoir, east of Walnut Creek cove. Sites in this assessment unit include 10952. 0809\_06 is Walnut Creek cove. Sites in this assessment unit include 10954. 0809\_07 is Old Ranch cove. Sites in this assessment unit include 10958 and 10959. 0809\_08 is the middle portion of the reservoir near the Cole subdivision. Sites in this assessment unit include 10956. 0809\_09 is Indian Creek cove. Sites in this assessment unit include 10961 and 10962. 0809\_10 is the upper portion of the reservoir near Indian Creek cove. Sites in this assessment unit include 10960. 0809\_11 is Darrett Creek cove. Sites in this assessment unit include 10965. 0809\_12 is the upper portion of the reservoir near Newark Beach. Sites in this assessment unit include 10964. 0809\_13 is the remainder of the reservoir. 0809\_14 is mid-Lake, from just above Walnut Creek Cove to the Oakwood Road peninsula. Sites in this assessment unit include 17667.

Figure 0809.1 shows the locations of assessment units, monitoring stations, dischargers, landfills, and confined animal feeding operations (CAFOs). Table 0809.1 lists the stations being monitored in fiscal year 2013 as well as the parameters being collected and the frequency of sampling.

### **HYDROLOGIC CHARACTERISTICS**

Eagle Mountain Reservoir has a conservation pool elevation of 649 feet and is fed by the West Fork Trinity River. Over the past three years, the average lake elevation has been 646 feet with a minimum elevation 642 feet in November 2011.

### **IMPAIRMENT/AREA OF INTEREST DESCRIPTION**

Based on the Draft 2012 Texas Water Quality Inventory, there are concerns in assessment units 0809\_01, 0809\_03, 0809\_05, 0809\_08, 0809\_09, 0809\_10, 0809\_12, and 0809\_14. Details of the assessment are located in Table 0809.2.

### **LAND USE AND NATURAL CHARACTERISTICS**

This segment is dominated by cropland. There is some rangeland in the upper portion of the segment. Large portions of the land directly adjacent to the reservoir are either forested or residential. The tributaries to the west of the reservoir and the reservoir itself are within the Western Cross Timbers. The tributaries to the east of the reservoir drain the Grand Prairie. See Figures 0809.2 to 0809.4 for land covers,

soil regions, and vegetative provinces in this segment. There are several small dischargers in this segment as well as two confined landfills. The locations of these can be seen in Figure 0809.1.

### **POTENTIAL CAUSES OF IMPAIRMENT OR INTEREST**

The concerns for low dissolved oxygen in 0809\_01 may be related to elevated Chlorophyll-a levels in that assessment unit. Overall, Chlorophyll-a concerns are likely due to the hypereutrophic status of the reservoir. However, it does not appear that harmful algal blooms are occurring as dissolved oxygen is not an issue in other portions of the reservoir. Residential and agricultural fertilizer use may be contributing to algal growth in the reservoir.

### **POTENTIAL STAKEHOLDERS**

Tarrant Regional Water District  
Town of Boyd  
City of Rhome  
City of Springtown  
Briar  
Pecan Acres  
City of Azle

### **RECOMMENDATIONS FOR IMPROVING WATER QUALITY**

Public education of homeowners and landowners may help reduce nutrient loading and algal growth in the reservoir.

### **ONGOING PROJECTS**

There are no ongoing projects in this segment.

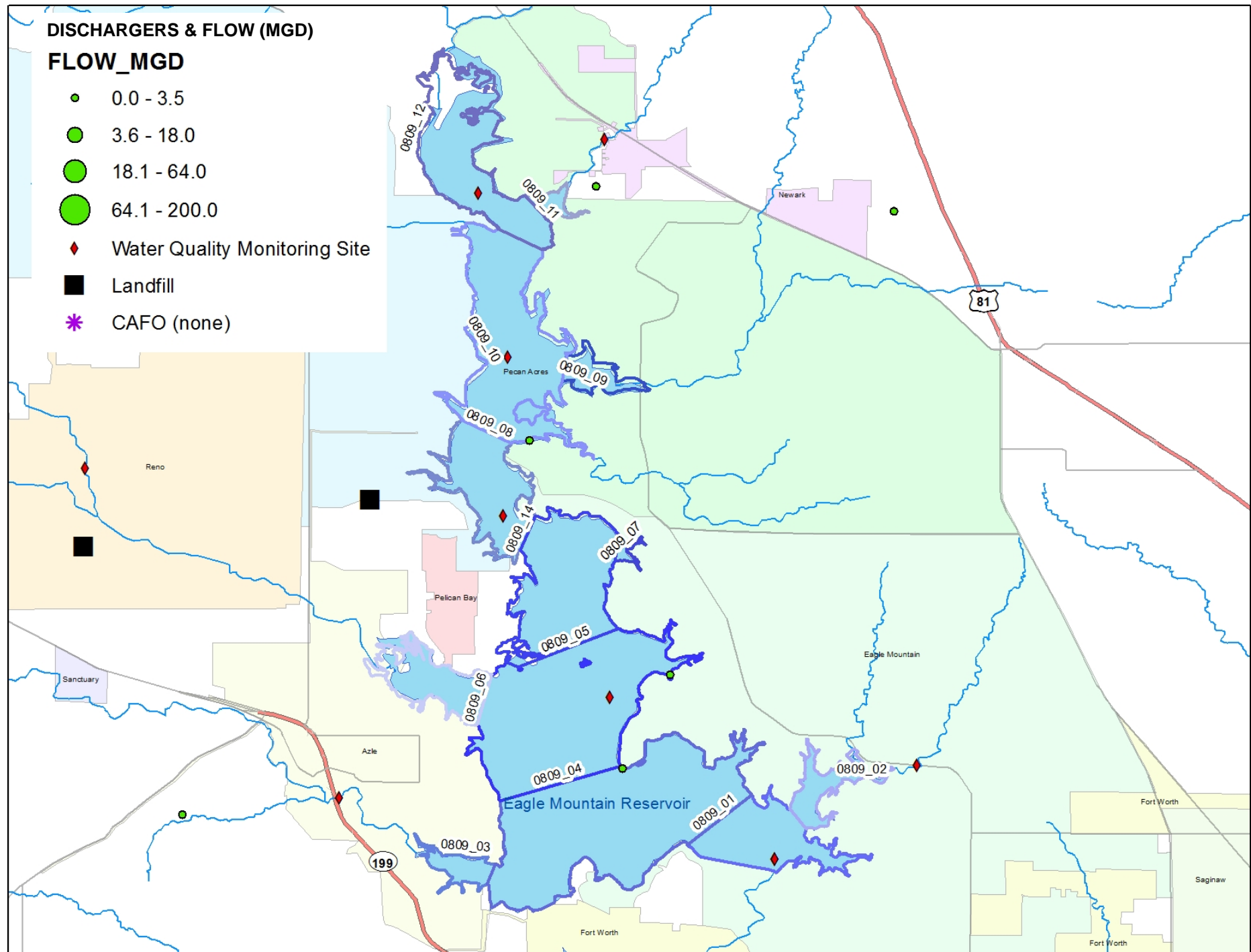
### **MAJOR WATERSHED EVENTS (PRESENT AND FUTURE)**

Zebra mussel DNA has been found in this reservoir. However, at this time no actual mussels have been found. Due to their ability to reproduce quickly and filter large amounts of water, zebra mussels can dramatically change the food web of a reservoir. In addition, they selectively reject blue-green algae which can lead to blooms of these algae and associated taste and odor problems in finished drinking water. Eight dischargers have recently renewed or amended their water quality permits-four in 2011 and four in 2012. See Table 0809.3 for details.

### **IMAGES**

See Figures 0809.5 to 0809.7 for images of this segment.

FIGURE 0809.1





**TABLE 0809.1: Fiscal Year 2012 Monitoring**

Monitoring Entity	Segment	AU	Site ID	Site Description	Monitoring Type	24 Hour DO	Metals in Water	Conventionals	Bacteria	Flow	Field
TRWD	0809		10853	WALNUT CREEK AT FM 1542	RT			12 (TSS, NH3, TKN, NO2+NO3, TP, TOC, Chloride, OP)	12 (E. coli)	12	12 (Water Temp, Specific Conductance, DO, pH, Flow Severity, Days Since Precipitation Event)
TRWD	0809		10854	ASH CREEK 56 METERS DOWNSTREAM OF SH 199 NORTHBOUND SERVICE ROAD	RT			12 (TSS, NH3, TKN, NO2+NO3, TP, TOC, Chloride, OP)	12 (E. coli)	12	12 (Water Temp, Specific Conductance, DO, pH, Flow Severity, Days Since Precipitation Event)
TRWD	0809		10855	DOSIER CREEK AT FM 1220	RT			12 (TSS, NH3, TKN, NO2+NO3, TP, TOC, Chloride, OP)	12 (E. coli)		12 (Water Temp, Specific Conductance, DO, pH, Flow Severity, Days Since Precipitation Event)
TRWD	0809		10858	DERRETT CREEK AT CENTRAL AVENUE IN NEWARK EAST OF EAGLE MOUNTAIN LAKE APPROX 1.2KM UPSTREAM OF EAGLE MOUNTAIN LAKE	RT			12 (TSS, NH3, TKN, NO2+NO3, TP, TOC, Chloride, OP)	12 (E. coli)		12 (Water Temp, Specific Conductance, DO, pH, Flow Severity, Days Since Precipitation Event)
TRWD	0809	0809_01	10944	EAGLE MOUNTAIN RESERVOIR 250 METERS NORTH OF EAST EDGE OF DAM	BS	2					
TRWD	0809	0809_01	10944	EAGLE MOUNTAIN RESERVOIR 250 METERS NORTH OF EAST EDGE OF DAM	RT		5 (Total Calcium, Magnesium, Sodium, Potassium, Arsenic, Iron, Manganese)	5 (Total Alkalinity, TSS, NH3, TKN, NO2+NO3, TP, TOC, DOC, Chloride, Sulfate, Chlorophyll-a, TDS, OP, Phytoplankton)	4 (E. coli)		5 (Water Temp, Secchi Depth, Specific Conductance, DO, pH)
TRWD	0809	0809_05	10952	EAGLE MOUNTAIN RESERVOIR 1.5 KM W AND 308 METERS S OF INTERSECTION BETWEEN VILLAGE RD AND EAGLE MOUNTAIN PLANT ROAD NEAR TEXAS ELECTRIC	RT			5 (Total Alkalinity, TSS, NH3, TKN, NO2+NO3, TP, TOC, DOC, Chloride, Chlorophyll-a, TDS, OP)	4 (E. coli)		5 (Water Temp, Secchi Depth, Specific Conductance, DO, pH)
TRWD	0809	0809_08	10956	EAGLE MOUNTAIN RESERVOIR 645 METERS WEST AND 485 METERS SOUTH OF INTERSECTION OF OAKWOOD LANE AND PEDEN ROAD NEAR COLE SUBDIVISION	RT			5 (Total Alkalinity, TSS, NH3, TKN, NO2+NO3, TP, TOC, DOC, Chloride, Chlorophyll-a, TDS, OP)	4 (E. coli)		5 (Water Temp, Secchi Depth, Specific Conductance, DO, pH)

**TABLE 0809.1 Continued: Fiscal Year 2012 Monitoring**

Monitoring Entity	Segment	AU	Site ID	Site Description	Monitoring Type	24 Hour DO	Metals in Water	Conventionals	Bacteria	Flow	Field
TRWD	0809	0809_10	10960	EAGLE MOUNTAIN RESERVOIR 112 METERS NORTH AND 818 METERS EAST OF INTERSECTION OF MILLER RD AND GANTT ROAD NEAR INDIAN CREEK COVE	RT			5 (Total Alkalinity, TSS, NH3, TKN, NO2+NO3, TP, TOC, DOC, Chloride, Chlorophyll-a, TDS, OP)	4 (E. coli)		5 (Water Temp, Secchi Depth, Specific Conductance, DO, pH)
TRWD	0809	0809_12	10964	EAGLE MOUNTAIN RESERVOIR 187 METERS NORTH AND 788 METERS EAST OF INTERSECTION OF BRIAR ROAD AND LIBERTY SCHOOL ROAD NEAR NEWARK BEACH	RT			5 (Total Alkalinity, TSS, NH3, TKN, NO2+NO3, TP, TOC, DOC, Chloride, Chlorophyll-a, TDS, OP)	4 (E. coli)		5 (Water Temp, Secchi Depth, Specific Conductance, DO, pH)

**TABLE 0809.2: Draft 2012 Water Quality Inventory**

Segment and Assessment Unit	Use	Method	Parameter Description	Criteria	Number of samples assessed	Number of samples exceed criteria	Mean of samples assessed (avg or geomean)	Mean of samples that exceed criteria	Dataset Qualifier	Impairment Level	Impairment Category
0809_01	Aquatic Life Use	Dissolved Oxygen grab screening level	Dissolved Oxygen Grab	5	38	3		3.37	AD	CS	
0809_01	General Use	Nutrient Screening Levels	Chlorophyll-a	26.7	37	10		37.76	AD	CS	
0809_03	General Use	Nutrient Screening Levels	Ammonia	0.11	4	0			LD	CS	
0809_05	General Use	Nutrient Screening Levels	Chlorophyll-a	26.7	37	11		33.22	AD	CS	
0809_08	General Use	Nutrient Screening Levels	Chlorophyll-a	26.7	37	18		38.21	AD	CS	
0809_09	General Use	Nutrient Screening Levels	Chlorophyll-a	26.7	4	0			LD	CS	
0809_10	General Use	Nutrient Screening Levels	Chlorophyll-a	26.7	36	18		40.7	AD	CS	
0809_12	General Use	Nutrient Screening Levels	Chlorophyll-a	26.7	14	3		38.3	AD	CS	
0809_14	General Use	Nutrient Screening Levels	Chlorophyll-a	26.7	11	4		35.85	AD	CS	

Dataset Qualifier Codes

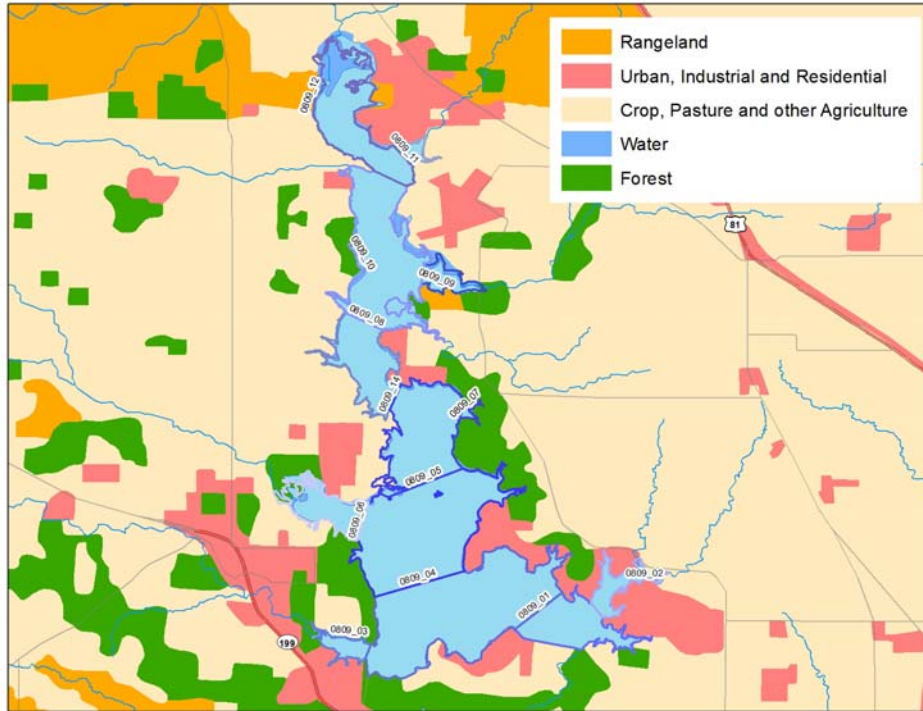
AD-Adequate Data (10 or more samples)

LD-Limited Data (between 4 and 9 samples)

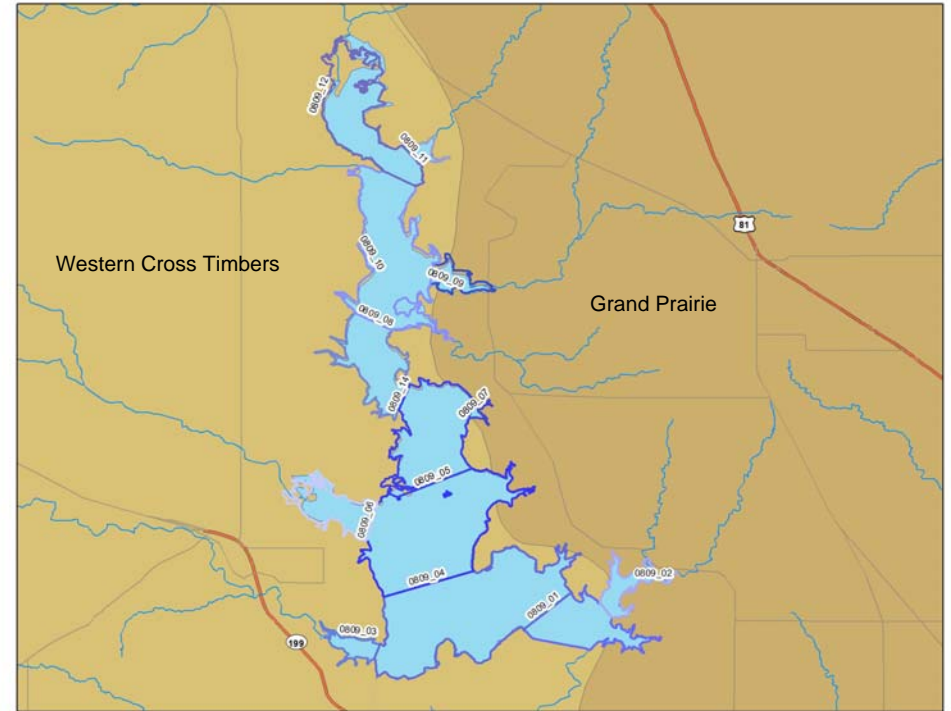
Impairment Level

CS-Screening level concern

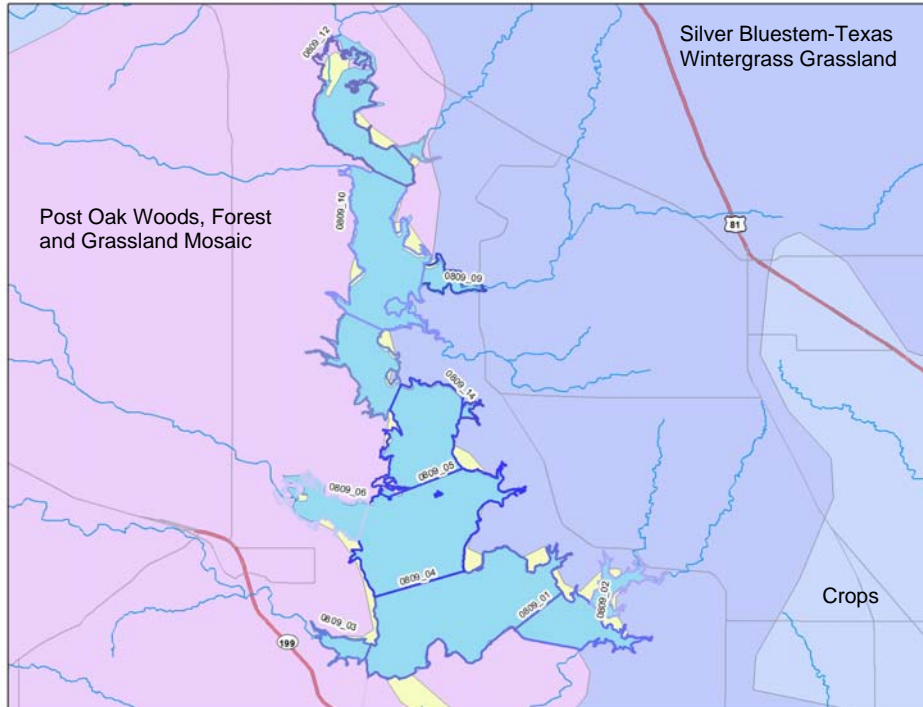
**FIGURE 0809.2: LAND COVER**



**FIGURE 0809.3: SOIL REGIONS**



**FIGURE 0809.4: VEGETATIVE PROVINCES**



**TABLE 0809.3: New and Renewed Discharge Permits**

Segment	Notice received by TRA on	Permitee/Facility	County	Permit Type	Action	Status	Permit Number
809	2/15/2011	SPRINGTOWN ISD - RENO ELEM STP	Parker	Water Quality	Renewal	Final	14054-001
809	6/27/2011	TXU GENERATION CO LP - EAGLE MTN SES	Tarrant	Water Quality	Renewal	Received notification	00550-000
809	12/16/2011	SPRINGTOWN, CITY - WALNUT CR STP	Parker	Water Quality	Renewal	Final	10649-001
809	12/16/2011	THE FORT WORTH BOAT CLUB - STP	Tarrant	Water Quality	Renewal	Final	14840-001
809	1/19/2012	NEWARK, CITY - STP	Wise	Water Quality	Amendment	Final	11626-001
809	1/30/2012	AQUA DEVELOPMENT, INC - STP	Tarrant	Water Quality	Renewal	Final	14910-001
809	2/17/2012	EAGLE MOUNTAIN RV PARK	Tarrant	Water Quality	Renewal	Final	12909-001
809	4/26/2012	AQUA DEVELOPMENT INC - RESORT STP	Tarrant	Water Quality	Renewal	Final	14125-001

**FIGURE 0809.5: Upper end of Eagle Mountain Reservoir, west of Newark**



**FIGURE 0809.6: Eagle Mountain Reservoir, west of Pecan Acres**



**FIGURE 0809.7: Lower end of Eagle Mountain Reservoir, Little Dosier Slough**





## **0808 – West Fork Trinity River Below Eagle Mountain Reservoir**

### **SEGMENT DESCRIPTION**

Segment 0808 begins at a point 4.0 km (2.5 miles) downstream of Eagle Mountain Dam in Tarrant County and continues up to Eagle Mountain Dam in Tarrant County. There is one assessment unit in this segment, 0808\_01, that covers the entire segment.

Figure 0808.1 shows the locations of assessment units, monitoring stations, dischargers, landfills, and confined animal feeding operations (CAFOs).

### **HYDROLOGIC CHARACTERISTICS**

This segment is very short and is dominated by releases from Eagle Mountain Reservoir.

### **IMPAIRMENT/AREA OF INTEREST DESCRIPTION**

Based on the Draft 2012 Texas Water Quality Inventory, there is an impairment in assessment unit 0808\_01. Details of the assessment are located in Table 0808.1.

### **LAND USE AND NATURAL CHARACTERISTICS**

This very small segment is forested along the river channel with the density of the forest downstream of Ten Mile Bridge Road being much greater than the density upstream. There are some cropland, pasture, and residential areas adjacent to the forested areas. The river channel and the area to the west are located in the Western Cross Timbers although there is some drainage from the Grand Prairie to the east. See Figures 0808.2 to 0808.4 for land covers, soil regions, and vegetative provinces in this segment.

### **POTENTIAL CAUSES OF IMPAIRMENT OR INTEREST**

Fish consumption bans in this segment are based on legacy pollutant chemicals that have been banned for decades. It is assumed that contaminated sediments or buried chemical stockpiles are the source of continued impairments in this segment.

### **POTENTIAL STAKEHOLDERS**

Tarrant Regional Water District

### **RECOMMENDATIONS FOR IMPROVING WATER QUALITY**

Intensive sampling may be helpful in narrowing down sources of legacy pollutants. If sources are found, clean-ups or sequestration may reduce loading into water bodies and fish tissue.

### **ONGOING PROJECTS**

There are no ongoing projects in this segment.

### **MAJOR WATERSHED EVENTS (PRESENT AND FUTURE)**

There are no known or anticipated events that would affect water quality in this segment. Being a very small segment and downstream of Eagle Mountain Reservoir, this segment is dominated by releases from the dam. Therefore, it can be expected that issues impacting Eagle Mountain Reservoir would also affect this segment.

### **IMAGES**

See Figures 0808.5 to 0808.6 for images of this segment.



