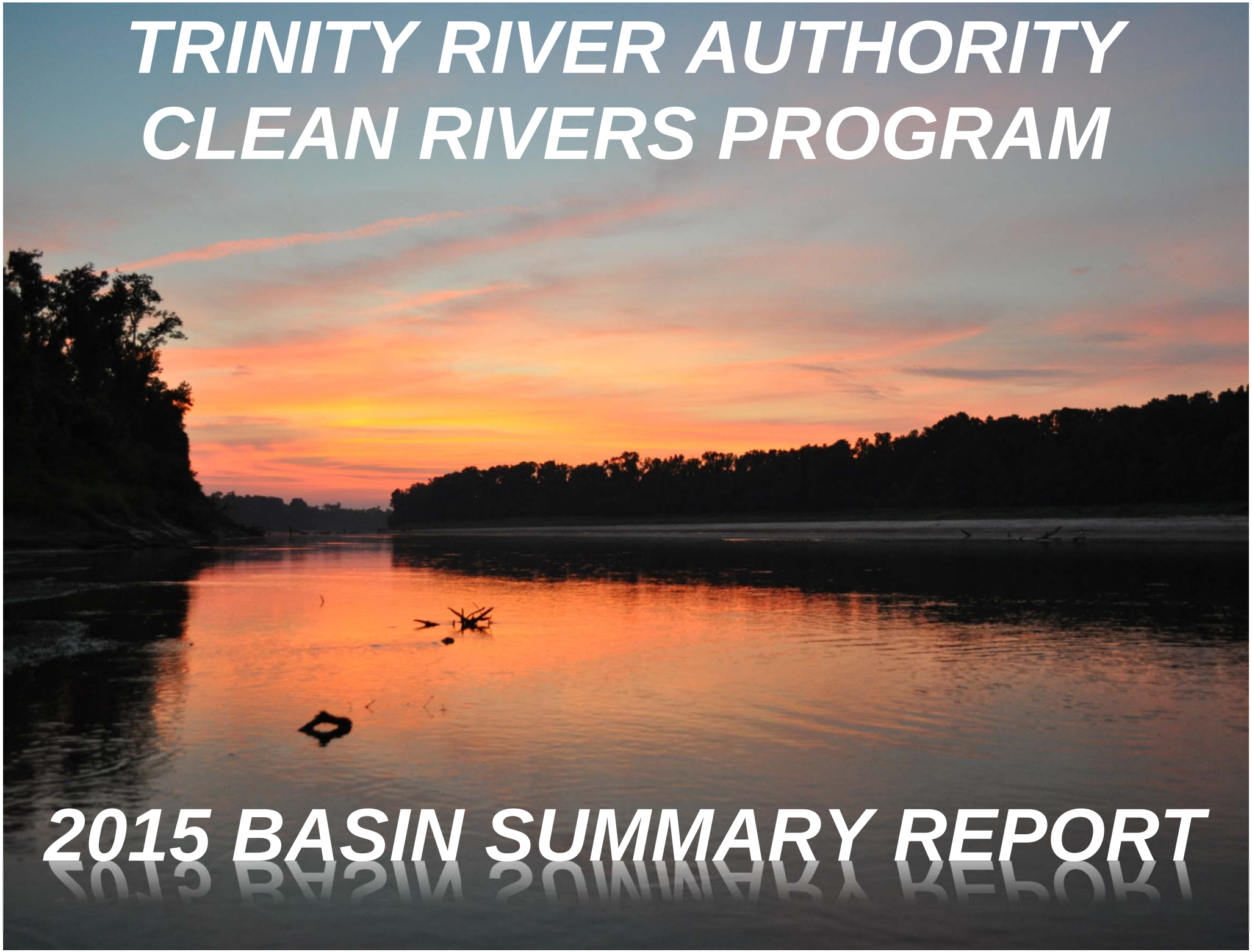

TRINITY RIVER AUTHORITY
CLEAN RIVERS PROGRAM
2015 BASIN SUMMARY REPORT

An electronic version of this report with active links can be found at
http://www.trinityra.org/default.asp?contentID=97.

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PREPARED IN COOPERATION WITH THE

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

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Foreword

Executive Summary

Trinity River Authority (TRA) operates and administers the Texas Clean Rivers Program (CRP) through a biennial contract with the Texas Commission on Environmental Quality (TCEQ). The primary goal for the CRP is to acquire water quality data that is both accurate and of a comparable, known quality. Therefore, all Clean Rivers Program partners throughout Texas sample and handle data under similar Quality Assurance Project Plans. Additionally, data provided to TCEQ by the Clean Rivers Program is used in the Texas Water Quality Inventory.

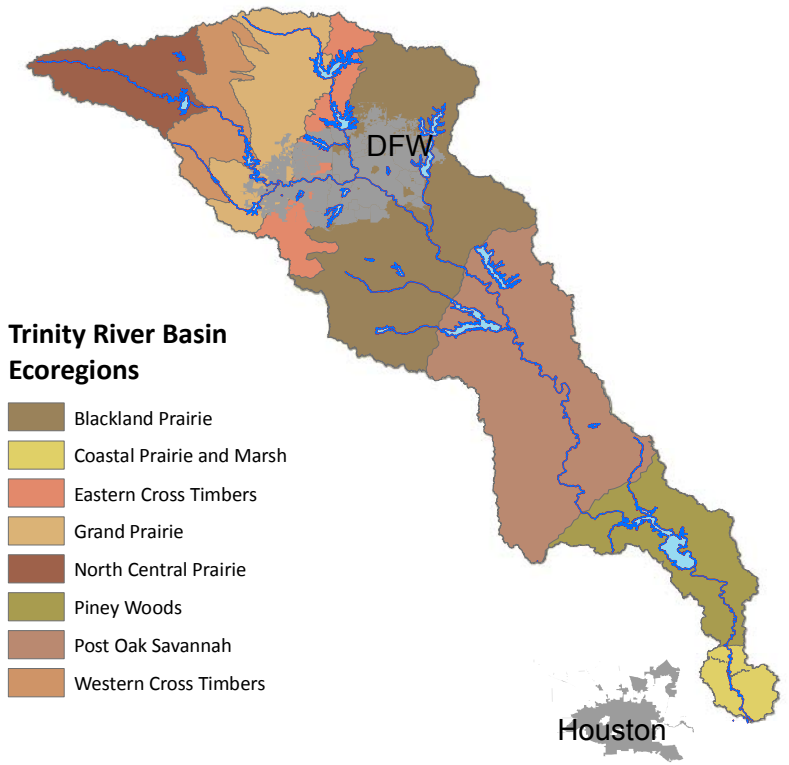


Figure ES-1: Trinity River Basin Ecoregions Map

CRP programs statewide are involved in other activities such as public outreach, watershed inventories, special projects, and data analysis and reporting. Every five years, a comprehensive Basin Summary Report is prepared for each river basin and is designed to examine the water quality of the basin. The *Trinity River Authority Clean Rivers Program 2015 Basin Summary Report* reviews the most recent TCEQ water quality assessment: the Draft 2014 Texas Integrated Report. In addition, two in-house data analyses were conducted: a trend analysis on a ten-year data set and a 5-year analysis to see a snapshot of recently collected data.

The Trinity River basin extends approximately 715 river miles and drains about 18,000 mi² before emptying into Trinity Bay near Anahuac. The basin transitions from sandy soils and rangeland in the northwest, to blackland prairies and row crop agriculture around the DFW Metroplex, to piney forest along the middle portions of the basin, and finally to the coastal prairies near the mouth of the river. Additionally, the Trinity River supports the water needs of two major population centers; the DFW Metroplex in the upper reaches and the City of Houston in the south.

Generally, water quality in the Trinity River basin is of high quality. Detailed discussions of water quality for each subwatershed are found in the body of the full report. The major issues prevalent basin-wide are listings for bacteria (Contact Recreation Use), low dissolved oxygen (Aquatic Life Use), and concerns for chlorophyll-a and nutrients (General Use).

Bacteria impairments are prevalent throughout much of the basin. In the TCEQ Draft 2014 Texas Integrated Report, 140 assessment units were assessed for contact recreation. Of these, 38 were found to have concerns or to be not supporting the contact recreation use. Furthermore, 31 of these findings were on unclassified segments which are generally small streams; many of which are intermittent urban streams in the DFW Metroplex. High levels of these bacteria can indicate improperly treated wastewater or illicit dischargers. However, much of the research has shown that the majority of sources are related to birds and other wildlife that live along the riparian corridor. A Total Maximum Daily Load (TMDL) Implementation Plan for bacteria is underway in the DFW area. The documentation for this plan can be found at http://www.nctcog.org/aa/jobs/envir/SEEclean/wq/tmdl/TMDLI-Plan.asp. While implementing a bacteria TMDL in this area will be difficult at best, the plan presents an iterative approach where implementation activities will be periodically evaluated and adjusted. The hope is that the activities outlined in the Implementation Plan will eventually reduce the bacteria loading into these streams.

Dissolved oxygen (DO) in water is imperative for aquatic species to survive. Low DO can be caused by algal activity, sanitary sewer overflows, rapid temperature swings, or a host of other natural and anthropogenic factors. The default standard for DO is 5 mg/L. Many of the listings for low DO are on high order streams with seasonal flows and the default standard may be inappropriate. Additionally, some of the higher order streams that show low DO measurements are not experiencing fish kills and biological indicators show that the environment is healthy. DO is an important parameter and should continue to be closely monitored. Toward this end, TRA Clean Rivers Program staff have begun diurnal DO monitoring at several sites in the Clear Fork in order to address the findings of the Integrated Report. Standard revisions should be considered prior to starting the TMDL process.

Based upon general consensus, nutrients are not causing widespread problems in the Trinity River basin and the majority of correlation analysis shows little relationship between nutrients and harmful algal blooms that can cause widespread fish kills. In the naturally turbid waters of the Trinity basin, the greatest limiting factor is likely light penetration into the water column. Numeric standards for chlorophyll-a have been developed for 75 reservoirs in Texas; 14 of which are in the Trinity River basin. Of these 14, criteria were approved by EPA for only four. Standards for chlorophyll-a and nutrients in streams are anticipated sometime in the future.

Legacy pollutants continue to be a problem in the upper basin and have caused much of that area to be under a fish consumption advisory posted by the Texas Department of State Health Services. These legacy pollutants include chemicals like PCBs, chlordane, arsenic, and DDT that were identified in the edible portions of fish tissue. There are no realistic solutions for remediation. Most of these chemicals have been banned for decades, yet continue to persist in the sediments. Nationwide, efforts to remove contaminated sediments have resulted in exacerbating problems downstream. Unfortunately, consumption bans will remain in effect for the foreseeable future.

The TCEQ Draft 2014 Texas Integrated Report found a large number of issues related to Aquatic Life and General Uses as shown in Figure ES-2. Importantly, there are no listings for Public Water Supply. TRA's trend analysis followed the same general pattern with conventionals and nutrients making up the majority of the parameters trending in an adverse direction (Figure ES-3). As populations continue to increase, water quality will become more important. It is imperative that planning agencies monitor water quality and focus on making monitoring programs as efficient and pertinent as possible. TRA currently partners with eight other basin cities/entities to leverage funds and maximize data collection.

Figure ES-2: Draft 2014 Texas Integrated Report Summary

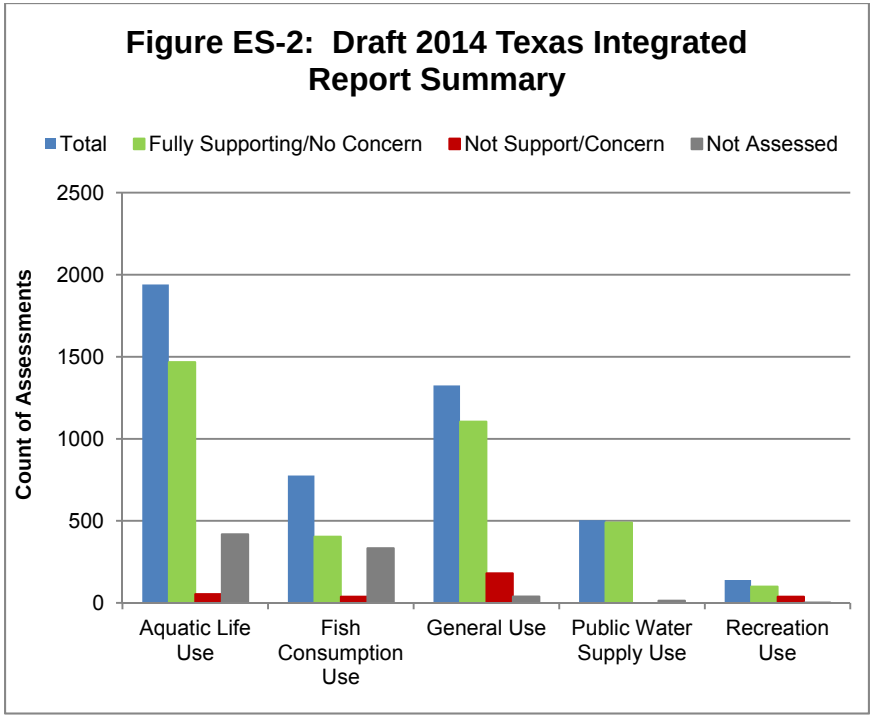
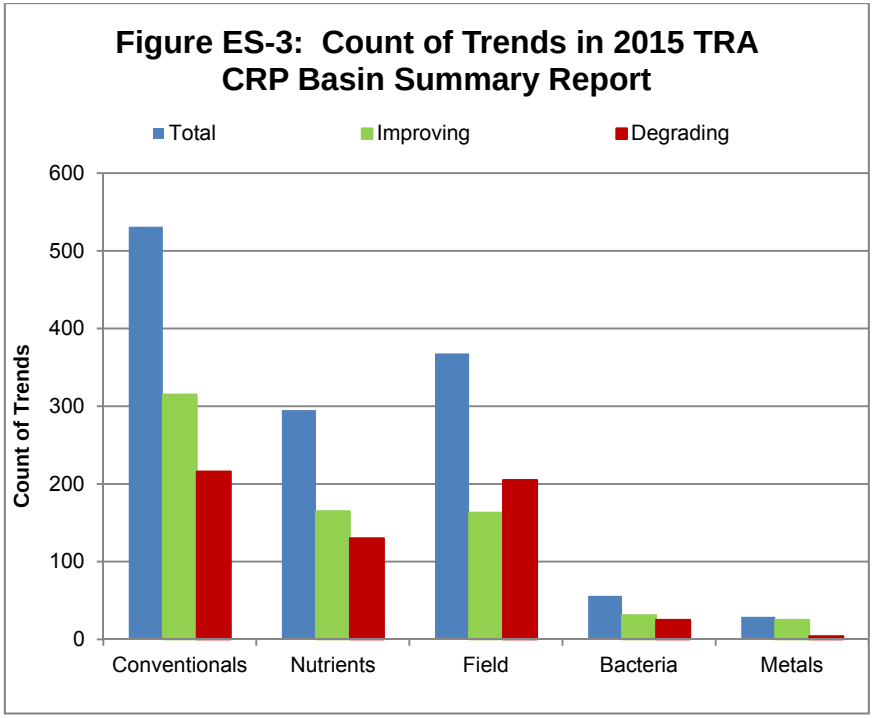


Figure ES-3: Count of Trends in 2015 TRA CRP Basin Summary Report



Conclusions and Recommendations

Conclusions

Water quality in the Trinity River basin will continue to be a challenge as the pressures of population growth continue. The Trinity River basin provides drinking water to over 50% of the residents of Texas and the demands on these finite resources will only increase as populations in both the DFW and Houston areas swell.

Addressing the concerns of rural and large urban populations will be paramount in the decades to come. Additionally, issues related to water quality and water quantity are currently being addressed through the efforts of the Regional Planning Groups and the Environmental Flows process. There are no easy answers to these questions, but solutions must be found for basin residents to continue to thrive.

Generally, the major water quality issues in the Trinity River basin are legacy pollutants, bacteria impairments, non-point source runoff, and nutrient listings. Additionally, new concerns are developing nationwide based on recent studies of Personal Care Products (PCPs), endocrine disrupting pollutants, and other parameters classified together as “Emerging Contaminants”. However, due to cost and current technology, these parameters are not yet part of routine monitoring programs in the Trinity River basin.

Legacy Pollutants cause many miles of the Trinity River to be not supporting of the fish consumption use because of high values of toxic substances found in fish tissue samples. These listings are based on chemicals that have been banned since the early 1970s. Yet, they persist in the sediment and continue to cause problems over 40 years later.

Bacteria impairments occur for both natural and man-made reasons. Many of the listings for bacteria in the DFW area are due to wildlife and avian species living in and around the riparian zones. Other times, listings are caused by sanitary sewer overflows and improperly treated wastewater. Standards revisions are still being evaluated but it is likely that these revisions may remove some of the listings.

Non-point source runoff is both an urban and rural issue. Over the past several decades, technological and treatment advances at point source dischargers have resulted in effluent of sufficient quality that these sources are no longer causing widespread listings. Many times, the effluent is much cleaner than the instream water quality that exists upstream of the discharge. Urban runoff typically consists of excessive nutrients from over-fertilization of lawns, bacteria, household

chemicals, oils and greases, sanitary sewer overflows, illicit discharges, and a variety of other contaminants. Rural area runoff commonly contains excessive nutrients, bacteria, and pesticides. Both urban and rural areas are responsible for tens of thousands of tons of sediment that wash into basin waterbodies.

New sampling and analysis techniques have allowed scientists to detect smaller and smaller ratios of constituents in water. What is unknown are the effects on biota. We do not yet know if these constituents are causing problems or not. Additionally, what are the long-term, chronic effects? Do these tiny volumes of chemicals react with each other in a way that causes health concerns for humans? Right now, we simply do not know.

Overall, the current water quality in the Trinity River basin is quite good and there is a competitive market for wastewater effluent reuse due to the high degree of treatment. The challenges ahead in tackling water quality issues are large and there are no easy fixes. It is likely that the legacy pollutant issue will persist for many decades to come. The Trinity River Authority's Clean Rivers Program will continue to work to find solutions through data collection and data quality assurance, watershed surveys, special studies, and public outreach programs.

Recommendations

From the beginning of the Texas Clean Rivers Program, there has been an emphasis on collection, quality assurance, and submittal of data to TCEQ. In the current biennium, TRA CRP staff have begun to shift to a more targeted data collection approach. In previous bienniums, monitoring was focused on long term data collection for trend analysis. While that is still important and provides useful data, limited resources and continued water quality listings have necessitated a change in the routine monitoring program. Currently, priority is given to those sites where flow can be collected. This information is necessary to confirm the flow status of streams and for loading calculations. In addition, resources have been shifted away from sites that are in close proximity to other routine sites or have shown little change in water quality over the years. These resources have been reallocated to areas where impairments have been identified but remained unaddressed.

Moving forward, routine sampling needs to be reassessed on a regular basis to determine where limited resources are best spent. As technology advances and analytical costs decrease, monitoring for emerging contaminants should be considered. However, as the science is still progressing, it will be important to balance the cost of this type of sampling against the benefits that may be gained. Little benefit could be gained from simply collecting the data but not fully understanding what it means or how it affects the biota.

Recently, TRA CRP staff have begun a biological data collection program in the basin. Other agencies such as the Texas Department of State Health Services, Texas Parks and Wildlife Department, USGS, and TCEQ collect biological samples statewide. TRA biological monitoring efforts currently consist of Aquatic Life Monitoring at one location each year. Data analysis and current water quality issues are used to identify the area of interest for each monitoring event. This monitoring program should be expanded in the future as resources allow. Additionally, long term biological monitoring should be considered at locations where water quality changes are identified in order to determine if these changes are impacting aquatic life.

Over the years, the TRA Clean Rivers Program has partnered with several entities in order to leverage available funding for water quality monitoring. This partner network has provided for much greater basin coverage than would be possible with in-house resources. Efforts to expand this network are always ongoing and we look forward to welcoming new partners in the next biennium.

Previous analysis during the SB3 Environmental Flows process identified a distinct lack of sediment transport and geomorphologic data in the Trinity River. Because access to river along the main stem is quite difficult, little field work has been completed since the 1970s. Over the past five years, extensive work has been conducted to provide this information. This includes habitat surveys, flow monitoring, channel mapping, and geotagged photographs. TRA has worked closely with the Texas Instream Flow Program and the Trinity and San Jacinto Basin and Bay Expert Science Committee to fill these data gaps. These watershed surveys in conjunction with large-scale main stem biological data collection efforts are paramount in giving basin stakeholders information with which to approach the adaptive management phase of the environmental flows process.

Background

Introduction

The Texas Clean Rivers Program

In 1991, Texas Senate Bill 818 created the Clean Rivers Program (CRP). This program is administered by the Texas Commission on Environmental Quality (TCEQ) and is conducted in each of the major river basins by local planning agencies such as the Trinity River Authority. The CRP is funded, in part, by fees assessed to water and wastewater permits. The goals of the program are to protect the water resources of the state and to improve water quality.

Annual Reports

Each year, the local planning agencies produce a Basin Highlights Report which summarizes the CRP activities in their basin. This report may include information on events effecting water quality, a summary of water quality data, and an overview of public outreach activities and special projects. Every fifth year, a greatly expanded Basin Summary Report provides a detailed analysis of water quality data and potential sources, as well as offering recommendations for future basin activities. Past reports are available on TRA's website at http://www.trinityra.org/default.asp?contentID=97.

Goals and Objectives of the TRA CRP

The TRA CRP focuses on three main aspects of the program: water quality monitoring, special projects, and public outreach. Routine water quality monitoring data are vital to the success of the CRP. Data are used for regulatory purposes such as setting water quality standards and modeling for permit limits, as well as to assess the health of waterbodies. In the Trinity basin, monitoring is leveraged with the existing programs of several municipalities and other entities.

Special projects are typically geared toward short-term sampling activities focused on answering a specific water quality question. These may also include ongoing activities which maintain high standards of data quality, as well as in-depth analyses of existing data for various ends and compilation of historic data sources.

Public outreach involves annually updating the Steering Committee which helps guide the activities of the TRA CRP. Other outreach activities include sponsorship of trash clean-ups and volunteer monitoring programs. Education on the importance and protection of Trinity water resources is accomplished via participation in organized public and school events.

Trinity Basin and Water Quality Characteristics

The Trinity River extends approximately 715 miles and drains about 18,000 square miles before ending at Trinity Bay near Anahuac. A majority of the basin topography is flat to gently rolling. A large portion of the watershed flows through the Blackland Prairies which lends the river its characteristic muddy brown color. This ecoregion is made up of soil types that, while excellent for row crop agriculture, are highly erodible.

The northern portion of the basin is dominated by the DFW Metroplex. Legacy pollutants from long-lived banned chemicals are a concern. Other results of urban life include storm water runoff that is polluted by oil and grease, pesticides, fertilizers, and animal waste. During the summer months, the native flow of the river in this area is reduced to a trickle generally made up of seeps from groundwater and occasional rainfall events. The larger fraction of summer flow is made up of high quality effluent from wastewater dischargers. This allows the river to maintain a habitat far greater in flow and water quality than historical levels.

The far northern and middle reaches of the basin are characterized by agriculture. These activities can result in elevated nutrient levels from fertilizer use, bacteria from confined animal feeding operations (CAFOs), and erosion. Many areas of the basin are also experiencing increased oil and gas drilling activities which can have negative impacts on water quality.

Public Involvement



Image PI-1: Steering Committee Meeting

The TRA CRP is involved in several public involvement activities which range from trash clean-ups to public education events. Public interest in the welfare of local waterbodies is vital to improving water quality in the Trinity Basin.

The TRA Clean Rivers Steering Committee is made up of basin stakeholders and other interested parties, including city officials and the general public. The steering committee provides input and information that is used to guide the program. Annual meetings, which are open to the public, are held to update committee members on the activities of the program and to provide a forum to share ideas. If you are interested in participating in the Steering Committee, contact information can be found at http://www.trinityra.org/form.asp?i=4.

Trash clean-ups are public events that are organized by cities and counties. The TRA CRP helps fund these events which include T.R.E.E.S. Trash Bash, Navarro County Clean-UP Day, and Walker County Proud. Volunteers at these events remove many tons of debris from waterbodies and waterways. In addition to the immediate benefit of the waste removal, volunteers become more aware of their impact on local waterbodies.