FIGURE 0808.1

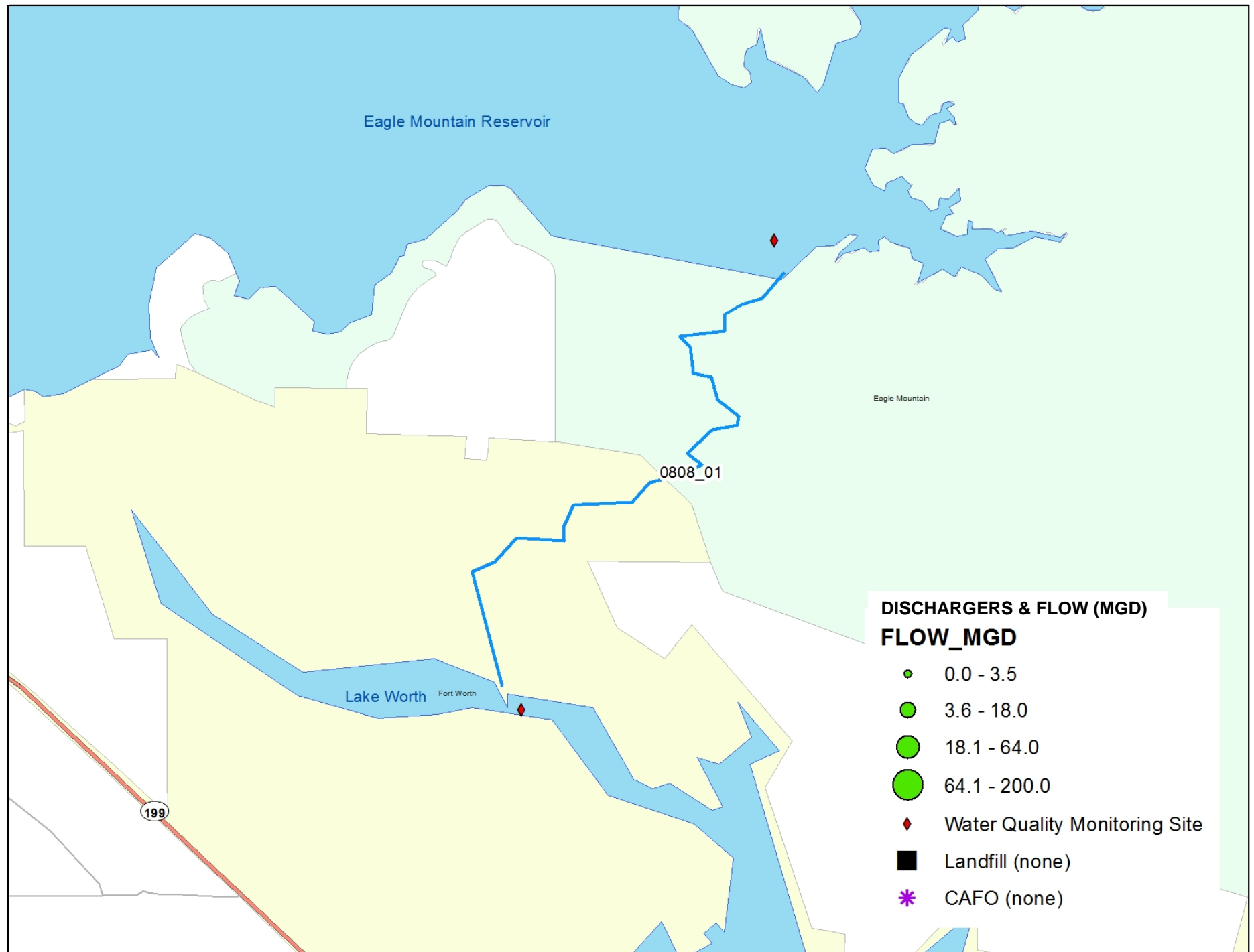


TABLE 0808.1: Draft 2012 Water Quality Inventory

Segment and Assessment Unit	Use	Method	Parameter Description	Criteria	Number of samples assessed	Number of samples exceed criteria	Mean of samples assessed (avg or geomean)	Mean of samples that exceed criteria	Dataset Qualifier	Impairment Level	Impairment Category
0808_01	Fish Consumption Use	HS Advisories, Cures, and Risk Assessments	Restricted and No-Consumption-aldrin in fish tissue						OE	NS	5a
0808_01	Fish Consumption Use	HS Advisories, Cures, and Risk Assessments	Restricted and No-Consumption-dieldrin in edible tissue						OE	NS	5a

Dataset Qualifier Codes

OE-Other information than ambient samples evaluated

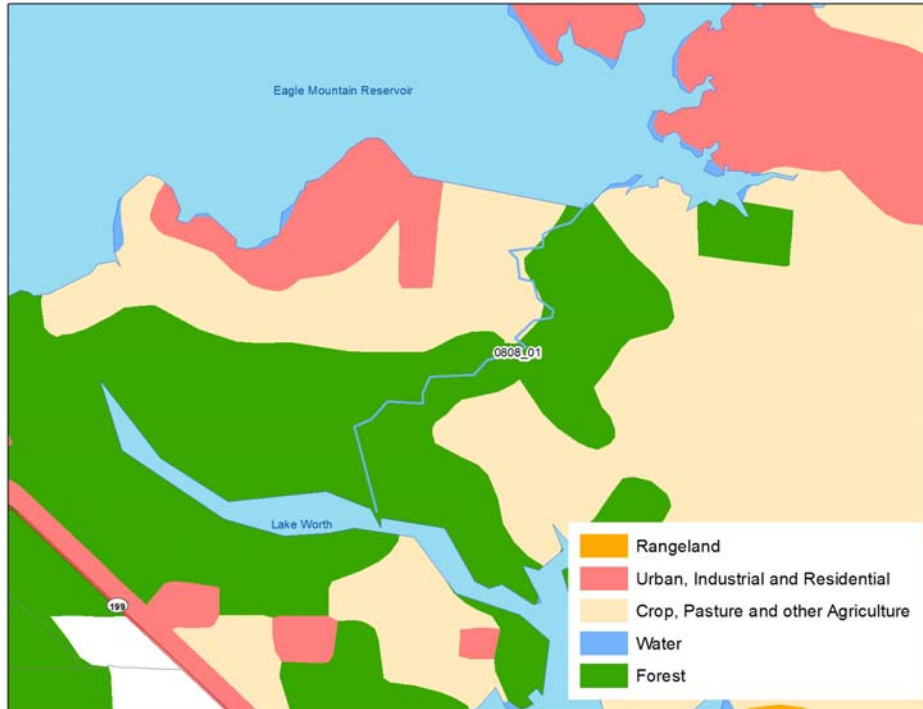
Impairment Level

NS-Nonsupport

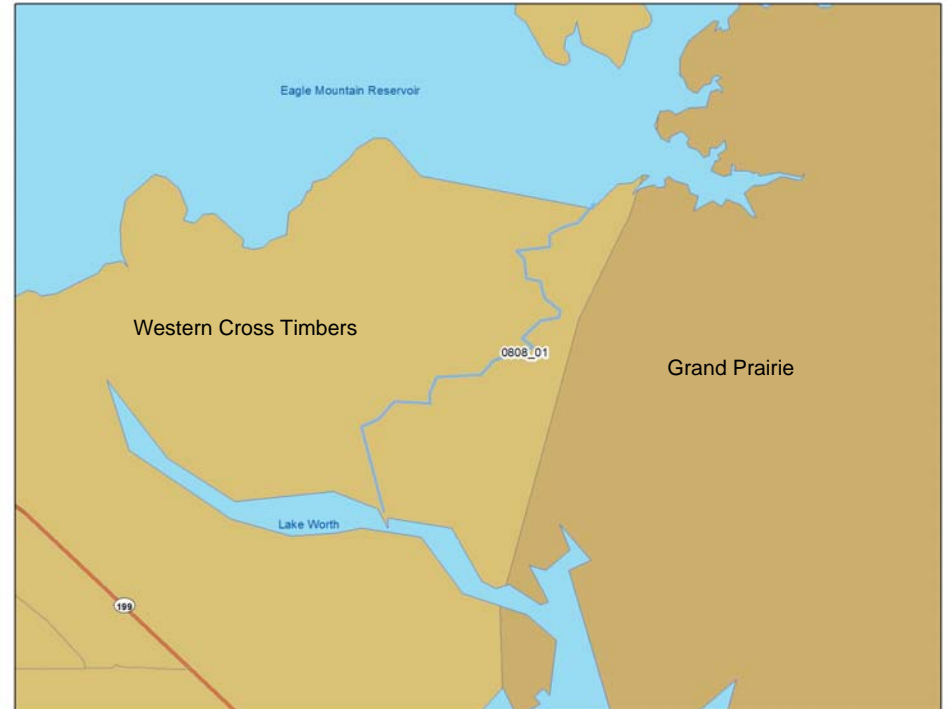
Impairment Category

5a-A TMDL is underway, scheduled, or will be scheduled

**FIGURE 0808.2: LAND COVER**



**FIGURE 0808.3: SOIL REGIONS**



**FIGURE 0808.4: VEGETATIVE PROVINCES**



**FIGURE 0808.5: West Fork Trinity River at Ten Mile Bridge Road, downstream**



**FIGURE 0808.6: West Fork Trinity River at Ten Mile Bridge Road, upstream**





## **0807 – Lake Worth**

### **SEGMENT DESCRIPTION**

Segment 0807 begins at Lake Worth Dam in Tarrant County and continues up to a point 4.0 km (2.5 miles) downstream of Eagle Mountain Dam in Tarrant County. It impounds the West Fork Trinity River up to the normal pool elevation of 594.3 feet. There is one assessment unit in this segment, 0807\_01, that covers the entire reservoir. Sites in this assessment unit include 10942, 15163, 15166, and 15167.

Figure 0807.1 shows the locations of assessment units, monitoring stations, dischargers, landfills, and confined animal feeding operations (CAFOs). Table 0807.1 lists the stations being monitored in fiscal year 2013 as well as the parameters being collected and the frequency of sampling.

### **HYDROLOGIC CHARACTERISTICS**

Lake Worth has a conservation pool elevation of 594 feet. As it is a short distance downstream of Eagle Mountain Reservoir, the releases from that lake influence the elevations in Lake Worth. Over the past three years, the elevation has fallen to 591 feet twice over the fall and winter of 2011 and 2012.

### **IMPAIRMENT/AREA OF INTEREST DESCRIPTION**

Based on the Draft 2012 Texas Water Quality Inventory, there are impairments in assessment units 0807\_01. Details of the assessment are located in Table 0807.2.

### **LAND USE AND NATURAL CHARACTERISTICS**

The watershed around Lake Worth transitions from rural and residential with forested areas at the upstream end of the lake to heavy residential and urban and the downstream end of the lake. In addition, the Naval Air Station Fort Worth Joint Reserve Base is located at the downstream end. A majority of the lake and eastern tributaries lie within the Grand Prairie while the western tributaries flow through the Western Cross Timbers. See Figures 0807.2 to 0807.4 for land covers, soil regions, and vegetative provinces in this segment. There are two landfills in this segment; the locations of which can be seen in Figure 0807.1.

### **POTENTIAL CAUSES OF IMPAIRMENT OR INTEREST**

Fish consumption bans in this segment are based on legacy pollutant chemicals that have been banned for decades. It is assumed that contaminated sediments or buried chemical stockpiles are the source of continued impairments in this segment.

### **POTENTIAL STAKEHOLDERS**

Tarrant Regional Water District  
Town of Lakeside  
City of Lake Worth  
City of White Settlement  
NAS Fort Worth JRB  
City of Sansom Park  
City of Fort Worth

### **RECOMMENDATIONS FOR IMPROVING WATER QUALITY**

Intensive sampling may be helpful in narrowing down sources of legacy pollutants. If sources are found, clean-ups or sequestration may reduce loading into water bodies and fish tissue.

### **ONGOING PROJECTS**

There are no ongoing projects in this segment.

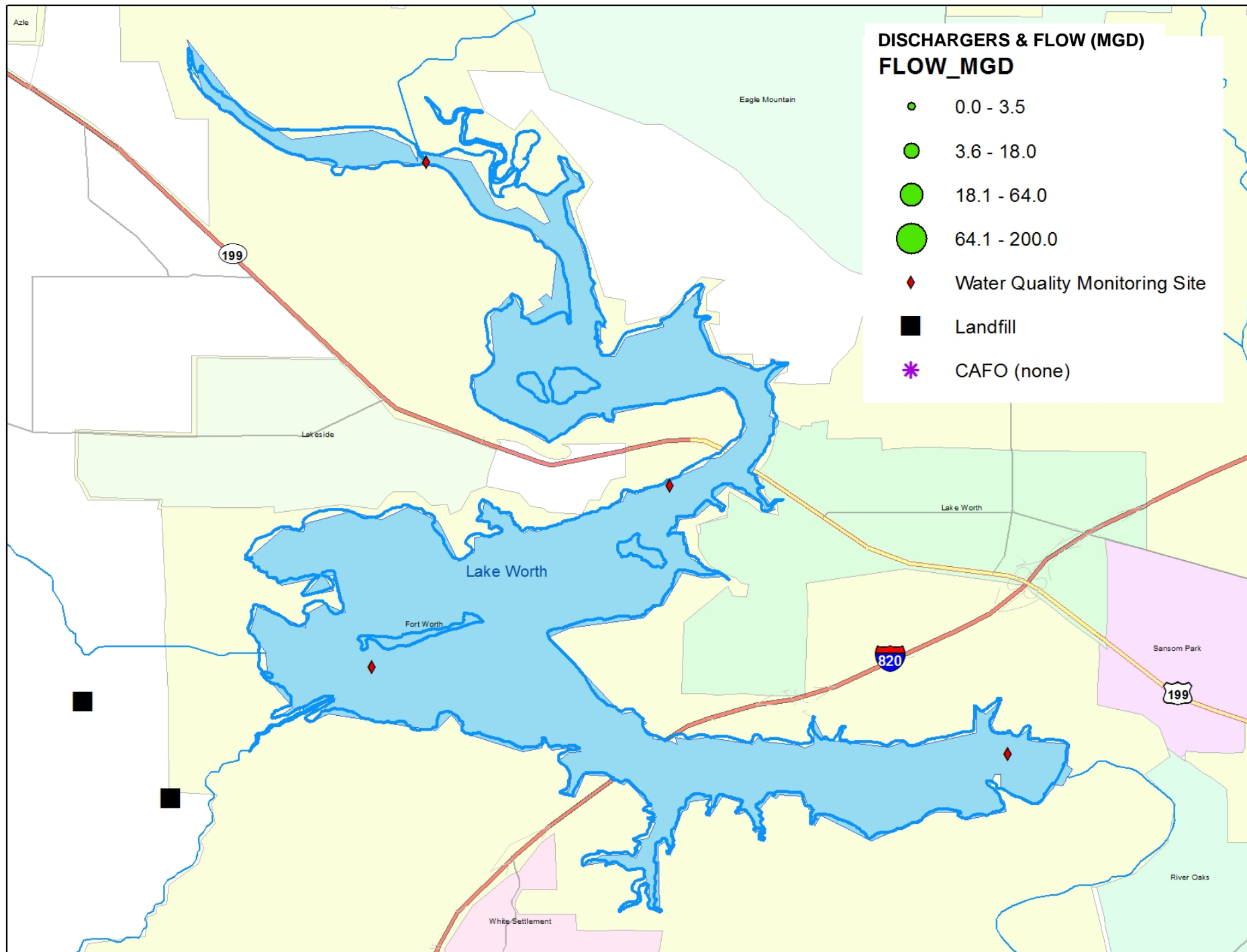
### **MAJOR WATERSHED EVENTS (PRESENT AND FUTURE)**

There are no known or anticipated events that would affect water quality in this segment.

### **IMAGES**

See Figures 0807.5 to 0807.6 for images of this segment.

FIGURE 0807.1



**TABLE 0807.1: Fiscal Year 2012 Monitoring**

Monitoring Entity	Segment	AU	Site ID	Site Description	Monitoring Type	24 Hour DO	Metals in Water	Conventionals	Bacteria	Flow	Field
TRWD	0807	0807_01	10942	LAKE WORTH 546 METERS SOUTH AND 319 METERS EAST OF INTERSECTION OF QUEBEC STREET AND CAHOBA DRIVE MID LAKE NEAR DAM	BS	2					
TRWD	0807	0807_01	10942	LAKE WORTH 546 METERS SOUTH AND 319 METERS EAST OF INTERSECTION OF QUEBEC STREET AND CAHOBA DRIVE MID LAKE NEAR DAM	RT		5 (Total Calcium, Magnesium, Sodium, Potassium, Arsenic, Iron, Manganese)	5 (Total Alkalinity, TSS, NH3, TKN, NO2+NO3, TP, TOC, DOC, Chloride, Sulfate, Chlorophyll-a, TDS, OP, Phytoplankton)	4 (E. coli)		5 (Water Temp, Secchi Depth, Specific Conductance, DO, pH)
TRWD	0807	0807_01	15163	LAKE WORTH MID CHANNEL 35 M DOWNSTREAM OF MOUTH OF WEST FORK OF THE TRINITY RIVER	RT			5 (Total Alkalinity, TSS, NH3, TKN, NO2+NO3, TP, TOC, DOC, Chloride, Chlorophyll-a, TDS, OP)	4 (E. coli)		5 (Water Temp, Secchi Depth, Specific Conductance, DO, pH)
TRWD	0807	0807_01	15166	LAKE WORTH AT MOUTH OF SILVER CREEK 957 METERS SOUTH AND 1.08 KM WEST OF INTERSECTION OF SILVER CREEK ROAD AND HERON DRIVE	RT			5 (Total Alkalinity, TSS, NH3, TKN, NO2+NO3, TP, TOC, DOC, Chloride, Chlorophyll-a, TDS, OP)	4 (E. coli)		5 (Water Temp, Secchi Depth, Specific Conductance, DO, pH)
TRWD	0807	0807_01	15167	LAKE WORTH MID CHANNEL SOUTH OF SH 199 472 METERS SOUTH AND 298 METERS WEST OF INTERSECTION OF WATER-CRESS DRIVE AND SH 199	RT			5 (Total Alkalinity, TSS, NH3, TKN, NO2+NO3, TP, TOC, DOC, Chloride, Chlorophyll-a, TDS, OP)	4 (E. coli)		5 (Water Temp, Secchi Depth, Specific Conductance, DO, pH)

**TABLE 0807.2: Draft 2012 Water Quality Inventory**

Segment and Assessment Unit	Use	Method	Parameter Description	Criteria	Number of samples assessed	Number of samples exceed criteria	Mean of samples assessed (avg or geomean)	Mean of samples that exceed criteria	Dataset Qualifier	Impairment Level	Impairment Category
0807_01	General Use	Nutrient Screening Levels	Chlorophyll-a	26.7	56	17		43.41	AD	CS	
0807_01	Fish Consumption Use	HS Advisories, Cures, and Risk Assessments	Restricted and No-Consumption-aldrin in fish tissue						OE	NS	4b
0807_01	Fish Consumption Use	HS Advisories, Cures, and Risk Assessments	Restricted and No-Consumption-dieldrin in edible tissue						OE	NS	4b
0807_01	Fish Consumption Use	HS Advisories, Cures, and Risk Assessments	Restricted and No-Consumption-PCBs in edible tissue						AD	NS	4b

Dataset Qualifier Codes

AD-Adequate Data (10 or more samples)

OE-Other information than ambient samples evaluated

Impairment Level

CS-Screening level concern

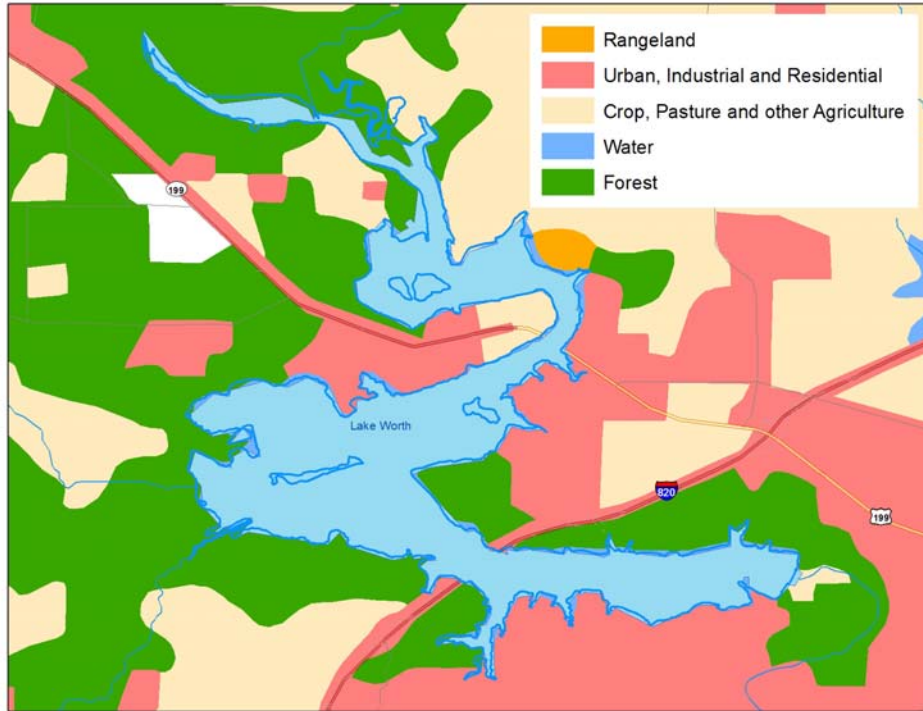
NS-Nonsupport

Impairment Category

4b-Other pollution control requirements are reasonably expected to result in the attainment of the water quality standard in the near future



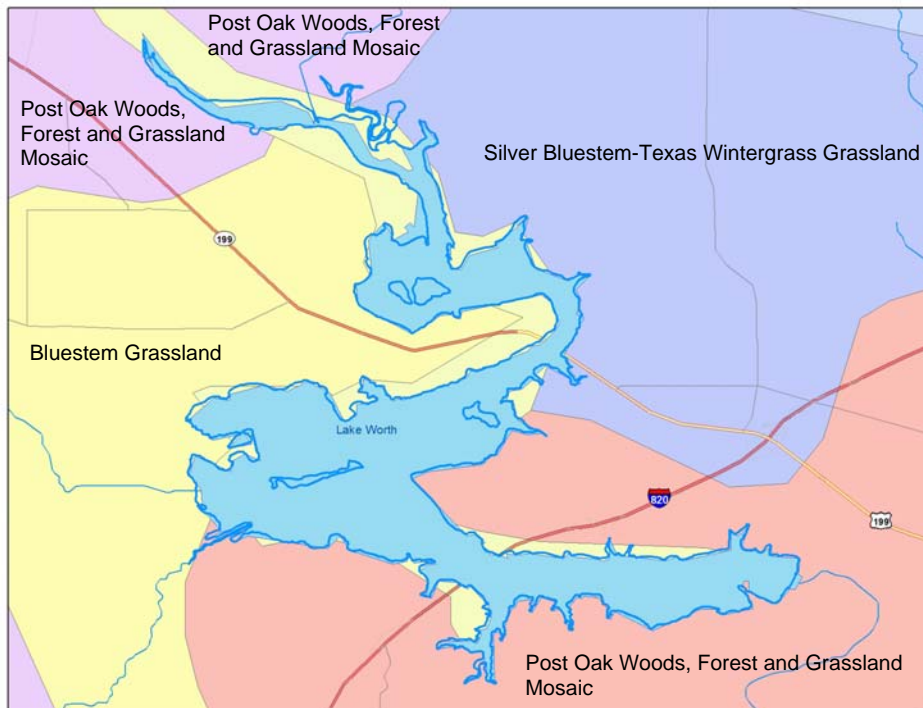
**FIGURE 0807.2: LAND COVER**



**FIGURE 0807.3: SOIL REGIONS**



**FIGURE 0807.4: VEGETATIVE PROVINCES**



**FIGURE 0807.5: Lake Worth at Jacksboro Highway, downstream**



**FIGURE 0807.6: Lake Worth at Jacksboro Highway, upstream**



## **0834 – Lake Amon G. Carter**

### **SEGMENT DESCRIPTION**

Segment 0834 begins at Amon G. Carter Dam in Montague County and continues up to the normal pool elevation of 920 feet, impounding Big Sandy Creek. There is one assessment unit in this segment, 0834\_01, that covers the entire reservoir. Sites in this assessment unit include 11063.

Figure 0834.1 shows the locations of assessment units, monitoring stations, dischargers, landfills, and confined animal feeding operations (CAFOs).

### **HYDROLOGIC CHARACTERISTICS**

Lake Amon G. Carter has a conservation pool elevation of 920 feet and is fed by several creeks including Big Sandy Creek. The current elevation of 914 feet is the lowest over the past three years.

### **IMPAIRMENT/AREA OF INTEREST DESCRIPTION**

Based on the Draft 2012 Texas Water Quality Inventory, there are no impairments or concerns in this segment.

### **LAND USE AND NATURAL CHARACTERISTICS**

Much of this segment is forested with some residential development immediately around the lake. The remainder of the watershed is rural with some rangeland and lies entirely within the Western Cross Timbers. See Figures 0834.2 to 0834.4 for land covers, soil regions, and vegetative provinces in this segment.

### **POTENTIAL CAUSES OF IMPAIRMENT OR INTEREST**

There are no impairments or concerns in this segment.

### **POTENTIAL STAKEHOLDERS**

City of Bowie  
Sunset

### **RECOMMENDATIONS FOR IMPROVING WATER QUALITY**

There are no impairments or concerns in this segment.

### **ONGOING PROJECTS**

There are no ongoing projects in this segment.

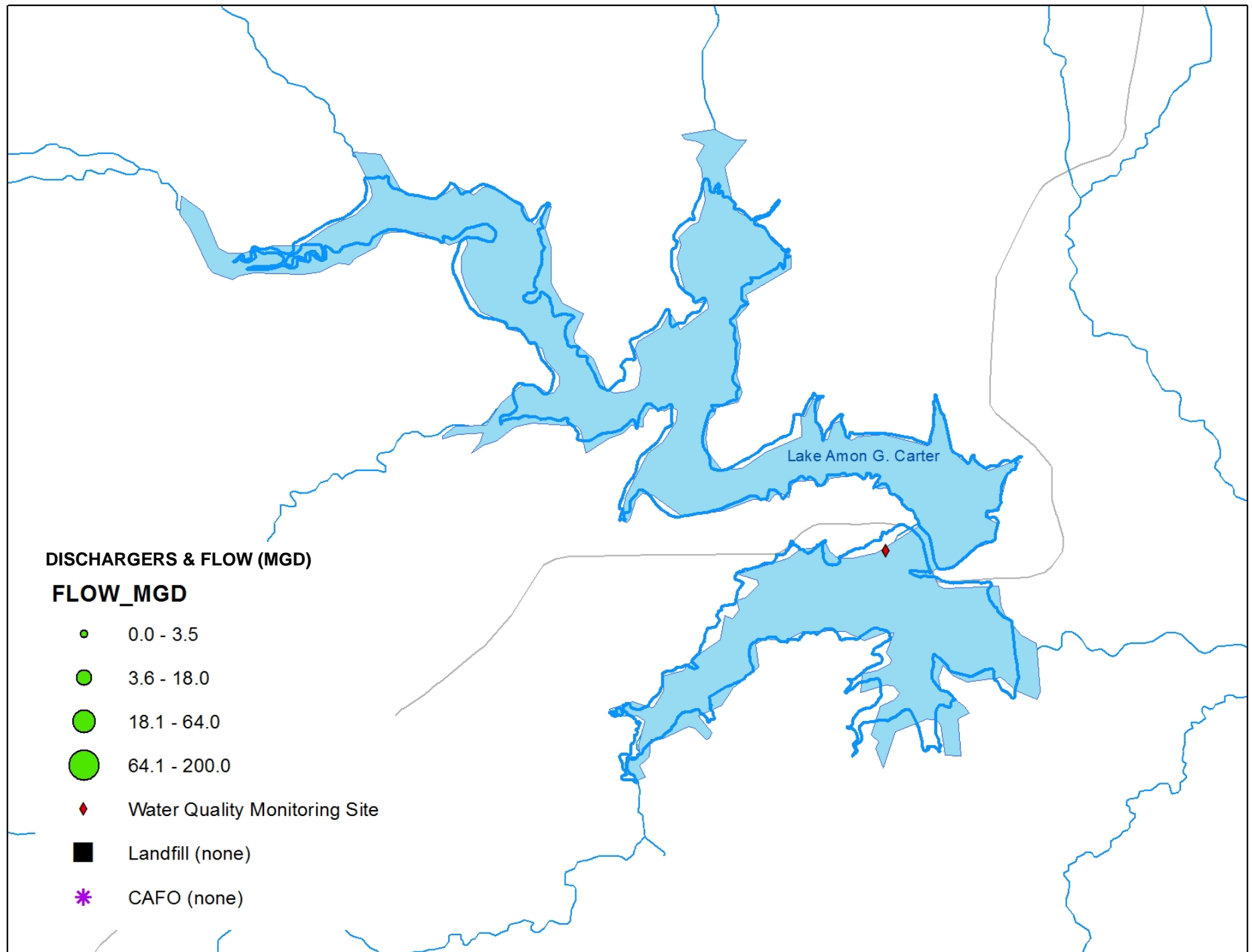
### **MAJOR WATERSHED EVENTS (PRESENT AND FUTURE)**

There are no known or anticipated events that would affect water quality in this segment.

### **IMAGES**

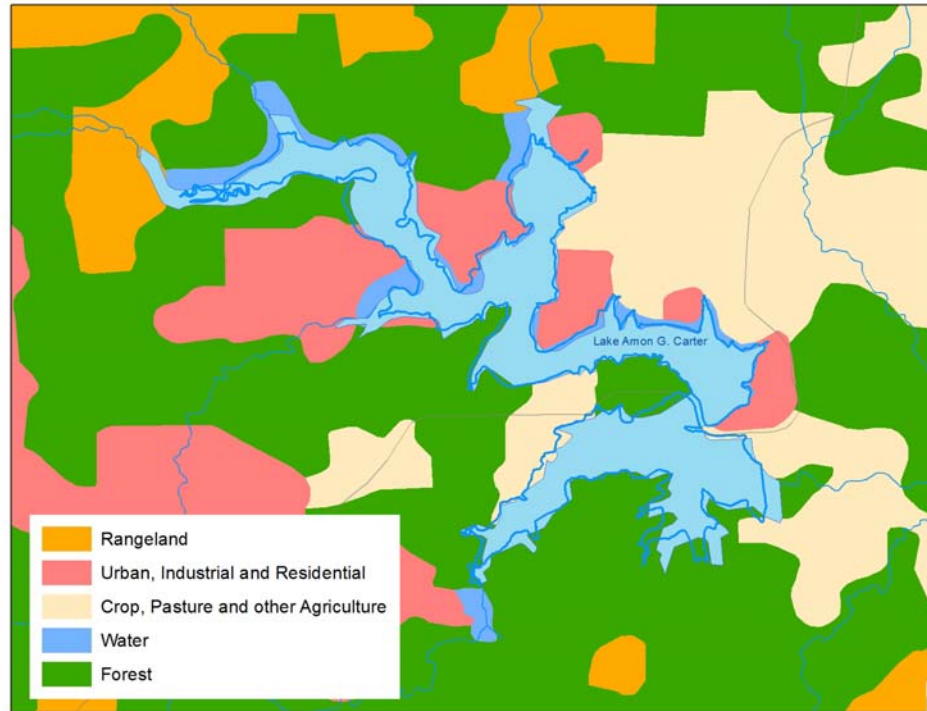
See Figures 0834.5 to 0834.7 for images of this segment.

FIGURE 0834.1

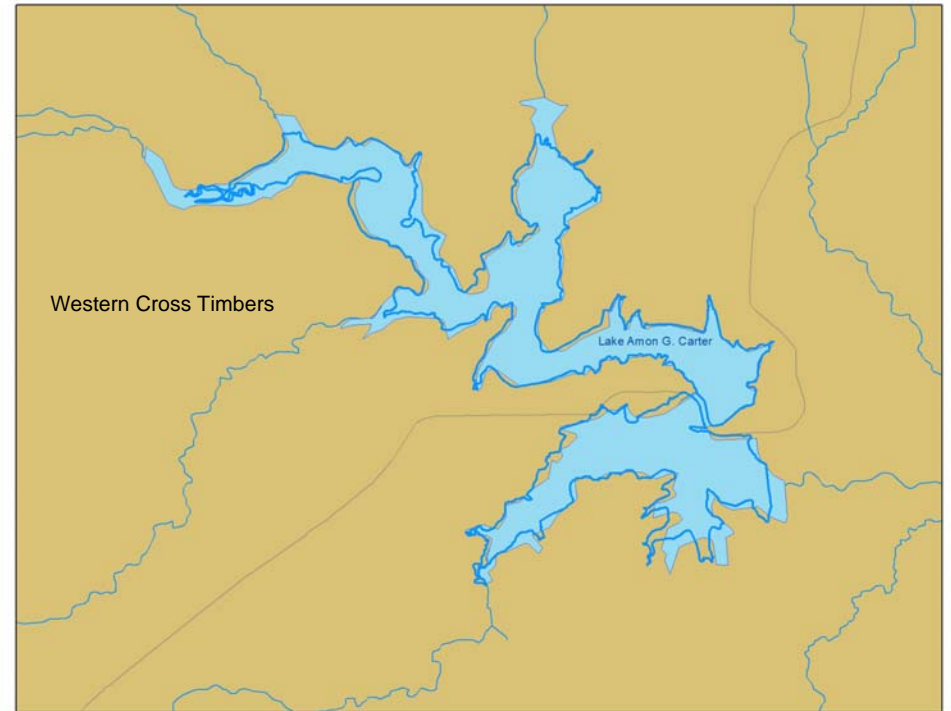




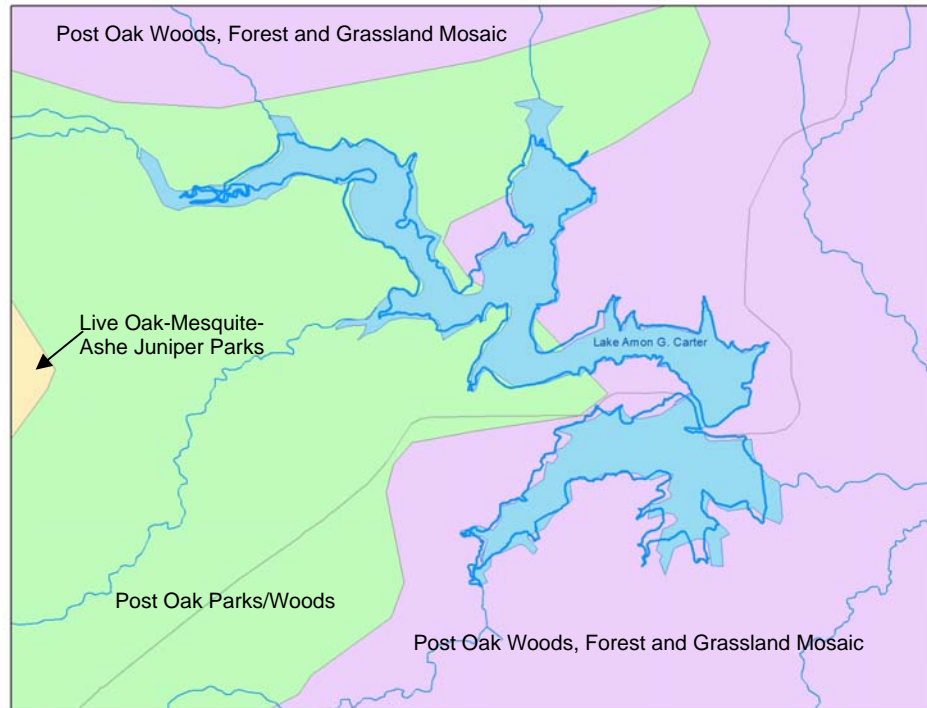
**FIGURE 0834.2: LAND COVER**



**FIGURE 0834.3: SOIL REGIONS**



**FIGURE 0834.4: VEGETATIVE PROVINCES**



**FIGURE 0834.5: Lake Amon G. Carter/Soil Conservation Service Site 8 Reservoir**



**FIGURE 0834.6: Lower end of Lake Amon G. Carter**



**FIGURE 0834.7: Upper end of Lake Amon G. Carter**



# Clear Fork Subwatershed

## 0833 – Clear Fork Trinity River Above Lake Weatherford

### SEGMENT DESCRIPTION

Segment 0833 begins at a point 3.1 km (1.9 miles) upstream of FM 1707 in Parker County and continues up to FM 3107 in Parker County. There are four assessment units in this segment. 0833\_02 is the upper 11 miles of segment. Sites in this assessment unit include 16415, 17459, 17460, and 17463. 0833\_03 is from the confluence of McKnight Branch to the confluence of Cottonwood Creek. Sites in this assessment unit include 11062. 0833\_04 is from the confluence with Dobbs Branch to the confluence with McKnight Branch. Sites in this assessment unit include 17461. 0833\_05 is from the confluence of Dobbs Creek to the lower end of the segment. Sites in this assessment unit include 17462.

Figure 0833.1 shows the locations of assessment units, monitoring stations, dischargers, landfills, and confined animal feeding operations (CAFOs).

### HYDROLOGIC CHARACTERISTICS

There are no USGS flow gages in this segment, however, based on photos and Google Earth images, the river channel is comparatively small and flows are most likely low or non-existent on a regular basis.

### IMPAIRMENT/AREA OF INTEREST DESCRIPTION

Based on the Draft 2012 Texas Water Quality Inventory, there are impairments in assessment units 0833\_02, 0833\_03, and 0833\_04. Details of the assessment are located in Table 0833.1.

### LAND USE AND NATURAL CHARACTERISTICS

This segment is primarily rural cropland and pasture with small pockets of forest. A majority of this segment flows through the Western Cross Timbers with a small portion of the most downstream end flowing through the Grand Prairie. A few of the tributaries drain the Carbonate Cross Timbers. See Figures 0833.2 to 0833.4 for land covers, soil regions, and vegetative provinces in this segment. There is one CAFO in this segment. Its location can be seen in Figure 0833.1.

### POTENTIAL CAUSES OF IMPAIRMENT OR INTEREST

Low dissolved oxygen issues in this segment are presumed to be caused by low intermittent stream flows.

### POTENTIAL STAKEHOLDERS

Town of Poolville

### RECOMMENDATIONS FOR IMPROVING WATER QUALITY

Additional monitoring and flow measurements are recommended to determine the flow status and the river.

### ONGOING PROJECTS

There are no ongoing projects in this segment.

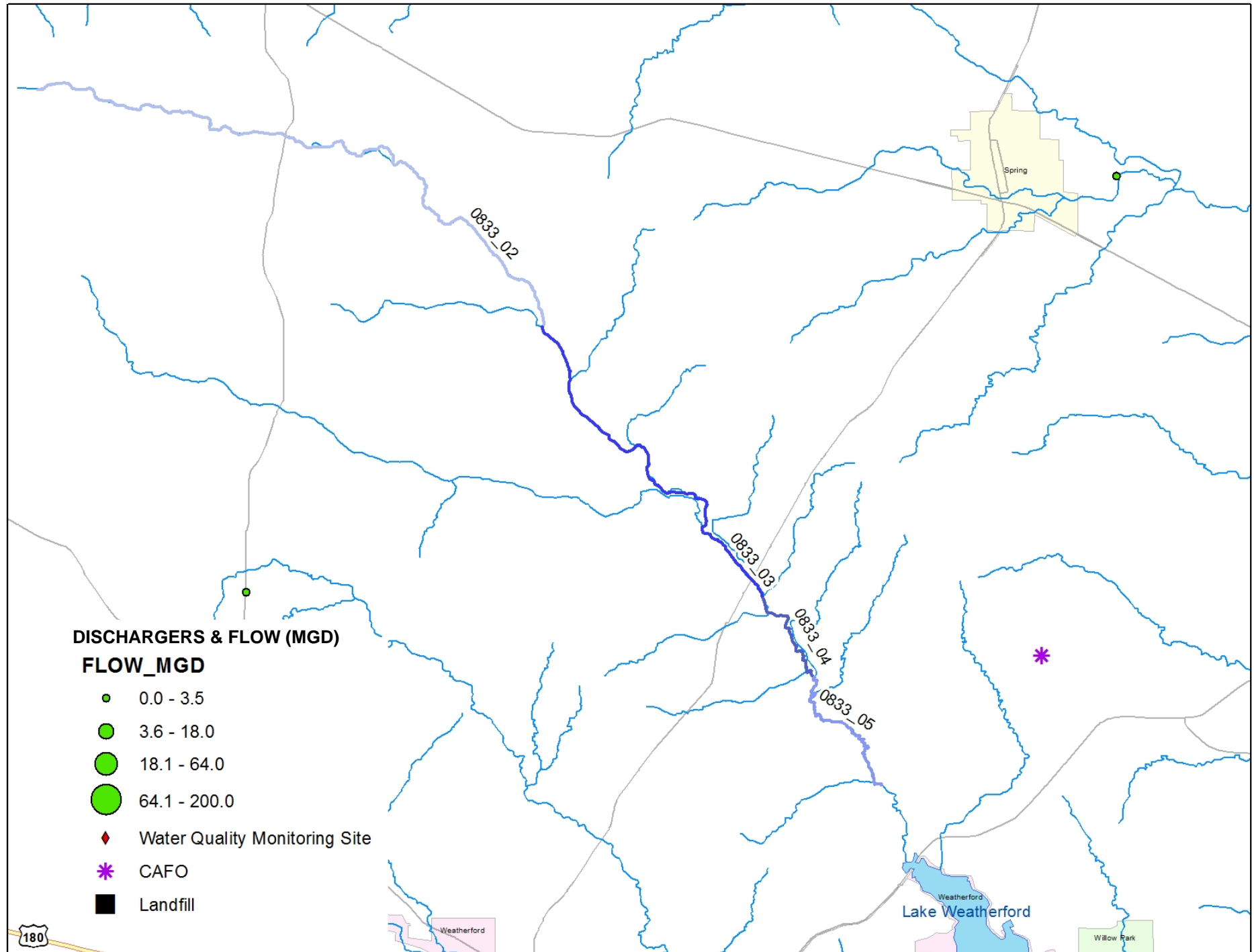
### MAJOR WATERSHED EVENTS (PRESENT AND FUTURE)

There are no known or anticipated events that would affect water quality in this segment. It is located above any major discharge. Without flows from dischargers, it is susceptible to extreme low flows during drought conditions. One discharger applied for a water quality permit in 2012. See Table 0833.2 for details.

### IMAGES

See Figures 0833.5 to 0833.6 for images of this segment.

FIGURE 0833.1





**TABLE 0833.1: Draft 2012 Water Quality Inventory**

Segment and Assessment Unit	Use	Method	Parameter Description	Criteria	Number of samples assessed	Number of samples exceed criteria	Mean of samples assessed (avg or geomean)	Mean of samples that exceed criteria	Dataset Qualifier	Impairment Level	Impairment Category
0833_02	Aquatic Life Use	Dissolved Oxygen grab screening level	Dissolved Oxygen Grab						ID	CS*	
0833_02	Aquatic Life Use	Dissolved Oxygen grab minimum	Dissolved Oxygen Grab						ID	NS*	5c
0833_02	Aquatic Life Use	Dissolved Oxygen 24hr average	Dissolved Oxygen 24hr Avg						ID	NS*	5c
0833_02	Aquatic Life Use	Dissolved Oxygen 24hr minimum	Dissolved Oxygen 24hr Min						ID	NS*	5c
0833_02	General Use	Nutrient Screening Levels	Chlorophyll-a						ID	CS*	
0833_03	Aquatic Life Use	Dissolved Oxygen grab screening level	Dissolved Oxygen Grab						ID	CS*	
0833_03	Aquatic Life Use	Dissolved Oxygen 24hr average	Dissolved Oxygen 24hr Avg						ID	NS*	5b
0833_03	Aquatic Life Use	Dissolved Oxygen 24hr minimum	Dissolved Oxygen 24hr Min						ID	NS*	5b
0833_04	Aquatic Life Use	Dissolved Oxygen grab minimum	Dissolved Oxygen Grab						ID	NS*	5c
0833_04	Aquatic Life Use	Dissolved Oxygen 24hr minimum	Dissolved Oxygen 24hr Min						ID	CN*	

**Dataset Qualifier Codes**

ID-Inadequate data (less than 4 samples)

**Impairment Level**

CN\*-Use concern carried forward from previous assessments

CS\*-Screening level concern carried forward from previous assessments

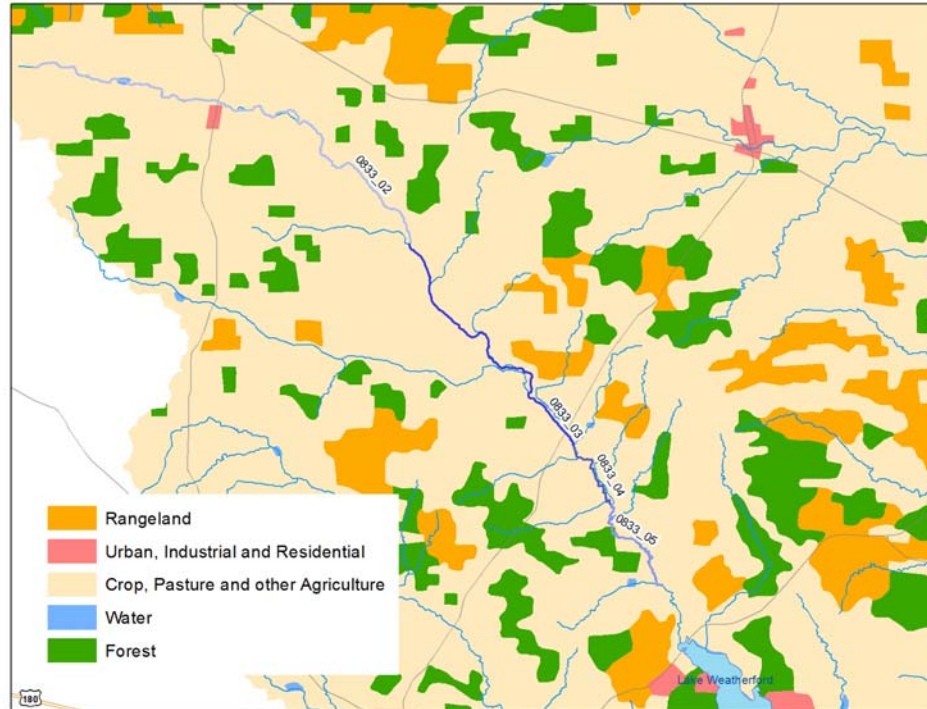
NS\*-Nonsupport carried forward from previous assessments

**Impairment Category**

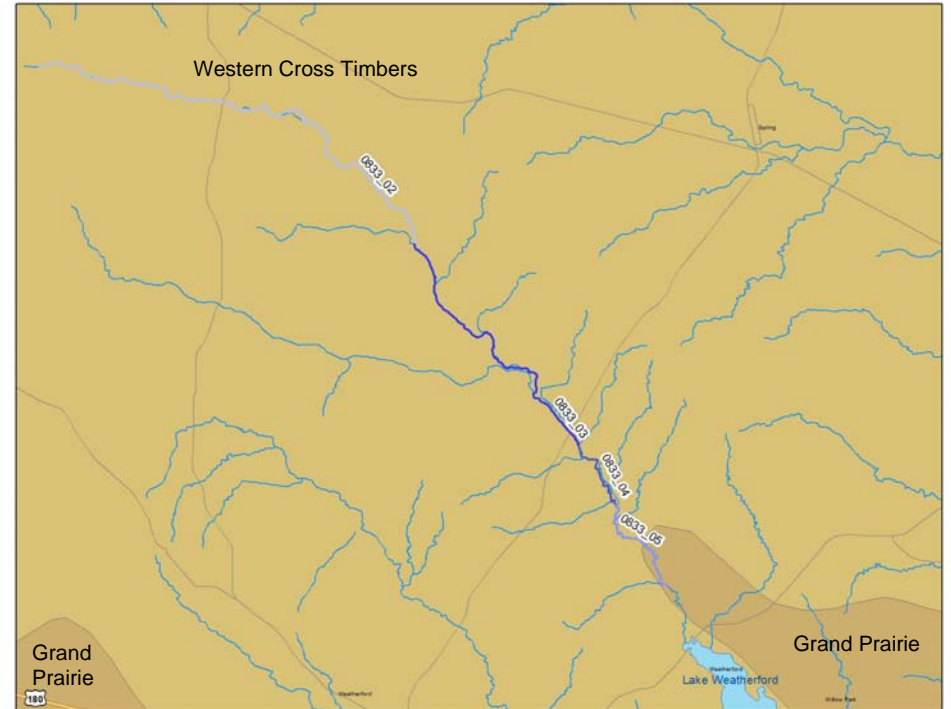
5b-A review of the water quality standards for this water body will be conducted before a TMDL is scheduled

5c-Additional data and information will be collected before a TMDL is scheduled

**FIGURE 0833.2: LAND COVER**



**FIGURE 0833.3: SOIL REGIONS**



**FIGURE 0833.4: VEGETATIVE PROVINCES**

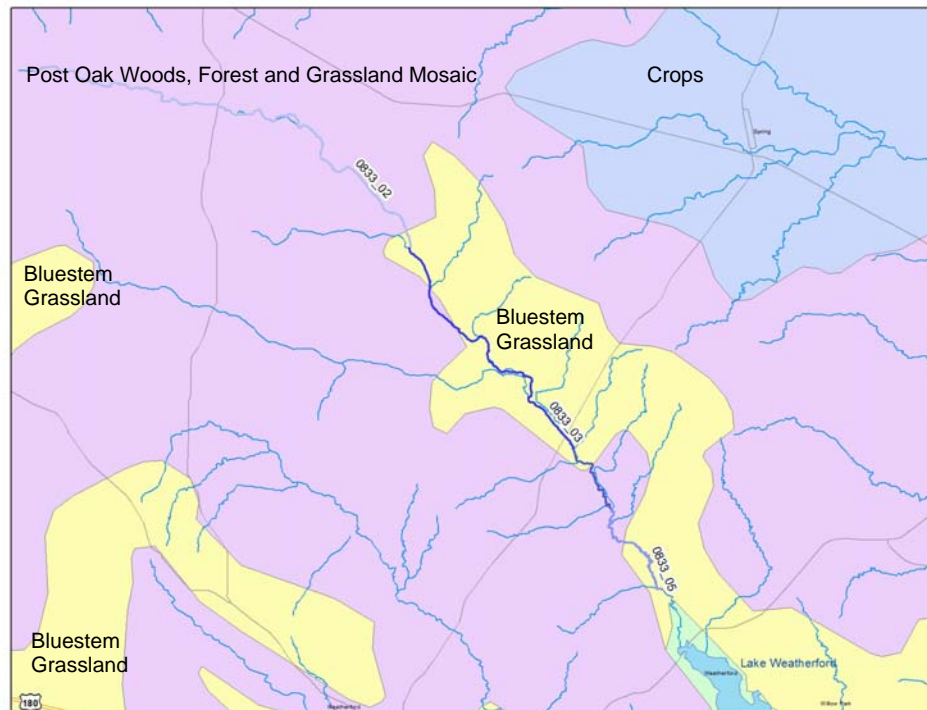


TABLE 0833.2: New and Renewed Discharge Permits

Segment	Notice received by TRA on	Permitee/Facility	County	Permit Type	Action	Status	Permit Number
833	10/29/2012	TARRANT REGIONAL WATER DISTRICT	Tarrant	Water Quality	New	Received notification	12805

**FIGURE 0833.5: Clear Fork Trinity River at Upper Denton Road, upstream**



**FIGURE 0833.6: Clear Fork Trinity River at Upper Denton Road, downstream**





## **0832 – Lake Weatherford**

### **SEGMENT DESCRIPTION**

Segment 0832 begins at Weatherford Dam in Parker County and continues up to a point 3.1 km (1.9 miles) upstream of FM 1707 in Parker County. It impounds the Clear Fork Trinity River, up to the normal pool elevation of 896 feet. There is one assessment unit in this segment, 0832\_01, that covers the entire reservoir. Sites in this assessment unit include 11061.