Image PI-2: Fort Worth Waterama

The Texas Stream Team utilizes a network of trained volunteers to monitor the quality of waterbodies in Texas. Texas State University administers this program in cooperation with the TCEQ and the EPA. The TRA CRP supports this program through funding for sampling kit supplies.

In addition to the activities discussed above, the TRA CRP participates in several organized public outreach and education events each year. These range from local Earth Day events to educational field trips for large school groups. At these events, information is presented on the Trinity basin as well as the Trinity River Authority. Educational materials are supplied in order to teach the public how they can take a personal role in reducing and preventing water pollution.

Special Projects

Special projects are typically studies or activities that look at a specific issues in-depth. These are either federally or locally funded and can range from short term to long term, depending on the needs of the project.

Federal Programs

There are several projects occurring in the Trinity River basin that are part of federal programs such as the EPA's Superfund, Brownfield, RCRA, and ECHO programs. In the subwatershed summary chapters of this document, these projects are listed by type for each subwatershed. Information about those projects can be obtained from the embedded links to the EPA website.

Superfund sites are those abandoned sites and facilities that are determined to be contaminated and in need of cleanup. Funding for cleanup activities was established by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) in 1980 and the Superfund Amendments and Reauthorization Act (SARA) in 1986. The EPA can either cleanup a site or identify those responsible for the contamination. In cases where contamination can be tied to an individual, entity, or company, the EPA may require those responsible to clean the site or pay the EPA for their cleanup activities. The process of identifying sites to the end goal of cleanup or remediation can take many years or decades.

Brownfield sites are industrial or commercial facilities that are either abandoned or underutilized and which may have low level contamination. These sites differ from Superfund sites in the extent of contamination present. Brownfields are generally sites which can benefit the community, economy, and environment through their cleanup and redevelopment. Depending on the type and extent of contamination, as well as state laws, Brownfields are redeveloped for a wide variety of purposes ranging from residential and commercial to recreational. In addition, Brownfield redevelopment eases the pressure to destroy natural spaces for new development activities.

The Resource Conservation and Recovery Act (RCRA) of 1976 governs the disposal of solid and hazardous waste. In addition, the Act governs the tracking of hazardous waste from its creation to disposal. This is commonly known as the "cradle to grave" program. Other goals of the Act are to protect human and environmental health from improper waste disposal and reduce waste. Information provided by the RCRA program is available online.

The Enforcement and Compliance History Online (ECHO) database provides the public with information on facilities regulated by EPA. This includes information on inspections, violations, and enforcement actions. All facilities regulated by the Clean Air Act Stationary Source Program, Clean Water Act National Pollutant Elimination Discharge System, and RCRA are included in the ECHO database.

State Level Basin Programs

There are many state-wide and basin-wide special projects that are administered by TCEQ and other state agencies such as the Texas State Soil and Water Conservation Board (TSSWCB). Short descriptions of each project referenced in the watershed summary chapters can be found on the Coordinated Monitoring Schedule Special Projects website. In general, many of these projects are related to Total Maximum Daily Load (TMDL) activities. A TMDL determines the maximum amount of a pollutant that can be allowed to enter a waterbody while still meeting applicable standards. Therefore, it identifies the amount of pollutant reduction necessary to restore water quality to acceptable levels. A TMDL is scheduled when a waterbody has been found to be in exceedance of a standard and requires further action. After TMDL levels are determined for each pollutant and waterbody, implementation plans are developed for the steps necessary to reduce pollutant levels. Several of the current TMDL projects in the Trinity basin are for elevated bacteria levels in the water column and legacy pollutants such as PCBs.

TRA CRP Projects

The Trinity River Authority Clean Rivers Program either participates in or administers several special projects during the course of its biennial contracts with TCEQ. Final reports for past special projects are available on the TRA CRP website. TRA CRP staff have recently begun an aquatic life monitoring program in the basin. This monitoring provides baseline information about the health of a stream over and above what can be determined by routine grab sampling. Aquatic life monitoring is conducted at a selected reach during the index and critical periods which are the warm and hot periods of the year. Sample collection consists of diurnal dissolved oxygen monitoring, flow measurements, fish and benthic macroinvertebrate surveys, and habitat surveys.

Water Quality Review

Data Review Methodology

Data Collection

A large portion of the data used in this report were generated by TRA CRP partners. Current partners include the cities of Dallas, Fort Worth, Grand Prairie, Arlington, and Irving, as well as Tarrant Regional Water District and the TRA Lake Livingston Project. These partner entities have monitoring programs that have been in place for many years for reasons such as storm water permitting and water supply protection. The entities have agreed to provide their data to the CRP on a voluntary basis. In return, TRA CRP staff provide the partner entities with data quality assurance, sampling supplies and equipment, funding for analytical costs, and additional manpower on an as-needed and negotiated basis. This voluntary partner network has allowed the TRA CRP to leverage funding for more than a four to one return on the dollar. The result has been the ability to collect a large amount of data covering a large portion of the basin which would be impossible using only in-house resources. Data are collected in compliance with both the biennial quality assurance project plans and the TCEQ Surface Water Quality Monitoring Procedures Manuals.

Assessments

The date range for the TCEQ Draft 2014 Texas Integrated Report includes the seven-year period from December 1, 2005 to November 30, 2012. Where needed, data from an additional three years starting from December 1, 2003 were used. The methods used for the Integrated Report are described in the TCEQ document titled "2014 Guidance for Assessing and Reporting Surface Water Quality in Texas."

Findings of the Integrated Report are classified as Fully Supporting, No Concern, Use Concern, Screening Level Concern, and Not Supporting. To simplify data presentation in this report, the Use Concern and Screening Level Concern classifications were combined into a single "Concern" category. Use Concern findings are given for assessments against designated use standards such as dissolved oxygen and E. coli. Use Concerns can apply to datasets with limited data where the threshold number of exceedances are met or to datasets with adequate data where there are less than the threshold number of exceedances required for a Not Supporting finding. Screening Level Concerns apply to General Use nutrients and chlorophyll-a as well as a few other parameters for other designated uses. These parameters have screening levels rather than standards.

In order to determine the status of more recently collected data, TRA conducted an in-house assessment using the most recent available and complete data. This includes data collected between December 1, 2008 and November 30, 2013. Data were compared to standards and screening levels in a manner similar to TCEQ methodologies. The exception to this is for orthophosphate (OP). This parameter is no longer assessed by TCEQ. However, because many partners still collect this parameter, it has been included in the in-house assessment and has been compared to old TCEQ screening levels. This in-house assessment may provide information on emerging issues.

Trend Analysis

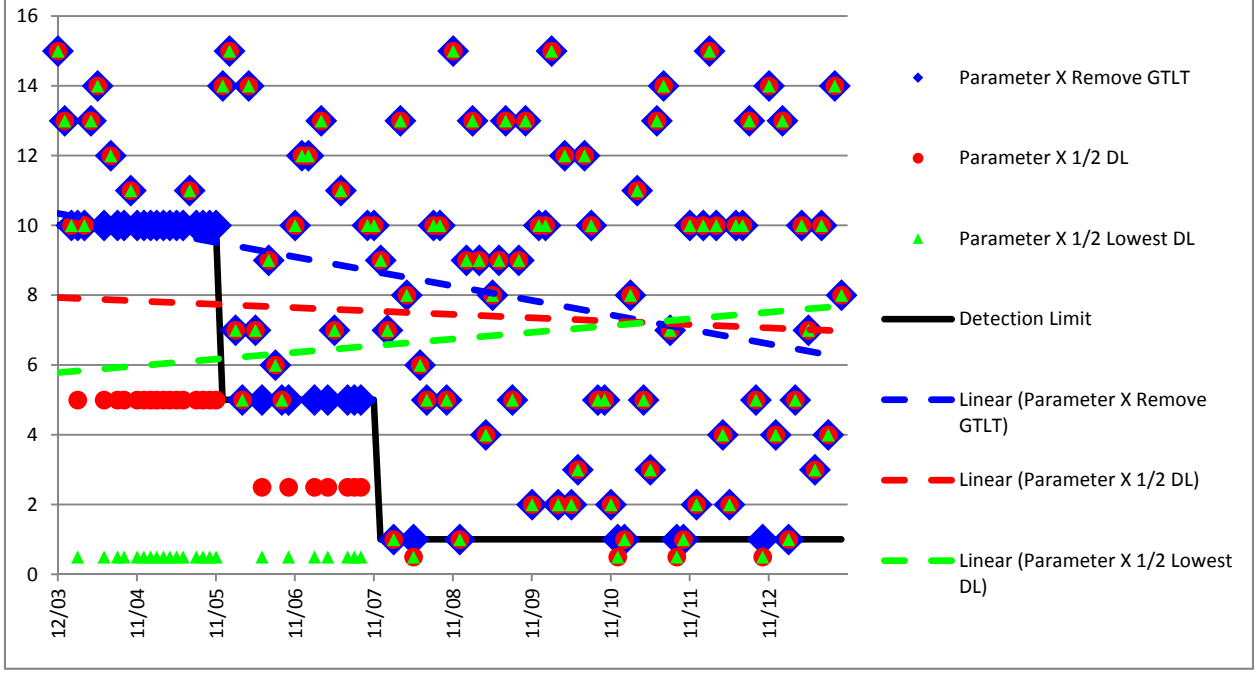
Trend analyses were conducted on all datasets determined to be adequately normal. Those datasets that passed significance testing were determined to have trends that warranted further discussion and investigation. The methodology used for data preparation and trend analysis is discussed below.

Data Preparation

Data from both the SWQMIS database as well as the TRA in-house database were compiled to obtain the dataset used for trend analysis in this report. Both databases were used in order to ensure that all data that was submitted to TCEQ for inclusion into SWQMIS over the period of record was included in the trend analysis. Additionally, data that were collected by the cities of Fort Worth and Dallas but analyzed labs that were not NELAC accredited were included for data analysis. Data for the period from December 1, 2003 to November 30, 2013 were selected in order to be somewhat comparable to the data used in the TCEQ Draft 2014 Texas Integrated Report and to include more recently collected data. Data collected at greater than 1.01 meters depth were removed in order to prevent at-depth samples from biasing the dataset. In addition, data collected under monitoring programs other than those for routine, diurnal, intensive, continuous, and SWQM acquired routine monitoring were removed to prevent biasing the dataset to conditions such as flow and weather.

There are many ways to handle data sets containing greater than and less than values. These methods range from simply removing the greater than and less than symbols to deleting the data points associated with the symbols. For this report, data reported at greater than a certain upper limit were taken as the upper limit value. Data reported at less than the detection limit were censored to one half the lowest detection limit found in the dataset for each parameter. This prevents influencing trends with changes in detection limits over time when the censored values are scattered throughout a dataset. However, when the censored values are concentrated at the beginning or end of a dataset, they can introduce false trends as seen in Figure DRM-1. The data in the graph are for an imaginary Parameter X. Values between 0 and 15 were randomly generated. The black stepped down line shows the change in detection limit. The data set in blue shows the values reported below the detection limit as the detection limit. For example, if the detection limit was 10 and the value was reported as <10, then the value in blue is plotted at 10. This has introduced a decreasing trend as shown by the dashed blue line. The data set in red has been censored to one half of the reported detection limit. This has also introduced a slight decreasing trend. The data set in green has been censored to one half of the lowest detection limit seen in the period of record. This has introduced an increasing trend. While each method of censoring may introduce false trends, censoring to one half of the lowest detection limit was chosen for the reason discussed at the beginning of this paragraph. In addition, censoring to one half of the lowest detection limit makes the censored values more obvious in a data set with a large number of these data points.

Figure DRM-1: Censoring of Data



After data were censored, the resultant data set was then averaged by station, sample date, and parameter code to reduce multiple samples collected at different depths less than 1.01 meters and at different times of the day to one value. From this, parameter groups were identified for which parameter combinations were made in a priority order to increase the data availability. The remaining data storet codes were updated the priority storet code. No averages across parameters were made. For example, if dissolved ammonia (storet code 00608) and total ammonia (00610) were available for Site X on a particular date, then the total ammonia was used and dissolved ammonia was deleted. If only dissolved ammonia was available, the storet code was updated from 00608 to 00610 for further data analysis. This method is similar to that used by TCEQ during data analysis for the Integrated Report. Table DRM-1 lists the parameter hierarchies and combinations that were made.

Table DRM-1: Parameter Hierarchies and Combinations

Hierarchy Parameter Code	Raw Parameter Code	Order of Preference	Raw Parameter Description
31699	31699	1	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML
31699	31700	2	E COLI,NA+MUG OR EA+MUG,24HRS, 35 DEGREE (#/100ML)
31699	31648	3	E. COLI, MTEC, MF, #/100 ML
31701	31701	1	ENTEROCOCCI, ENTEROLERT, IDEXX, (MPN/100 ML)
31701	31649	2	ENTEROCOCCI, ME, MF, #/100ML
31616	31616	1	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH, #/100ML
31616	79835	2	FECAL COLIFORM MPN/100ML 5/2,3 DIL FERMENT METHOD
31616	31613	3	FECAL COLIFORM, MF AGAR (COLONIES/100 ML)
31616	31625	4	FECAL COLIFORM, MF, M-FC, 0.7 UM
00610	00610	1	NITROGEN, AMMONIA, TOTAL (MG/L AS N)
00610	00608	2	NITROGEN, AMMONIA, DISSOLVED (MG/L AS N)
00940	00940	1	CHLORIDE (MG/L AS CL)
00940	00941	2	CHLORIDE, DISSOLVED (MG/L)
70953	70953	1	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L
70953	32211	2	CHLOROPHYLL-A UG/L SPECTROPHOTOMETRIC ACID. METH
00620	00620	1	NITRATE NITROGEN, TOTAL (MG/L AS N)
00620	00630	2	NITRITE PLUS NITRATE, TOTAL ONE LAB DETERMINED VALUE (MG/L AS N)
00620	00593	3	NO2 PLUS NO3-N, TOTAL, CALCULATED VALUE (MG/L)
00620	00631	4	NITRITE PLUS NITRATE, DISS 1 DET. (MG/L AS N)
00620	00618	5	NITRATE NITROGEN, DISSOLVED (MG/L AS N)
00671	00671	1	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN
00671	70507	2	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FILTER >15MIN
00671	00660	3	PHOSPHATE, ORTHO (MG/L AS PO4)
70300	70300	1	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)
70300	00212 (value*0.65)	2	SPECIFIC CONDUCTANCE, US/CM, FIELD, 24HR AVG

70300	00094 (value*0.65)	3	SPECIFIC CONDUCTANCE,FIELD (US/CM @ 25C)
70300	00095 (value*0.65)	4	SPECIFIC CONDUCTANCE,LAB (UMHOS/CM @ 25C)
70300	70294	5	RESIDUE, TOT DISS,UNSPEC CALC BASED ON COND (MG/
70300	47004	6	SOLIDS,TOTAL, DISS, ELECTRICAL-CONDUCTIVITY,MG/L
70300	70301	7	SOLIDS, DISSOLVED-SUM OF CONSTITUENTS (MG/L)
00094	00094	1	SPECIFIC CONDUCTANCE,FIELD (US/CM @ 25C)
00094	00095	2	SPECIFIC CONDUCTANCE,LAB (UMHOS/CM @ 25C)
00900	00900	1	HARDNESS, TOTAL (MG/L AS CACO3)
00900	00915	2	CALCIUM, DISSOLVED (MG/L AS CA)
00900	00925	3	MAGNESIUM, DISSOLVED (MG/L AS MG)
00900	46570	4	HARDNESS, DISSOLVED, CALCULATED (MG/L AS CaCO3)
00900	00916	5	CALCIUM, TOTAL (MG/L AS CA)
00900	00927	6	MAGNESIUM, TOTAL (MG/L AS MG)
00900	82394	7	HARDNESS, TOTAL, CALCULATED (MG/L AS CaCO3)
01523	01523	1	SILVER, IONIC UG/L
01523	01075	2	SILVER, DISSOLVED (UG/L AS AG)
39360	39360	1	DDD IN WHOLE WATER SAMPLE (UG/L)
39360	39310	2	P,P' DDD IN WHOLE WATER SAMPLE (UG/L)
39365	39365	1	DDE IN WHOLE WATER SAMPLE (UG/L)
39365	39320	2	P,P' DDE IN WHOLE WATER SAMPLE (UG/L)
39370	39370	1	DDT IN WHOLE WATER SAMPLE (UG/L)
39370	39300	2	P,P' DDT IN WHOLE WATER SAMPLE (UG/L)

After all parameter combinations were completed, data were deleted for which there were less than 20 data points for each station and parameter as these data sets are inadequate for trend analysis. The remaining parameters were compared to existing standards and screening levels. Those parameters having standards and screening levels, as well as some additional critical parameters, were retained in the data set. All other data was removed. The remaining parameters are listed in Table DRM-2 and represent the data used for trend analyses.

Table DRM-2: Parameters Retained for Data Analysis

Parameter Code	Parameter Description
00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)
00020	TEMPERATURE, AIR (DEGREES CENTIGRADE)
00061	FLOW STREAM, INSTANTANEOUS (CUBIC FEET PER SEC)
00078	TRANSPARENCY, SECCHI DISC (METERS)
00094	SPECIFIC CONDUCTANCE,FIELD (US/CM @ 25C)
00209	TEMPERATURE, WATER (DEGREES CENTIGRADE), 24HR AVG
00210	WATER TEMPERATURE, DEGREES CENTIGRADE, 24HR MAX
00211	TEMPERATURE, WATER (DEGREES CENTIGRADE) 24HR MIN
00213	SPECIFIC CONDUCTANCE, US/CM, FIELD, 24HR MAX
00214	SPECIFIC CONDUCTANCE, US/CM, FIELD, 24HR MIN
00215	PH, S.U., 24HR MAXIMUM VALUE
00216	PH, S.U., 24HR, MINIMUM VALUE
00300	OXYGEN, DISSOLVED (MG/L)
00310	BIOCHEMICAL OXYGEN DEMAND (MG/L, 5 DAY - 20DEG C
00400	PH (STANDARD UNITS)
00530	RESIDUE, TOTAL NONFILTRABLE (MG/L)
00535	RESIDUE, VOLATILE NONFILTRABLE (MG/L)
00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)
00620	NITRATE NITROGEN, TOTAL (MG/L AS N)
00625	NITROGEN, KJELDAHL, TOTAL (MG/L AS N)
00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)
00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN
00900	HARDNESS, TOTAL (MG/L AS CACO3)
00940	CHLORIDE (MG/L AS CL)
00945	SULFATE (MG/L AS SO4)
00951	FLUORIDE, TOTAL (MG/L AS F)
01000	ARSENIC, DISSOLVED (UG/L AS AS)
01005	BARIUM, DISSOLVED (UG/L AS BA)

Parameter Code	Parameter Description
01025	CADMIUM, DISSOLVED (UG/L AS CD)
01030	CHROMIUM, DISSOLVED (UG/L AS CR)
01040	COPPER, DISSOLVED (UG/L AS CU)
01049	LEAD, DISSOLVED (UG/L AS PB)
01065	NICKEL, DISSOLVED (UG/L AS NI)
01090	ZINC, DISSOLVED (UG/L AS ZN)
01106	ALUMINUM, DISSOLVED (UG/L AS AL)
01147	SELENIUM, TOTAL (UG/L AS SE)
01351	FLOW SEVERITY:1=No Flow,2=Low,3=Normal,4=Flood,5=High,6=Dry
31616	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH, #/100ML
31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML
31701	ENTEROCOCCI, ENTEROLERT, IDEXX, (MPN/100 ML)
32101	BROMODICHLOROMETHANE,WHOLE WATER,UG/L
32104	BROMOFORM, WHOLE WATER, UG/L
32105	DIBROMOCHLOROMETHANE, WHOLE WATER, UG/L
32106	CHLOROFORM, WHOLE WATER, UG/L
32218	PHEOPHYTIN-A UG/L SPECTROPHOTOMETRIC ACID. METH.
70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)
70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L
72053	DAYS SINCE PRECIPITATION EVENT (DAYS)
74069	STREAM FLOW ESTIMATE (CFS)
80082	BOD, CARBONACEOUS, 5 DAY, 20 DEG C
82078	TURBIDITY,FIELD NEPHELOMETRIC TURBIDITY UNITS, N
82079	TURBIDITY,LAB NEPHELOMETRIC TURBIDITY UNITS, NTU
89855	DISSOLVED OXYGEN, 24-HOUR MIN. (MG/L) MIN. 4 MEA
89856	DISSOLVED OXYGEN, 24-HOUR MAX. (MG/L) MIN. 4 MEA
89857	DISSOLVED OXYGEN, 24-HOUR AVG. (MG/L) MIN. 4 MEA

Trend analyses were conducted for each station and parameter for the entire period of record (POR), for the Summer months (growing season), and for the Winter months (dormant season). The summer (growing season) months were designated as May through October while the winter (dormant season) months were designated as November through April. These designations were defined for the 2010 TRA CRP Basin Summary Report and were duplicated for this report. The seasons were based on temperature data recorded at a continuously operating NOAA weather station currently located at DFW

International Airport. For the 2010 report, the period of record for the data spanned from 1899 to 2008. The designation of seasons based on temperature fairly evenly split the average total rainfall amounts for the entire period of record with 14.82 inches in the winter and 18.15 inches in the summer.

Data for which there were ten or more data points for each station, parameter, and summer/winter season were passed to the next step in preparing for trend analysis. Sample dates were converted to decimal times based on quarters. For example, all samples collected from December 2003 through February 2004 were assigned a time of 0. All samples collected from September 2013 through November 2013 were assigned a time of 9.75. This resulted in 40 unique times. These times were used to determine if the data for each station and parameter were evenly distributed over the ten year period of record. This prevents influencing trends with weighting of data to the beginning or end of the period of record. It also ensures accurate trends by removing data sets where only a small amount of data exists for one or two years.

The decimal times were assigned bin numbers from 0 to 39. The data were crosstabed on station, date, and parameter with the bin number standing in for the value. From this crosstab, 50 columns of data were randomly selected using a random number generator to determine the distribution of the data over the period of record. The data for these columns were placed in a separate document where all identifying information was made invisible. The resultant document appeared simply as a page with columns of black boxes representing where data existed. Three qualified personnel reviewed the document and marked whether or not a column looked evenly distributed. The results were compiled and columns where two or more people agreed that it was evenly distributed were returned to their numeric states. The mean and standard deviation of the bin number values for these columns ranged from 6.79 to 29.66 and from 4.35 to 12.70, respectively. These values were rounded up or down to the nearest whole number and used to select columns of data from the whole data set with bin number means between 6 and 30 and standard deviations between 4 and 13. This resulted in 3,349 unique stations and parameters that were determined to be evenly distributed across the ten year period of record and for which trend analyses were conducted.

Trend Analysis

Most water quality data are inherently non-normal, while most statistics are based on the assumption of normality. This can make the results of statistical analyses performed on water quality data less reliable. To increase the reliability of trend analyses, only datasets that fell within predefined boundaries of adequate normality were used. To determine normality and significance, the data were run through a statistical program written in SAS.

Water quality data results are a “sample” of the “population” of water quality data. Therefore, inferences about a waterbody’s population of overall water quality can be made from the samples. The first step in determining if a dataset is appropriate for statistical analysis is to determine normality. Normality can be determined by the skewness and kurtosis of the dataset.

Skewness refers to the length of one tail compared to the other on a distribution plot. In a normally distributed dataset, the skewness is zero. This indicates that the length of the tails on either side of the peak are equal. If skewness is less than zero, the data is skewed to the left indicating that the left tail is longer compared to the right tail. If skewness is greater than zero, the data is skewed to the right indicating that the right tail is longer than the left tail. To extend these findings to a population, a test statistic must be calculated. Skewness divided by the standard error of skewness is a common test statistic. If the test statistic for the sample set is greater than two or less than negative 2, then it can be inferred that the population is likely to be skewed in the same direction as the sample set.

Kurtosis is a measure of peakness of a dataset. The standard kurtosis calculation for a normally distributed dataset results in a value of three. Excess kurtosis simply subtracts a value of three from the standard calculation, resulting in a value of zero. This is a matter of convention and ease of comprehension. For this report, excess kurtosis is used. If excess kurtosis is positive, the peak is taller and narrower with longer tails indicating that there are more values around the mean than a normal distribution. If excess kurtosis is negative, the peak is shorter and flatter with shorter tails indicating that there are more values at the extremes than a normal distribution. Similar to skewness, a test statistic is calculated by dividing excess kurtosis by the standard error of excess kurtosis. If the test statistic is greater than three or less than negative three, then it can be inferred that the population is peaked in a manner similar to the sample set.

Data sets, either in their raw or natural log transformed states, meeting the requirements below were determined to be within the acceptable range of normality to result in reliable statistical analysis. These range values increase the number of datasets included in trend analysis.

Skewness Test Statistic -2<=Skewness/SES<=2

Excess Kurtosis Test Statistic -3<=Excess Kurtosis/SEK<=3

Data sets passing the normality test were then tested for significance of trends. The R^2 value is used as a measure of how well the predicted line, or the regression line, fits the observed data. R^2 values range from zero to one with one being a perfect fit. In order to be more inclusive, R^2 values greater than or equal to 0.1 were considered significant. Figure DRM-2 shows the percentage of data that falls under each R^2 value range. The null hypothesis for temporal trend analysis is that

there is no correlation between time and measured values, in other words, there is no significant trend. The p-value is the probability of a null hypothesis being true or a measure of confidence that a dataset can be used to make predictions and that the observed values are not random. A significance level of 0.1 gives a 90% confidence level. If the p-value is greater than 0.1, the trend is not significant. If the p-value is less than 0.1, the trend is significant and the observed values are not random. The t-statistic is the probability that a correlation (or slope) is due to chance. If the regression line falls entirely within one standard error away from the slope, then the t-statistic value is close to zero and the correlation is due to chance and therefore not significant. If the regression line crosses over the lines one standard error away from the slope, then the t-statistic is greater than the absolute value of one and the correlation is not due to chance and is significant. If the R^2, p-value, and t-statistic values each passed their individual significance tests, then the trend was considered significant.

Figure DRM-3 illustrates the process of determining normality and trend significance. Figure DMR-4 shows that a large amount of data passed the normality tests but failed to pass trend significance tests. As stated above, 3,349 unique station and parameter combinations had data sets that were determined to be evenly distributed across the ten year period of record. Multiplied by three for the period of record, the summer periods, and the winter periods, this resulted in a total of 10,047 possible trends. However, after applying the normality and significance tests, this number dropped to 1,281 significant trends. A summary and the results of the significant trends for each segment are detailed in the Trend Analysis Result tables in the Subwatershed Summaries section.

Figure DRM-2: Histogram of R2 Values

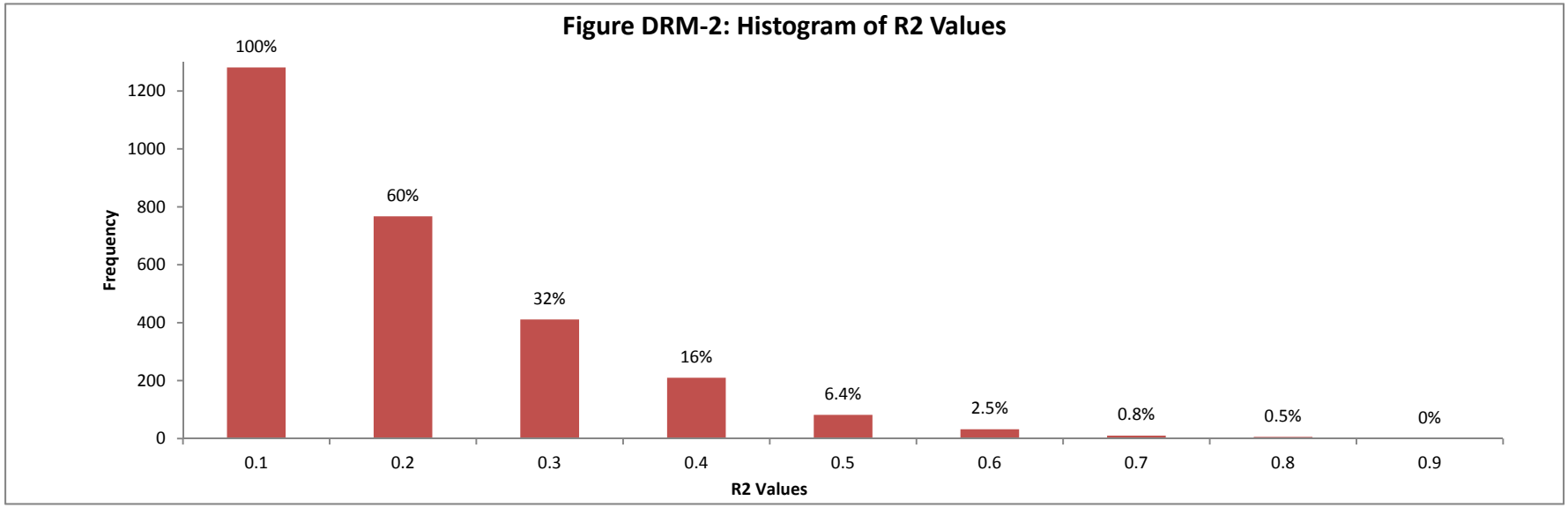


Figure DMR-3: Normality and Significance Flowchart

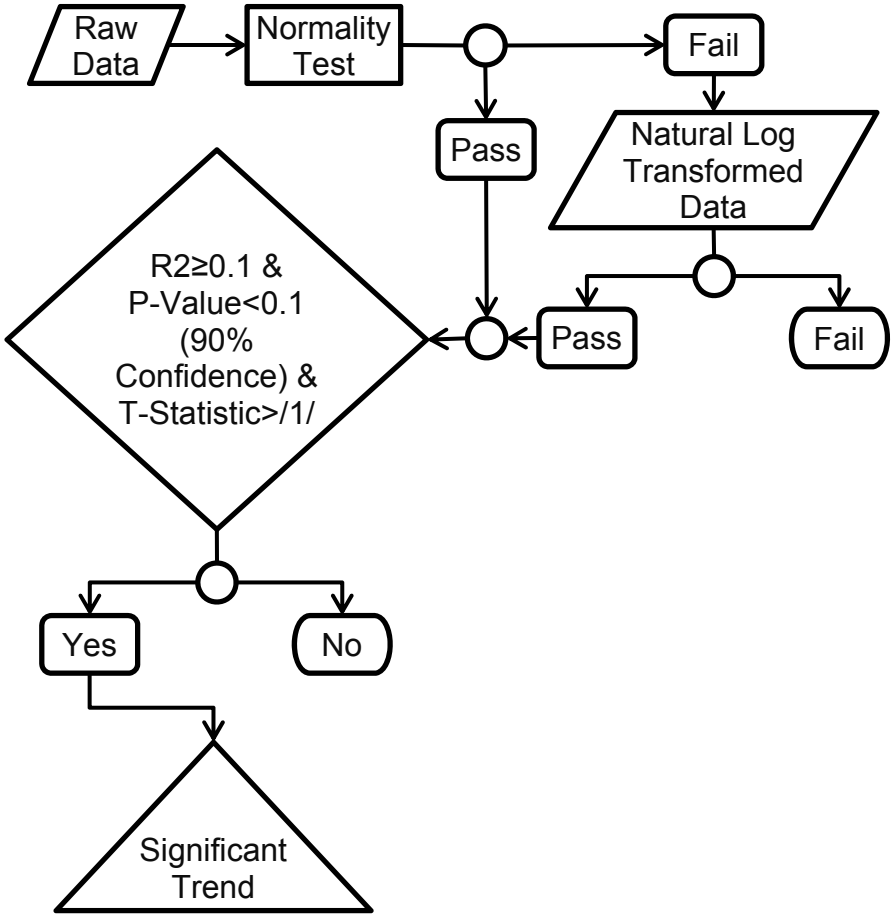
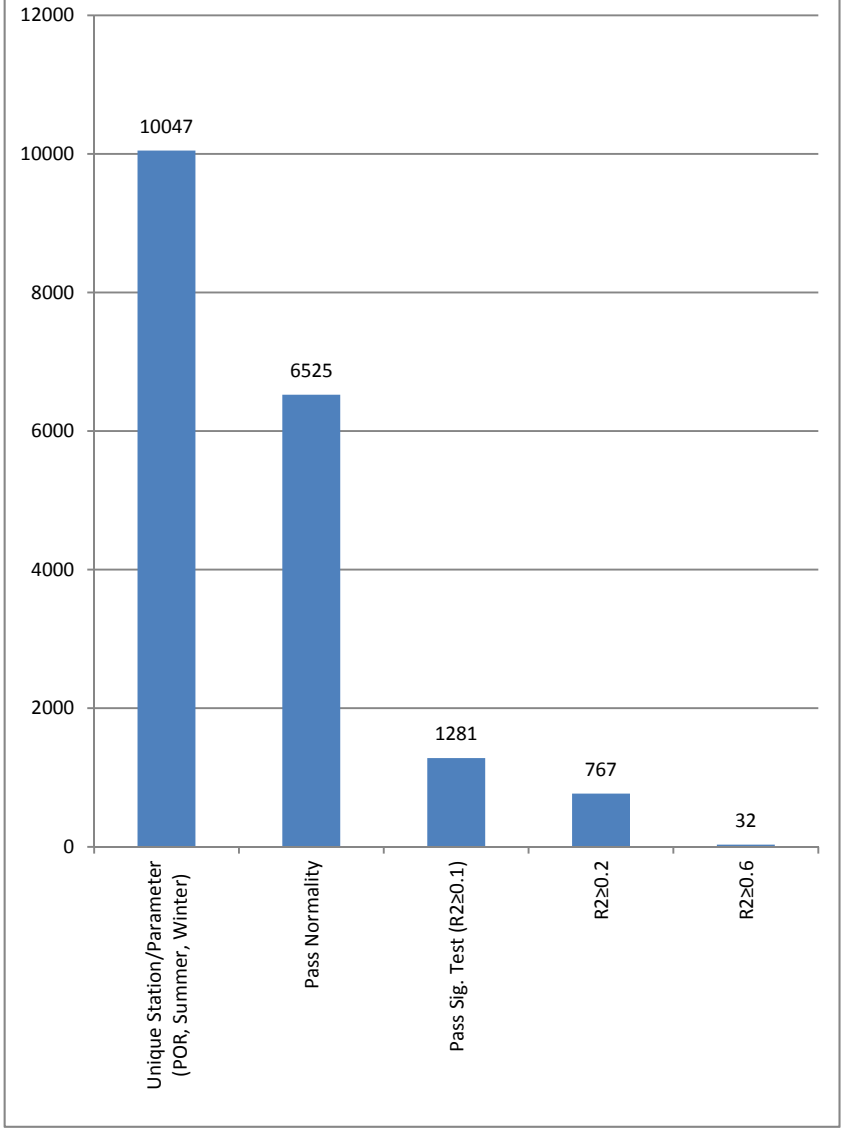


Figure DMR-4: Count of Possible Trends



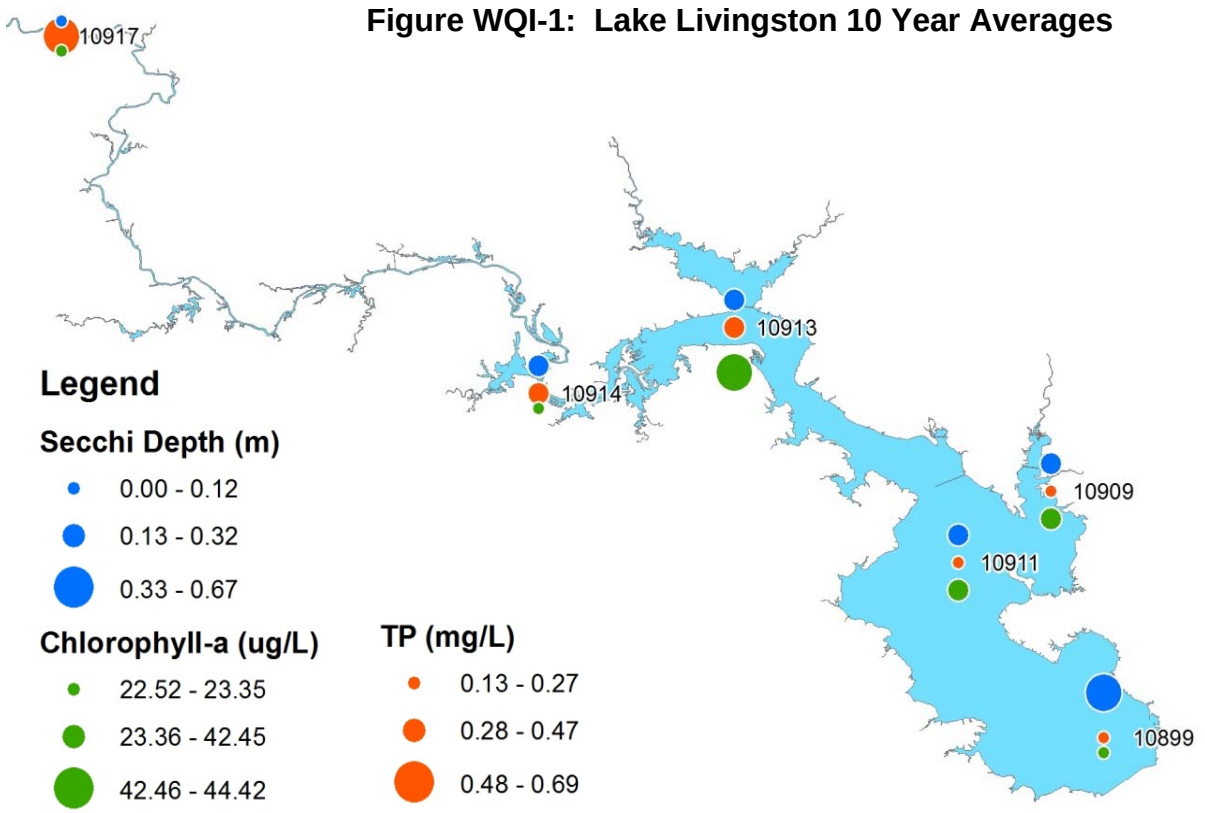
General Water Quality Issues

Nutrients

Based upon the general consensus of many basin water quality experts, nutrients are not causing wide-spread problems in the Trinity River basin. In an attempt to maintain the existing levels of use attainment in reservoirs, draft standards have been derived from existing main body chlorophyll-a data. It is very difficult to obtain meaningful correlations between any single constituent and phytoplankton. The data (10-year period of record averages for chlorophyll-a, TP, and Secchi depth) from Lake Livingston are a good example as shown in Figure WQI-1.

As expected, the TP value is high and the chlorophyll-a and turbidity values are low in the riverine portion (10917) of the lake. However, the upper reaches (10913) of Lake Livingston shows the highest chlorophyll-a value, yet TP has decreased somewhat and the turbidity is still quite high, which should significantly limit phytoplankton production. Unexpectedly, in the middle section (10911), both chlorophyll-a values and TP values have decreased as turbidity decreases. Near the dam (10899), chlorophyll-a and TP should, in theory, be the highest due to the very low turbidity. However, both parameters are far lower than the middle portion of the lake.

Figure WQI-1: Lake Livingston 10 Year Averages



Nutrients are essential for the productivity of aquatic ecosystems. Without the building blocks, or "food", that drives the system, there will be no plant and animal life. Conversely, an overabundance of nutrients within riverine and reservoir ecosystems may have detrimental effects in some instances. Clear reservoirs are more susceptible to nutrient enrichment than sediment-laden rivers and lakes. Algae require nutrients and light to grow; Trinity basin water bodies are generally turbid and as a result light can be more of a limiting factor than nutrients. The Trinity's two fairly clear reservoirs, Bridgeport and Amon G. Carter, should be more susceptible to algal growth due to nutrient enrichment but this was not demonstrated. Much of the work showing nutrient correlations with excessive phytoplankton production were performed in very clear, northern lakes and may not apply.

Numeric standards for chlorophyll-a have been developed for 75 reservoirs in Texas; 14 of which are in the Trinity River basin. Of these 14, criteria were approved by EPA for only four. Standards for chlorophyll-a and nutrients in streams are anticipated sometime in the future.

Especially during dry weather, point sources dischargers can have local effects on streams and rivers. However, reservoir nutrient loadings are typically dominated by storm water runoff which is difficult to control. Many Trinity basin water bodies are nutrient saturated and exponential decreases in nutrients would be needed to limit phytoplankton growth. Watershed Protection Programs, extensive use of best management practices, and a cultural shift in both rural and urban communities are needed to measurably decrease nutrients in the Trinity basin.

Bacteria

Enterococcus and *Escherichia coli* (*E. coli*) are bacteria commonly found in the intestines of animals and humans. These bacteria live in the waste products of these animals and can be washed into surface and ground water during rain events. High measurements of these bacteria can indicate improperly treated wastewater, illicit discharges, livestock and wildlife presence, and a host of other sources. Any warm blooded animal can be a source. Some of these bacteria produce powerful toxins and can cause severe illness if ingested. To protect public safety, CRP partners sample for bacteria throughout the basin. These samples are compared to a surface water quality standard determined by the Texas Commission on Environmental Quality and approved by the U.S. Environmental Protection Agency.

E. coli (freshwater) and *Enterococcus* (tidal waters) are the two parameters used in assessing water bodies against the Contact Recreation use standard. This standard is based on the geometric mean of the sample set. This is illustrated in

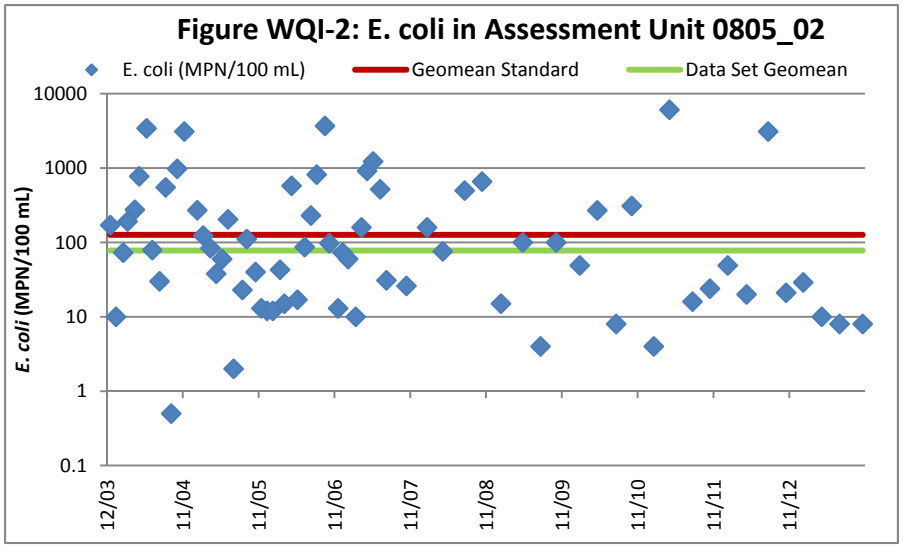


Figure WQI-2. In the TCEQ Draft 2014 Integrated Report, 140 assessment units were assessed for contact recreation. Of these, 38 were found to have concerns or to be not supporting the contact recreation use. Furthermore, 31 of these findings were on unclassified segments which are generally small streams; many of which are intermittent urban streams in the DFW Metroplex.

The Clean Water Act requires that states perform a Total Maximum Daily Load (TMDL) for water bodies not meeting the water quality standards. TMDLs establish an allowable loading of a particular pollutant and allots a certain percentage to each source. There is currently a TMDL Implementation Plan in place for much of the Upper Trinity River basin. The documentation for this Implementation Plan can be found at http://www.nctcog.org/aa/jobs/envir/SEEclean/wq/tmdl/TMDLI-Plan.asp. While implementing a bacteria TMDL in this area will be difficult at best, the plan presents an iterative approach where implementation activities will be periodically evaluated and adjusted. The hope is that the activities outlined in the Implementation Plan will eventually reduce the bacteria loading into these streams.

Potential issues associated with this Implementation Plan are that sources are frequently difficult to identify and nearly impossible to control. This is especially true for sources attributed to wildlife. In a 2006 Texas Institute for Applied Environmental Research (TIAER) report, *Monitoring Report for Bacterial Source Tracking Segments 0806, 0841, and 0805 of the Trinity River Bacteria TMDL* (http://repositories.lib.utexas.edu/bitstream/handle/2152/4033/TCEQ_2006.pdf?sequence=3), researchers attempted to identify the sources of E. coli in the Upper Trinity River region.

In general, they found that the E. coli sources were:

43-48% Mammalian Wildlife and Avian;

32-41% Combination of Human, Pet, and Livestock; and

15-19% Unknown.

During wet-weather sampling, E. coli values tend to spike at the beginning, or first flush, and then taper off as the rain event progresses. In smaller streams, such as those found in the Upper Trinity River basin, this is compounded by the fact that many of these streams are commonly low flow systems. Bacteria levels can increase in these systems because it is not washed out or assimilated.

Many of the current large-scale projects in the Upper Trinity River basin are designed to increase riparian buffer zones and create additional opportunities for the public to enjoy recreating in and around the Trinity River. It is possible that these projects, which are designed to re-create the natural riparian vegetation and habitat, may actually increase the E. coli values by introducing additional wildlife and avian sources.

Although epidemiological data are difficult to determine, there is no evidence that these E. coli values are causing incidences of sickness in the Trinity River basin. Water quality is monitored regularly in all flow conditions and there are no known illnesses in sampling personnel attributed to bacteria ingestion or contact during sample collection.

How to deal with the E. coli listings will continue to be addressed into the future. Currently, a triennial review of the Texas Surface Water Quality Standards at TCEQ is underway that may result in an increase of allowable bacteria values based on actual rather than presumed levels of contact. If approved, some, though not all, segments may be delisted.



Image WQI-3: Algal Bloom

Chlorophyll-a

Chlorophyll-a is commonly used throughout the state as a surrogate for algal biomass. It is the pigment responsible for the green color of many algal species and is vital for photosynthesis. High levels of chlorophyll-a may indicate algal blooms have occurred or are occurring as shown in Image WQI-3. Typically nutrients, such as nitrogen and phosphorous species, are the limiting factors for algal growth. The most common limiting nutrients are the phosphates. Nutrients can enter waterbodies via runoff containing

residential and agricultural fertilizers, as well as animal waste, atmospheric deposition, effluent from wastewater treatment plants, and sanitary sewer overflows.

In the Trinity basin, nutrients are not always the limiting factor for algal growth. In the naturally turbid waters of the river, light availability is commonly the limiting factor. High suspended sediment loads decrease light penetration into the water column. Therefore, algal productivity is limited to a narrow band at the surface of the water which can range from just a few inches to several feet depending on the turbidity of the water. In reservoirs, light can be the limiting factor in the turbid upper reaches and coves where sediments are still in suspension. As sediments settle out nearer to the main body of the reservoirs, nutrients can become the limiting factors.

Algal growth can affect levels of dissolved oxygen and pH. As algae cycle through photosynthesis and respiration during a 24-hour period, DO and pH levels rise and fall in response. Because chlorophyll-a is used as a surrogate for algal biomass, data analysis can show a strong correlation between chlorophyll-a, DO, and pH. The strength and direction of the correlation depends on the extent of the algal bloom and the time of day, as well as the time required for DO and pH levels to recover.

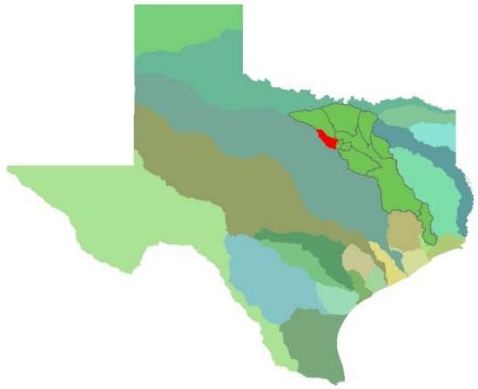
During sunny daylight hours, algae photosynthesize and respire. The process of photosynthesis uses light, carbon dioxide, and water to produce carbohydrates and oxygen. Therefore, oxygen levels can increase.