Figure 0832.1 shows the locations of assessment units, monitoring stations, dischargers, landfills, and confined animal feeding operations (CAFOs).

### **HYDROLOGIC CHARACTERISTICS**

Lake Weatherford has a conservation pool elevation of 896 feet and is fed by the Clear Fork Trinity River. The elevation in this lake has fallen below 889 feet twice over the past three years—in the fall/winter of 2011 and March 2013.

### **IMPAIRMENT/AREA OF INTEREST DESCRIPTION**

Based on the Draft 2012 Texas Water Quality Inventory, there is a concern in assessment unit 0832\_01. Details of the assessment are located in Table 0832.1.

### **LAND USE AND NATURAL CHARACTERISTICS**

The watershed around Lake Weatherford is a fairly even mix of rangeland, cropland and pasture, and forest with residential areas around the lake. A majority of the segment drains the Western Cross Timbers. Tributaries feeding into the northeast side of the lake flow through the Grand Prairie. See Figures 0832.2 to 0832.4 for land covers, soil regions, and vegetative provinces in this segment. There are two small dischargers in this segment on the southwest side of the lake (Figure 0832.1).

### **POTENTIAL CAUSES OF IMPAIRMENT OR INTEREST**

Chlorophyll-a concerns in Lake Weatherford are assumed to be related to the hypertrophic status of the reservoir. As the perimeter of the lake is highly developed, residential fertilizer application may be contributing to algal growth in the lake. However, it does not appear that nutrients are an issue at this time.

### **POTENTIAL STAKEHOLDERS**

City of Weatherford  
City of Hudson Oaks  
City of Willow Park

### **RECOMMENDATIONS FOR IMPROVING WATER QUALITY**

Public education of homeowners around the lake may help improve issues related to Chlorophyll-a in this segment.

### **ONGOING PROJECTS**

There are no ongoing projects in this segment.

### **MAJOR WATERSHED EVENTS (PRESENT AND FUTURE)**

There are no known or anticipated events that would affect water quality in this segment. One discharger renewed their water quality permit in 2011. See Table 0832.2 for details.

### **IMAGES**

See Figures 0832.5 to 0832.6 for images of this segment.

FIGURE 0832.1

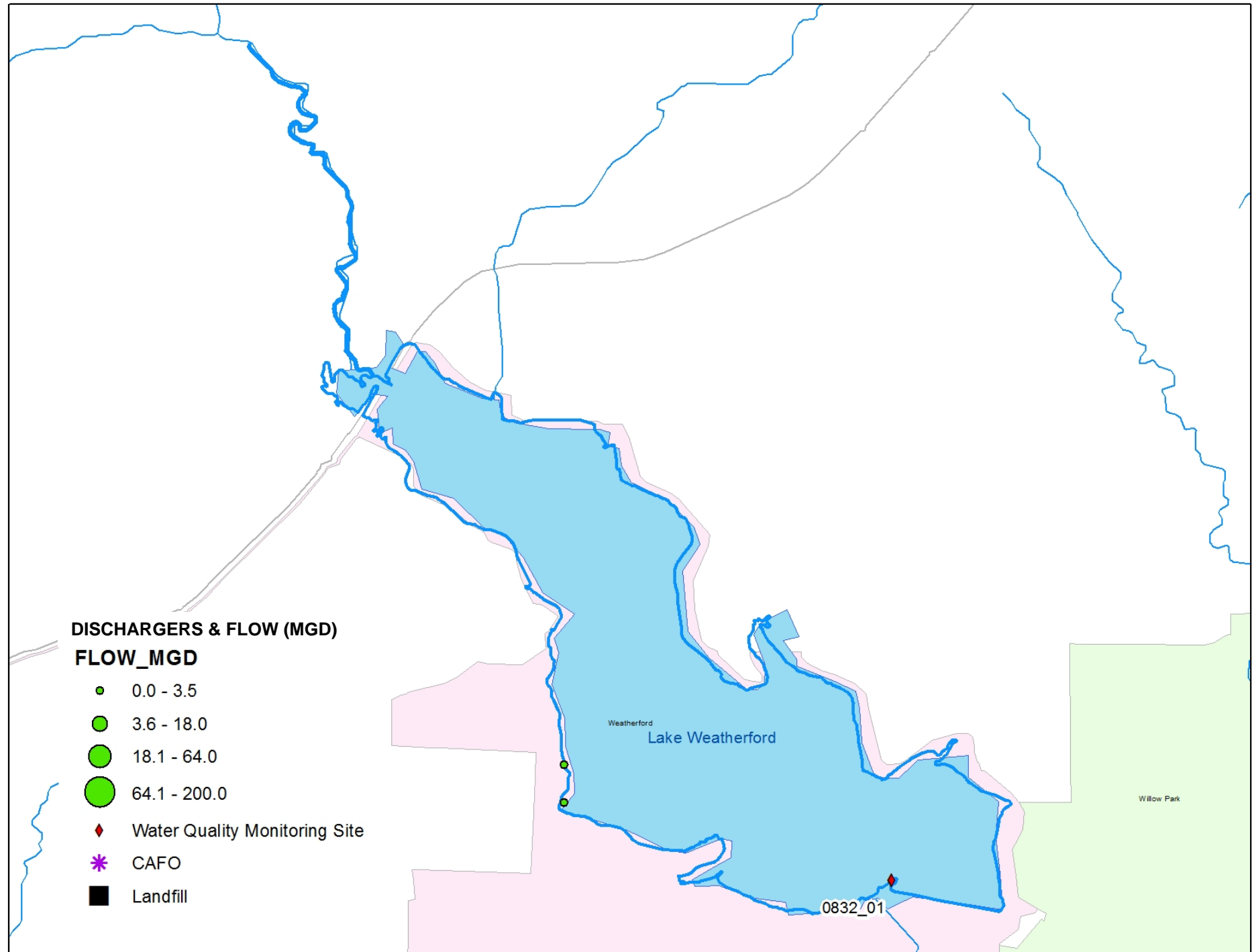


TABLE 0832.1: Draft 2012 Water Quality Inventory

Segment and Assessment Unit	Use	Method	Parameter Description	Criteria	Number of samples assessed	Number of samples exceed criteria	Mean of samples assessed (avg or geomean)	Mean of samples that exceed criteria	Dataset Qualifier	Impairment Level	Impairment Category
0832_01	General Use	Nutrient Screening Levels	Chlorophyll-a	26.7	18	7		33.69	AD	CS	

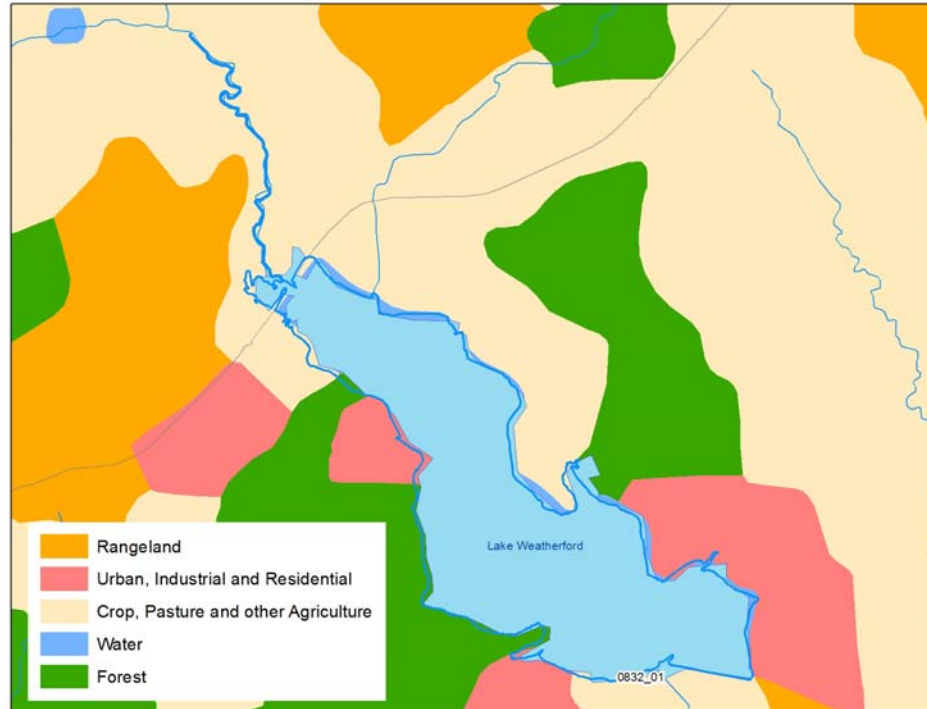
Dataset Qualifier Codes

AD-Adequate Data (10 or more samples)

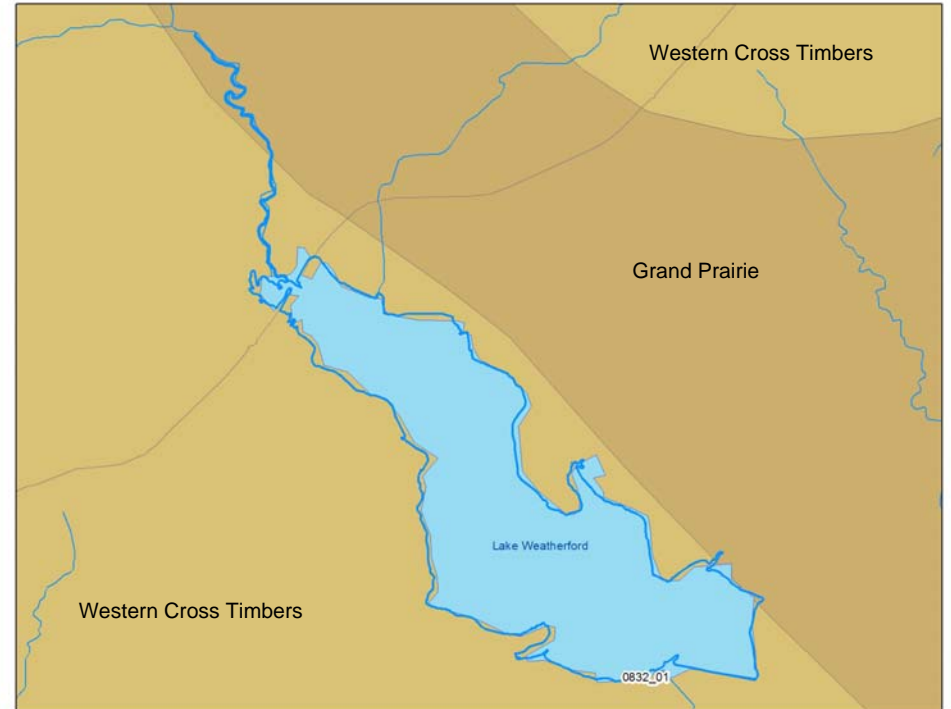
Impairment Level

CS-Screening level concern

**FIGURE 0832.2: LAND COVER**



**FIGURE 0832.3: SOIL REGIONS**



**FIGURE 0832.4: VEGETATIVE PROVINCES**

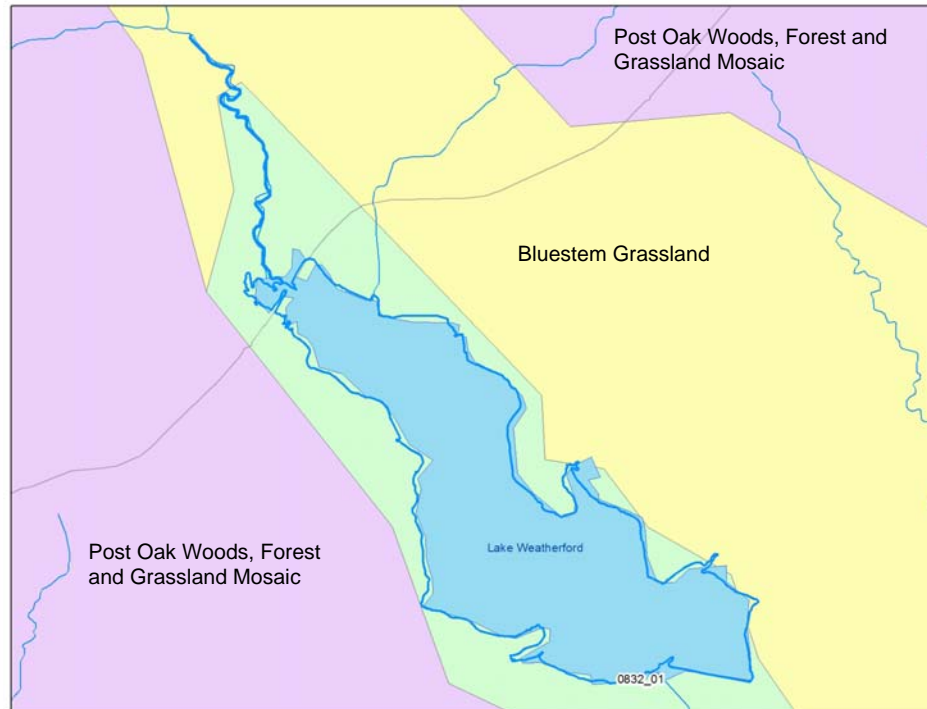




TABLE 0832.2: New and Renewed Discharge Permits

Segment	Notice received by TRA on	Permitee/Facility	County	Permit Type	Action	Status	Permit Number
832	3/9/2011	BRAZOS ELECTRIC POWER COOPERATIVE INC - L WEATHERFORD SES	Parker	Water Quality	Renewal	Final	01904-000

**FIGURE 0832.5: Upper end of Lake Weatherford**



**FIGURE 0832.6: Middle of Lake Weatherford**



## **0831 – Clear Fork Trinity River Below Lake Weatherford**

### **SEGMENT DESCRIPTION**

Segment 0831 begins at a point 200 meters (220 yards) downstream of US 377 in Tarrant County and continues up to Weatherford Dam in Parker County. There are four assessment units in this segment. 0831\_01 is the lower 12.75 miles, downstream from the South Fork Trinity River confluence. Sites in this assessment unit include 13691, 17444, and 17447. 0831\_03 is the upper 11 miles of segment. Sites in this assessment unit include 17445. 0831\_04 is from two miles upstream of the South Fork Trinity River confluence to the Squaw Creek confluence. Sites in this assessment unit include 11060. 0831\_05 is from the confluence of Squaw Creek to the Lake Weatherford Dam. Sites in this assessment unit include 17446 and 17637.

Unclassified water bodies in this segment include those listed below.

0831A—South Fork Trinity River—An 1 mile stretch of the South Fork Trinity River running upstream from the confluence with the Clear Fork Trinity River to the confluence with Willow Creek in Parker County. This segment includes sites 17454 and 17455.

0831B—Unnamed tributary of South Fork Trinity River—A 4.4 mile stretch of an unnamed tributary of the South Fork Trinity River stretching from the confluence to the upper end of the creek. This segment includes site 17456.

0831C—Town Creek—A 19.5 mile stretch of Town Creek extending from the confluence with the South Fork of the Trinity River up to the upper end of the creek. This segment includes site 17457.

Figure 0831.1 shows the locations of assessment units, monitoring stations, dischargers, landfills, and confined animal feeding operations (CAFOs). Table 0831.1 lists the stations being monitored in fiscal year 2013 as well as the parameters being collected and the frequency of sampling.

### **HYDROLOGIC CHARACTERISTICS**

Based on the USGS flow gage near Weatherford (08045850), the median annual average flow in this segment is 3.6 cfs. However, the period of record for this site is not continuous and ends in 2005. A more recent gage near Aledo (08045995), has annual average data for 2011 (10.7 cfs) and 2012 (49.9 cfs). Over the past year, this gage shows post-rainfall peak flows returning to normal within a week. In addition, it appears that normal base flows at this gage are approximately 3 cfs.

### **IMPAIRMENT/AREA OF INTEREST DESCRIPTION**

Based on the Draft 2012 Texas Water Quality Inventory, there are impairments in assessment units 0831\_01, 0831\_04, 0831\_05, 0831A\_01, and 0831B\_01. Details of the assessment are located in Table 0831.2.

### **LAND USE AND NATURAL CHARACTERISTICS**

This segment is mainly rural cropland and pastures. There are areas of forest, especially along the river and tributary channels. In addition, there are some residential

and commercial areas throughout the segment, especially along the river channel. Most of the segment flows through the Western Cross Timbers with the upper reaches of some tributaries draining the Grand Prairie. See Figures 0831.2 to 0831.4 for land covers, soil regions, and vegetative provinces in this segment. There are many small dischargers located in this segment as seen in Figure 0831.1. One discharger, located in the far upper reaches of the segment, can be seen in Figure 0833.1.

### **POTENTIAL CAUSES OF IMPAIRMENT OR INTEREST**

Low dissolved oxygen in this segment is assumed to be due to low stream flows. Elevated nutrients may be attributable to the small dischargers located throughout the segment as well as the many residential communities.

### **POTENTIAL STAKEHOLDERS**

City of Weatherford  
City of Hudson Oaks  
City of Willow Park  
Town of Annetta  
City of Aledo  
Tarrant Regional Water District

### **RECOMMENDATIONS FOR IMPROVING WATER QUALITY**

Additional monitoring is recommended to determine if elevated nutrients are related to dischargers. Public education of homeowners and landowners along the river channel may also help reduce nutrient loading from fertilizer application.

### **ONGOING PROJECTS**

There are no ongoing projects in this segment.

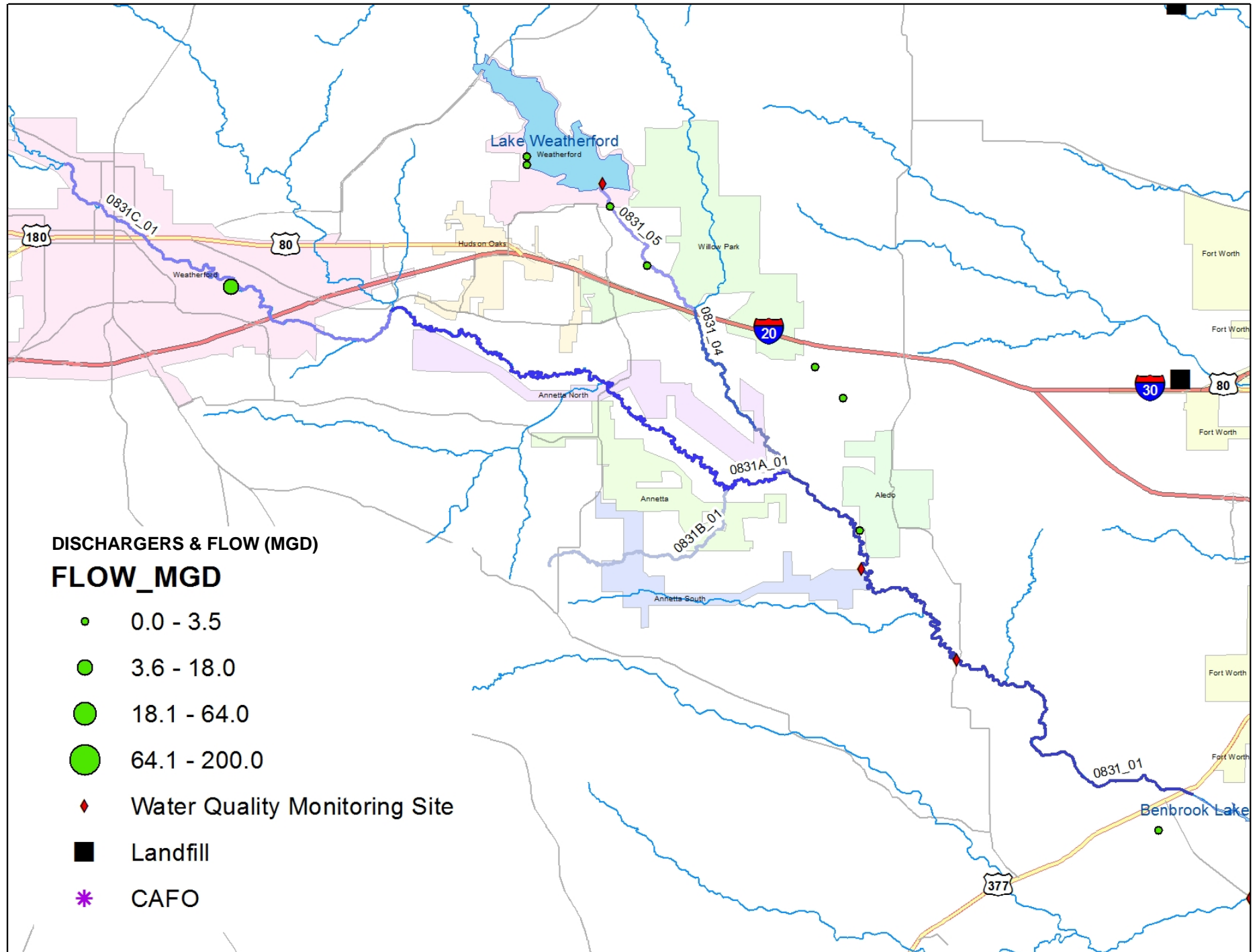
### **MAJOR WATERSHED EVENTS (PRESENT AND FUTURE)**

There are no known or anticipated events that would affect water quality in this segment. It appears that low flows are common in this segment leading to the low dissolved oxygen issues in this segment. In addition, effluent from dischargers can be high in nutrients which may contribute to the nutrient issue in this segment, especially during periods of low stream flow. Two dischargers in 2011 and three in 2012 renewed their water quality permits. See Table 0831.3 for details.

### **IMAGES**

See Figures 0831.5 to 0831.3 for images of this segment.