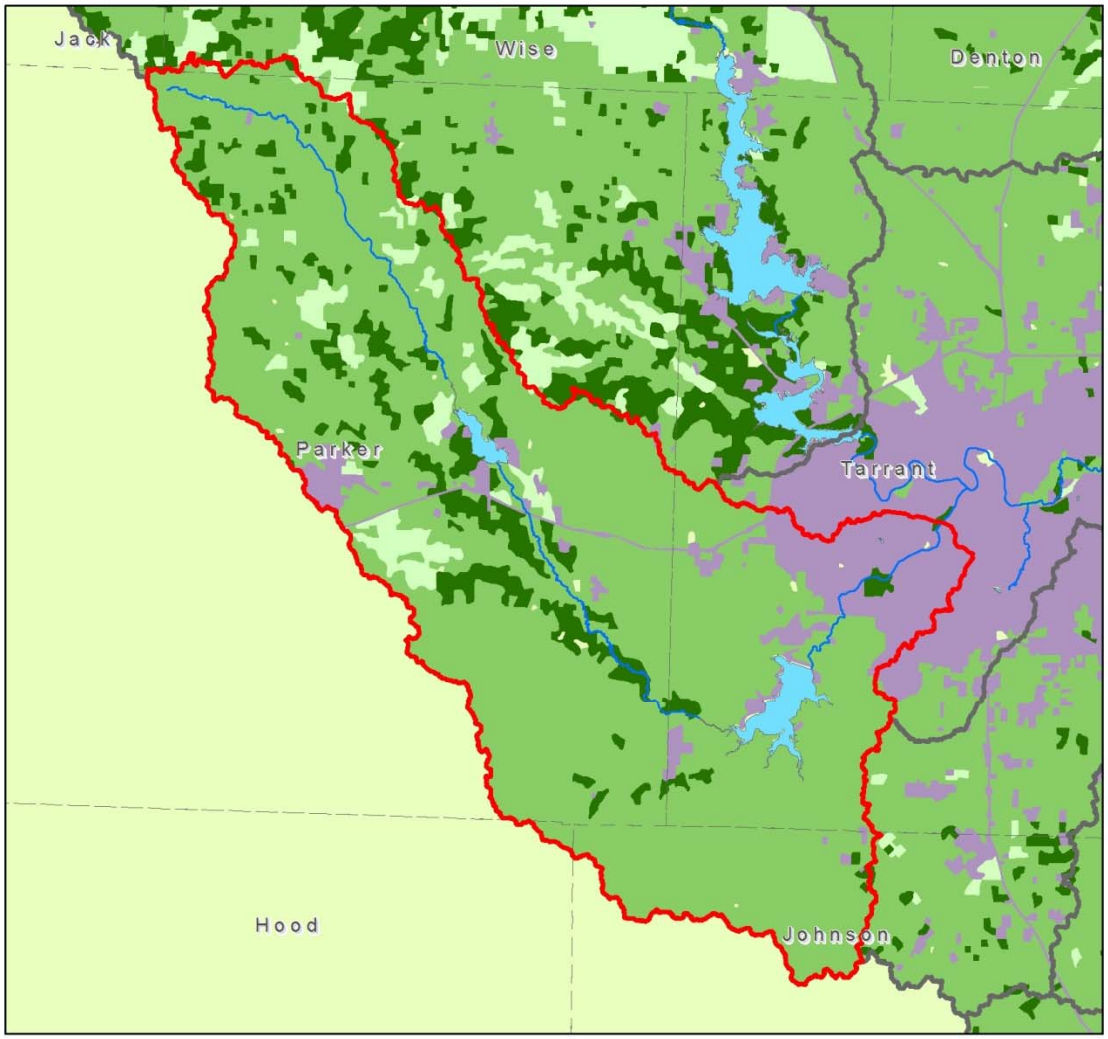
At night or during cloudy weather, algal photosynthesis stops while respiration continues. Cellular respiration uses carbohydrates and oxygen to produce carbon dioxide and water. Carbon dioxide in the presence of water forms carbonic acid which reduces the pH of the water. Therefore, oxygen and pH levels can decrease.

During an algal bloom, it is not uncommon for the water to become supersaturated with dissolved oxygen during the day. At night or during cloudy weather, DO and pH can drop to very low levels, occasionally causing fish kills. This rise and fall in DO and pH during a 24-hour period is called a diurnal swing. The severity of the diurnal swing and the resultant minimum and maximum DO and pH levels depend of the extent of the algal bloom.

Subwatershed Summaries

Clear Fork Trinity River





CLEAR FORK TRINITY RIVER

Classified Segments Used in this Report – 5
Unclassified Segments & Tributaries Used in this Report – 6

0833 – Clear Fork Trinity River Above Lake Weatherford
0832 – Lake Weatherford
0831 – Clear Fork Trinity River Below Lake Weatherford
0831A – South Fork Trinity River
0831B – Rufe Evans Hollow
0831C – Town Creek
0830 – Benbrook Lake
Bear Creek – An unclassified tributary
Rock Creek – An unclassified tributary
0829 – Clear Fork Trinity River Below Benbrook Lake
0829A – Lake Como

Sites Used for Analysis:

2008 Integrated Report	19
2010 Integrated Report	32
2012 Integrated Report	33
Draft 2014 Integrated Report	29
5-Year Analysis	12
Valid Trends	12

Table CF-1: Clear Fork Trinity River Count of Dischargers by Type and County

County	Cooling Water	Domestic Sewage <1mgd	Mining	Stormwater	Wastewater >1mgd	CAFO	Total Dischargers
JOHNSON		1					1
PARKER		3			4	1	8
TARRANT		2					2
Total		6			4	1	11

The Clear Fork subwatershed extends approximately 65 river miles from Parker County to the confluence with the Lower West Fork in Tarrant County. Although a majority of the subwatershed is sparsely populated and rural, major population centers include Weatherford, Benbrook, and the communities of the southwest Dallas/Fort Worth Metroplex. Lake Weatherford and Benbrook Lake are located in this subwatershed. Water right permit holders for Lake Weatherford and Benbrook Lake are the City of Weatherford and TRWD, respectively.

The subwatershed generally receives between 32 and 36 inches of precipitation annually. The terrain consists of flat land and rolling prairies which are mostly used for cattle grazing. The downstream reaches of the subwatershed become more urbanized as they approach the Metroplex.

There are two Brownfield sites in this subwatershed as well as one Superfund site. The Superfund designation is due to Trichloroethene in ground water. In addition, there were two hazmat events requiring action from the EPA OSC office; one of which is outside of the period of record for this report. See Tables CF-2 to CF-4, for details and links to additional information.

Table CF-2: EPA Brownfields

Segment	Site	Link to Additional EPA Information	Map Site	Assessment Complete Date	Cleanup Required	Cleanup Status	Redevelopment Status	Media Affected	Classes of Contaminants Found	Media Addressed	Classes of Contaminants Cleaned Up
0829	PUBLIC MARKET DOWNTOWN	EPA Link	Map It	3/31/2004	Yes	Complete (6/30/2003)	In Progress (Started 6/30/2003)	None		None	
0829	BENBROOK MUNICIPAL LANDFILL	EPA Link	Map It	6/30/2003	No	Not Started	Not Started	None		None	

Table CF-3: EPA Superfund Sites

Segment	Site	Link to Additional EPA Information	Map Site	1st Cleanup Action Initiated	Proposed to National Priority List (NPL)	Listed as Final on the NPL	Final Remedy Selected	Construction Complete	Deleted From NPL	Media Affected	Contaminant
0831	CIRCLE COURT GROUND WATER PLUME	EPA Link	Map It		3/15/2012	9/18/2012				Ground Water	Trichloroethene

Table CF-4: EPA On-Scene Coordinator Investigations

Segment	Site	Link to Additional EPA Information	Map Site	Date	Contaminants Found
0831	RUSSELL ROAD DRUM	EPA Link	Map It	7/20/2012	Solvents
0831	WEATHERFORD AEROSPACE ACID SPILL	EPA Link	Map It	7/21/2014	Hydrofluoric Acid, Nitric Acid

There is one project underway in this subwatershed which is being managed by the TMDL team of the TCEQ; the Trinity River PCBs in Tissue TMDL. There is not active sampling for this project at this time. This project covers portions of both the Clear Fork and the Main Stem Trinity River. For this subwatershed, the portion of the Clear Fork below Benbrook Lake (Segment 0829) is the area of concern. There is a fish consumption advisory in effect due to elevated levels of polychlorinated biphenyls (PCBs) and dioxins in edible fish tissue. The goal of this project is to determine the sources of pollutants and the extent of fish contamination in order to make consumption safe in the affected segments.



Image CF- 1: Clear Fork sign at US 377

Segment 0833 – Clear Fork Trinity River Above Lake Weatherford

Overview

This 30 mile segment runs from 1.9 miles upstream of FM 1707 in Parker County to FM 3107 in Parker County. The vast majority of this rural watershed is classified as agriculture/pasture. The upper 90% of the segment is located within the Western Cross Timbers with the remaining 10% in the Grand Prairie ecoregion.

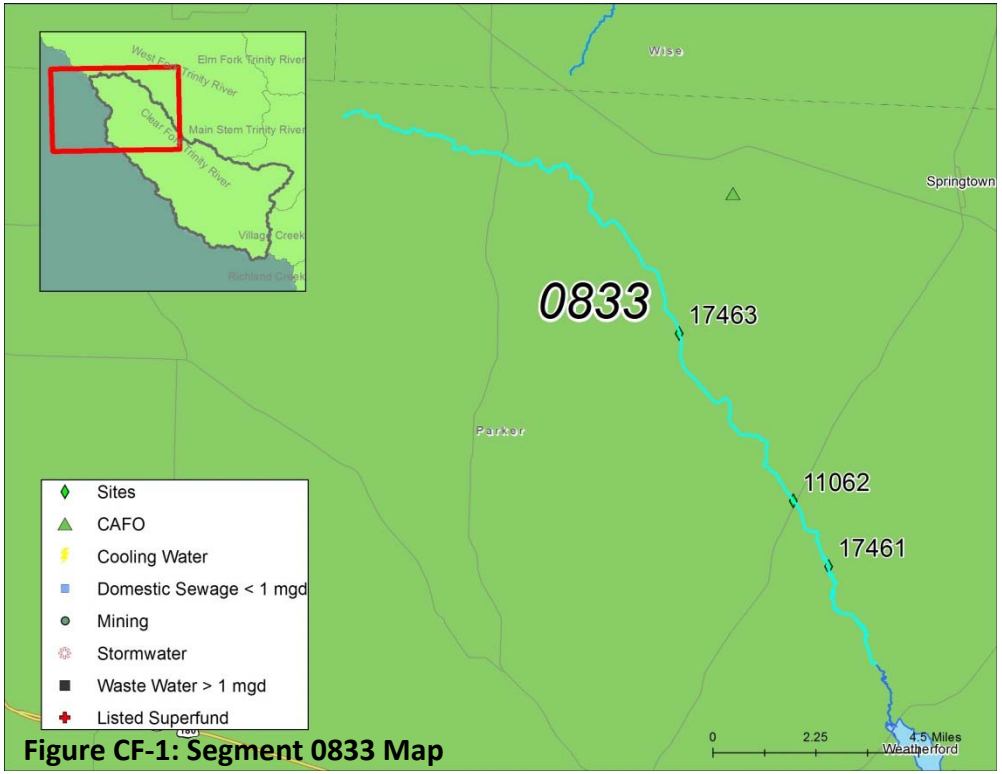


Figure CF-1: Segment 0833 Map

Assessments (Classified Segments):

Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0833_03 - From the confluence of McKnight Branch to the confluence of Strickland Ck. approximately 8 kilometers (5 miles) upstream of FM 51 in Parker County	Not Supporting	Not Assessed (No Data)
0833_04 - From the confluence with Dobbs Branch to confluence with McKnight Branch	Not Supporting	Not Assessed (No Data)
0833_05 - From the confluence of Dobbs Ck. to the lower end of segment	Not Supporting	Not Assessed (No Data)

All three assessed portions of this segment were found to be not supporting due to low dissolved oxygen by the TCEQ Draft 2014 Integrated Report. As there is no current data in these assessment units, the findings have been carried forward from previous Integrated Reports. It is believed that these findings are due to low flow conditions. The TRA CRP has recently begun monitoring diurnal dissolved oxygen and flow in these assessment units in order to verify the findings of previous Integrated Reports.

General Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0833_03	Not Assessed (No Data)	Not Assessed (No Data)
0833_04	Not Assessed (No Data)	Not Assessed (No Data)
0833_05	Not Assessed (No Data)	Not Assessed (No Data)

Contact Recreation Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0833_03	Not Assessed (No Data)	Not Assessed (No Data)
0833_04	Not Assessed (No Data)	Not Assessed (No Data)
0833_05	Not Assessed (No Data)	Not Assessed (No Data)

Public Water Supply Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0833_03	Not Assessed (No Data)	Not Assessed (No Data)
0833_04	Not Assessed (No Data)	Not Assessed (No Data)
0833_05	Not Assessed (No Data)	Not Assessed (No Data)

Fish Consumption Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0833_03	Not Assessed (No Data)	Not Assessed (No Data)
0833_04	Not Assessed (No Data)	Not Assessed (No Data)
0833_05	Not Assessed (No Data)	Not Assessed (No Data)

Assessments (Unclassified Segments):

Aquatic Life Use: Not Assessed (No Data)

General Use: Not Assessed (No Data)

Contact Recreation Use: Not Assessed (No Data)

Public Water Supply Use: Not Assessed (No Data)

Fish Consumption Use: Not Assessed (No Data)

Trend Analysis Overview

Trends (Classified Segments):
None

Trends (Unclassified Segments):
None



Image CF- 2: Clear Fork at Upper Denton Rd

Segment 0832 – Lake Weatherford

Overview

This 1,200 acre segment impounds the Clear Fork Trinity River from the Lake Weatherford dam in Parker County, to a point 1.9 miles upstream of FM 1707 in Parker County, up to a normal pool elevation of 896 feet. The watershed area around the lake is approximately evenly split among the urban, forest, and agriculture/pasture land use classifications. The watershed area to the west of Lake Weatherford is in the Western Cross Timbers ecoregion while the east side is in the Grand Prairie ecoregion. Lake Weatherford has been noted as being hypereutrophic by the TCEQ report Trophic Classification of Texas Reservoirs.

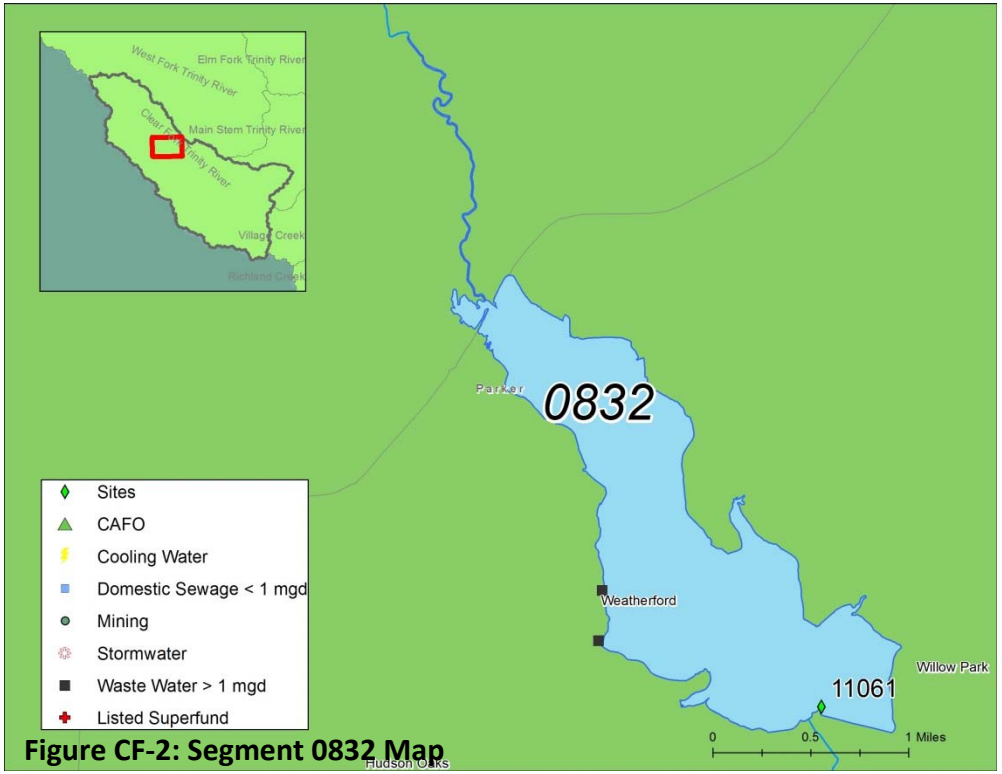


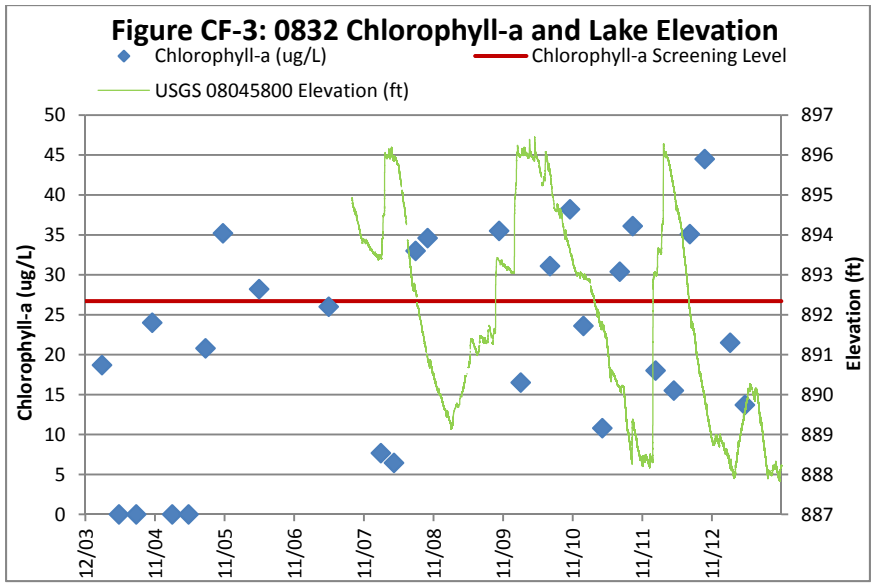
Figure CF-2: Segment 0832 Map

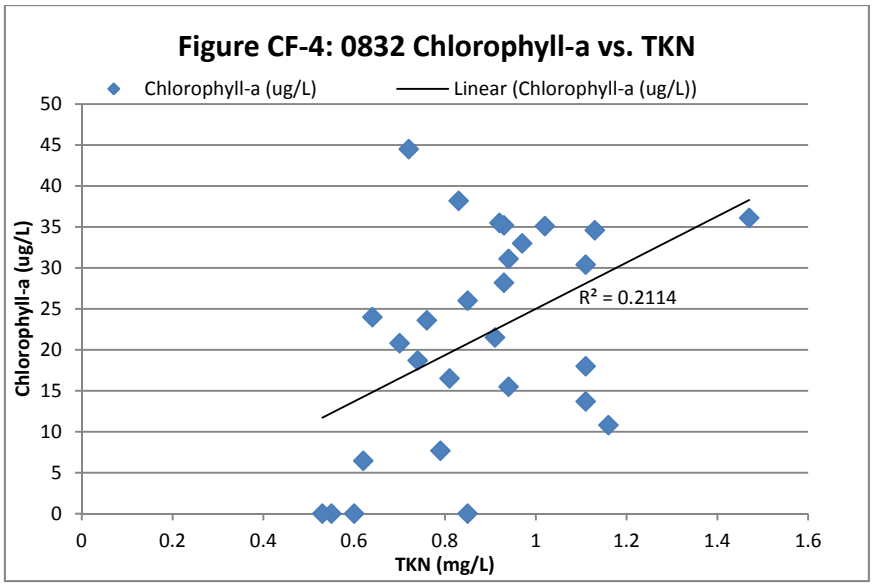
Assessments (Classified Segments):

Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0832_01 - Entire reservoir	Fully Supporting	Fully Supporting
General Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0832_01	Concern	Concern

This segment was found to have concerns for elevated levels of chlorophyll-a by the TCEQ Draft 2014 Integrated Report and the in-house 5 year assessment. This agrees with the hypereutrophic classification of the reservoir. Figure CF-3 shows chlorophyll-a in this segment. There are occasions where elevated values occur when lake levels are also high which indicates that nutrients may be washed in during storm events. However, this is not always the case as there are also elevated chlorophyll-a values when lake levels are low. There is a relatively high positive correlation between chlorophyll-a and TKN as shown in Figure CF-4. However, this correlation is negative when looking at chlorophyll-a vs. ammonia. This

indicates that the majority of the TKN is organic nitrogen which can converted to nitrate and then used by algae. As this lake is in a largely rural area and is fed by the river which drains a rural area, it can reasonably be assumed that the source of nitrogen in this segment is from agricultural fertilizer, livestock wastes, or failing septic systems.





Contact Recreation Use:
0832_01

TCEQ Draft 2014 Integrated Report No Concern

In-House 5 Year Assessment Fully Supporting

Public Water Supply Use:
0832_01

TCEQ Draft 2014 Integrated Report Fully Supporting

In-House 5 Year Assessment Fully Supporting

Fish Consumption Use:
0832_01

TCEQ Draft 2014 Integrated Report Not Assessed (No Data)

In-House 5 Year Assessment Not Assessed (No Data)

Assessments (Unclassified Segments):

Aquatic Life Use: Not Assessed (No Data)

General Use: Not Assessed (No Data)

Contact Recreation Use: Not Assessed (No Data)

Public Water Supply Use: Not Assessed (No Data)

Fish Consumption Use: Not Assessed (No Data)

Trend Analysis Overview

Table CF-5: Trend Analysis Result Summary

Clear Fork		Days Since Precip			Secchi Depth			pH			Chlorophyll-a			TSS			VSS			SO4			NH3			TKN		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0832_01	11061			UP	DN	DN		UP	UP		UP	UP		UP			UP	UP		UP	UP				DN	UP	UP	UP

Trends Key
A-All Months
S-Summer/Growing Season (May-October)
W-Winter/Dormant Sesaon (November-April)
UP Increasing Trends
DN Decreasing Trends

There were 16 significant trends identified for this segment as summarized in Table CF-5. For additional detail on trend methods, see the Data Review Methodology section.

Trends (Classified Segments):
See Table CF-6 for details of the significant trends analysis summary presented in Table CF-5. As discussed above, it appears that there is a relatively strong correlation between chlorophyll-a and TKN which may be related to sources of nitrogen in the watershed around and above the lake. The increasing trends for pH, TSS, and VSS and the decreasing trends for secchi depth are most likely related to the increasing trends for chlorophyll-a and TKN as algae can affect both pH and clarity and are a component of suspended solids. There are increasing trends for sulfate; however, the data are well below the stream standard as shown in Figure CF-5 and the R^2's are less than 0.16.

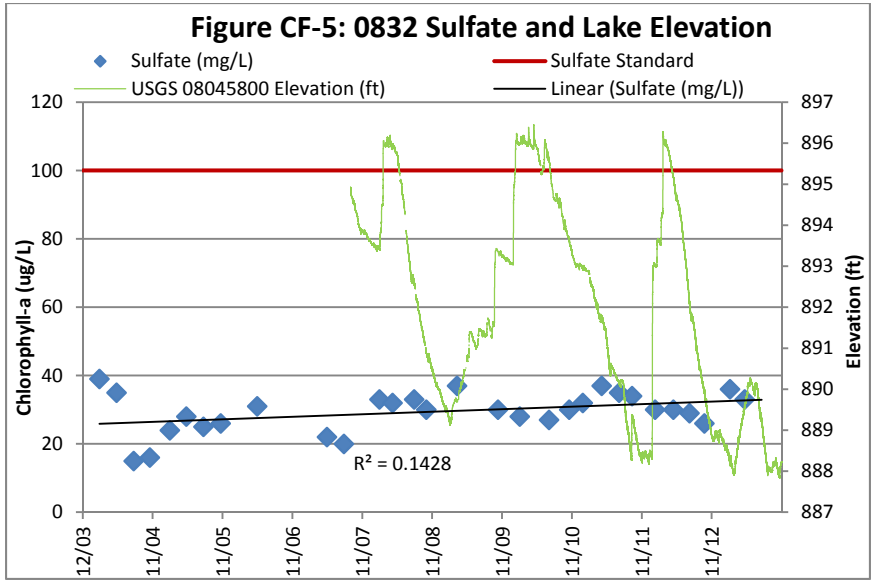




Image CF- 3: Lake Weatherford at low stage

Table CF-6: 0832 Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0832_01	11061	Secchi Depth	POR	0.26	-0.05	0.00	0.02	-3.10	1.70	-0.16	30	0.57	1.20	0.65	0.50	0.40	0.36	0.25	2/26/04	8/19/13
0832_01	11061	Secchi Depth	Summer	0.50	-0.08	0.00	0.02	-4.08	1.27	-0.18	19	0.60	1.20	0.68	0.56	0.40	0.38	0.28	5/25/04	8/19/13
0832_01	11061	pH	POR	0.15	0.03	0.03	0.01	2.28	0.27	-0.33	31	8.35	8.95	8.50	8.30	8.15	7.80	0.35	2/26/04	8/19/13
0832_01	11061	pH	Summer	0.19	0.04	0.06	0.02	2.01	-0.56	0.28	19	8.42	8.95	8.65	8.50	8.20	7.80	0.45	5/25/04	8/19/13
0832_01	11061	TSS	POR	0.11	0.06	0.08	0.03	1.82	0.72	0.15	30	12.03	38.00	15.00	10.50	7.00	4.00	8.00	2/26/04	5/22/13
0832_01	11061	VSS	POR	0.16	0.42	0.03	0.18	2.34	1.64	0.28	30	3.65	12.00	6.00	4.00	0.50	0.50	5.50	2/26/04	5/22/13
0832_01	11061	VSS	Summer	0.47	0.59	0.00	0.16	3.63	0.49	-0.51	17	3.62	9.00	5.00	4.00	0.50	0.50	4.50	5/25/04	5/22/13
0832_01	11061	NH3	Winter	0.31	-0.01	0.05	0.00	-2.25	1.46	0.46	13	0.05	0.17	0.07	0.06	0.00	0.00	0.07	2/26/04	3/6/13
0832_01	11061	TKN	POR	0.31	0.04	0.00	0.01	3.60	1.27	0.81	31	0.88	1.47	1.02	0.85	0.72	0.53	0.30	2/26/04	5/22/13
0832_01	11061	TKN	Summer	0.34	0.05	0.01	0.02	2.87	0.41	0.24	18	0.93	1.47	1.11	0.94	0.72	0.53	0.39	5/25/04	5/22/13
0832_01	11061	TKN	Winter	0.33	0.03	0.04	0.01	2.32	0.34	0.44	13	0.81	1.11	0.91	0.81	0.74	0.55	0.17	2/26/04	3/6/13
0832_01	11061	SO4	POR	0.14	0.74	0.04	0.34	2.16	-1.78	0.56	30	29.43	39.00	33.00	30.00	26.00	15.00	7.00	2/26/04	5/22/13
0832_01	11061	SO4	Summer	0.16	0.76	0.10	0.43	1.77	-1.61	0.54	18	29.00	37.00	33.00	30.00	26.00	15.00	7.00	5/25/04	5/22/13
0832_01	11061	Chlorophyll-a	POR	0.19	1.83	0.02	0.75	2.44	-0.60	-1.05	28	21.61	44.50	33.80	22.55	12.25	0.00	21.55	2/26/04	5/22/13
0832_01	11061	Chlorophyll-a	Summer	0.29	2.49	0.02	1.00	2.49	-0.49	-1.02	17	21.54	44.50	33.00	26.00	10.80	0.00	22.20	5/25/04	5/22/13
0832_01	11061	Days Since Precip	Winter	0.36	0.67	0.02	0.25	2.69	0.80	0.98	15	5.30	13.00	7.00	5.00	3.00	0.50	4.00	2/26/04	3/6/13

Trends (Unclassified Segments):

None

Segment 0831 – Clear Fork Trinity River Below Lake Weatherford

Overview

This 19 mile segment runs from 220 yards downstream of US 377 in Tarrant County to the Lake Weatherford dam in Parker County. The majority of the land use in 0831 is classified as agriculture/pasture. The upper half of the segment is located in the Western Cross Timbers ecoregion and the lower half is in the Grand Prairie ecoregion.

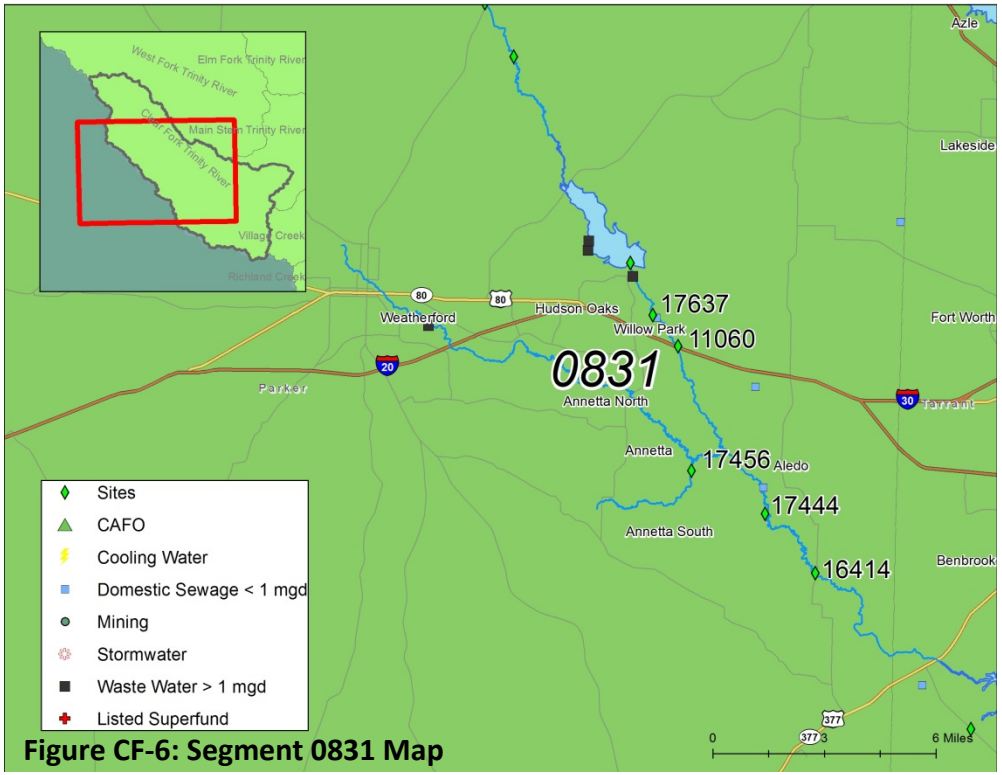


Figure CF-6: Segment 0831 Map

Assessments (Classified Segments):

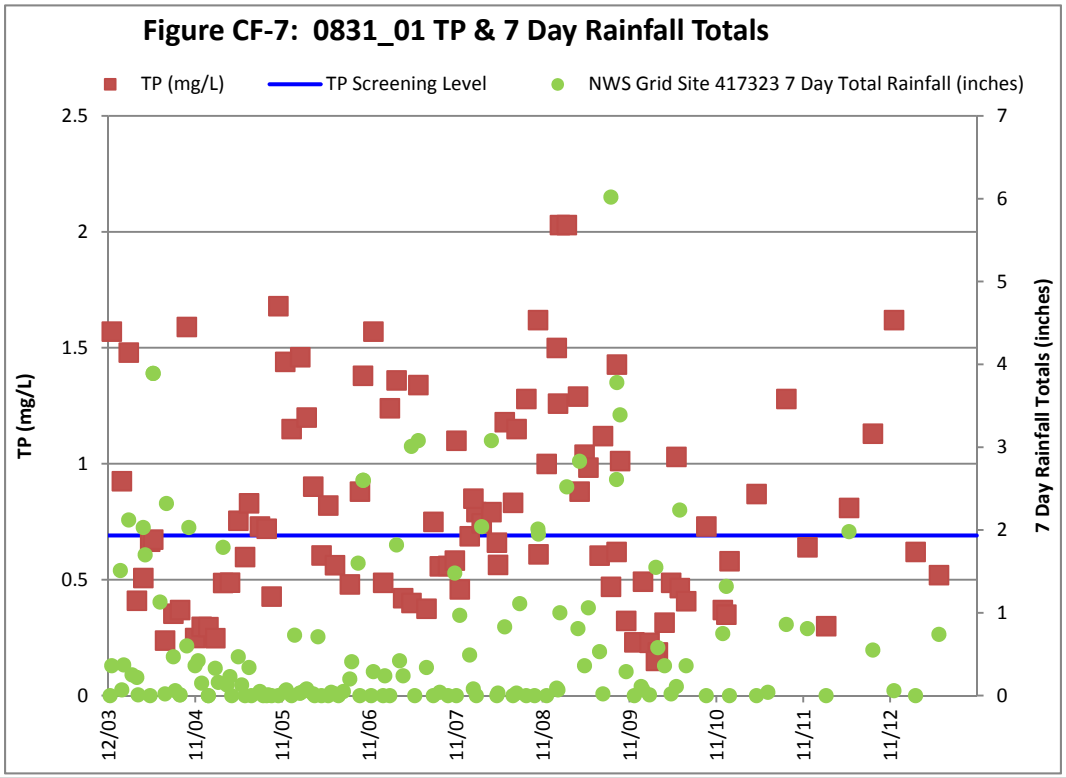
Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0831_01 - Lower 12.75 miles, downstream from South Fork Trinity River confluence	Fully Supporting	Fully Supporting
0831_03 - From the confluence with South Fork of Trinity R. to a point 2 mi upstream	Not Assessed (No Data)	Not Assessed (No Data)
0831_04 - 2 mi upstream of South Fork Trinity River confluence to Squaw Ck. confluence	Not Supporting	Not Assessed (No Data)
0831_05 - From the confluence of Squaw Ck. to Lake Weatherford Dam	Not Supporting	Not Assessed (No Data)

The portions of this segment upstream and downstream of the Squaw Creek confluence (0831_04 and 0831_05) were found to be not supporting due to low dissolved oxygen by the TCEQ Draft 2014 Integrated Report. As there is no current data in these assessment units, the findings have been carried forward from previous Integrated Reports. It is believed that these findings are due to low flow conditions. The TRA CRP has recently begun monitoring diurnal dissolved oxygen and flow in these assessment units in order to verify these findings.

General Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0831_01	Concern	Concern
0831_03	Fully Supporting	Fully Supporting
0831_04	Fully Supporting	Fully Supporting
0831_05	Fully Supporting	Fully Supporting

The lowermost portion of this segment (0831_01) was found to have concerns for nitrate and TP by both the TCEQ Draft 2014 Integrated Report and the in-house 5 year assessment. The in-house 5 year assessment found that there were concerns for OP as well. Nitrate, TP, and OP are all fairly weakly correlated to both flow and 7 day total rainfall amounts at a nearby NWS grid site. This relationship is best illustrated by TP as seen in Figure CF-7. There are some cases where the nutrients increase with rainfall which indicates that levels are likely runoff related. However, there are also many cases where nutrients are not positively correlated to rainfall. This indicates that there are sources in the watershed unrelated to non-point sources. As discussed in the TRA CRP 2010 Basin Summary Report, it is believed that upstream WWTP dischargers may be contributing to the elevated nutrient levels seen in 0831_01.

Figure CF-7: 0831_01 TP & 7 Day Rainfall Totals



Contact Recreation Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0831_01	Fully Supporting	Not Supporting
0831_03	No Concern	Not Assessed (No Data)
0831_04	No Concern	Not Assessed (No Data)
0831_05	Not Assessed (No Data)	Not Assessed (No Data)

Assessment unit 0831_01 was found to be not supporting due to high *E. coli* levels by the in-house 5 year assessment. As expected, many of the high *E. coli* values coincide with recent rainfall events, regardless of magnitude, as seen in Figure CF-8. Based on the surrounding land use, this suggests that the finding is due to livestock wastes.

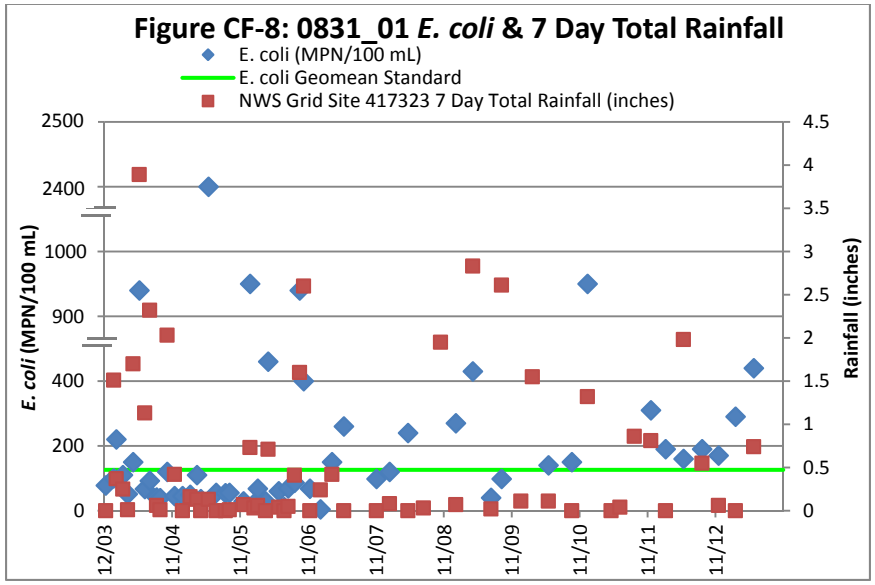




Image CF- 4: Resistant outcrop at Hwy 377

Public Water Supply Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0831_01	Fully Supporting	Fully Supporting
0831_03	Fully Supporting	No Concern
0831_04	Fully Supporting	No Concern
0831_05	Fully Supporting	No Concern

Fish Consumption Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0831_01	Not Assessed (No Data)	Not Assessed (No Data)
0831_03	Not Assessed (No Data)	Not Assessed (No Data)
0831_04	Not Assessed (No Data)	Not Assessed (No Data)
0831_05	Not Assessed (No Data)	Not Assessed (No Data)

Assessments (Unclassified Segments):

Aquatic Life Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0831A_01 - Eleven mile stretch of S. Fork Trinity River running upstream from confluence with Clear Fork Trinity River to confluence with Willow Creek, Parker County	Not Assessed (No Data)	Not Assessed (No Data)
0831B_01 - Entire segment	Concern	Not Assessed (No Data)

Assessment unit 0831B_01 was found to be not supporting due to low dissolved oxygen by the TCEQ Draft 2014 Integrated Report. As there is no current data in this assessment unit, the finding has been carried forward from previous Integrated Reports. It is believed that this finding is due to low flow conditions. The TRA CRP has recently begun monitoring diurnal dissolved oxygen and flow in this assessment unit in order to verify this finding.

General Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0831A_01	Concern	Not Assessed (No Data)
0831B_01	Not Assessed (No Data)	Not Assessed (No Data)

Assessment unit 0831A_01 was found to have concerns for Total Phosphorus by the TCEQ Draft 2014 Integrated Report. As there is not current data in this assessment unit, the finding has been carried forward from previous Integrated Reports.

Contact Recreation Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0831A_01	Not Assessed (No Data)	Not Assessed (No Data)
0831B_01	Not Assessed (No Data)	Not Assessed (No Data)

Public Water Supply Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0831A_01	Not Assessed (No Data)	Not Assessed (No Data)
0831B_01	Not Assessed (No Data)	Not Assessed (No Data)

Fish Consumption Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0831A_01	Not Assessed (No Data)	Not Assessed (No Data)
0831B_01	Not Assessed (No Data)	Not Assessed (No Data)

Trend Analysis Overview

Table CF-7: Trend Analysis Result Summary

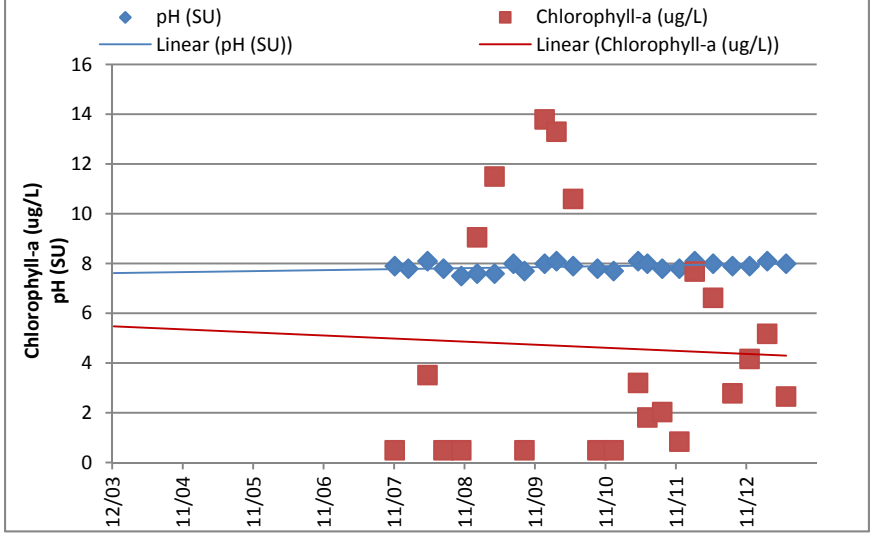
Clear Fork		Flow Severity			pH			*E. coli*			NH3		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W
0831_01	17444		DN		UP					UP	DN	DN	DN
0831_04	11060		DN					DN	DN				

Trends Key
A-All Months
S-Summer/Growing Season (May-October)
W-Winter/Dormant Sesaon (November-April)
UP Increasing Trends
DN Decreasing Trends

There were 9 significant trends identified for this segment as summarized in Table CF-7. For additional detail on trend methods, see the Data Review Methodology section.

Trends (Classified Segments):
See Table CF-8 for details of the significant trends analysis summary presented in Table CF-7. Trends for Flow Severity are somewhat subjective as the reported data are categorical and based on an observer's opinion of the flow at the time of sampling. The slight increasing pH trend has an R^2 of 0.15 and is occurring while there is non-significant decreasing chlorophyll-a trend (Figure CF-9). The upper standard for pH is 9 SU. Currently the reported data are very close to 8 SU. The increasing winter trend for *E. coli* has an R^2 of 0.16 and appears to be an artifact of when the samples were collected

Figure CF-9: 0831_01 (17444) Chlorophyll-a & pH



as the elevated values were generally collected during or shortly after rain events. The geometric mean for the winter samples is 66.62 MPN/100 mL; well below the geometric mean standard of 126 MPN/100 mL.

Table CF-8: 0831 Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0831_01	17444	pH	POR	0.15	0.04	0.06	0.02	1.97	-1.01	-0.56	24	7.88	8.10	8.00	7.90	7.80	7.50	0.20	12/4/07	6/24/13
0831_01	17444	NH3	POR	0.41	-0.84	0.00	0.22	-3.88	0.24	-0.88	24	0.35	3.13	0.18	0.07	0.00	0.00	0.17	12/4/07	6/24/13
0831_01	17444	NH3	Summer	0.40	-0.79	0.02	0.29	-2.69	-0.42	-0.74	13	0.16	1.11	0.11	0.07	0.00	0.00	0.11	5/22/08	6/24/13
0831_01	17444	NH3	Winter	0.41	-0.89	0.03	0.35	-2.52	0.39	-0.73	11	0.56	3.13	0.22	0.06	0.00	0.00	0.22	12/4/07	3/18/13
0831_01	17444	Flow Severity	Summer	0.10	-0.03	0.08	0.02	-1.80	0.71	0.89	31	3.03	5.00	3.00	3.00	3.00	2.00	0.00	5/4/04	6/24/13
0831_01	17444	*E. coli*	Winter	0.16	0.17	0.04	0.07	2.22	-0.77	1.43	27	190.59	1000.00	220.00	110.00	49.00	4.00	171.00	12/9/03	3/18/13
0831_04	11060	Flow Severity	Summer	0.32	-0.14	0.02	0.05	-2.72	0.78	1.39	18	3.06	5.00	3.00	3.00	3.00	2.00	0.00	5/4/04	6/12/07
0831_04	11060	*E. coli*	POR	0.11	-0.37	0.05	0.18	-2.05	-1.16	2.54	37	101.70	820.00	94.00	60.00	30.00	2.00	64.00	12/9/03	6/12/07
0831_04	11060	*E. coli*	Summer	0.25	-0.65	0.04	0.29	-2.28	-1.63	2.09	18	81.56	550.00	68.00	52.00	34.00	2.00	34.00	5/4/04	6/12/07

Trends (Unclassified Segments):
None



Image CF- 5: Narrow channel at IH20

Segment 0830 – Benbrook Lake

Overview

This 3,770 acre segment impounds the Clear Fork Trinity River from the Benbrook Lake dam in Tarrant County to 220 yards downstream of US 377 in Tarrant County, up to a normal pool elevation of 694 feet. The majority of the watershed is classified as agriculture/pasture with significant urban development on the north side of the lake. The entire segment is located within the Grand Prairie ecoregion. Benbrook Lake has been noted as being hypereutrophic by the TCEQ report Trophic Classification of Texas Reservoirs.

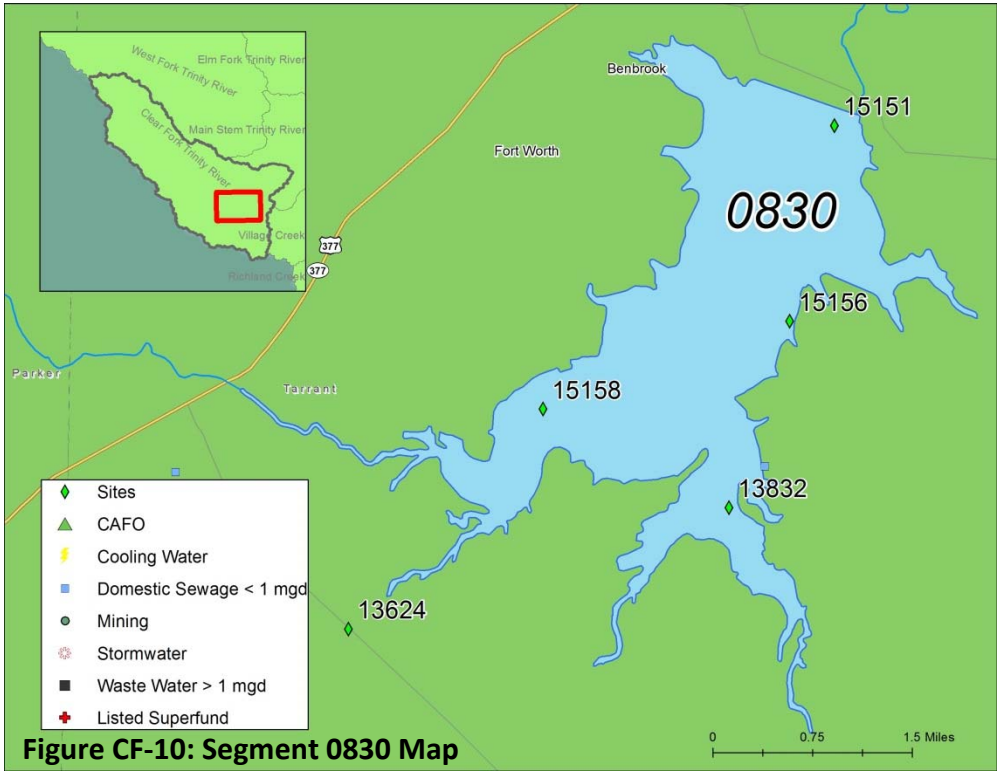
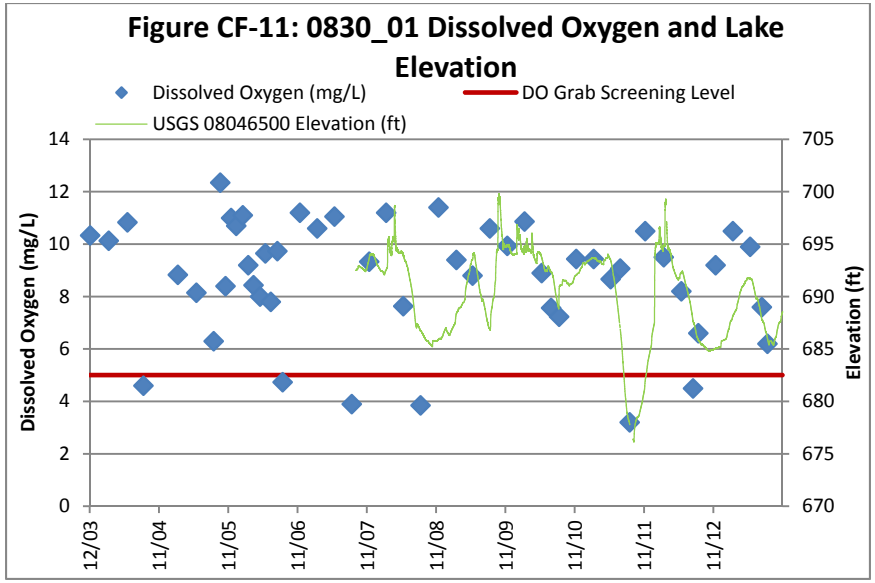