FIGURE 0831.1





**TABLE 0831.1: Fiscal Year 2012 Monitoring**

Monitoring Entity	Segment	AU	Site ID	Site Description	Monitoring Type	24 Hour DO	Metals in Water	Conventionals	Bacteria	Flow	Field
TRWD	0831	0831_01	16414	CLEAR FORK TRINITY RIVER AT KELLY ROAD 8.7KM UPSTREAM OF US 377 SOUTH OF ALEDO	RT			12 (TSS, NH3, TKN, NO2+NO3, TP, TOC, Chloride, OP)		12	12 (Water Temp, Specific Conductance, DO, pH, Flow Severity, Days Since Precipitation Event)

**TABLE 0831.2: Draft 2012 Water Quality Inventory**

Segment and Assessment Unit	Use	Method	Parameter Description	Criteria	Number of samples assessed	Number of samples exceed criteria	Mean of samples assessed (avg or geomean)	Mean of samples that exceed criteria	Dataset Qualifier	Impairment Level	Impairment Category
0831_01	General Use	Nutrient Screening Levels	Total Phosphorus	0.69	12	8		1.02	AD	CS	
0831_01	General Use	Nutrient Screening Levels	Orthophosphorus	0.37	11	11		0.74	AD	CS	
0831_01	General Use	Nutrient Screening Levels	Nitrate	1.95	11	4		2.6	AD	CS	
0831_04	Aquatic Life Use	Dissolved Oxygen 24hr average	Dissolved Oxygen 24hr Avg						ID	NS*	5c
0831_04	Aquatic Life Use	Dissolved Oxygen 24hr minimum	Dissolved Oxygen 24hr Min						ID	CN*	
0831_05	Aquatic Life Use	Dissolved Oxygen grab screening level	Dissolved Oxygen Grab						ID	CS*	
0831_05	Aquatic Life Use	Dissolved Oxygen 24hr average	Dissolved Oxygen 24hr Avg						ID	NS*	5c
0831_05	Aquatic Life Use	Dissolved Oxygen 24hr minimum	Dissolved Oxygen 24hr Min						ID	NS*	5b
0831A_01	General Use	Nutrient Screening Levels	Orthophosphorus						ID	CS*	
0831A_01	General Use	Nutrient Screening Levels	Total Phosphorus						ID	CS*	
0831B_01	Aquatic Life Use	Dissolved Oxygen grab screening level	Dissolved Oxygen Grab						ID	CS*	

Dataset Qualifier Codes

AD-Adequate Data (10 or more samples)

ID-Inadequate data (less than 4 samples)

Impairment Level

CN\*-Use concern carried forward from previous assessments

CS-Screening level concern

CS\*-Screening level concern carried forward from previous assessments

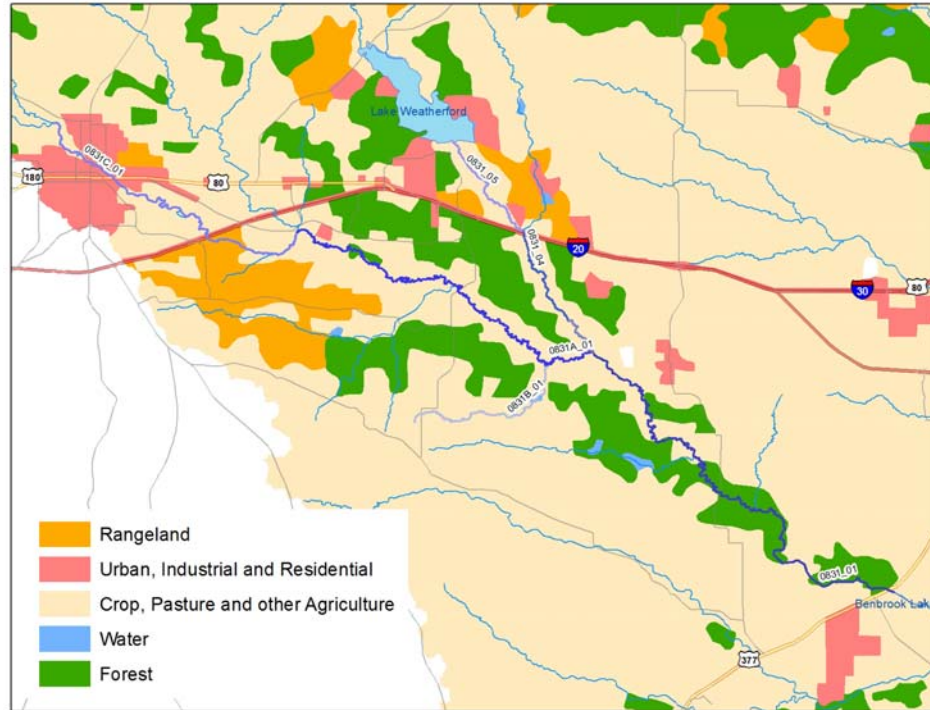
NS\*-Nonsupport carried forward from previous assessments

Impairment Category

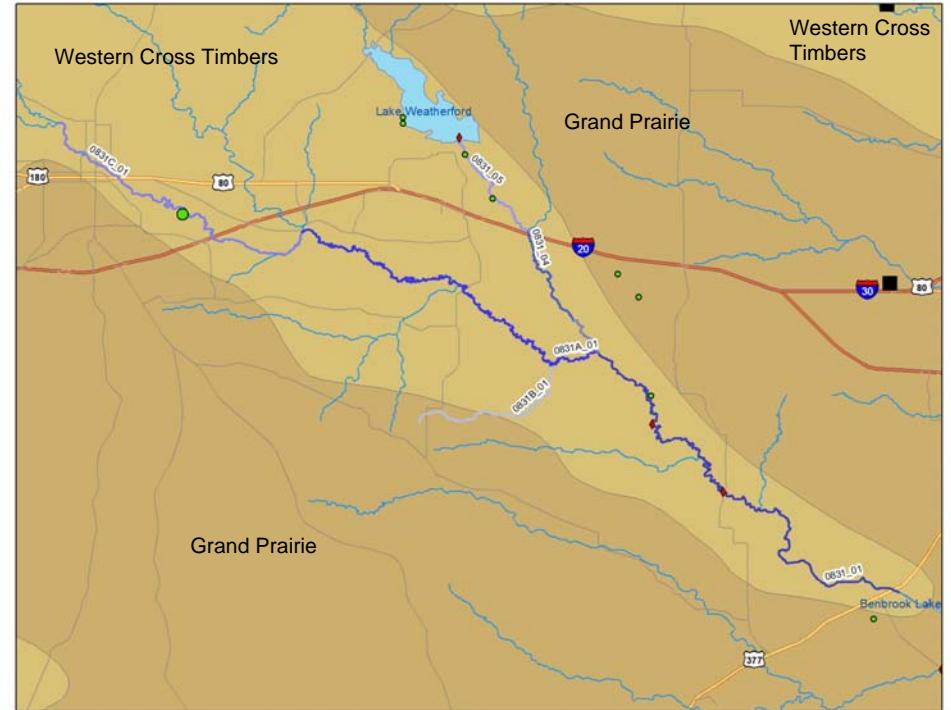
5b-A review of the water quality standards for this water body will be conducted before a TMDL is scheduled

5c-Additional data and information will be collected before a TMDL is scheduled

**FIGURE 0831.2: LAND COVER**



**FIGURE 0831.3: SOIL REGIONS**



**FIGURE 0831.4: VEGETATIVE PROV-**



**TABLE 0831.3: New and Renewed Discharge Permits**

Segment	Notice received by TRA on	Permitee/Facility	County	Permit Type	Action	Status	Permit Number
831	8/1/2011	COWTOWN ENTERPRISES INC - COWTOWN RV PK	Parker	Water Quality	Renewal	Draft	14003-001
831	12/16/2011	WILLOW PARK, CITY- STP	Parker	Water Quality	Renewal	Final	13834-001
831	1/9/2012	TOWN OF ANNETTA- DEER CREEK	Parker	Water Quality	Renewal	Final	13759-001
831	2/2/2012	ALEDO, CITY - STP	Parker	Water Quality	Renewal	Final	10847-001
831	6/11/2012	WEATHERFORD, CITY OF	Parker	Water Quality	Renewal	Final	10380-002



**FIGURE 0831.5: Clear Fork Trinity River at US 377, downstream**



**FIGURE 0831.6: Clear Fork Trinity River at IH-20, downstream**



**FIGURE 0831.7: Clear Fork Trinity River at East Lake Drive, downstream**



**FIGURE 0831.8: Clear Fork Trinity River at East Lake Drive, upstream**





## **0830 – Benbrook Lake**

### **SEGMENT DESCRIPTION**

Segment 0830 begins at Benbrook Dam in Tarrant County and continues up to a point 200 meters (220 yards) downstream of US 377 in Tarrant County. It impounds the Clear Fork Trinity River up to normal pool elevation of 694 feet. There are five assessment units in this segment. 0830\_01 is the lower portion of reservoir. Sites in this assessment unit include 13830, 15151, and 15161. 0830\_02 is the middle portion of reservoir. Sites in this assessment unit include 13831 and 15156. 0830\_03 is the upper portion of reservoir. Sites in this assessment unit include 15158. 0830\_04 is the remainder of reservoir. 0830\_05 is the Rock/Mustang Creek arm of Benbrook Lake. Sites in this assessment unit include 13832.

Figure 0830.1 shows the locations of assessment units, monitoring stations, dischargers, landfills, and confined animal feeding operations (CAFOs). Table 0830.1 lists the stations being monitored in fiscal year 2013 as well as the parameters being collected and the frequency of sampling.

### **HYDROLOGIC CHARACTERISTICS**

Benbrook Lake has a conservation pool elevation of 694 feet and a flood pool elevation of 724 feet. The lowest elevation over the past three years was 676 feet in October 2011.

### **IMPAIRMENT/AREA OF INTEREST DESCRIPTION**

Based on the Draft 2012 Texas Water Quality Inventory, there are concerns in assessment units 0830\_01, 0830\_02, 0830\_03, and 0830\_05. Details of the assessment are located in Table 0830.2.

### **LAND USE AND NATURAL CHARACTERISTICS**

This segment is largely rural with cropland and pasture. There are a few small areas of forest along the tributaries and residential developments around the lake. The segment lies almost entirely within the Grand Prairie with one of the tributaries draining the Western Cross Timbers. See Figures 0830.2 to 0830.4 for land covers, soil regions, and vegetative provinces in this segment. Figure 0830.1 shows the locations of the small dischargers in this segment.

### **POTENTIAL CAUSES OF IMPAIRMENT OR INTEREST**

Concerns for elevated Chlorophyll-a are assumed to be related to the hypereutrophic status of the reservoir. Although nutrients are not currently a concern, residential and agricultural fertilizers may be contributing to algal growth in this segment.

### **POTENTIAL STAKEHOLDERS**

Tarrant Regional Water District  
City of Benbrook

### **RECOMMENDATIONS FOR IMPROVING WATER QUALITY**

Public education of homeowners and landowners may help address Chlorophyll-a issues in this segment.

### **ONGOING PROJECTS**

There are no ongoing projects in this segment.

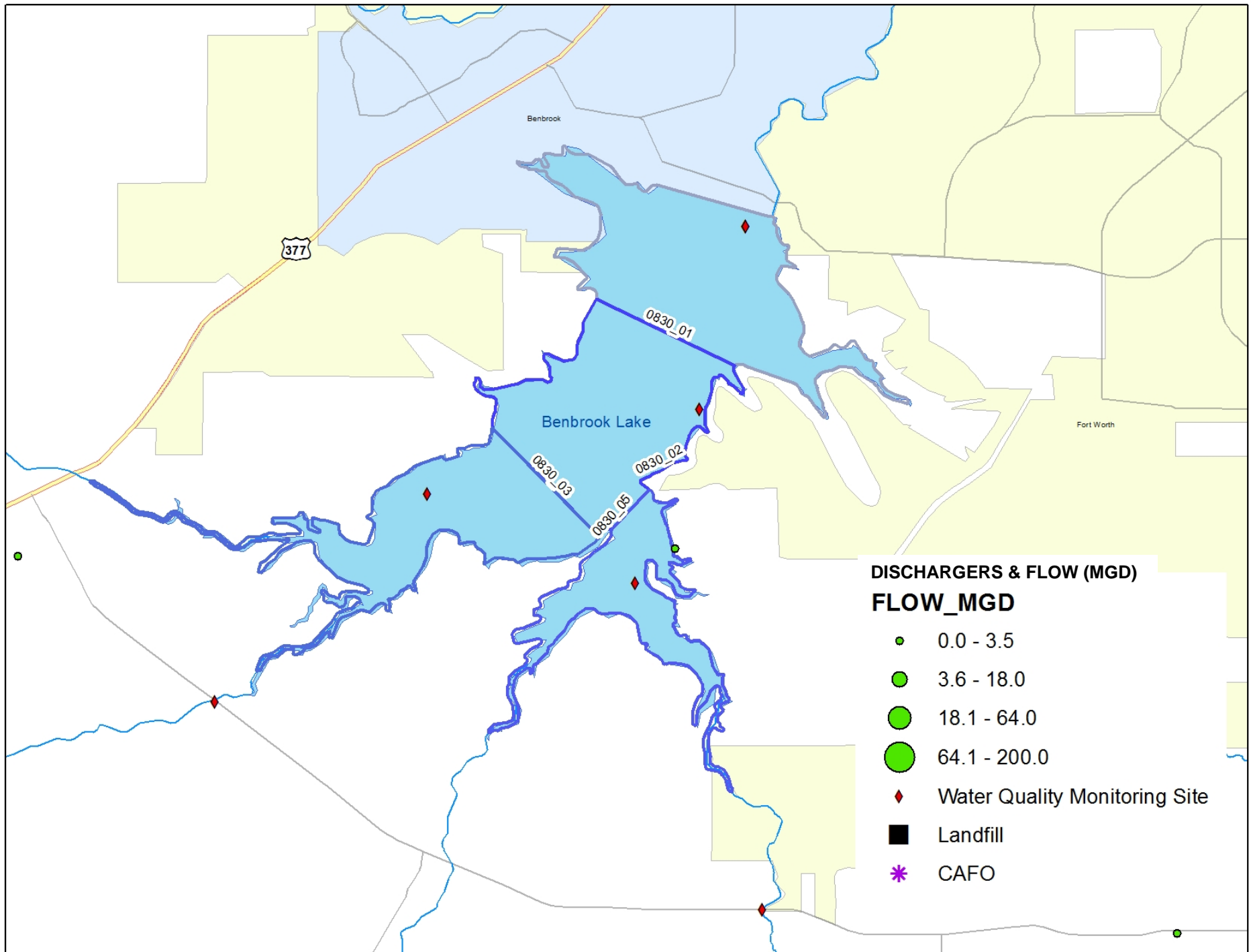
### **MAJOR WATERSHED EVENTS (PRESENT AND FUTURE)**

Zebra mussels are a current topic of concern throughout the basin. Based on the water chemistry of the reservoir, Benbrook Lake has been identified as having a high risk for zebra mussel infestation. Three dischargers renewed their water quality permit recently-two in 2011 and one in 2012. See Table 0830.3 for details.

### **IMAGES**

See Figures 0830.5 to 0830.6 for images of this segment.

FIGURE 0830.1



**TABLE 0830.1: Fiscal Year 2012 Monitoring**

Monitoring Entity	Segment	AU	Site ID	Site Description	Monitoring Type	24 Hour DO	Metals in Water	Conventionals	Bacteria	Flow	Field
TRWD	0830		13624	BEAR CREEK AT FM 1187 NEAR BENBROOK	RT			12 (TSS, NH3, TKN, NO2+NO3, TP, TOC, Chloride, OP)		12	12 (Water Temp, Specific Conductance, DO, pH, Flow Severity, Days Since Precipitation Event)
TRWD	0830		16725	ROCK CREEK AT FM 1187 3.7KM UPSTREAM OF BENBROOK LAKE	RT			12 (TSS, NH3, TKN, NO2+NO3, TP, TOC, Chloride, OP)			12 (Water Temp, Specific Conductance, DO, pH, Flow Severity, Days Since Precipitation Event)
TRWD	0830	0830_01	15151	BENBROOK LAKE EAST END OF DAM 285 METERS SOUTH AND 332 METERS WEST OF INTERSECTION OF PECAN VALLEY DRIVE AND LAKESIDE DRIVE	BS	2					
TRWD	0830	0830_01	15151	BENBROOK LAKE EAST END OF DAM 285 METERS SOUTH AND 332 METERS WEST OF INTERSECTION OF PECAN VALLEY DRIVE AND LAKESIDE DRIVE	RT		5 (Total Calcium, Magnesium, Sodium, Potassium, Arsenic, Iron, Manganese)	5 (Total Alkalinity, TSS, NH3, TKN, NO2+NO3, TP, TOC, DOC, Chloride, Sulfate, Chlorophyll-a, TDS, OP, Phytoplankton)	4 (E. coli)		5 (Water Temp, Secchi Depth, Specific Conductance, DO, pH)
TRWD	0830	0830_02	15156	BENBROOK LAKE 1.36 KM NORTH AND 223 METERS WEST OF INTERSECTION OF ST FRANCIS VILLAGE RD AND ST ANTHONY DR EAST SIDE IN MAIN CHANNEL	RT			5 (Total Alkalinity, TSS, NH3, TKN, NO2+NO3, TP, TOC, DOC, Chloride, Chlorophyll-a, TDS, OP)	4 (E. coli)		5 (Water Temp, Secchi Depth, Specific Conductance, DO, pH)
TRWD	0830	0830_03	15158	BENBROOK LAKE EAST OF BOAT RAMP AT HOLIDAY PARK IN MAIN CHANNEL 1.21 KM N AND 58 M E OF INTERSECTION OF PENINSULA RD AND BEAR CREEK DR	RT			5 (Total Alkalinity, TSS, NH3, TKN, NO2+NO3, TP, TOC, DOC, Chloride, Chlorophyll-a, TDS, OP)	4 (E. coli)		5 (Water Temp, Secchi Depth, Specific Conductance, DO, pH)
TRWD	0830	0830_05	13832	BENBROOK LAKE USGS SITE CR 92 METERS NORTH AND 1.27 KM EAST OF INTERSECTION OF PENINSULA ROAD AND PLOVER ROAD	RT			5 (Total Alkalinity, TSS, NH3, TKN, NO2+NO3, TP, TOC, DOC, Chloride, Chlorophyll-a, TDS, OP)	4 (E. coli)		5 (Water Temp, Secchi Depth, Specific Conductance, DO, pH)

TABLE 0830.2: Draft 2012 Water Quality Inventory

Segment and Assessment Unit	Use	Method	Parameter Description	Criteria	Number of samples assessed	Number of samples exceed criteria	Mean of samples assessed (avg or geomean)	Mean of samples that exceed criteria	Dataset Qualifier	Impairment Level	Impairment Category
0830_01	General Use	Nutrient Screening Levels	Chlorophyll-a	26.7	54	25		38.69	AD	CS	
0830_02	General Use	Nutrient Screening Levels	Chlorophyll-a	26.7	40	16		42.06	AD	CS	
0830_03	General Use	Nutrient Screening Levels	Chlorophyll-a	26.7	35	17		43.06	AD	CS	
0830_05	General Use	Nutrient Screening Levels	Chlorophyll-a	26.7	24	15		39.97	AD	CS	

Dataset Qualifier Codes

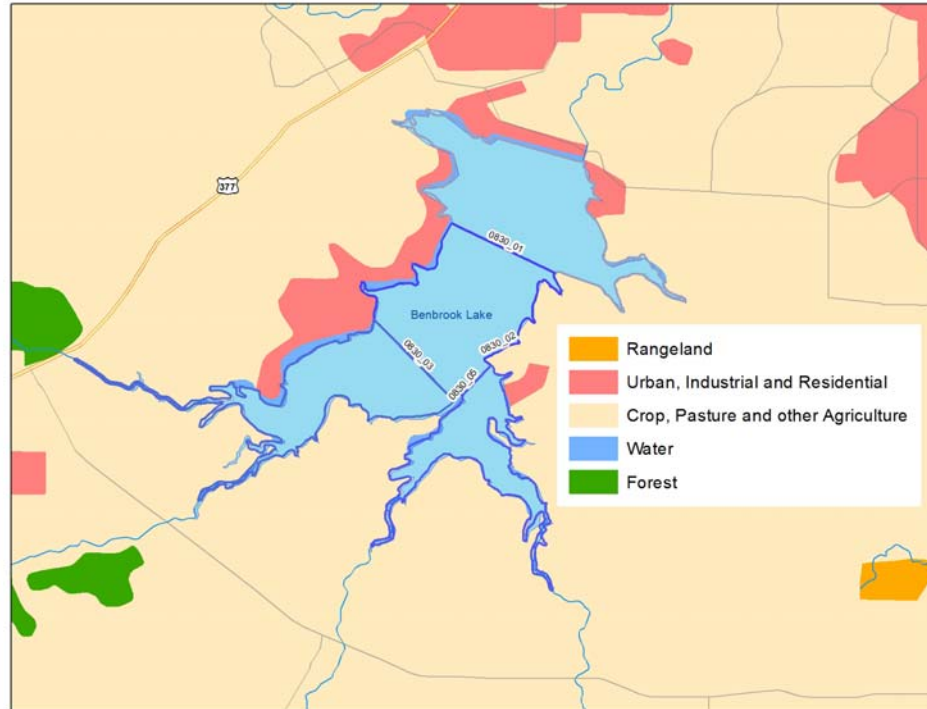
AD-Adequate Data (10 or more samples)

Impairment Level

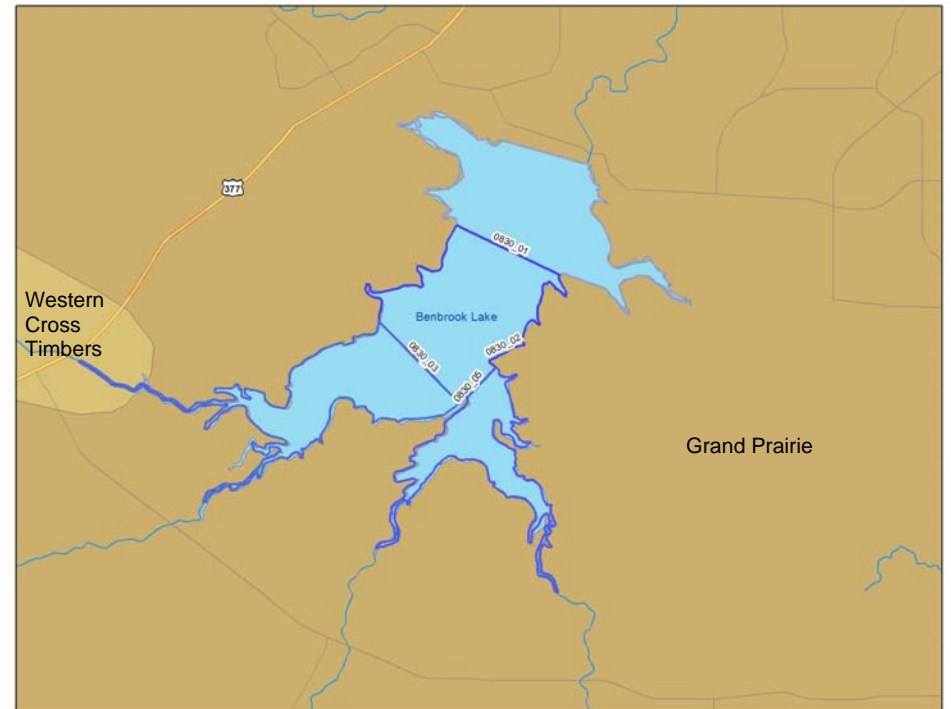
CS-Screening level concern



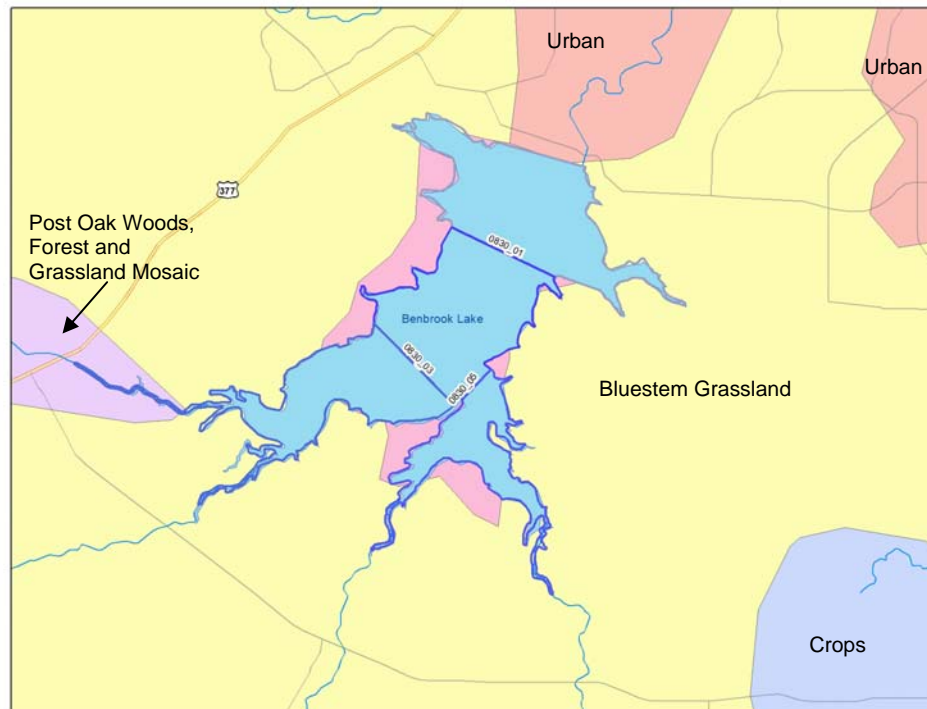
**FIGURE 0830.2: LAND COVER**



**FIGURE 0830.3: SOIL REGIONS**



**FIGURE 0830.4: VEGETATIVE PROVINCES**



**TABLE 0830.3: New and Renewed Discharge Permits**

Segment	Notice received by TRA on	Permitee/Facility	County	Permit Type	Action	Status	Permit Number
830	9/19/2011	BENBROOK TEXAS LTD PARTNERSHIP - STP	Tarrant	Water Quality	Renewal	Final	14792-001
830	9/19/2011	GRAND RANCH TREATMENT CO-STP	Johnson	Water Quality	Renewal	Final	13846-001
830	8/13/2012	ST. FRANCIS VILLAGE INC	Tarrant	Water Quality	Renewal	Final	10612-001

**FIGURE 0830.5: Benbrook Lake, swimming area off Lakeview Drive**



**FIGURE 0830.6: Benbrook Lake near dam**



## **0829 – Clear Fork Trinity River Below Benbrook Lake**

### **SEGMENT DESCRIPTION**

Segment 0829 begins at the confluence with the West Fork Trinity River in Tarrant County and continues up to Benbrook Dam in Tarrant County. There are three assessment units in this segment. 0829\_01 is from the confluence with the West Fork Trinity River and continues one mile upstream. Sites in this assessment unit include 16119 and 20427. 0829\_02 is from one mile upstream of the confluence with the West Fork Trinity River and continues up to the confluence with Mary's Creek. Sites in this assessment unit include 11044, 11045, 18456, and 16122. 0829\_03 is from the confluence with Mary's Creek and continues up to Benbrook Dam in Tarrant County. Sites in this assessment unit include 13623.

Unclassified water bodies in this segment include those listed below.

0829A—Lake Como—From Lake Como Dam to the reservoir headwaters in Lake Como Park in Tarrant County. This segment includes site 16814.