Figure CF-10: Segment 0830 Map

Assessments (Classified Segments):

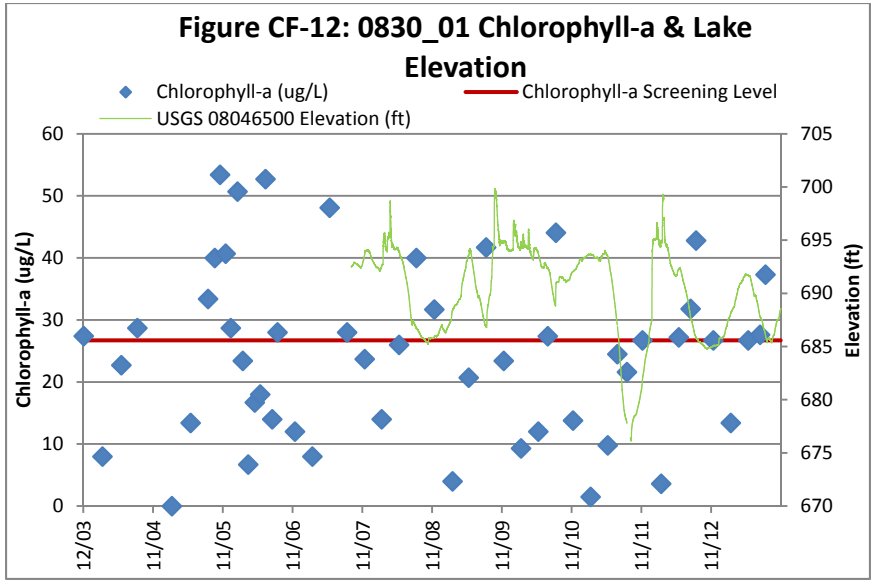
Aquatic Life Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0830_01 - Lower portion of reservoir	Concern	Fully Supporting
0830_02 - Middle portion of reservoir	Fully Supporting	Fully Supporting
0830_03 - Upper portion of reservoir	Fully Supporting	Fully Supporting
0830_05 - Rock/Mustang Creek arm of Benbrook Lake	Fully Supporting	Fully Supporting

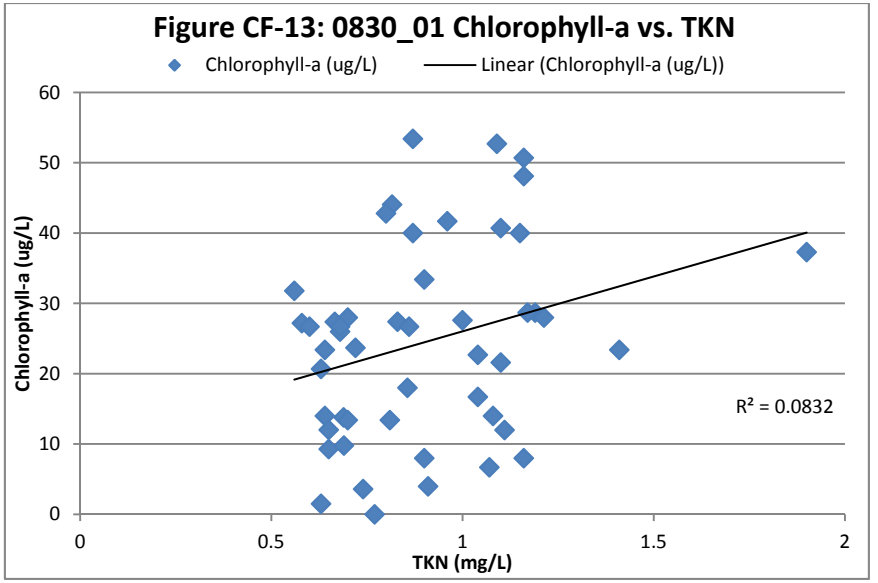
The lower portion of the reservoir (0830_01) was found to have concerns due to low dissolved oxygen by the TCEQ Draft 2014 Integrated Report. It appears that low dissolved oxygen coincides with low lake levels (Figure CF-11).



General Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0830_01	Concern	Concern
0830_02	Concern	Concern
0830_03	Concern	Concern
0830_05	Concern	Concern

All portions of this segment were found to have concerns for chlorophyll-a by both the TCEQ Draft 2014 Integrated Report and the in-house 5 year assessment. This agrees with the hypereutrophic classification of the reservoir. Figure CF-12 shows chlorophyll-a in this segment. There are occasions where elevated values occur when lake levels are also high or normal which indicates that nutrients may be washed in during storm events. However, this is not always the case as there are also elevated chlorophyll-a values when lake levels are low. There is a positive correlation between chlorophyll-a and TKN as shown in Figure CF-13 (correlation coefficient=0.29). However, this correlation is negative when looking at chlorophyll-a vs. ammonia (correlation coefficient=-0.39). This indicates that the majority of the TKN is organic nitrogen which can converted to nitrate and then used by algae. As this lake is in a largely rural area and is fed by the river which drains a rural area, it can reasonably be assumed that the source of nitrogen in this segment is from agricultural fertilizer, livestock wastes, or failing septic systems.





Contact Recreation Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0830_01	Fully Supporting	Fully Supporting
0830_02	Fully Supporting	Fully Supporting
0830_03	Fully Supporting	Fully Supporting
0830_05	Fully Supporting	Fully Supporting

Public Water Supply Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0830_01	Fully Supporting	Fully Supporting
0830_02	Fully Supporting	Fully Supporting
0830_03	Fully Supporting	Fully Supporting
0830_05	Fully Supporting	Fully Supporting

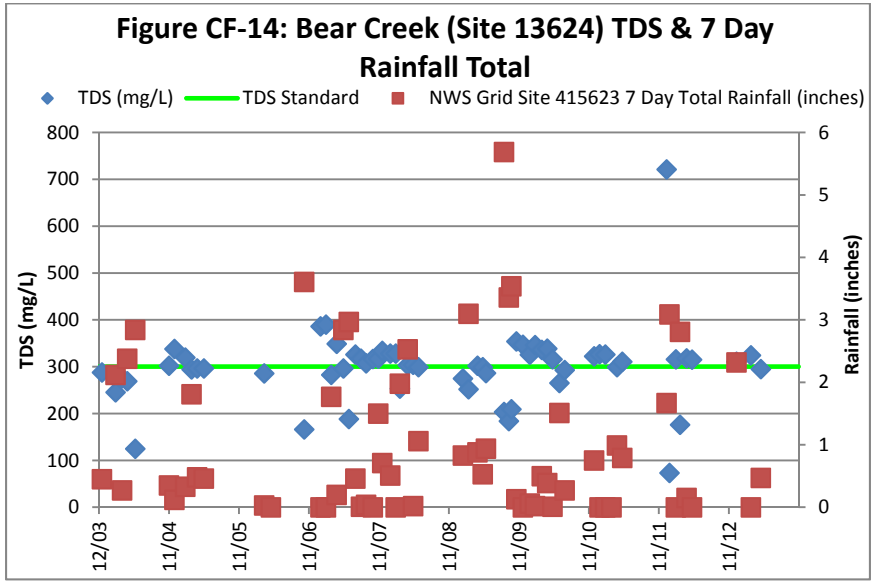
Fish Consumption Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0830_01	Not Assessed (No Data)	Not Assessed (No Data)
0830_02	Not Assessed (No Data)	Not Assessed (No Data)
0830_03	Not Assessed (No Data)	Not Assessed (No Data)
0830_05	Not Assessed (No Data)	Not Assessed (No Data)

Assessments (Unclassified Segments):

Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
Bear Creek - Entire water body	Not Assessed (No Data)	Fully Supporting
Rock Creek - Entire water body	Not Assessed (No Data)	Not Assessed (No Data)

General Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
Bear Creek	Not Assessed (No Data)	Not Supporting
Rock Creek	Not Assessed (No Data)	Not Supporting

Both Bear and Rock Creek were found to be not supporting due to elevated levels of TDS by the in-house 5 year assessment. TDS for these two creeks hovers around 300 mg/L as shown in Figure CF-14 for Bear Creek. The average TDS for Bear Creek was 302.25 and 301.43 for Rock Creek. Regardless of the rainfall, TDS generally remains around 300 mg/L. This indicates that the standard of 300 mg/L may not be appropriate for these two creeks.



Contact Recreation Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
Bear Creek	Not Assessed (No Data)	Not Assessed (No Data)
Rock Creek	Not Assessed (No Data)	Not Assessed (No Data)

Public Water Supply Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
Bear Creek	Not Assessed (No Data)	Fully Supporting
Rock Creek	Not Assessed (No Data)	Fully Supporting

Fish Consumption Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
Bear Creek	Not Assessed (No Data)	Not Assessed (No Data)
Rock Creek	Not Assessed (No Data)	Not Assessed (No Data)

Trend Analysis Overview

Table CF-9: Trend Analysis Result Summary

Clear Fork		Flow			Water Temp			DO			pH			Chlorophyll-a			TSS			Chloride			NH3			NO3		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0830_01	15151					UP																					UP	
0830_02	15156																										UP	
0830_03	15158																		DN								UP	UP
0830_05	13832								DN		DN	DN				DN	DN		DN			DN					UP	
Bear Creek	13624		UP																					DN				
Rock Creek	16725																						DN		DN			

Clear Fork		TKN			OP			TP		
Seg_AU	Site	A	S	W	A	S	W	A	S	W
0830_01	15151	DN		DN	DN		DN		DN	
0830_02	15156	DN	DN	DN	DN	DN		DN	DN	
0830_03	15158	DN	DN	DN	DN	DN		DN		DN
0830_05	13832	DN	DN	DN				DN	DN	DN
Bear Creek	13624	DN	DN	DN						
Rock Creek	16725	DN		DN						

Trends Key

A-All Months

S-Summer/Growing Season (May-October)

W-Winter/Dormant Sesaon (November-April)

UP Increasing Trends

DN Decreasing Trends

There were 48 significant trends identified for this segment as summarized in Table CF-9. For additional detail on trend methods, see the Data Review Methodology section.

Trends (Classified Segments):

See Table CF-10 for details of the significant trends analysis summary presented in Table CF-9. There is an increasing trend in water temperature during the summer with an R^2 of 0.13. Increasing trends exist for nitrate in several assessment units with R^2's of less than 0.31. These are similar to the nitrate trends in the West Fork segments 0807, 0809, and 0811. The majority of the reported data are below the screening level of 0.37 mg/L which does not indicate an immediate issue. This is shown in Figure CF-15 for assessment unit 0830_03. Unlike the trends in the West Fork segments, it does not appear that the increasing levels of nitrate in the lake are related to decreasing lake elevations. Rather, there are higher nitrate values when there are increases in lake elevation indicating that nitrate may be washed into the lake during runoff events. Decreasing trends for DO and pH have R^2's less than 0.24.

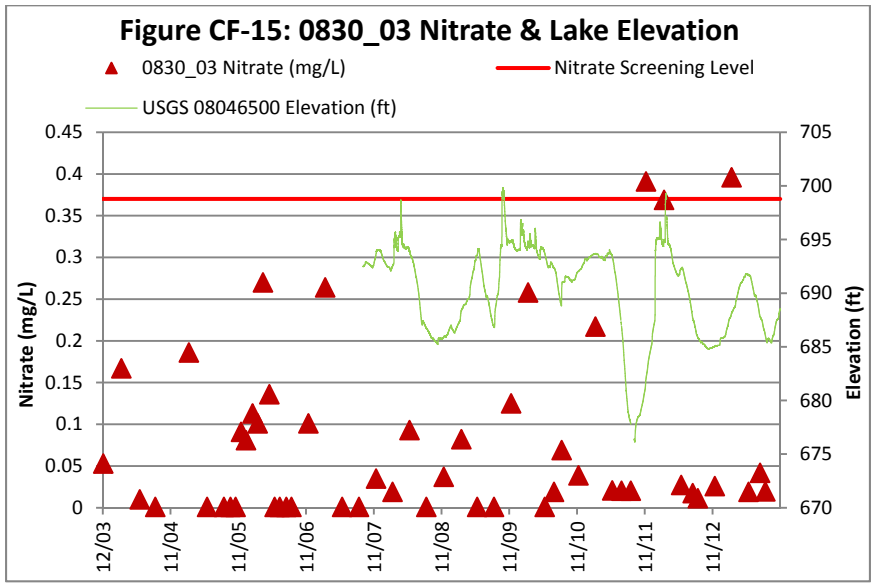


Figure CF-15: 0830_03 Nitrate & Lake Elevation

Table CF-10: 0830 Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0830_01	15151	Water Temp	Summer	0.13	0.23	0.06	0.12	1.97	-0.95	0.42	28	27.80	30.93	29.13	27.78	26.70	23.20	2.43	6/17/04	9/11/13
0830_01	15151	NO3	Summer	0.18	0.26	0.03	0.11	2.38	0.49	-1.32	28	0.03	0.32	0.03	0.01	0.00	0.00	0.03	6/17/04	9/11/13
0830_01	15151	TKN	POR	0.19	-0.04	0.00	0.01	-3.27	1.27	-0.16	49	0.90	1.90	1.09	0.86	0.69	0.56	0.40	12/3/03	9/11/13
0830_01	15151	TKN	Winter	0.40	-0.05	0.00	0.01	-3.62	1.37	-0.43	22	0.88	1.41	1.10	0.85	0.69	0.63	0.41	12/3/03	3/13/13
0830_01	15151	TP	Summer	0.12	0.00	0.08	0.00	-1.81	1.65	1.39	27	0.06	0.11	0.07	0.05	0.04	0.02	0.03	6/17/04	9/11/13
0830_01	15151	OP	POR	0.13	-0.16	0.01	0.06	-2.55	1.46	-1.44	46	0.01	0.06	0.01	0.00	0.00	0.00	0.01	12/3/03	9/11/13
0830_01	15151	OP	Winter	0.18	-0.20	0.06	0.10	-2.03	0.03	-1.17	21	0.01	0.05	0.01	0.01	0.00	0.00	0.01	12/3/03	3/13/13
0830_02	15156	NO3	Summer	0.24	0.30	0.01	0.10	2.84	1.12	-1.04	28	0.02	0.32	0.02	0.00	0.00	0.00	0.02	6/17/04	9/11/13
0830_02	15156	TKN	POR	0.34	-0.05	0.00	0.01	-4.88	1.54	-0.85	49	0.87	1.44	1.02	0.82	0.67	0.53	0.35	12/3/03	9/11/13
0830_02	15156	TKN	Summer	0.28	-0.04	0.00	0.01	-3.11	0.75	-0.79	27	0.88	1.32	1.02	0.92	0.67	0.53	0.35	6/17/04	9/11/13
0830_02	15156	TKN	Winter	0.43	-0.06	0.00	0.01	-3.91	1.48	-0.27	22	0.86	1.44	1.03	0.80	0.68	0.53	0.36	12/3/03	3/13/13
0830_02	15156	TP	POR	0.24	-0.07	0.00	0.02	-3.84	-0.52	-0.41	48	0.06	0.15	0.08	0.06	0.04	0.02	0.04	12/3/03	9/11/13
0830_02	15156	TP	Summer	0.29	0.00	0.00	0.00	-3.13	1.42	-0.40	26	0.06	0.11	0.07	0.05	0.04	0.02	0.04	6/17/04	9/11/13
0830_02	15156	OP	POR	0.18	-0.18	0.00	0.06	-3.17	1.43	-1.73	48	0.01	0.05	0.01	0.00	0.00	0.00	0.01	12/3/03	9/11/13
0830_02	15156	OP	Summer	0.37	-0.20	0.00	0.05	-3.74	1.59	-1.50	26	0.00	0.01	0.01	0.00	0.00	0.00	0.01	6/17/04	9/11/13
0830_03	15158	TSS	Winter	0.24	-1.30	0.02	0.51	-2.55	0.98	-0.50	23	19.52	35.70	24.00	17.70	13.70	8.30	10.30	12/3/03	3/13/13
0830_03	15158	NO3	Winter	0.17	0.02	0.05	0.01	2.05	1.65	-0.41	23	0.15	0.40	0.26	0.10	0.04	0.00	0.22	12/3/03	3/13/13
0830_03	15158	NO3	Summer	0.31	0.33	0.00	0.10	3.43	0.68	-1.68	28	0.02	0.14	0.02	0.01	0.00	0.00	0.02	6/17/04	9/11/13
0830_03	15158	TKN	POR	0.40	-0.07	0.00	0.01	-5.76	0.05	0.80	51	0.89	1.67	1.13	0.85	0.67	0.10	0.46	12/3/03	9/11/13
0830_03	15158	TKN	Summer	0.38	-0.06	0.00	0.02	-3.99	-0.23	0.42	28	0.88	1.50	1.13	0.85	0.67	0.10	0.46	6/17/04	9/11/13
0830_03	15158	TKN	Winter	0.45	-0.08	0.00	0.02	-4.11	0.23	0.95	23	0.90	1.67	1.13	0.85	0.68	0.10	0.45	12/3/03	3/13/13
0830_03	15158	TP	POR	0.11	-0.05	0.02	0.02	-2.44	0.24	-0.51	49	0.09	0.22	0.12	0.09	0.06	0.03	0.05	12/3/03	9/11/13
0830_03	15158	TP	Winter	0.14	-0.05	0.09	0.03	-1.77	0.11	0.00	22	0.10	0.21	0.12	0.09	0.08	0.05	0.04	12/3/03	3/13/13
0830_03	15158	OP	POR	0.13	-0.17	0.01	0.06	-2.63	0.45	-2.06	47	0.01	0.06	0.01	0.01	0.00	0.00	0.01	12/3/03	9/11/13
0830_03	15158	OP	Summer	0.17	-0.16	0.04	0.07	-2.21	0.81	-1.74	26	0.01	0.02	0.01	0.00	0.00	0.00	0.01	6/17/04	9/11/13
0830_05	13832	DO	Summer	0.22	-0.27	0.03	0.11	-2.40	0.24	0.87	22	7.03	10.40	7.70	6.98	6.30	4.00	1.40	10/19/05	9/11/13
0830_05	13832	pH	POR	0.11	-0.04	0.04	0.02	-2.12	0.79	-0.82	39	8.12	8.80	8.40	8.05	7.90	7.60	0.50	10/19/05	9/11/13
0830_05	13832	pH	Summer	0.24	-0.06	0.02	0.02	-2.53	0.82	-0.58	22	8.10	8.80	8.40	8.03	7.85	7.60	0.55	10/19/05	9/11/13
0830_05	13832	TSS	POR	0.17	-1.10	0.01	0.41	-2.70	1.96	1.38	37	17.36	38.50	20.50	16.30	12.70	4.70	7.80	10/19/05	9/11/13
0830_05	13832	TSS	Winter	0.43	-1.51	0.00	0.45	-3.36	0.75	-0.12	17	18.05	31.10	20.50	18.40	13.00	8.70	7.50	11/16/05	3/13/13
0830_05	13832	NO3	Summer	0.24	0.36	0.02	0.14	2.50	0.40	-1.28	22	0.04	0.23	0.03	0.01	0.00	0.00	0.03	10/19/05	9/11/13
0830_05	13832	TKN	POR	0.39	-0.07	0.00	0.01	-4.80	1.30	1.27	38	0.86	1.70	1.00	0.81	0.67	0.10	0.33	10/19/05	9/11/13
0830_05	13832	TKN	Summer	0.47	-0.08	0.00	0.02	-4.23	0.15	0.22	22	0.85	1.46	1.06	0.81	0.65	0.10	0.41	10/19/05	9/11/13
0830_05	13832	TKN	Winter	0.27	-0.06	0.04	0.03	-2.27	0.77	0.90	16	0.88	1.70	0.98	0.84	0.69	0.47	0.29	11/16/05	3/13/13
0830_05	13832	TP	POR	0.23	-0.07	0.00	0.02	-3.27	0.35	-0.31	38	0.08	0.19	0.10	0.08	0.06	0.04	0.04	10/19/05	9/11/13
0830_05	13832	TP	Summer	0.26	-0.08	0.02	0.03	-2.66	0.88	-0.31	22	0.08	0.19	0.10	0.07	0.06	0.04	0.04	10/19/05	9/11/13
0830_05	13832	TP	Winter	0.18	-0.07	0.10	0.04	-1.78	-0.46	0.40	16	0.09	0.19	0.10	0.08	0.07	0.04	0.03	11/16/05	3/13/13
0830_05	13832	Chloride	Winter	0.23	-0.56	0.06	0.27	-2.06	-0.04	-0.57	16	24.58	29.80	26.90	24.62	22.25	19.06	4.65	11/16/05	3/13/13
0830_05	13832	Chlorophyll-a	Winter	0.30	-3.18	0.03	1.31	-2.43	0.93	-0.09	16	26.24	60.50	38.00	22.15	15.35	4.00	22.65	11/16/05	3/13/13

Trends (Unclassified Segments):

See Table CF-11 for details of the significant trends analysis summary presented in Table CF-9. There are no trends of concern in the unclassified segments as, with the exception of flow, all trends are decreasing which is generally desirable for nutrients.

Table CF-11: Unclassified Tributary Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
Bear Creek	13624	Flow	Summer	0.30	0.24	0.05	0.11	2.16	0.80	-0.14	13	9.11	37.00	12.00	6.40	3.00	2.00	9.00	5/16/06	5/16/13
Bear Creek	13624	NH3	Summer	0.16	-0.22	0.07	0.11	-1.90	1.20	-1.49	21	0.01	0.05	0.02	0.00	0.00	0.00	0.02	6/7/04	5/16/13
Bear Creek	13624	TKN	POR	0.20	-0.16	0.00	0.04	-3.88	0.00	-1.36	61	0.55	2.38	0.71	0.38	0.22	0.10	0.49	12/16/03	5/16/13
Bear Creek	13624	TKN	Summer	0.43	-0.25	0.00	0.07	-3.82	-0.01	-0.52	21	0.51	1.82	0.65	0.35	0.24	0.10	0.41	6/7/04	5/16/13
Bear Creek	13624	TKN	Winter	0.14	-0.13	0.02	0.05	-2.53	-0.01	-1.22	40	0.57	2.38	0.80	0.41	0.21	0.10	0.59	12/16/03	3/25/13
Rock Creek	16725	NH3	POR	0.29	-0.28	0.00	0.06	-4.63	1.20	-2.30	54	0.02	0.15	0.03	0.00	0.00	0.00	0.03	2/25/04	6/26/12
Rock Creek	16725	NH3	Winter	0.42	-0.33	0.00	0.07	-4.90	0.88	-1.82	35	0.02	0.15	0.04	0.00	0.00	0.00	0.04	2/25/04	4/24/12
Rock Creek	16725	TKN	POR	0.22	-0.17	0.00	0.04	-3.92	-1.20	-0.69	57	0.81	2.75	1.11	0.65	0.34	0.10	0.77	2/25/04	6/26/12
Rock Creek	16725	TKN	Winter	0.20	-0.16	0.00	0.05	-3.04	-0.92	-0.74	38	0.90	2.75	1.40	0.73	0.32	0.10	1.08	2/25/04	4/24/12



Image CF- 6: Spillway at Benbrook Lake

Segment 0829 – Clear Fork Trinity River Below Benbrook Lake

Overview

This segment runs 14 miles from the confluence of the West Fork Trinity River in Tarrant County to the Benbrook Lake dam in Tarrant County. The watershed here is approximately 100% urban and the entire segment is in the Grand Prairie ecoregion.