Figure 0829.1 shows the locations of assessment units, monitoring stations, dischargers, landfills, and confined animal feeding operations (CAFOs). Table 0829.1 lists the stations being monitored in fiscal year 2013 as well as the parameters being collected and the frequency of sampling.

### **HYDROLOGIC CHARACTERISTICS**

Based on USGS flow gages near Benbrook (08047000) and Fort Worth (08047500), the median annual average flow in this segment is 71.75 cfs with median annual average flows of 57.95 near Benbrook and 100.1 cfs at Fort Worth. The gage near Benbrook is influenced by releases from Benbrook Lake with elevated flows during flood stage releases. The gage at Fort Worth shows post-rainfall peaks returning to normal flows within a few days. This is likely due to the channelized nature of river between IH-20 and the confluence with the West Fork that quickly transports high flows downstream. Base flows in this segment are generally below 10 cfs in the summer and between 10 and 40 cfs during the spring and winter.

### **IMPAIRMENT/AREA OF INTEREST DESCRIPTION**

Based on the Draft 2012 Texas Water Quality Inventory, there are impairments in assessment units 0829\_01, 0829\_02, 0829\_03, 0829A\_01. Details of the assessment are located in Table 0829.2.

### **LAND USE AND NATURAL CHARACTERISTICS**

This segment has transitioned from rural cropland and pasture to dense residential with some commercial development. It is located in the southwest corner of the vast Dallas-Fort Worth Metroplex and lies within the Grand Prairie. See Figures 0829.2 to 0829.4 for land covers, soil regions, and vegetative provinces in this segment.

### **POTENTIAL CAUSES OF IMPAIRMENT OR INTEREST**

Fish consumption bans in this segment are based on legacy pollutant chemicals that have been banned for decades. It is assumed that contaminated sediments or buried chemical stockpiles are the source of continued impairments in this segment.

### **POTENTIAL STAKEHOLDERS**

Tarrant Regional Water District  
City of Benbrook  
City of Fort Worth

### **RECOMMENDATIONS FOR IMPROVING WATER QUALITY**

Intensive sampling may be helpful in narrowing down sources of legacy pollutants. If sources are found, clean-ups or sequestration may reduce loading into water bodies and fish tissue.

### **ONGOING PROJECTS**

The Trinity River PCBs in Tissue TMDL is underway in this segment. The project is managed by the TMDL team of the TCEQ and is currently in the report preparation phase.

### **MAJOR WATERSHED EVENTS (PRESENT AND FUTURE)**

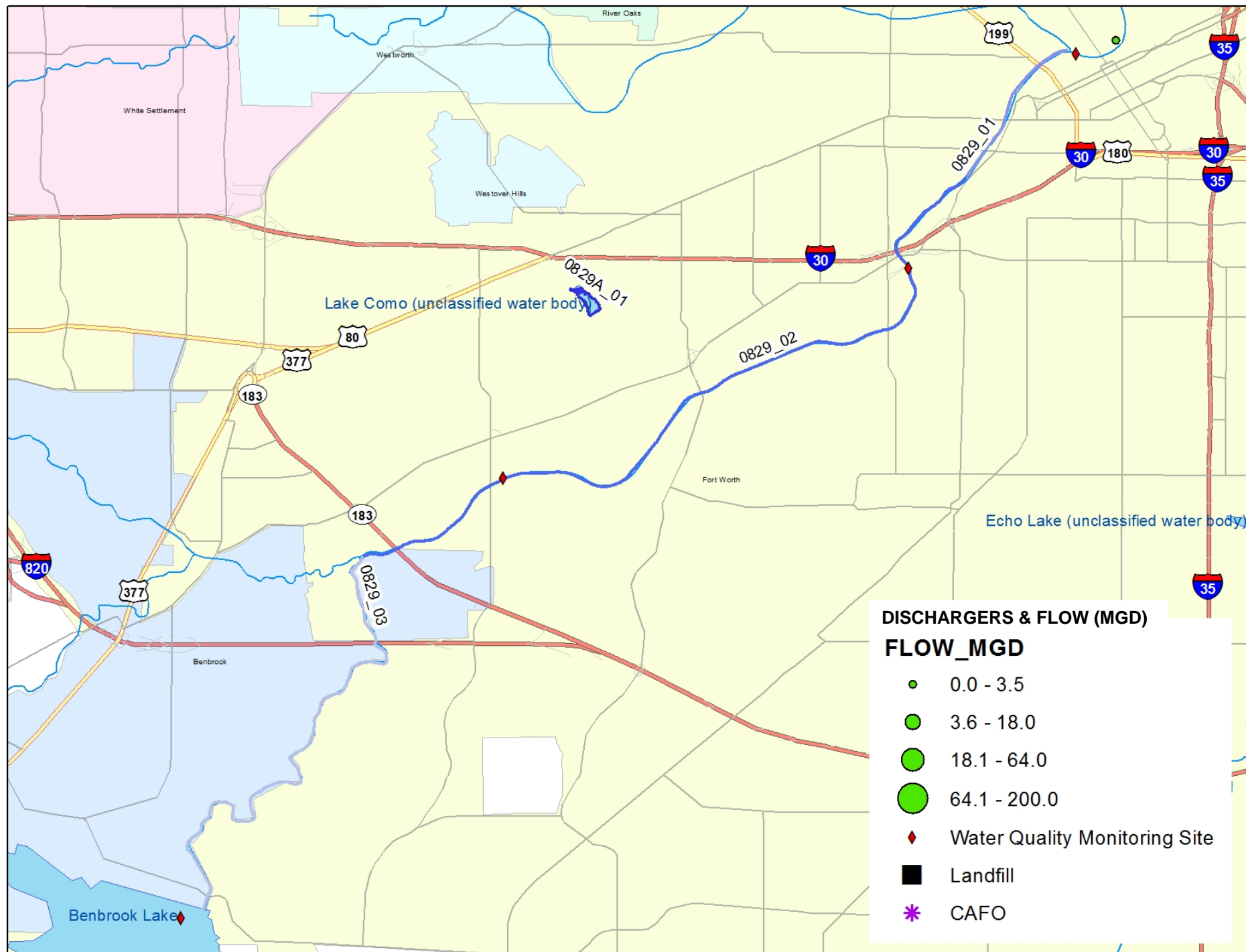
There are no known or anticipated events that would affect water quality in this segment.

### **IMAGES**

See Figures 0829.5 to 0829.6 for images of this segment.



FIGURE 0829.1



**TABLE 0829.1: Fiscal Year 2012 Monitoring**

Monitoring Entity	Segment	AU	Site ID	Site Description	Monitoring Type	24 Hour DO	Metals in Water	Conventionals	Bacteria	Flow	Field
Fort Worth	0829	0829_02	18456	CLEAR FORK TRINITY RIVER MID CHANNEL 85 M UPSTREAM OF SPILLWAY AND IMMEDIATELY UPSTREAM OF WEST ROSEDALE STREET IN FORT WORTH	RT					12	12 (Water Temp, Specific Conductance, DO, PH, Flow Severity, Days Since Precipitation Event, Turbidity)

**TABLE 0829.2: Draft 2012 Water Quality Inventory**

Segment and Assessment Unit	Use	Method	Parameter Description	Criteria	Number of samples assessed	Number of samples exceed criteria	Mean of samples assessed (avg or geomean)	Mean of samples that exceed criteria	Dataset Qualifier	Impairment Level	Impairment Category
0829_01	Fish Consumption Use	HS Advisories, Cures, and Risk Assessments	Restricted and No-Consumption-dioxin in edible tissue						OE	NS	5a
0829_01	Fish Consumption Use	HS Advisories, Cures, and Risk Assessments	Restricted and No-Consumption-PCBs in edible tissue						OE	NS*	5a
0829_02	General Use	Nutrient Screening Levels	Chlorophyll-a	14.1	26	8		19.84	AD	CS	
0829_02	Fish Consumption Use	HS Advisories, Cures, and Risk Assessments	Restricted and No-Consumption-dioxin in edible tissue						OE	NS*	5a
0829_02	Fish Consumption Use	HS Advisories, Cures, and Risk Assessments	Restricted and No-Consumption-PCBs in edible tissue						OE	NS*	5a
0829_03	Fish Consumption Use	HS Advisories, Cures, and Risk Assessments	Restricted and No-Consumption-dioxin in edible tissue						OE	NS*	5a
0829_03	Fish Consumption Use	HS Advisories, Cures, and Risk Assessments	Restricted and No-Consumption-PCBs in edible tissue						OE	NS*	5a
0829A_01	Fish Consumption Use	Bioaccumulative Toxics in fish tissue	Arsenic	0.04	10	9		0.06	AD	CS	

Dataset Qualifier Codes

AD-Adequate Data (10 or more samples)

OE-Other information than ambient samples evaluated

Impairment Level

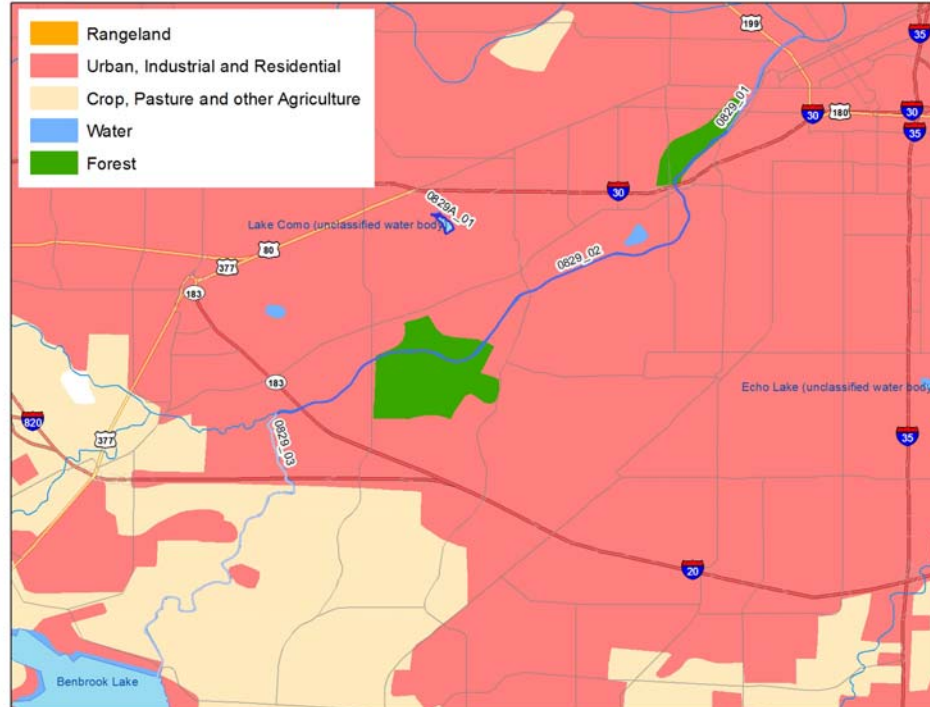
CS-Screening level concern

NS\*-Nonsupport carried forward from previous assessments

Impairment Category

5a-A TMDL is underway, scheduled, or will be scheduled

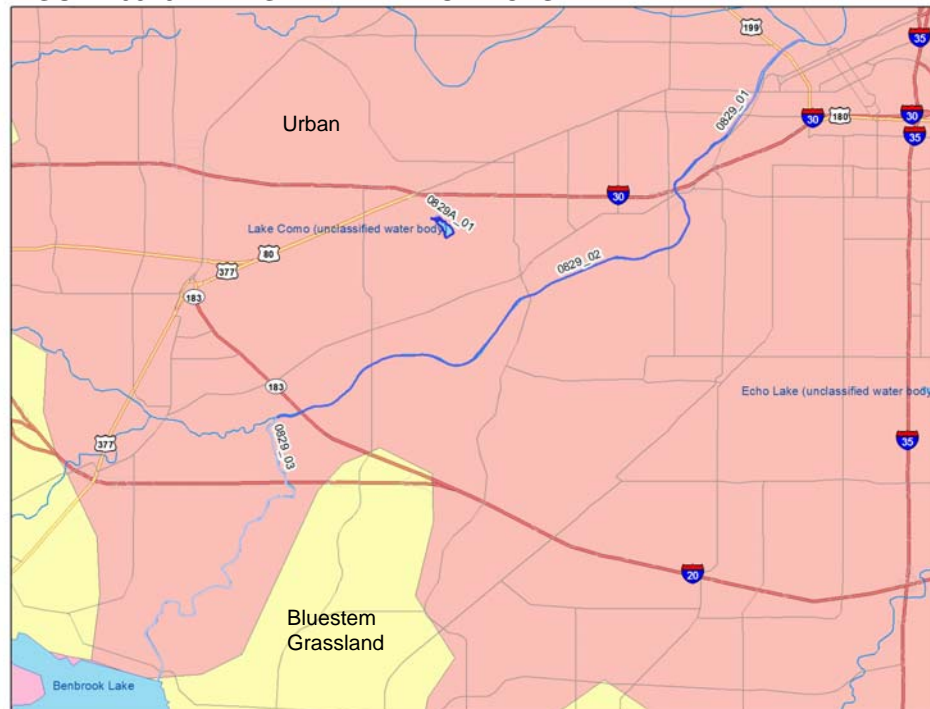
**FIGURE 0829.2: LAND COVER**



**FIGURE 0829.3: SOIL REGIONS**



**FIGURE 0829.4: VEGETATIVE PROVINCES**



**FIGURE 0829.5: Clear Fork Trinity River at IH-20**



**FIGURE 0829.6: Clear Fork Trinity River at IH-30**





# Village Creek Subwatershed

## 0828 – Lake Arlington

### SEGMENT DESCRIPTION

Segment 0828 begins at Lake Arlington Dam in Tarrant County and continues up to the normal pool elevation of 550 feet, impounding Village Creek. There are eight assessment units in this segment. 0828\_01 is the lowermost portion of lake along the western half of the dam. Sites in this assessment unit include 11040 and 13905. 0828\_02 is the lowermost portion of lake along the eastern half of the dam. Sites in this assessment unit include 13904. 0828\_03 is the western half of the lower portion of the lake. Sites in this assessment unit include 13903. 0828\_04 is the eastern half of the lower portion of the lake. Sites in this assessment unit include 13901. 0828\_05 is the western half of the upper portion of the lake. Sites in this assessment unit include 13899. 0828\_06 is the eastern half of the upper portion of the lake. Sites in this assessment unit include 11042 and 13898. 0828\_07 is the uppermost portion of the lake. Sites in this assessment unit include 13897. 0828\_08 is the remainder of the lake.

Unclassified water bodies in this segment include those listed below.

0828A—Village Creek—From the confluence with Lake Arlington in Tarrant County up to the headwaters east of Joshua in Johnson County. This segment includes sites 10780 and 10786.

Figure 0828.1 shows the locations of assessment units, monitoring stations, dischargers, landfills, and confined animal feeding operations (CAFOs). Table 0828.1 lists the stations being monitored in fiscal year 2013 as well as the parameters being collected and the frequency of sampling.

### HYDROLOGIC CHARACTERISTICS

Lake Arlington has a conservation pool elevation of 550 feet. Over the past three years, the lake fell to 540 feet in October 2011. The stream above Lake Arlington has a median annual average flow of 29.7 cfs based on historic data from the USGS flow gage at Everman (08048970). Like many small streams, this stream recovers from post-rainfall flows rather quickly; generally within a few days or less depending on the magnitude of the peak. Base flows are below 2 cfs throughout the year.

### IMPAIRMENT/AREA OF INTEREST DESCRIPTION

Based on the Draft 2012 Texas Water Quality Inventory, there are impairments in assessment units 0828\_02, 0828\_05, 0828\_06, 0828\_07, and 0828A\_01. Details of the assessment are located in Table 0828.2.

### LAND USE AND NATURAL CHARACTERISTICS

The upstream and downstream ends of this segment are urbanized with residential, commercial and industrial development, especially around the lake. The middle portion of the segment is generally rural with cropland and pastures with small areas of rangeland and forest throughout. The stream channel and lake flow through the

Eastern Cross Timbers with a few tributaries draining the Grand Prairie. See Figures 0828.2 to 0828.4 for land covers, soil regions, and vegetative provinces in this segment. There are several landfills and small dischargers in this segment as well as one CAFO. The locations of these can be seen in Figure 0828.1.

### POTENTIAL CAUSES OF IMPAIRMENT OR INTEREST

Chlorophyll-a and Nitrate concerns may be related to residential fertilizer use in the communities around the lake. Elevated bacteria levels in the stream may be due to wildlife in the watershed.

### POTENTIAL STAKEHOLDERS

City of Arlington  
City of Burleson  
City of Crowley  
City of Everman  
Rendon  
City of Kennedale  
Tarrant Regional Water District

### RECOMMENDATIONS FOR IMPROVING WATER QUALITY

Public education of homeowners around the lake may help reduce nutrients and Chlorophyll-a levels in Lake Arlington. A developing Watershed Protection Plan is anticipated to address the bacteria issues in Village Creek.

### ONGOING PROJECTS

The Village Creek Stakeholder Committee, formed to develop the Lake Arlington Master Plan, is pursuing a 319 grant to develop a Watershed Protection Plan. The plan would, among other things, address bacterial impairments on Village Creek.

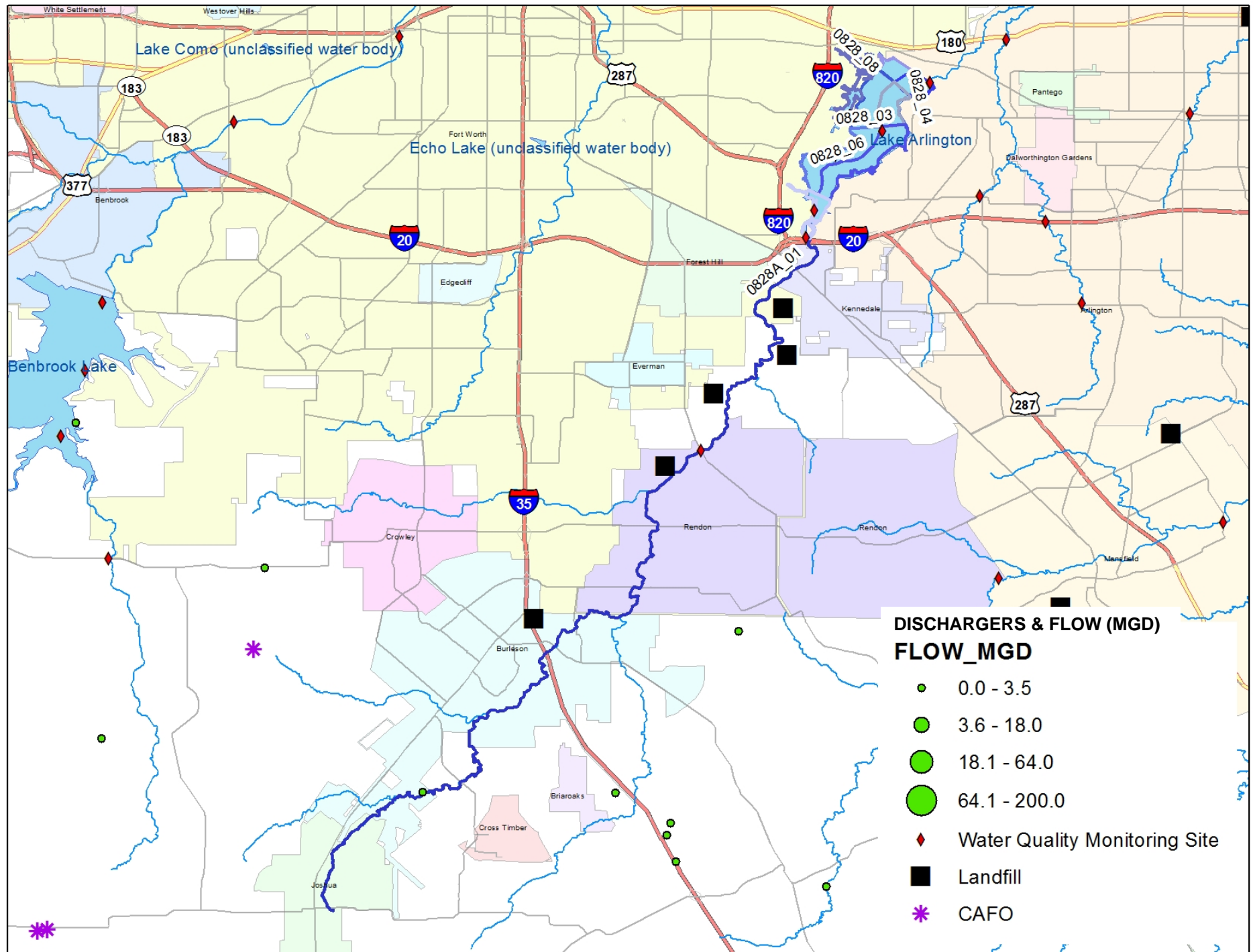
### MAJOR WATERSHED EVENTS (PRESENT AND FUTURE)

Zebra mussels are a current topic of concern throughout the basin. Based on the water chemistry of the reservoir, Lake Arlington has been identified as having a high risk for zebra mussel infestation. In addition, the Watershed Protection Plan is expected to address bacteria in the segment. One water rights and one water quality permit was requested in 2011. Eight water quality permits were recently renewed—seven in 2011 and one in 2012. See Table 0828.3 for details.

### IMAGES

See Figures 0828.5 to 0828.7 for images of this segment.

**FIGURE 0828.1**



**TABLE 0828.1: Fiscal Year 2012 Monitoring**

Monitoring Entity	Segment	AU	Site ID	Site Description	Monitoring Type	24 Hour DO	Metals in Water	Conventionals	Bacteria	Flow	Field
TRWD	0828	0828_02	13904	LK ARLINGTON USGS SITE AC ID 324304097113601 LOCATION MATCHES SITE MAP 518 M N AND 507 M W INTERSECT OF LK ARLINGTON BLVD AND GREEN OAK	BS	2					
TRWD	0828	0828_02	13904	LK ARLINGTON USGS SITE AC ID 324304097113601 LOCATION MATCHES SITE MAP 518 M N AND 507 M W INTERSECT OF LK ARLINGTON BLVD AND GREEN OAK	RT		5 (Total Calcium, Magnesium, Sodium, Potassium, Arsenic, Iron, Manganese)	5 (Total Alkalinity, TSS, NH3, TKN, NO2+NO3, TP, TOC, DOC, Chloride, Sulfate, Chlorophyll-a, TDS, OP, Phytoplankton)	4 (E. coli)		5 (Water Temp, Secchi Depth, Specific Conductance, DO, pH)
TRWD	0828	0828_05	13899	LAKE ARLINGTON USGS SITE EC 254 METERS SOUTH AND 493 METERS EAST OF INTERSECTION OF CRAVENS ROAD AND WILBARGER STREET	RT			5 (Total Alkalinity, TSS, NH3, TKN, NO2+NO3, TP, TOC, DOC, Chloride, Chlorophyll-a, TDS, OP)	4 (E. coli)		5 (Water Temp, Secchi Depth, Specific Conductance, DO, pH)
TRWD	0828	0828_06	11042	LAKE ARLINGTON MID LAKE 177 METERS NORTH AND 865 METERS WEST OF INTERSECTION OF ARBOR VALLEY DRIVE AND PERKINS ROAD	RT			5 (Total Alkalinity, TSS, NH3, TKN, NO2+NO3, TP, TOC, DOC, Chloride, Chlorophyll-a, TDS, OP)	4 (E. coli)		5 (Water Temp, Secchi Depth, Specific Conductance, DO, pH)
TRWD	0828	0828_07	13897	LAKE ARLINGTON USGS SITE FC 570 METERS EAST OF INTERSECTION OF KAY DRIVE AND KALTENBRUN ROAD	RT			5 (Total Alkalinity, TSS, NH3, TKN, NO2+NO3, TP, TOC, DOC, Chloride, Chlorophyll-a, TDS, OP)	4 (E. coli)		5 (Water Temp, Secchi Depth, Specific Conductance, DO, pH)
Arlington	0828A	0828A_01	10780	VILLAGE CREEK ON WEST BANK AT IH 20 WEST FEEDER ROAD IN ARLINGTON	RT		4 (Dissolved Cadmium, Chromium, Copper, Iron, Nickel, Zinc)		4 (E. coli)		4 (Water Temp, Air Temp, Specific Conductance, DO, PH, Flow Severity, Days Since Precipitation Event)
TRWD	0828A	0828A_01	10786	VILLAGE CREEK IMMEDIATELY DOWNSTREAM OF RENDON ROAD SW OF ARLINGTON	RT		12 (Total Arsenic)	12 (TSS, NH3, TKN, NO2+NO3, TP, TOC, Chloride, OP)	12 (E. coli)	12	12 (Water Temp, Specific Conductance, DO, pH, Flow Severity, Days Since Precipitation Event)

**TABLE 0828.2: Draft 2012 Water Quality Inventory**

Segment and Assessment Unit	Use	Method	Parameter Description	Criteria	Number of samples assessed	Number of samples exceed criteria	Mean of samples assessed (avg or geomean)	Mean of samples that exceed criteria	Dataset Qualifier	Impairment Level	Impairment Category
0828_02	General Use	Nutrient Screening Levels	Chlorophyll-a	26.7	28	21		44.28	AD	CS	
0828_05	General Use	Nutrient Screening Levels	Chlorophyll-a	26.7	14	12		46.33	AD	CS	
0828_06	General Use	Nutrient Screening Levels	Chlorophyll-a	26.7	29	20		45.77	AD	CS	
0828_07	General Use	Nutrient Screening Levels	Nitrate	0.37	18	7		0.52	AD	CS	
0828A_01	Recreation Use	Bacteria Geomean	E. coli	126	24	1	182.07		AD	NS	5c