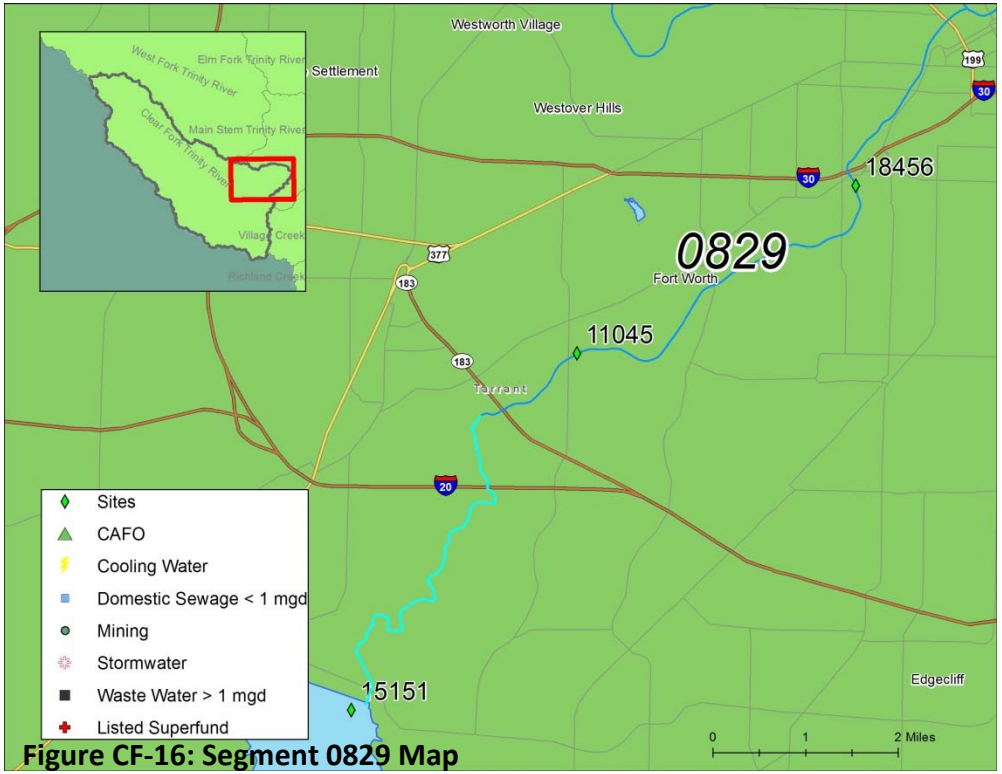


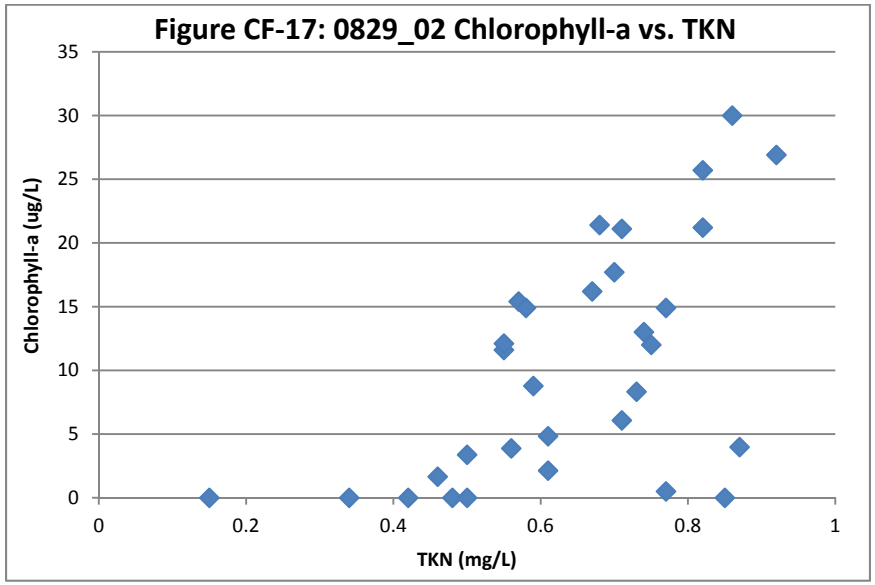
Figure CF-16: Segment 0829 Map

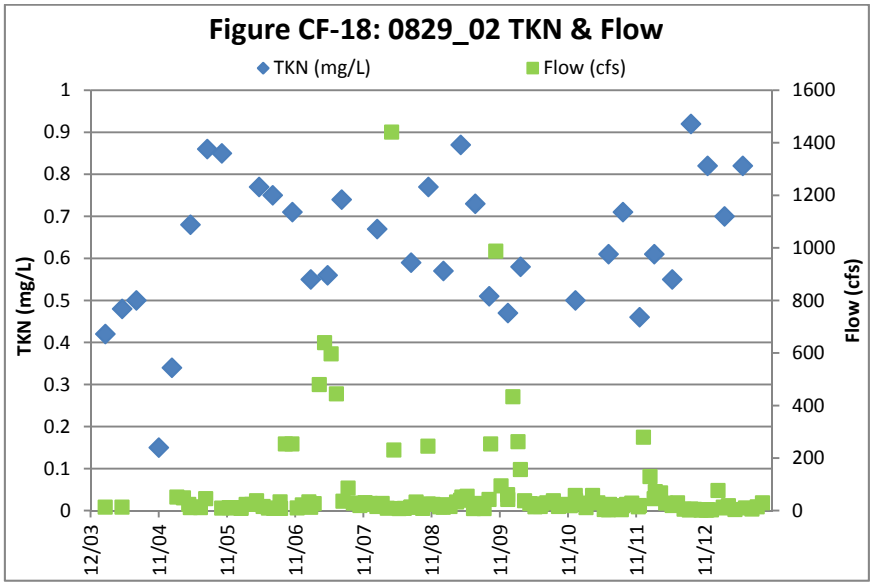
Assessments (Classified Segments):

Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0829_01 - From the confluence with West Fork Trinity River to 1 mile upstream	No Concern	Not Assessed (No Data)
0829_02 - From 1 mile upstream of the confluence with West Fork Trinity River up to the confluence with Mary's Creek	Fully Supporting	Fully Supporting
0829_03 - From the confluence with Mary's Creek up to Benbrook Dam in Tarrant County, TX	Not Assessed (No Data)	Not Assessed (No Data)

General Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0829_01	Not Assessed (No Data)	Fully Supporting
0829_02	Fully Supporting	Concern
0829_03	Not Assessed (No Data)	Fully Supporting

Assessment unit 0829_02 was found to have concerns for chlorophyll-a based on the in-house 5 year assessment. Similar to segment 0832, there is a high positive correlation between chlorophyll-a and TKN (Figure CF-17). However, there is no correlation between TKN and flow. There is no correlation between chlorophyll-a and ammonia. This indicates that the majority of the TKN is organic nitrogen which can converted to nitrate and then used by algae. As the watershed is urbanized, it appears that the source of nitrogen may be related to residential fertilizers. Flows in this assessment unit are typically low, so residence time may be relatively high allowing the algae plenty of time to utilize the nitrogen in the system. Although there is a low correlation, there are occasions when TKN decreases during high flow events which may support the long residence time theory (Figure CF-18). It does not appear that the chlorophyll-a concerns are having an effect on dissolved oxygen as there were only three data points out of 141 that were reported below 5 mg/L.

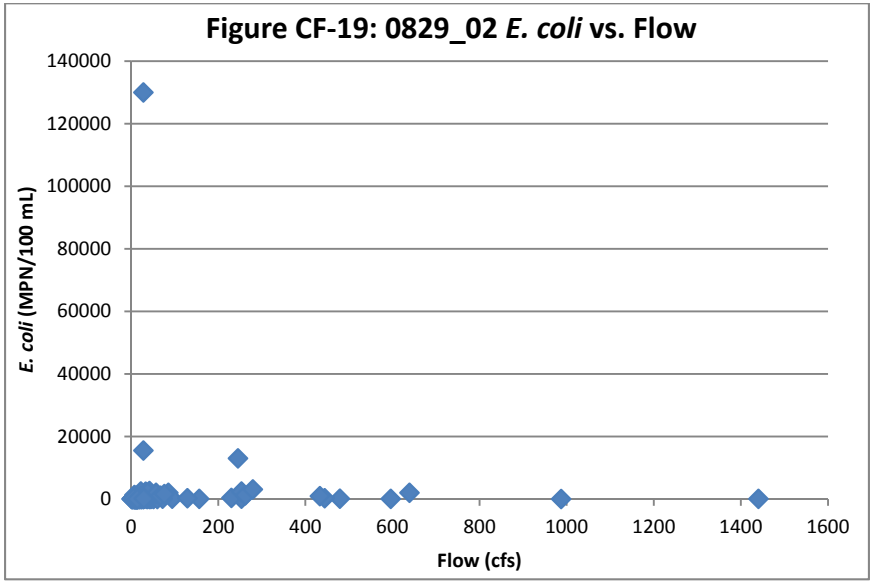




Contact Recreation Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0829_01	Not Assessed (No Data)	Not Assessed (No Data)
0829_02	Fully Supporting	Not Supporting
0829_03	Not Assessed (No Data)	Not Assessed (No Data)

Assessment unit 0829_02 was found to be not supporting due to elevated *E. coli* levels by the in-house 5 year assessment. There are several extremely high *E. coli* values in this assessment unit that are driving up the geometric mean. However, even removing the three highest values from the dataset, the geomean still exceeds the standard of 126 MPN/100 mL. As shown in Figure CF-19, there is a poor correlation between *E. coli* and flow. This indicates that, similar to chlorophyll-a, there is enough residence time to allow *E. coli* populations to increase. Alternatively, there may be continuous sources into the stream such as failing septic systems or broken sewage lines. It is recommended that additional sampling be conducted in order to determine the location of possible sources in the watershed.

Figure CF-19: 0829_02 *E. coli* vs. Flow



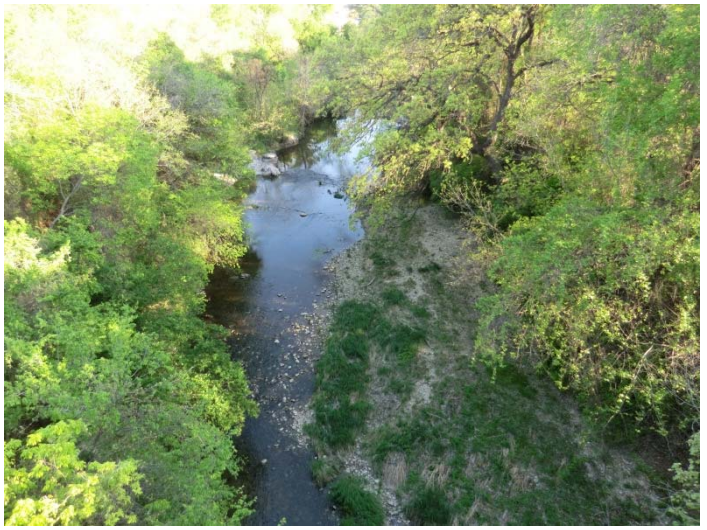


Image CF- 7: 0829 at IH20

Public Water Supply Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0829_01	Fully Supporting	No Concern
0829_02	Fully Supporting	Fully Supporting
0829_03	Not Assessed (No Data)	No Concern

Fish Consumption Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0829_01	Not Supporting	Not Assessed (No Data)
0829_02	Not Supporting	Not Assessed (No Data)
0829_03	Not Supporting	Not Assessed (No Data)

Based on the TCEQ Draft 2014 Integrated Report, this segment was found to be not supporting due to dioxins and PCBs in fish tissue. TMDLs are underway.

Assessments (Unclassified Segments):

Aquatic Life Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0829A_01 - Entire lake	Not Assessed (No Data)	Not Assessed (No Data)

General Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0829A_01	Not Assessed (No Data)	Not Assessed (No Data)

Contact Recreation Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0829A_01	Not Assessed (No Data)	Not Assessed (No Data)

Public Water Supply Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0829A_01	Not Assessed (No Data)	Not Assessed (No Data)

Fish Consumption Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0829A_01	Concern	Not Assessed (No Data)

Based on the TCEQ Draft 2014 Integrated Report, this assessment unit was found to be not supporting due to arsenic in fish tissue.

Trend Analysis Overview

Table CF-12: Trend Analysis Result Summary

Clear Fork		Days Since Precip			Flow Severity			DO			pH			Sp Cond			TDS			NH3		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0829_02	11045				DN	DN	DN				DN	DN	DN							DN		
0829_02	18456		UP							DN		UP		UP	UP	UP	UP	UP	UP			

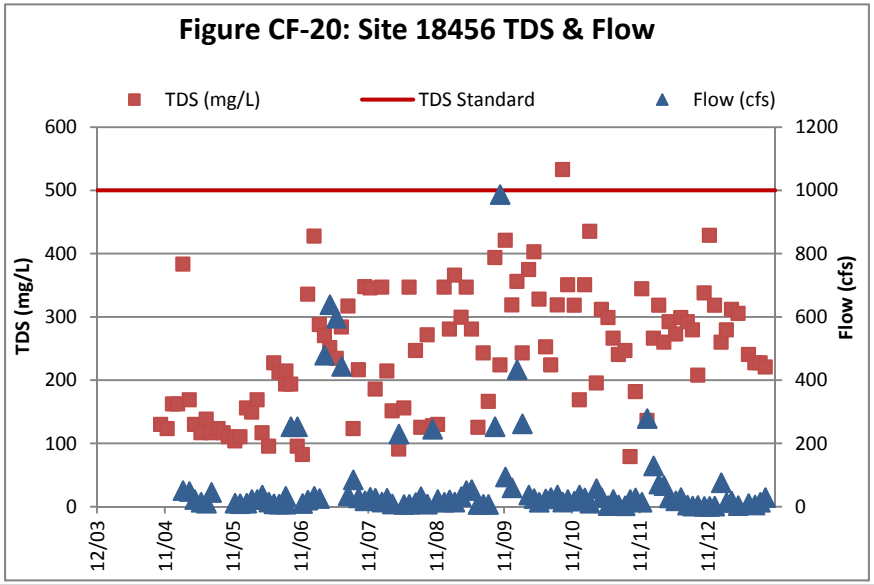
Trends Key
A-All Months
S-Summer/Growing Season (May-October)
W-Winter/Dormant Sesaon (November-April)
UP Increasing Trends
DN Decreasing Trends

There were 16 significant trends identified for this segment as summarized in Table CF-12. For additional detail on trend methods, see the Data Review Methodology section.

Trends (Classified Segments):
See Table CF-13 for details of the significant trends analysis summary presented in Table CF-12. The decreasing winter trend for dissolved oxygen at site 18456 has an R^2 of 0.11 while there is an increasing summer trend for pH with an R^2 of 0.12. The decreasing pH trends for site 11045 occur in all three time periods with R^2 values from 0.17 to 0.35. This seems to indicate that there may be a change in water quality occurring at site 11045. However, the slopes are extremely shallow (-0.03 and -0.04) with minimum pH values of 7.3 and 7.4 so these trends do not present a concern at this time.

Specific conductance and TDS trends are increasing at site 18456 as shown by TDS in Figure CF-20. While the R^2's are less than 0.21, the slopes are high. This is somewhat concerning but, as the standard is applied to an average of the data over the entire segment, there doesn't appear to be an immediate concern for exceeding the standard. Currently,

Figure CF-20: Site 18456 TDS & Flow



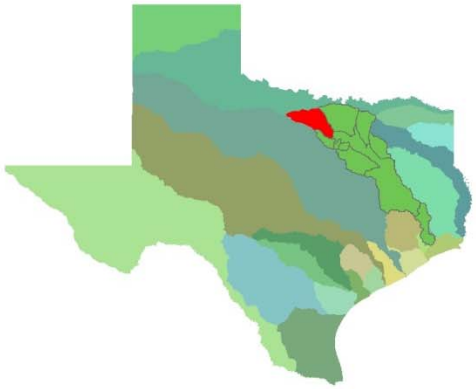
there is no data available for assessment units 0829_01 and 0829_03. The average TDS value for 0829_02 is 257.9 mg/L while the standard is 500 mg/L. TDS and specific conductance are poorly related to stream flow which may indicate that TDS levels in this segment are naturally high. A likely cause for the increasing trends is the urbanization of the watershed. Lawn irrigation and other anthropogenic activities can introduce water with high dissolved solids content to the river via storm drains.

Table CF-13: 0829 Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0829_02	11045	pH	POR	0.26	-0.04	0.00	0.01	-3.44	-0.55	-0.34	36	7.76	8.10	7.90	7.80	7.65	7.30	0.25	2/18/04	3/18/13
0829_02	11045	pH	Summer	0.17	-0.03	0.09	0.02	-1.82	-0.34	0.33	18	7.74	8.10	7.80	7.75	7.60	7.30	0.20	5/18/04	9/19/12
0829_02	11045	pH	Winter	0.35	-0.04	0.01	0.01	-2.95	-0.50	-0.48	18	7.78	8.10	7.90	7.80	7.70	7.40	0.20	2/18/04	3/18/13
0829_02	11045	NH3	POR	0.14	-0.21	0.02	0.09	-2.35	1.46	-2.04	37	0.03	0.20	0.06	0.00	0.00	0.00	0.06	2/18/04	6/24/13
0829_02	11045	Flow Severity	POR	0.27	-0.20	0.00	0.06	-3.55	1.44	-1.37	37	3.49	5.00	5.00	3.00	3.00	2.00	2.00	2/18/04	3/18/13
0829_02	11045	Flow Severity	Summer	0.39	-0.25	0.00	0.08	-3.28	0.72	-1.44	19	3.68	5.00	5.00	3.00	3.00	2.00	2.00	5/18/04	9/19/12
0829_02	11045	Flow Severity	Winter	0.18	-0.15	0.08	0.08	-1.88	1.52	-0.20	18	3.28	5.00	3.00	3.00	3.00	2.00	0.00	2/18/04	3/18/13
0829_02	18456	Sp Cond	POR	0.19	25.24	0.00	5.02	5.03	1.01	-1.10	108	375.65	820.00	490.00	377.00	245.00	122.00	245.00	11/9/04	10/8/13
0829_02	18456	Sp Cond	Summer	0.20	24.11	0.00	6.68	3.61	1.59	1.47	54	358.72	820.00	450.00	365.50	240.00	122.00	210.00	5/10/05	10/8/13
0829_02	18456	Sp Cond	Winter	0.21	27.56	0.00	7.46	3.69	-0.08	-1.92	54	392.57	670.00	532.00	413.00	250.00	127.00	282.00	11/9/04	4/9/13
0829_02	18456	DO	Winter	0.11	-0.22	0.01	0.09	-2.53	-1.10	0.59	52	9.33	13.70	10.60	9.55	8.50	4.90	2.10	11/9/04	4/9/13
0829_02	18456	pH	Summer	0.12	0.04	0.01	0.02	2.60	-0.42	-0.20	54	7.95	8.60	8.20	8.00	7.80	7.10	0.40	5/10/05	10/8/13
0829_02	18456	TDS	POR	0.19	16.40	0.00	3.26	5.03	1.01	-1.10	108	244.17	533.00	318.50	245.05	159.25	79.30	159.25	11/9/04	10/8/13
0829_02	18456	TDS	Summer	0.20	15.67	0.00	4.34	3.61	1.59	1.47	54	233.17	533.00	292.50	237.58	156.00	79.30	136.50	5/10/05	10/8/13
0829_02	18456	TDS	Winter	0.21	17.91	0.00	4.85	3.69	-0.08	-1.92	54	255.17	435.50	345.80	268.45	162.50	82.55	183.30	11/9/04	4/9/13
0829_02	18456	Days Since Precip	Summer	0.30	0.27	0.00	0.06	4.79	-0.38	-1.08	55	7.34	49.00	7.00	5.00	1.00	0.50	6.00	5/10/05	10/8/13

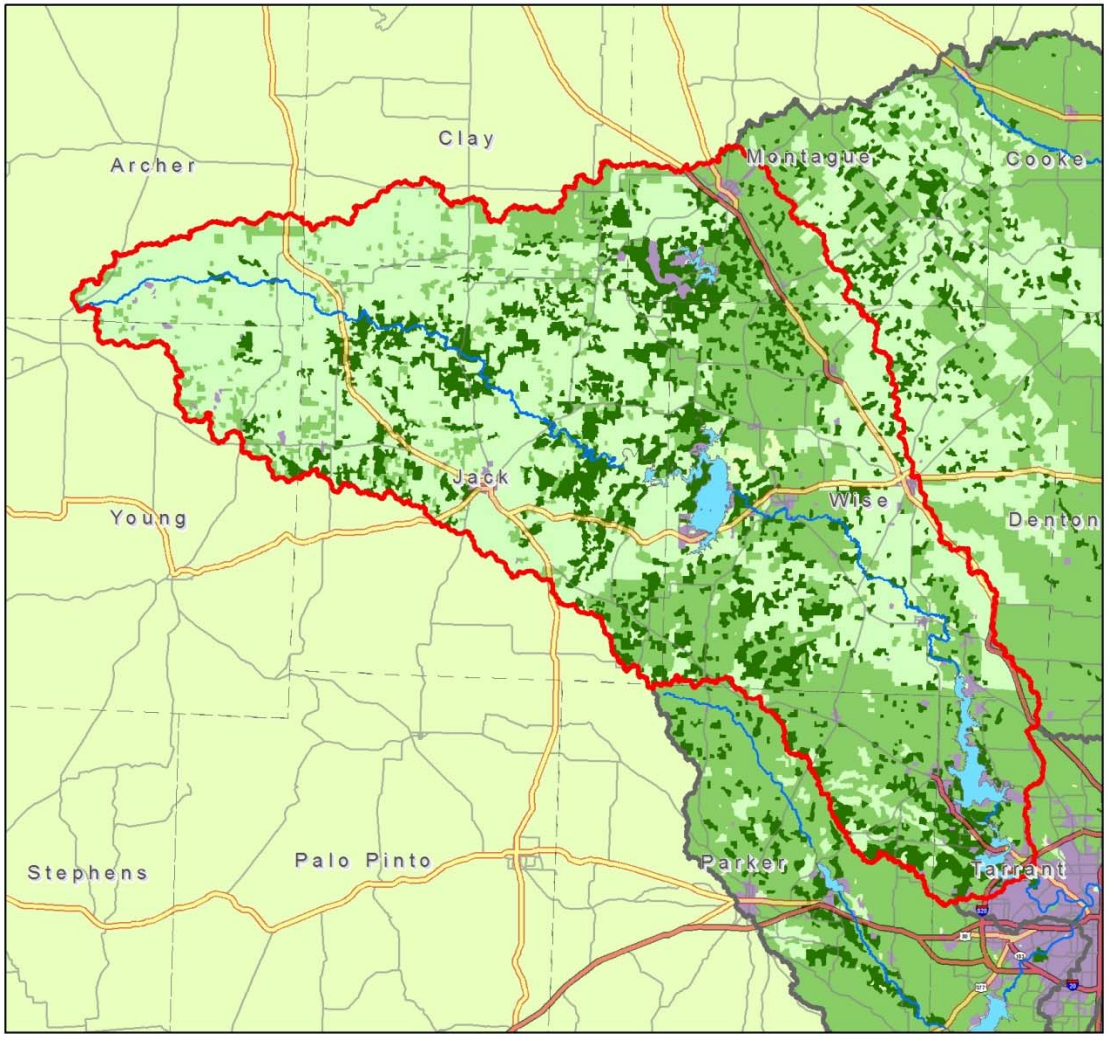
Trends (Unclassified Segments):
None

West Fork Trinity River



Land Use Type

- Rangeland
- Urban, Industrial and Residential
- Crop, Pasture and other Agriculture
- Forest



WEST FORK TRINITY RIVER

Classified Segments Used in this Report – 7
Unclassified Segments & Tributaries Used in this Report– 10

0812 – West Fork Trinity River Above Bridgeport
0811 – Bridgeport Reservoir
Beans Creek – An unclassified tributary
Big Creek – An unclassified tributary
0810 – West Fork Trinity River Below Bridgeport
0810A – Big Sandy Creek
0810B – Garrett Creek
0810C – Martin Branch
0810D – Salt Creek
0809 – Eagle Mountain Reservoir
0809A – Walnut Creek
0809B – Ash Creek
Derrett Creek – An unclassified tributary
Dosier Creek – An unclassified tributary
0808 – West Fork Trinity River Below Eagle Mountain Reservoir
0807 – Lake Worth
0834 – Lake Amon G. Carter

Sites Used for Analysis:

2008 Integrated Report	36
2010 Integrated Report	46
2012 Integrated Report	47
Draft 2014 Integrated Report	49
5-Year Analysis	39
Valid Trends	29

Table WF-1: West Fork Trinity River Count of Dischargers by Type and County

County	Cooling Water	Domestic Sewage <1mgd	Mining	Stormwater	Wastewater >1mgd	CAFO	Total Dischargers
JACK		2					2
MONTAGUE					1	1	2
PARKER		2			1		3
TARRANT		3			1		4
WISE		12			4		16
Total		19			7	1	27

The West Fork subwatershed extends approximately 150 river miles from the headwaters in Archer County to the Lake Worth Dam in Tarrant County. A majority of the subwatershed is rural with pastureland and row crop agriculture, however, the most downstream portion of the subwatershed becomes more urbanized. Major population centers include Bridgeport, Jacksboro, Bowie, Decatur, and Reno as well as the northwest communities of the DFW Metroplex. Bridgeport Reservoir, Eagle Mountain Reservoir, Lake Worth, and Lake Amon G. Carter are located in this subwatershed. Water rights permits for both Bridgeport and Eagle Mountain reservoirs are held by Tarrant Regional Water District (TRWD) while those for lakes Worth and Amon G. Carter are held by the cities of Fort Worth and Bowie, respectively.