Dataset Qualifier Codes

AD-Adequate Data (10 or more samples)

Impairment Level

CS-Screening level concern

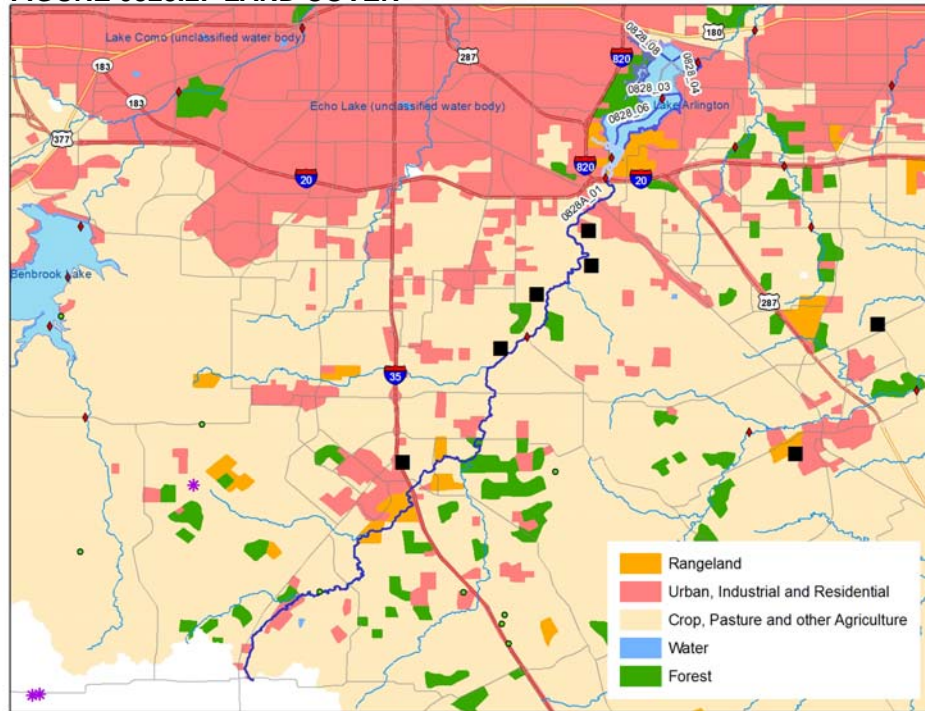
NS-Nonsupport

Impairment Category

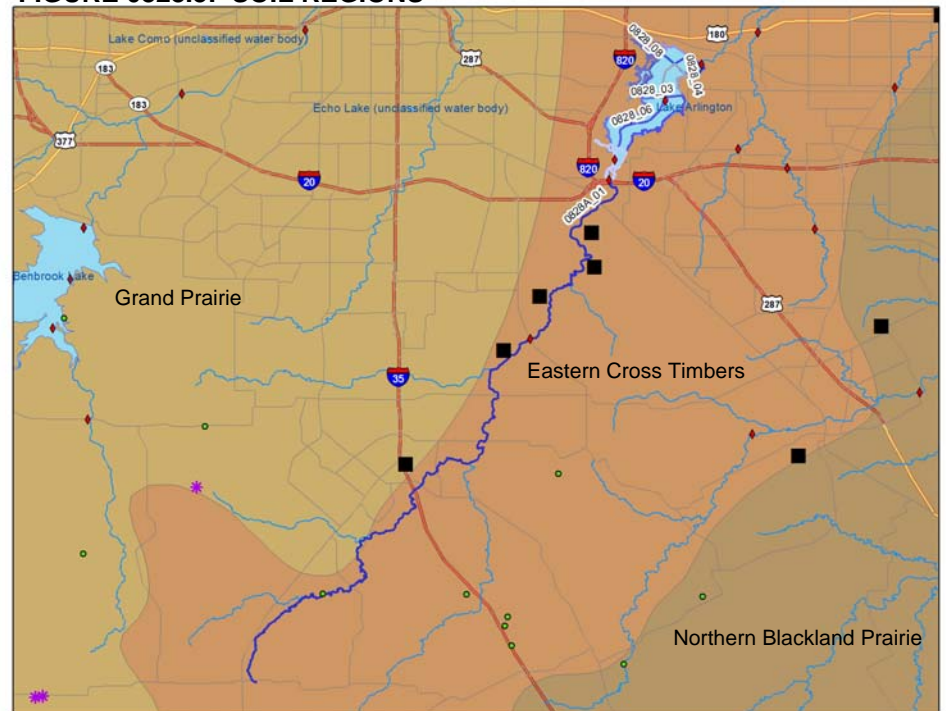
5c-Additional data and information will be collected before a TMDL is scheduled



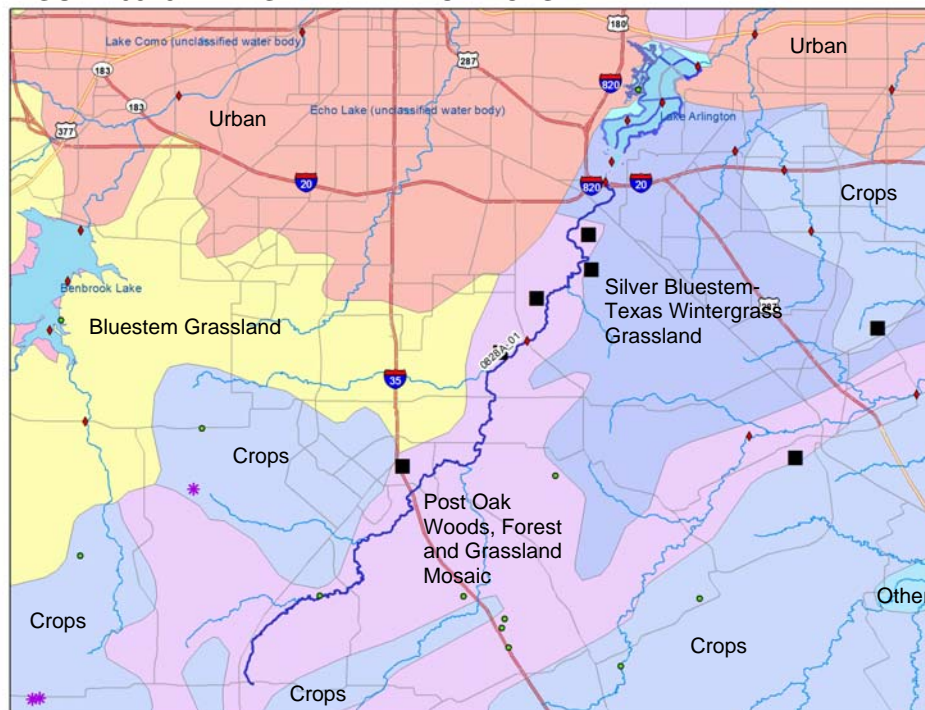
**FIGURE 0828.2: LAND COVER**



**FIGURE 0828.3: SOIL REGIONS**



**FIGURE 0828.4: VEGETATIVE PROVINCES**





**TABLE 0828.3: New and Renewed Discharge Permits**

Segment	Notice received by TRA on	Permittee/Facility	County	Permit Type	Action	Status	Permit Number
828	4/21/2011	XTO ENERGY, INC.	Johnson	Water Rights	New	Draft	12612
828	5/13/2011	JOCO HOLDING CORP. - MOTEL & RESTAURANT STP	Johnson	Water Quality	Renewal	Received notification	02730-000
828	7/1/2011	PHW, IMW, AWB & EB TEXAS LLC - STP	Tarrant	Water Quality	New	Draft	14970-001
828	7/14/2011	SOUTH FORT WORTH RV RANCH, LLC - STP	Johnson	Water Quality	Renewal	Final	14680-001
828	8/25/2011	MANSFIELD ISD - TARVER-RENDON ELEM SCH STP	Tarrant	Water Quality	Renewal	Final	13352-001
828	9/19/2011	JOHNSON CO SPECIAL UTILITY DIST.	Johnson	Water Quality	Renewal	Final	14350-001
828	10/17/2011	BRIARHAVEN WASTEWATER TREATMENT FACILITY	Johnson	Water Quality	Renewal	Final	14681-001
828	10/17/2011	EXTEX LAPORTE L P - HANDLEY SES	Tarrant	Water Quality	Renewal	Draft	00552-000
828	10/17/2011	TXDOT - STP	Johnson	Water Quality	Renewal	Final	14790-002
828	4/26/2012	D&K DEV CO - STP	Tarrant	Water Quality	Renewal	Final	13518-001

**FIGURE 0828.5: Lake Arlington/Village Creek at IH-20, upstream**



**FIGURE 0828.6: Lake Arlington at West Poly Webb Road boat ramp, upstream**



**FIGURE 0828.7: Lake Arlington at West Poly Webb Road boat ramp, downstream**



# Mountain Creek Subwatershed

## 0838 – Joe Pool Lake

### SEGMENT DESCRIPTION

Segment 0838 begins at Joe Pool dam in Dallas County and continues up to the normal pool elevation of 522 feet, impounding Mountain Creek. There are three assessment units in this segment. 0838\_01 is the lowermost portion of reservoir, adjacent to the dam. Sites in this assessment unit include 11073, 13890, 13891, 13893, and 13894. 0838\_02 is the Mountain Creek arm. Sites in this assessment unit include 11071, 13896, and 17684. 0838\_03 is the Walnut Creek arm. Sites in this assessment unit include 11072 and 13892.

Unclassified water bodies in this segment include those listed below.

0838A—Mountain Creek—A 10 mile stretch of Mountain Creek running upstream from US 287 in Ellis County to the confluence with Fish Spring Branch in Johnson County. This segment includes site 13622.

0838B—Sugar Creek—A 1.6 mile stretch of Sugar Creek running upstream from the Tarrant/Dallas County line up to just upstream of Britton Road in Mansfield in Tarrant County. This segment includes site 17680.

0838C—Walnut Creek—A 7 mile stretch of Walnut Creek running upstream from Holland Road up to the confluence with Willow Branch, northwest of Mansfield in Tarrant County. This segment includes site 13621.

Figure 0838.1 shows the locations of assessment units, monitoring stations, dischargers, landfills, and confined animal feeding operations (CAFOs). Table 0838.1 lists the stations being monitored in fiscal year 2013 as well as the parameters being collected and the frequency of sampling.

### HYDROLOGIC CHARACTERISTICS

The conservation pool elevation of Joe Pool Lake is 522 feet. It's most recent low elevation was 518 feet in October 2011. The median annual average flow into the Mountain Creek arm of Joe Pool Lake based on the USGS flow gage near Venus (08049580) is 10.8 cfs and 17.1 cfs into the Walnut Creek arm based on the gage near Mansfield (08049700). Post-rainfall peak flows on Mountain Creek generally return to base flows in 5 to 10 days. However, it should be noted that this stream is dry during most of the year. Peak flows in Walnut Creek typically return to base flows within 3 to 4 days, with base flows being below 2 cfs throughout the year.

### IMPAIRMENT/AREA OF INTEREST DESCRIPTION

Based on the Draft 2012 Texas Water Quality Inventory, there are impairments in assessment units 0838\_02 and 0838C\_01. Details of the assessment are located in Table 0838.2.

### LAND USE AND NATURAL CHARACTERISTICS

Most of the land drained by the tributaries in this segment is rural with cropland and pastures. There has been significant urbanization around the lake in recent years with residential and commercial development. There is a dense area of forest to the east of

the lake. Most of the segment drains the Northern Blackland Prairie with the upper reaches of one of the tributaries flowing through the Eastern Cross Timbers. See Figures 0838.2 to 0838.4 for land covers, soil regions, and vegetative provinces in this segment. There are small dischargers and several landfills in this segment, the locations of which can be seen in Figure 0838.1.

### POTENTIAL CAUSES OF IMPAIRMENT OR INTEREST

Elevated bacteria levels in this segment may be due to wildlife or pet waste. The area directly around the sample site in 0838C has been experiencing increased residential development which increases the pet population and reduces riparian vegetation that can absorb contaminants before they reach a water body.

### POTENTIAL STAKEHOLDERS

City of Mansfield  
City of Cedar Hill  
City of Grand Prairie

### RECOMMENDATIONS FOR IMPROVING WATER QUALITY

Public education of homeowners about pet waste disposal may help reduce bacteria levels in this assessment unit.

### ONGOING PROJECTS

TRA staff have recently begun a Nutrient Receiving Stream Study. This project was started in response to the EPA mandate for numeric nutrient criteria for surface waters. Quarterly samples are being collected downstream of several of TRA's wastewater treatment plants, including Mountain Creek, in order to obtain data for modeling. The model will be used to determine the streams' ability to consume constituents of effluent without harming the stream, the effect of various nutrient concentrations, and the levels of nutrients that may result in eutrophication. The model will also help determine the impact of various permit limits on receiving stream water quality.

TRA staff have been monitoring water quality in Joe Pool Lake and its tributaries for many years. Data are currently being analyzed to determine if trends exist and to develop a monitoring program that addresses these trends as well as the needs of customer cities. In addition, the monitoring program will be brought under CRP in order to include the data in the TCEQ database for assessment and regulatory purposes.

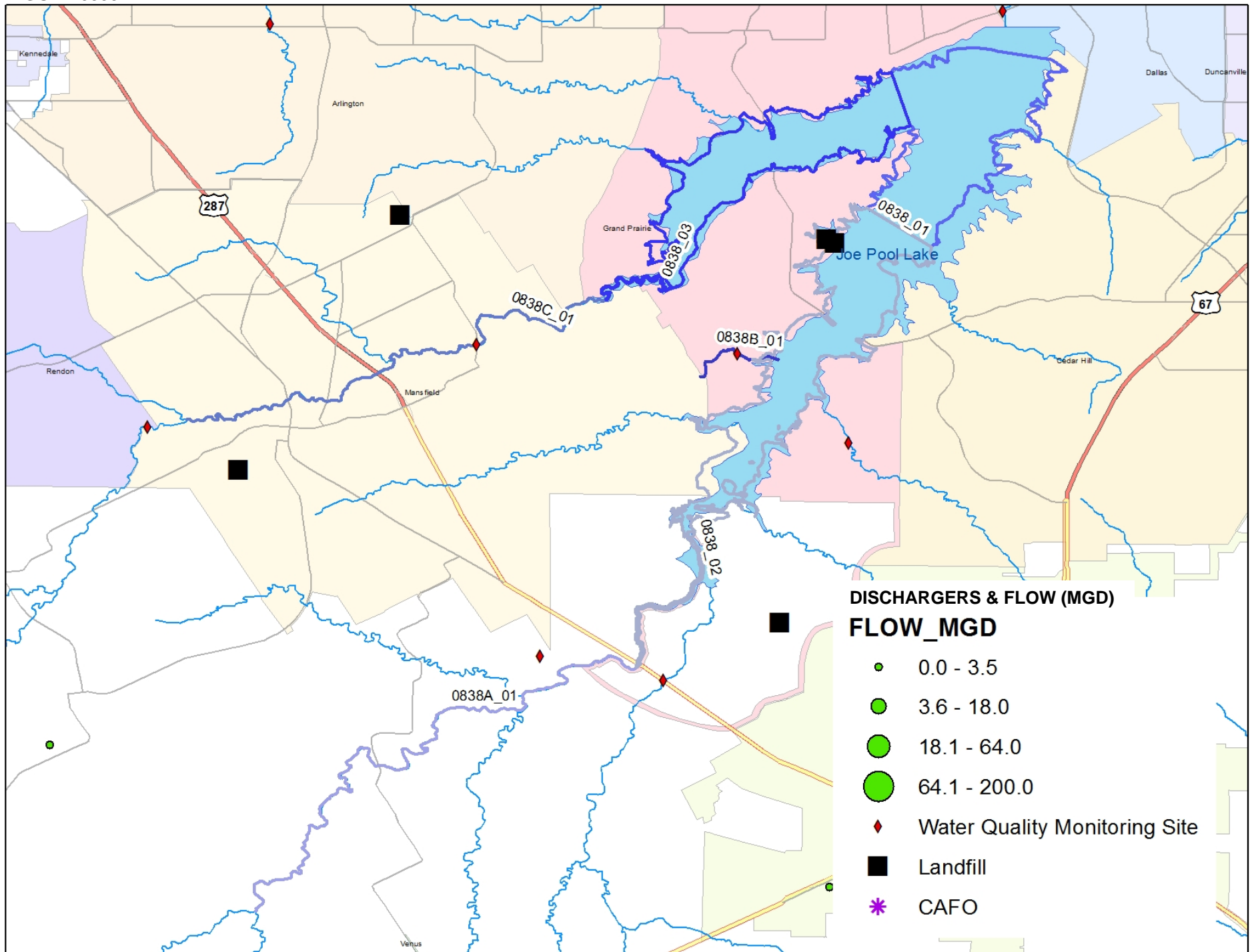
### MAJOR WATERSHED EVENTS (PRESENT AND FUTURE)

Zebra mussels are a current topic of concern throughout the basin. Based on the water chemistry of the reservoir, Joe Pool Lake has been identified as having a high risk for zebra mussel infestation. Three new water rights permits were granted in 2011 in addition to four water quality permit renewals. In 2012, one discharger received a new water quality permit and three dischargers renewed their permits. See Table 0838.3 for details.

### IMAGES

See Figures 0838.5 to 0838.7 for images of this segment.

FIGURE 0838.1





**TABLE 0838.1: Fiscal Year 2012 Monitoring**

Monitoring Entity	Segment	AU	Site ID	Site Description	Monitoring Type	24 Hour DO	Metals in Water	Conventionals	Bacteria	Flow	Field
Grand Prairie	0838		16433	HOLLINGS BRANCH AT TANGLE RIDGE ROAD 1KM UPSTREAM OF CONFLUENCE OF HOLLINGS BRANCH WITH JOE POOL LAKE	RT		1 (Dissolved Cadmium, Chromium, Copper, Lead, Zinc, Total Zinc)	4 (BOD, NO2+NO3, NH3, NO2, TKN, TP, Hardness, Chloride, Sulfate, Chlorophyll-a, TDS, OP)	12 (E. coli, Fecal Coliform, Fecal Streptococci)		12 (Water Temp, Air Temp, Secchi Depth, Specific Conductance, DO, PH, Flow Severity, Days Since Precipitation Event, Turbidity)
Grand Prairie	0838		16435	SOAP CREEK IMMEDIATELY DOWNSTREAM OF US 287 173 METERS SOUTHEAST OF INTERSECTION OF US 287 AND FM 661	RT		1 (Dissolved Cadmium, Chromium, Copper, Lead, Zinc, Total Zinc)	4 (BOD, NO2+NO3, NH3, TKN, TP, Hardness, Chloride, Sulfate, Chlorophyll-a, TDS, OP)	12 (E. coli, Fecal Coliform, Fecal Streptococci)		12 (Water Temp, Air Temp, Secchi Depth, Specific Conductance, DO, PH, Flow Severity, Days Since Precipitation Event, Turbidity)
Grand Prairie	0838A	0838A_01	21123	UNNAMED TRIBUTARY OF MOUNTAIN CREEK AT COUNTY ROAD 511 NEAR VENUS, 1.1 KM SOUTH OF INTERSECTION OF US 287 AND SH 360	RT		1 (Dissolved Cadmium, Chromium, Copper, Lead, Zinc, Total Zinc)	12 (BOD, NO2+NO3, NH3, TKN, TP, Hardness, Chloride, Sulfate, Chlorophyll-a, TDS, OP)	12 (E. coli, Fecal Coliform, Fecal Streptococci)		12 (Water Temp, Air Temp, Secchi Depth, Specific Conductance, DO, PH, Flow Severity, Days Since Precipitation Event, Turbidity)
Grand Prairie	0838B	0838B_01	17680	SUGAR CREEK IMMEDIATELY UPSTREAM OF EAST SEETON ROAD NORTH OF SPRING CREEK PARK IN GRAND PRAIRIE	RT		1 (Dissolved Cadmium, Chromium, Copper, Lead, Zinc, Total Zinc)	4 (BOD, NO2+NO3, NH3, NO2, TKN, TP, Hardness, Chloride, Sulfate, Chlorophyll-a, TDS, OP)	12 (E. coli, Fecal Coliform, Fecal Streptococci)		12 (Water Temp, Air Temp, Secchi Depth, Specific Conductance, DO, PH, Flow Severity, Days Since Precipitation Event, Turbidity)

TABLE 0838.2: Draft 2012 Water Quality Inventory

Segment and Assessment Unit	Use	Method	Parameter Description	Criteria	Number of samples assessed	Number of samples exceed criteria	Mean of samples assessed (avg or geomean)	Mean of samples that exceed criteria	Dataset Qualifier	Impairment Level	Impairment Category
0838_02	General Use	Nutrient Screening Levels	Nitrate	0.37	57	15		0.86	AD	CS	
0838C_01	Recreation Use	Bacteria Geomean	E. coli	126	61	1	285.01		AD	NS	5b

Dataset Qualifier Codes

AD-Adequate Data (10 or more samples)

Impairment Level

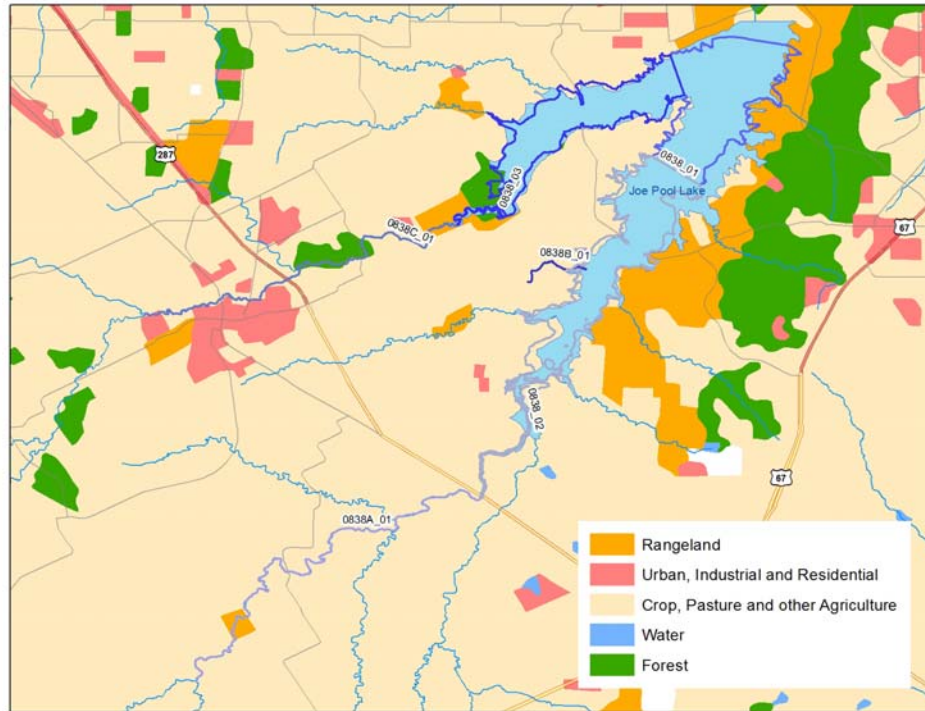
CS-Screening level concern

NS-Nonsupport

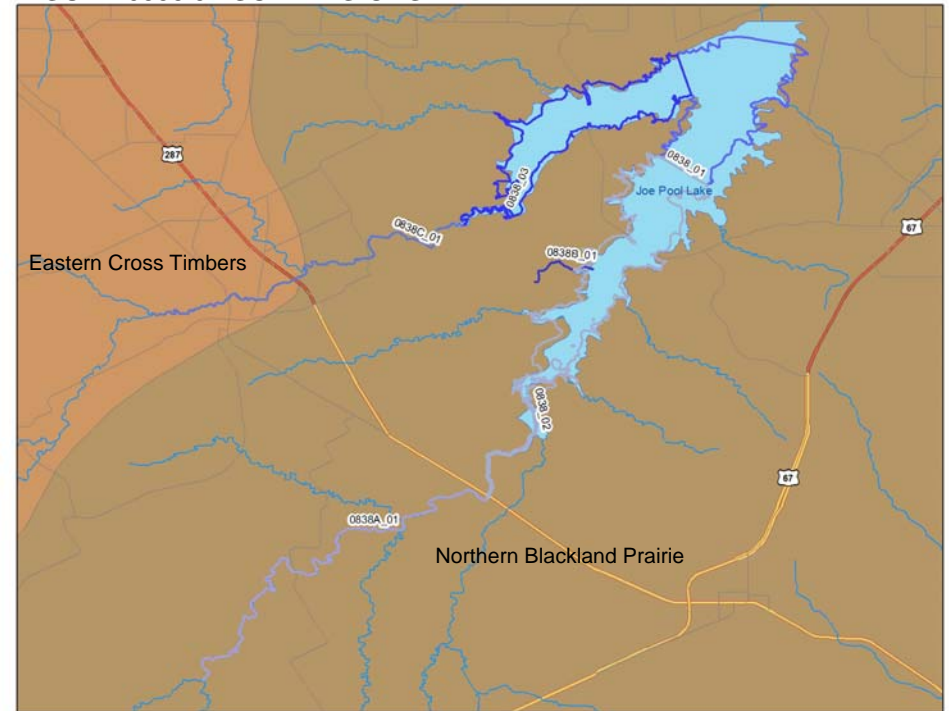
Impairment Category

5b-A review of the water quality standards for this water body will be conducted before a TMDL is scheduled

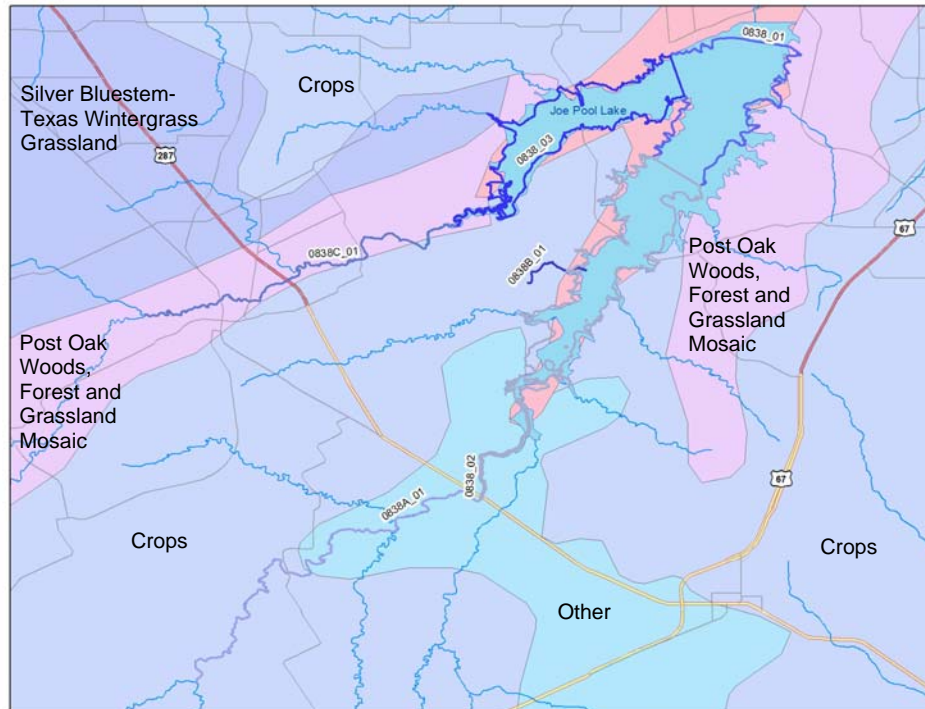
**FIGURE 0838.2: LAND COVER**



**FIGURE 0838.3: SOIL REGIONS**



**FIGURE 0838.4: VEGETATIVE PROVINCES**



**TABLE 0838.3: New and Renewed Discharge Permits**

Segment	Notice received by TRA on	Permittee/Facility	County	Permit Type	Action	Status	Permit Number
838	6/13/2011	XTO ENERGY, INC.	Johnson	Water Rights	New	Received notification	12637
838	6/22/2011	XTO ENERGY, INC.	Johnson	Water Rights	New	Received notification	11.138
838	7/22/2011	XTO ENERGY, INC.	Johnson	Water Rights	New	Final	12613
838	8/25/2011	TXI OPERATIONS LP - MIDLOTHIAN PORTLAND & MASONRY PL	Ellis	Water Quality	Renewal	Final	04379-000
838	9/19/2011	COUNTRY VISTA WASTEWATER TREATMENT PLANT LLC - COUNTRY VISTA STP	Johnson	Water Quality	Renewal	Final	13769-001
838	9/19/2011	CREEK PARK CORP - WALNUT CR MHP STP	Johnson	Water Quality	Renewal	Final	13868-001
838	10/17/2011	TXDOT - I 35 NORTHBOUND REST STOP STP	Johnson	Water Quality	Renewal	Final	14790-001
838	1/19/2012	ALVARADO ISD-STP	Johnson	Water Quality	Renewal	Final	14101-001
838	5/23/2012	TRA - MCRWS	Ellis	Water Quality	Renewal	Final	10348-001
838	8/13/2012	ASH GROVE TEXAS, L.P. - CEMENT PL	Ellis	Water Quality	Renewal	Final	02427-000
838	9/27/2012	MANSFIELD INDEPENDENT SCHOOL DISTRICT	Tarrant	Water Quality	New	Final	13352-002



**FIGURE 0838.5: Joe Pool Lake at Seeton Road boat ramp**



**FIGURE 0838.6: Hollings Branch at Tangle Ridge Road**



**FIGURE 0838.7: Walnut Creek at Matlock**



# Site Glossary

## 0807

10942—LAKE WORTH 546 METERS SOUTH AND 319 METERS EAST OF INTERSECTION OF QUEBEC STREET AND CAHOBA DRIVE MID LAKE NEAR DAM

15163—LAKE WORTH MID CHANNEL 35 M DOWNSTREAM OF MOUTH OF WEST FORK OF THE TRINITY RIVER

15166—LAKE WORTH AT MOUTH OF SILVER CREEK 957 METERS SOUTH AND 1.08 KM WEST OF INTERSECTION OF SILVER CREEK ROAD AND HERON DRIVE

15167—LAKE WORTH MID CHANNEL SOUTH OF SH 199 472 METERS SOUTH AND 298 METERS WEST OF INTERSECTION OF WATERCRESS DRIVE AND SH 199

## 0809

10944—EAGLE MOUNTAIN RESERVOIR 250 METERS NORTH OF EAST EDGE OF DAM

10945—EAGLE MOUNTAIN RESERVOIR 1.40 KM N AND 664 METERS E OF INTERSECTION OF TEN MILE BRIDGE RD AND WELLS BURNETT RD MID LAKE NEAR DAM

10947—EAGLE MOUNTAIN RESERVOIR 149 METERS N AND 88 METERS WEST OF INTERSECTION OF SANDY SHORES COURT AND RANDOM ROAD MID DOSIER SLOUGH COVE

10949—EAGLE MOUNTAIN RESERVOIR 731 METERS NORTH AND 16 METERS WEST OF INTERSECTION OF WALLACE RD AND WELLS BURNETT RD OUTER ASH CREEK COVE

10950—EAGLE MOUNTAIN RESERVOIR 213 METERS NORTH AND 114 METERS EAST OF INTERSECTION OF CRESTVIEW PLACE AND SHORELINE DRIVE MID ASH CREEK COVE

10951—EAGLE MOUNTAIN RESERVOIR 405 METERS SOUTH OF INTERSECTION OF PARK DRIVE AND ASH AVENUE INNER IN ASH CREEK COVE

10952—EAGLE MOUNTAIN RESERVOIR 1.5 KM W AND 308 METERS S OF INTERSECTION BETWEEN VILLAGE RD AND EAGLE MOUNTAIN PLANT ROAD NEAR TEXAS ELECTRIC

10954—EAGLE MOUNTAIN RESERVOIR 482 METERS S AND 342 METERS W OF INTERSECTION OF PELICAN ST AND LIBERTY SCHOOL ROAD IN MID WALNUT CREEK COVE

10956—EAGLE MOUNTAIN RESERVOIR 645 METERS WEST AND 485 METERS SOUTH OF INTERSECTION OF OAKWOOD LANE AND PEDEN ROAD NEAR COLE SUBDIVISION

10958—EAGLE MOUNTAIN RESERVOIR 890 METERS SOUTH AND 387 METERS EAST OF INTERSECTION OF PEDEN ROAD AND N SHORES ROAD IN OUTER OLD RANCH COVE

10959—EAGLE MOUNTAIN RESERVOIR 849 METERS SOUTH AND 565 METERS EAST OF INTERSECTION OF PEDEN ROAD AND N SHORES ROAD IN INNER OLD RANCH COVE

10960—EAGLE MOUNTAIN RESERVOIR 112 METERS NORTH AND 818 METERS EAST OF INTERSECTION OF MILLER RD AND GANTT ROAD NEAR INDIAN CREEK COVE

10961—EAGLE MOUNTAIN RESERVOIR 338 METERS NORTH AND 220 METERS WEST OF INTERSECTION OF LAKEVIEW CIR AND LAKESIDE DR OUTER INDIAN CREEK COVE

10962—EAGLE MOUNTAIN RESERVOIR 185 METERS NORTH OF INTERSECTION OF LAKESIDE DR AND AVONDALE RIDGE IN MID INDIAN CREEK COVE

10964—EAGLE MOUNTAIN RESERVOIR 187 METERS NORTH AND 788 METERS EAST OF INTERSECTION OF BRIAR ROAD AND LIBERTY SCHOOL ROAD NEAR NEWARK BEACH

10965—EAGLE MOUNTAIN RESERVOIR 316 METERS NORTH AND 180 METERS WEST OF INTERSECTION OF MARSHALL RD AND E RAYMOND DR IN MID DARRETT CREEK COVE

17667—EAGLE MOUNTAIN RESERVOIR MID LAKE 1.08 KM N AND 2.09 KM W OF INTERSECTION OF VILLAGE RD AND EAGLE MT PLANT RD W FK TRINITY RIVER ARM

## 0810

10967—WEST FORK TRINITY RIVER AT WISE CR 4757/VAN METER BRIDGE

10968—WEST FORK TRINITY RIVER 65 METERS UPSTREAM OF SH 114 EAST OF BOYD



10969—WEST FORK TRINITY RIVER 30 METERS DOWNSTREAM OF FM 730 NE OF BOYD

14246—WEST FORK TRINITY RIVER 281 METERS DOWNSTREAM OF CONFLUENCE WITH MARTIN BRANCH 2.2 MI SE OF PARADISE

14904—WEST FORT TRINITY RIVER IMMEDIATELY DOWNSTREAM OF US 380 1.8 MI SW OF BRIDGEPORT

17844—WEST FORK TRINITY RIVER AT BOBO BRIDGE ON WISE CR 4668 SOUTH OF BOYD

20840—WEST FORK TRINITY RIVER BELOW BRIDGEPORT RESERVOIR AT SH 114 APPROX 333 METERS SOUTH AND 647 METERS EAST OF THE INTERSECTION OF SH 114 AND INDUSTRIAL BOULEVARD IN WISE COUNTY

#### **0810A**

15688—BIG SANDY CREEK 42 METERS DOWNSTREAM OF US 380 4.0 MI EAST OF BRIDGEPORT

#### **0810B**

16767—GARRETT/RUSH CREEK AT SH 114 NORTH OF EAGLE MOUNTAIN RESERVOIR NW OF BOYD

#### **0810C**

17848—MARTIN BRANCH CENTER CREEK AT FM 51 EAST OF PARADISE

#### **0810D**

16766—SALT CREEK AT SH 114 NORTH OF EAGLE MOUNTAIN RESERVOIR NW OF BOYD

#### **0811**

10970—LAKE BRIDGEPORT 178 METERS WEST AND 187 METERS SOUTH OF NORTH EDGE OF DAM

15164—LAKE BRIDGEPORT AT NORTH END OF MAIN BODY OF RESERVOIR 10 METERS NORTH AND 1.21 KM WEST OF INTERSECTION OF VALLEY STREET AND FM 2952

15165—LAKE BRIDGEPORT AT SOUTH END OF MAIN BODY OF RESERVOIR 20 2.11 KM NORTH AND 20 METERS EAST OF INTERSECTION OF RUNAWAY DRIVE AND US 380

16736—LAKE BRIDGEPORT MID CHANNEL AT THE CONFLUENCE OF BEANS CREEK AND WEST FORK TRINITY RIVER

16759—LAKE BRIDGEPORT NORTH END OF LAKE IN WEST FORK TRINITY CHANNEL 749 M S AND 1.57 M W OF INTERSECTION OF COZY COVE CT AND WISE CR 1734

16760—LAKE BRIDGEPORT NORTH END OF LAKE AT THE MOUTH OF VENCHONER CREEK 80 M N AND 1.16 KM W OF INTERSECTION OF WISE CR 1637 AND 1641

16761—LAKE BRIDGEPORT WEST FORK CHANNEL 27 M WEST OF STEELE ISLAND 1.07 KM N AND 400 M W OF INTERSECTION OF EL LAGO RD AND BETTY DR

16762—LAKE BRIDGEPORT MAIN CHANNEL 0.8KM EAST OF RATTLE-SNAKE ISLAND 636 M N AND 180 M W OF INTERSECTION OF E BAY DR AND PRIVATE RD 1505

16763—LAKE BRIDGEPORT SOUTH END OF LAKE AT SHADY OAKS DRIVE BRIDGE AT MOUTH OF JASPER CREEK

16764—LAKE BRIDGEPORT MAIN CHANNEL 315 M S AND 513 M E OF INTERSECTION OF ISLET DR AND PORT O CALL DR 733 M SOUTH OF US 380

16765—LAKE BRIDGEPORT NORTH END OF LAKE IN MAIN CHANNEL 274 M S AND 1.02 KM E OF INTERSECTION OF PRIVATE ROADS 1736 AND 1737

#### **0812**

10972—WEST FORK TRINITY RIVER 30 METERS DOWNSTREAM OF SH 59 NORTHEAST OF JACKSBORO

18058—WEST FORK TRINITY RIVER IMMEDIATELY UPSTREAM OF COCA COLA RANCH ROAD DOWNSTREAM OF CONFLUENCE WITH HOWARD CREEK AND NE OF JACKSBORO

18059—WEST FORK TRINITY RIVER IMMEDIATELY UPSTREAM OF SQUAW MOUNTAIN ROAD 728 M UPSTREAM OF CONFLUENCE WITH CAMBERON CK AND NW OF JACKSBORO

**0828**

11040—LAKE ARLINGTON MID LAKE NEAR DAM 1.35 KM EAST AND 772 METERS SOUTH OF INTERSECTION OF ROSEDALE STREET AND ARKANSAS LANE

11042—LAKE ARLINGTON MID LAKE 177 METERS NORTH AND 865 METERS WEST OF INTERSECTION OF ARBOR VALLEY DRIVE AND PERKINS ROAD

13897—LAKE ARLINGTON USGS SITE FC 570 METERS EAST OF INTERSECTION OF KAY DRIVE AND KALTENBRUN ROAD

13898—LAKE ARLINGTON USGS SITE EL 660 METERS NORTH AND 155 METERS WEST OF INTERSECTION OF SHOREWOOD DRIVE AND WEST POLY WEBB ROAD

13899—LAKE ARLINGTON USGS SITE EC 254 METERS SOUTH AND 493 METERS EAST OF INTERSECTION OF CRAVENS ROAD AND WILBARGER STREET

13901—LAKE ARLINGTON USGS SITE BC 348 METERS NORTH AND 402 METERS WEST OF INTERSECTION OF LAKEHURST DRIVE AND WEST ARKANSAS LANE

13903—LAKE ARLINGTON USGS SITE BL 266 METERS SOUTH AND 742 METERS EAST OF INTERSECTION OF QUAIL ROAD AND WILLARD ROAD

13904—LK ARLINGTON USGS SITE AC ID 324304097113601 LOCATION MATCHES SITE MAP 518 M N AND 507 M W INTERSECT OF LK ARLINGTON BLVD AND GREEN OAK

13905—LAKE ARLINGTON USGS SITE AL 780 METERS SOUTH AND 77 METERS EAST OF INTERSECTION OF ROSEHILL DRIVE AND EAST LANCASTER AVENUE

**0828A**

10780—VILLAGE CREEK ON WEST BANK AT IH 20 WEST FEEDER ROAD IN ARLINGTON

10786—VILLAGE CREEK IMMEDIATELY DOWNSTREAM OF RENDON ROAD SW OF ARLINGTON

**0829**

11044—CLEAR FORK TRINITY RIVER AT ROGERS ROAD IN FORT WORTH

11045—CLEAR FORK TRINITY RIVER 161 METERS DOWNSTREAM OF BRYANT-IRVIN STREET IN FORT WORTH

13623—CLEAR FORK TRINITY RIVER 2.68 KILOMETERS DOWNSTREAM OF BENBROOK DAM

16119—CLEAR FORK TRINITY RIVER AT PURCEY STREET DRAIN 257 METERS UPSTREAM OF SH 199 IN FORT WORTH

16122—CLEAR FORK TRINITY RIVER AT UPSTREAM SIDE OF IH 30 IN TRINITY PARK IN FORT WORTH

18456—CLEAR FORK TRINITY RIVER MID CHANNEL 85 M UPSTREAM OF SPILLWAY AND IMMEDIATELY UPSTREAM OF WEST ROSEDALE STREET IN FORT WORTH

20427—CLEAR FORK TRINITY RIVER 235 METERS UPSTREAM OF WEST LANCASTER AVENUE IN FORT WORTH

**0829A**

16814—LAKE COMO MID LAKE 283 METERS N AND 114 METERS E OF INTERSECTION OF HOUGHTON AVE AND LAKE COMO DR NEAR WESTOVER HILLS IN SW FORT WORTH

**0830**

13830—BENBROOK LAKE USGS SITE AL 1.10 KILOMETERS WEST OF INTERSECTION OF TARRANT CR 1042 AND PECAN VALLEY ROAD

13831—BENBROOK LAKE USGS SITE BC 840 METERS SOUTH AND 2.17 KM EAST OF INTERSECTION OF BLUEBONNET HILLTOP DRIVE AND TIGER ROAD

13832—BENBROOK LAKE USGS SITE CR 92 METERS NORTH AND 1.27 KM EAST OF INTERSECTION OF PENINSULA ROAD AND PLOVER ROAD

15151—BENBROOK LAKE EAST END OF DAM 285 METERS SOUTH AND 332 METERS WEST OF INTERSECTION OF PECAN VALLEY DRIVE AND LAKESIDE DRIVE

15156—BENBROOK LAKE 1.36 KM NORTH AND 223 METERS WEST OF INTERSECTION OF ST FRANCIS VILLAGE RD AND ST ANTHONY DR EAST SIDE IN MAIN CHANNEL

15158—BENBROOK LAKE EAST OF BOAT RAMP AT HOLIDAY PARK IN MAIN CHANNEL 1.21 KM N AND 58 M E OF INTERSECTION OF PENINSULA RD AND BEAR CREEK DR



15161—BENBROOK LAKE MOUTH OF CARTWRIGHT SLOUGH SOUTH OF DAM 1.40 KM SOUTH AND 337 M WEST OF INTERSECTION OF LAKESIDE DR AND BENBROOK LAKE DR

**0831**

11060—CLEAR FORK TRINITY RIVER AT IH 20 WEST SERVICE ROAD EAST OF WEATHERFORD

13691—CLEAR FORK TRINITY RIVER AT US 377 NEAR ALEDO TX

17444—CLEAR FORK TRINITY RIVER AT FM 5 3.2 KM DOWNSTREAM OF CONFLUENCE OF CLEAR FORK AND SOUTH FORK SOUTH OF ALEDO

17445—CLEAR FORK TRINITY RIVER 54 M DOWNSTREAM OF UNDERWOOD ROAD 350 M UPSTREAM OF CONFLUENCE WITH SOUTH FORK 2.5 KM WEST OF ALEDO

17446—CLEAR FORK TRINITY RIVER IMMEDIATELY DOWNSTREAM OF EAST LAKE DRIVE 300 M DOWNSTREAM OF LAKE WEATHERFORD DAM EAST OF WEATHERFORD

17447—UNNAMED TRIBUTARY OF CLEAR FORK TRINITY RIVER IMMEDIATELY UPSTREAM OF CONFLUENCE WITH CLEAR FORK TRINITY 1.2 KM SOUTH OF ALEDO

17637—CLEAR FORK TRINITY RIVER IMMEDIATELY DOWNSTREAM OF CROWN ROAD 2.5 KM DOWNSTREAM OF LAKE WEATHERFORD DAM EAST OF WEATHERFORD

**0831A**

17454—SOUTH FORK TRINITY RIVER IMMEDIATELY UPSTREAM OF CONFLUENCE WITH CLEAR FORK TRINITY RIVER 2.0 KM WEST OF ALEDO

17455—SOUTH FORK TRINITY RIVER AT FM 5 4.1 KM UPSTREAM OF CONFLUENCE WITH CLEAR FORK TRINITY RIVER NORTH OF ANNETA

**0831B**

17456—RUFÉ EVANS HOLLOW AT OLD ANNETA ROAD 350 M UPSTREAM OF CONFLUENCE WITH SOUTH FORK TRINITY 3.2 KM WEST OF ALEDO

**0831C**

17457—TOWN CREEK AT US 80/180 3.7 KM UPSTREAM OF IH 20 2.4 KM UPSTREAM CITY OF WEATHERFORK WWTP OUTFALL PERMIT 10380

**0832**

11061—LAKE WEATHERFORD MID LAKE NEAR DAM 310 METERS NORTH AND 98 METERS EAST OF INTERSECTION OF E LAKE DRIVE AND WEST SHORE DRIVE

**0833**

11062—CLEAR FORK TRINITY RIVER 98 METERS UPSTREAM OF FM 51 UPSTREAM LAKE WEATHERFORD NORTHEAST OF WEATHERFORD

16415—CLEAR FORK TRINITY RIVER IMMEDIATELY DOWNSTREAM OF FM 920 NORTH OF POOLVILLE

17459—CLEAR FORK TRINITY RIVER AT TURPIN LAKE ROAD 1.1 KM UPSTREAM OF FM 920 NORTHWEST OF POOLEVILLE

17460—CLEAR FORK TRINITY RIVER AT ERWIN ROAD 3.0 KM DOWNSTREAM OF FM 920 EAST OF POOLEVILLE

17461—CLEAR FORK TRINITY RIVER IMMEDIATELY UPSTREAM OF OLD SPRINGTOWN ROAD UPSTREAM LAKE WEATHERFORD NORTHEAST OF WEATHERFORD

17462—CLEAR FORK TRINITY RIVER AT UPPER DENTON ROAD 3.1 KM UPSTREAM OF FM 1707 NORTHEAST OF WEATHERFORD

17463—CLEAR FORK TRINITY RIVER IMMEDIATELY DOWNSTREAM OF SARRA LANE 7.2 KM UPSTREAM OF FM 51 NORTH OF WEATHERFORD

**0834**

11063—LAKE AMON G. CARTER MID LAKE NEAR DAM 992 METERS WEST OF INTERSECTION OF FM 1125 AND WILLIAMSON ROAD

**0838**

11071—JOE POOL LAKE MOUNTAIN CREEK ARM AT LAKE RIDGE PKWY/MANSFIELD ROAD 251 M N AND 1.19 KM W OF INTERSECTION OF ANDERSON RD AND LK RIDGE USGS SITE DC 323503097012201

11072—JOE POOL LAKE WALNUT CREEK ARM AT LAKE RIDGE PARK-  
WAY 1.43 KM NORTH AND 503 M WEST OF INTERSECTION OF LAKE  
RIDGE PKWY AND HANGER LOWE RD

11073—JOE POOL LAKE MID LAKE AT DAM 48 METERS SOUTH AND 2.24  
KM WEST OF INTERSECTION OF MANSFIELD ROAD AND FM 1382

13890—JOE POOL LAKE USGS SITE AR408 METERS SOUTH AND 1.44 KM  
WEST OF INTERSECTION OF FM 1382 AND MANSFIELD ROAD

13891—JOE POOL LK USGS SITE AC LOCATION MATCHES USGS SITE  
MAP USCE 323819096584801 210 M S AND 685 M W OF INTERSECT OF FM  
1382 AND MANSFIELD

13892—JOE POOL LAKE USGS SITE BC 1.03 KM SOUTH AND 1.61 KM  
EAST OF INTERSECTION OF MANSFIELD ROAD AND LAKE RIDGE PARK-  
WAY

13893—JOE POOL LAKE USGS SITE CR 1.36 KM SOUTH AND 1.97 KM  
WEST OF INTERSECTION OF SHADYRIDGE DRIVE AND BELT LINE  
ROAD

13894—JOE POOL LAKE USGS SITE CC 213 METERS NORTH AND 2.10 KM  
EAST OF INTERSECTION OF GRAND PENINSULA DRIVE AND LAKE  
RIDGE PARKWAY

13896—JOE POOL LAKE USGS SITE EC 474 METERS SOUTH AND 2.02 KM  
EAST OF INTERSECTION OF SPRING LAKE PARKWAY AND HOLLAND  
ROAD

17684—JOE POOL LK MOUNTAIN CK ARM AT BOAT RAMP IN BRITTON  
PK 92 M S AND 1.08 KM E OF INTERSECTION OF BRITTON RD AND FM  
661/LAKEVIEW DR IN MANSFIELD

**0838A**

13622—MOUNTAIN CREEK AT FM 157 3.9 MI NORTH OF VENUS 3.0 MI  
UPSTREAM FROM GRASSY CREEK

**0838B**

17680—SUGAR CREEK IMMEDIATELY UPSTREAM OF EAST SEETON  
ROAD NORTH OF SPRING CREEK PARK IN GRAND PRAIRIE

**0838C**

13621—WALNUT CREEK AT MATLOCK ROAD 2.6 MI NORTHEAST OF  
MANSFIELD