The subwatershed receives between 28 and 36 inches of precipitation annually. The West Fork flows through the North Central Prairies, Western Cross Timbers, and Grand Prairies.

There is one site in this subwatershed that is on the EPA Superfund Site list. Trichloroethene, a degreaser, has been found in the ground water at this location. There are six hazmat events that required action by the EPA On-Scene Coordinator (OSC) office although two of these are outside of the period of record for this report. The OSC office responds to oil and hazardous materials spills and coordinates efforts for removal and disposal of the contaminants. See Tables WF-2 and WF-3, for details and links to additional information.

Table WF-2: EPA Superfund Sites

Segment	Site	Link to Additional EPA Information	Map Site	1st Cleanup Action Initiated	Proposed to National Priority List (NPL)	Listed as Final on the NPL	Final Remedy Selected	Construction Complete	Deleted From NPL	Media Affected	Contaminant
0809A	SANDY BEACH ROAD GROUND WATER PLUME	EPA Link	Map It	05/18/2004	04/27/2005	09/14/2005	09/29/2011			Ground Water	Trichloroethene

Table WF-3: EPA On-Scene Coordinator Investigations

Segment	Site	Link to Additional EPA Information	Map Site	Date	Contaminants Found
0812	COREPETRO OIL SPILL FPN NO. E02608	EPA Link	Map It	4/16/2002	Crude Oil
0810	E12607 - STRATA OPERATING/GREENTIDE WATER DISPOSAL, LTD.	EPA Link	Map It	11/8/2011	Produced Water, Crude Oil, Scale Inhibitor, Surfactants
0810A	ASPEN OIL SPILL	EPA Link	Map It	6/23/2010	Oil
0810A	DECATUR GAS WELL EXPLOSION	EPA Link	Map It	3/19/2010	Natural Gas
0809A	EAGLE MOUNTAIN LAKE DIESEL SPILL	EPA Link	Map It	9/22/2003	Diesel Fuel
0809A	PELICAN BAY PUBLIC WATER SYSTEM	EPA Link	Map It	8/10/2004	Trichloroethene, Cis-1,2-Dichloroethene, and MTBE

Segment 0812 – West Fork Trinity River Above Bridgeport

Overview

This 85 mile segment begins immediately upstream of the confluence of Bear Hollow in Jack County and continues to State Highway 79 in Archer County. Segment 0812 is entirely within the North Central Prairie ecoregion and the vast majority of land use in this segment is rangeland.

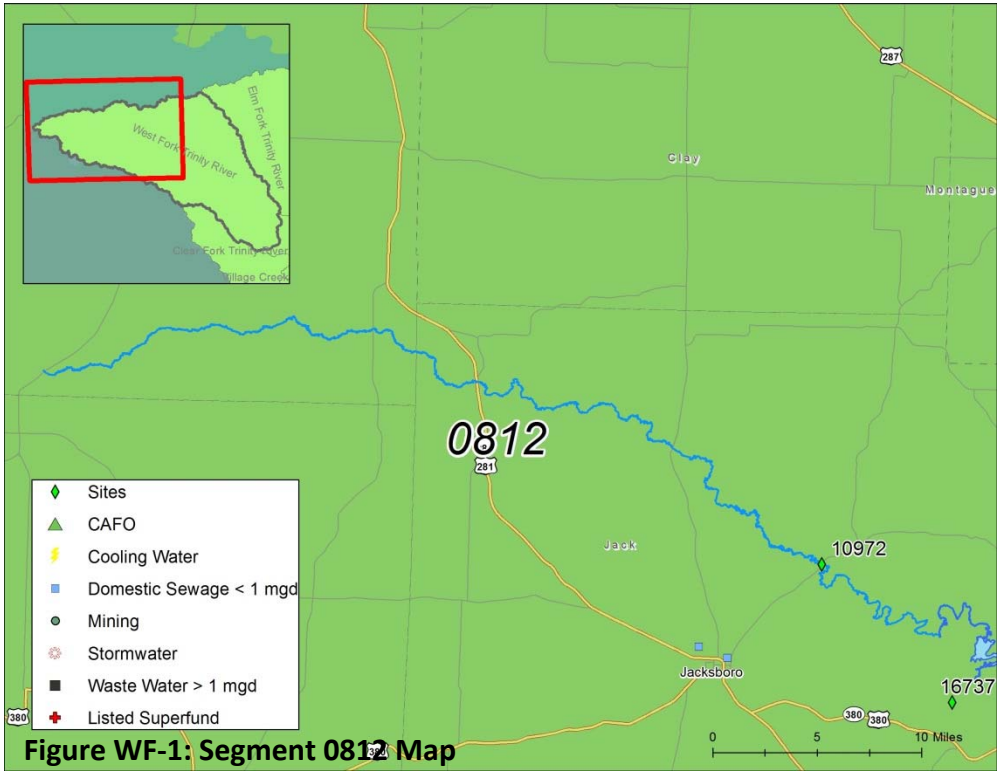


Figure WF-1: Segment 0812 Map

Assessments (Classified Segments):

Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0812_01 - Lower 25 miles of segment	Not Supporting	Fully Supporting
0812_02 - Upper 60 miles of segment	Not Assessed (No Data)	Not Assessed (No Data)

The lower 25 miles of the segment were found to be not supporting due to depressed dissolved oxygen by the TCEQ Draft 2014 Integrated Report. However, it was found to be fully supporting by the in-house 5 year assessment. The non-support finding is based on a carry forward listing from previous Integrated Reports. The listing category of 5b recommends reassessing the water quality standards prior to implementing a TMDL. As discussed in the 2010 Basin Summary Report, this segment has a high aquatic life use designation but the flow is typically very low. Between 10/1/2007 and 11/30/2013, flow values from the USGS Gage West Fork Trinity River Near Jacksboro were recorded as 0 cfs 41% of the time and below 0.1 cfs (inclusive of 0 cfs readings) almost 50% of the time.

General Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0812_01	Fully Supporting	Concern
0812_02	Fully Supporting	Fully Supporting

The lower 25 miles of the segment were found to have concerns for chlorophyll-a and total phosphorus by the in-house 5 year assessment. However, the chlorophyll-a concern was based on a limited data set of four values. Elevated Total Phosphorus levels appear to occur during periods of heavy rainfall as shown in Figure WF-2. This indicates that agricultural fertilizers may be the source of the concern in this segment.

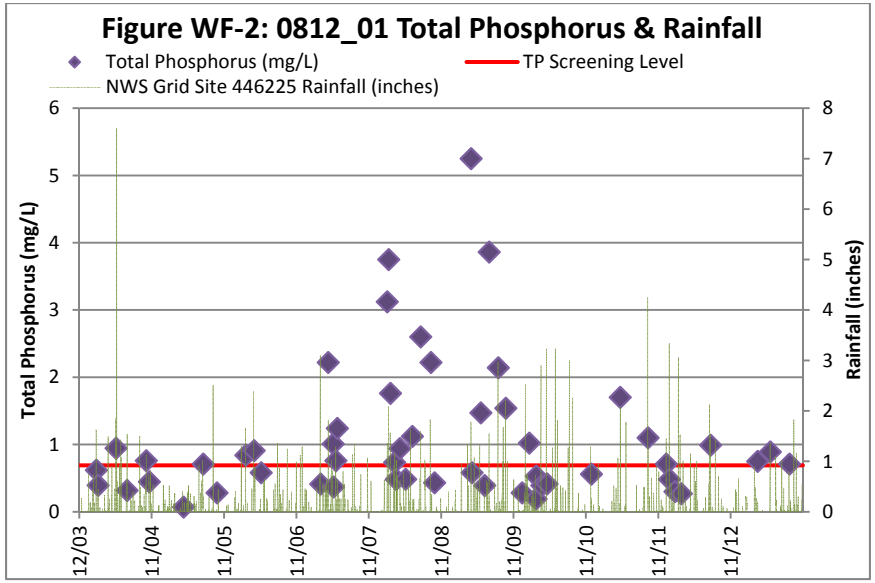


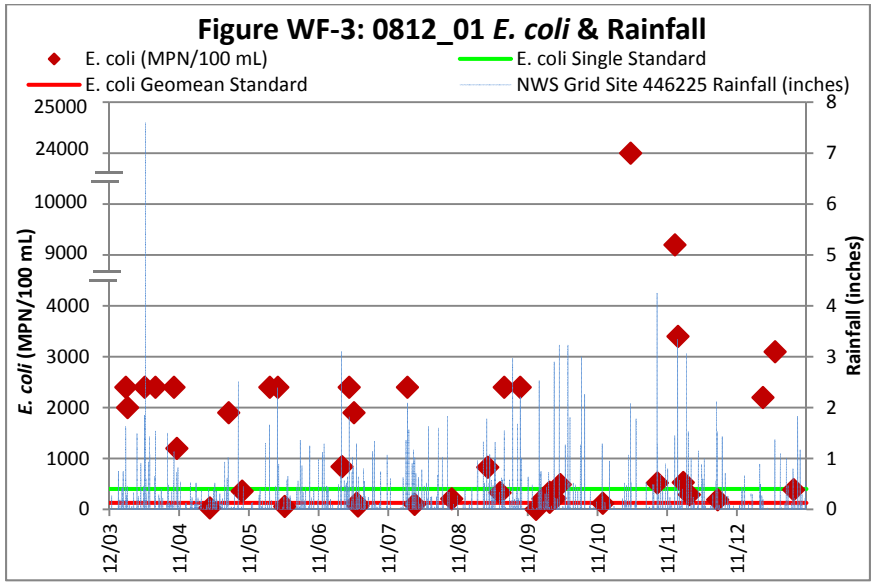


Image WF-1: Small beaver dam under Hwy 59

Contact Recreation Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0812_01	Concern	Not Supporting
0812_02	Not Assessed (No Data)	Not Assessed (No Data)

The lower 25 miles of the segment were found to have concerns for *E. coli* by the TCEQ Draft 2014 Integrated Report. This assessment unit was also found to be not supporting due to *E. coli* by the in-house 5 year assessment. As shown in Figure WF-3, it appears that *E. coli* levels rise in conjunction with rainfall events. The elevated data points after 2010 show a change in analytical methods where the samples are diluted in order to obtain a higher maximum detection limit. Prior to

2010, samples were not diluted therefore the results were reported as >2400 MPN/100 mL. With dilution, this maximum is multiplied by the dilution factor.



Public Water Supply Use:

	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0812_01	Fully Supporting	Fully Supporting
0812_02	Fully Supporting	No Concern

Fish Consumption Use:

	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0812_01	Not Assessed (No Data)	Not Assessed (No Data)
0812_02	Not Assessed (No Data)	Not Assessed (No Data)

Assessments (Unclassified Segments):
Aquatic Life Use: Not Assessed (No Data)

General Use: Not Assessed (No Data)

Contact Recreation Use: Not Assessed (No Data)

Public Water Supply Use: Not Assessed (No Data)

Fish Consumption Use: Not Assessed (No Data)

Trend Analysis Overview

Table WF-4: Trend Analysis Result Summary

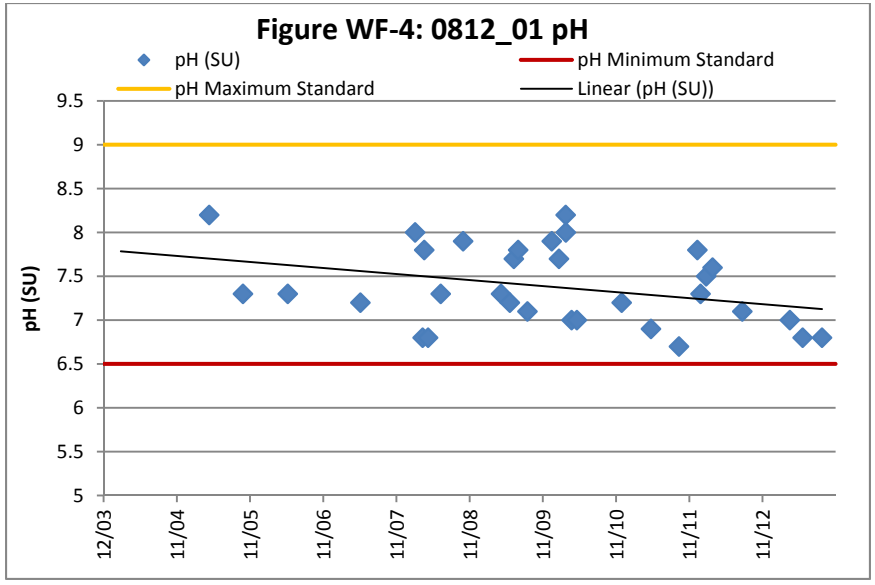
West Fork		Days Since Precip			Flow Severity			Flow			pH			Sp Cond			TSS			TDS			Chloride			TKN		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0812_01	10972		DN				DN	UP	UP		DN	DN		DN	DN				DN		DN	DN		DN				DN

West Fork		OP			TP		
Seg_AU	Site	A	S	W	A	S	W
0812_01	10972			DN		UP	

Trends Key
A-All Months
S-Summer/Grow ing Season (May-October)
W-Winter/Dormant Sesaon (November-April)
UP Increasing Trends
DN Decreasing Trends

There were 15 significant trends identified for this segment as summarized in Table WF-4. For additional detail on trend methods, see the Data Review Methodology section.

Trends (Classified Segments):
See Table WF-5 for details of the significant trends analysis summary presented in Table WF-4. There is downward summer trend for pH in this assessment unit with an R^2 of 0.37. However, there are no chlorophyll-a data available to determine if there associated trends in algae. A majority of the samples were collected before noon, and therefore, the stream may still be recovering from respiration by algal blooms. As the data are approaching the minimum pH standard, additional sampling including chlorophyll-a may be necessary to determine if nighttime respiration by algal blooms are causing the decreasing pH trends (Figure WF-4). The increasing trend for TP with an R^2 of 0.12 in the summer seasons appears to be an artifact of several frequent high flow events; specifically between 2008 and 2010 (Figure WF-5). Ongoing drought conditions appear to be causing a decreasing trend after 2010.



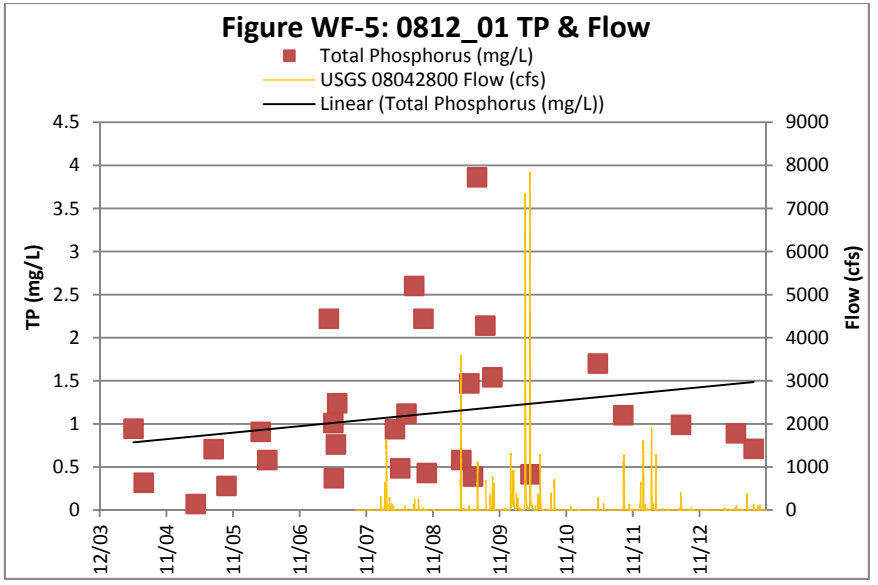


Table WF-5: 0812 Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0812_01	10972	Flow	POR	0.20	0.48	0.01	0.18	2.70	0.50	-0.95	31	286.99	2920.00	148.00	28.00	4.20	0.80	143.80	5/10/05	9/23/13
0812_01	10972	Flow	Summer	0.33	0.58	0.02	0.21	2.70	-0.18	-1.14	17	239.58	1580.00	155.00	69.00	4.00	0.80	151.00	5/10/05	9/23/13
0812_01	10972	Sp Cond	POR	0.18	-0.13	0.01	0.05	-2.59	1.64	0.19	32	268.84	1000.00	286.50	190.00	143.50	74.00	143.00	5/10/05	9/23/13
0812_01	10972	Sp Cond	Summer	0.36	-0.17	0.01	0.05	-3.02	1.86	1.02	18	242.89	1000.00	222.00	175.50	106.00	74.00	116.00	5/10/05	9/23/13
0812_01	10972	pH	POR	0.11	-0.07	0.06	0.04	-1.93	0.62	-1.28	32	7.38	8.20	7.80	7.30	7.00	6.70	0.80	5/10/05	9/23/13
0812_01	10972	pH	Summer	0.37	-0.10	0.01	0.03	-3.04	1.46	0.12	18	7.24	8.20	7.30	7.20	6.90	6.70	0.40	5/10/05	9/23/13
0812_01	10972	TSS	Winter	0.17	-0.15	0.07	0.08	-1.94	0.14	-0.63	20	337.44	1604.30	383.00	228.30	103.50	38.00	279.50	2/25/04	4/15/13
0812_01	10972	TKN	Winter	0.19	-0.08	0.04	0.04	-2.25	0.90	0.50	23	1.83	5.46	2.26	1.63	1.05	0.61	1.21	2/25/04	4/15/13
0812_01	10972	TP	Summer	0.12	0.11	0.07	0.06	1.91	-1.64	1.90	30	1.10	3.86	1.47	0.92	0.48	0.07	0.99	6/3/04	9/23/13
0812_01	10972	OP	Winter	0.14	-0.09	0.09	0.05	-1.78	-1.71	1.80	22	0.13	0.36	0.16	0.12	0.08	0.02	0.08	2/25/04	4/15/13
0812_01	10972	Chloride	Summer	0.20	-0.19	0.01	0.07	-2.68	-0.33	-0.23	30	35.00	149.00	40.75	21.20	9.30	2.50	31.45	6/3/04	9/23/13
0812_01	10972	Flow Severity	Winter	0.32	-0.38	0.02	0.14	-2.68	0.47	-1.50	17	4.24	6.00	5.00	4.00	3.00	3.00	2.00	12/7/05	4/15/13
0812_01	10972	TDS	Summer	0.16	-0.18	0.08	0.10	-1.84	1.91	1.54	20	379.33	3450.00	382.50	178.98	80.93	48.10	301.58	5/10/05	9/23/13
0812_01	10972	TDS	Winter	0.21	-44.27	0.09	23.92	-1.85	1.73	-0.07	15	244.21	596.00	379.20	172.90	106.60	76.70	272.60	4/18/07	4/15/13
0812_01	10972	Days Since Precip	Summer	0.30	-0.66	0.02	0.25	-2.62	1.21	-0.27	18	3.33	10.00	5.00	3.50	0.50	0.50	4.50	5/10/05	9/23/13

Trends (Unclassified Segments):

None

Segment 0811 – Bridgeport Reservoir

Overview

This 13,000 acre segment impounds the West Fork Trinity River from the Bridgeport Dam in Wise County to the confluence of Bear Hollow in Jack County, up to a normal pool elevation of 836 feet. The majority of the land use in 0811 is classified as rangeland with large sections of urban development on the southwest side of the lake. The entire segment is within the North Central Prairie ecoregion. Bridgeport Reservoir has been noted as being mesotrophic by the TCEQ report Trophic Classification of Texas Reservoirs.

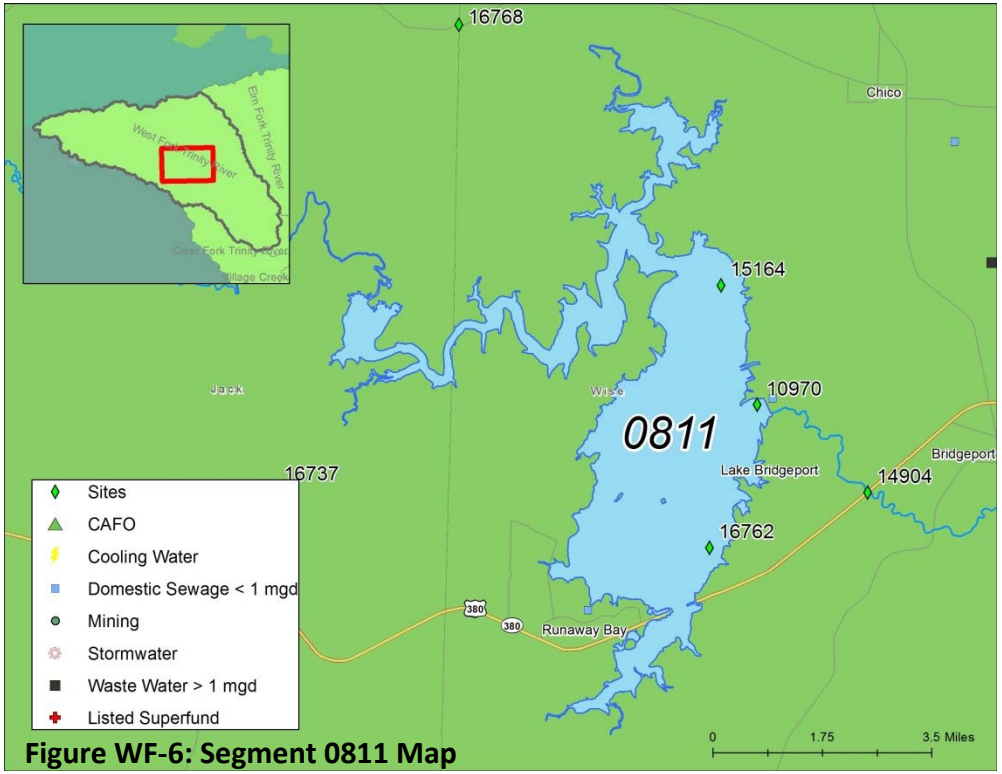


Figure WF-6: Segment 0811 Map

Assessments (Classified Segments):

Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0811_01 - Southeast portion of main body of reservoir	Fully Supporting	Fully Supporting
0811_02 - Southwest portion of main body of reservoir	Fully Supporting	Not Assessed (Inadequate Data)
0811_03 - Central portion of main body of reservoir	Fully Supporting	Fully Supporting
0811_04 - Northern portion of main body of reservoir	Fully Supporting	Fully Supporting
0811_05 - Remainder of reservoir	Fully Supporting	Not Assessed (No Data)

General Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0811_01	Fully Supporting	Fully Supporting
0811_02	Fully Supporting	Fully Supporting
0811_03	Fully Supporting	Fully Supporting
0811_04	Fully Supporting	Fully Supporting
0811_05	Fully Supporting	Fully Supporting

Contact Recreation Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0811_01	Fully Supporting	Fully Supporting
0811_02	Not Assessed (No Data)	Not Assessed (No Data)
0811_03	Fully Supporting	Fully Supporting
0811_04	Fully Supporting	Fully Supporting
0811_05	Not Assessed (No Data)	Not Assessed (No Data)

Public Water Supply Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0811_01	Fully Supporting	Fully Supporting
0811_02	Fully Supporting	Not Assessed (Inadequate Data)
0811_03	Fully Supporting	Fully Supporting
0811_04	Fully Supporting	Fully Supporting
0811_05	Fully Supporting	No Concern

Fish Consumption Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0811_01	Not Assessed (No Data)	Not Assessed (No Data)
0811_02	Not Assessed (No Data)	Not Assessed (No Data)
0811_03	Not Assessed (No Data)	Not Assessed (No Data)
0811_04	Not Assessed (No Data)	Not Assessed (No Data)
0811_05	Not Assessed (No Data)	Not Assessed (No Data)

Assessments (Unclassified Segments):

Aquatic Life Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
Beans Creek - Entire water body	Not Assessed (No Data)	Fully Supporting
Big Creek - Entire water body	Not Assessed (No Data)	Not Assessed (No Data)

General Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
Beans Creek	Not Assessed (No Data)	Concern
Big Creek	Not Assessed (No Data)	Fully Supporting

Beans Creek was found to have concerns for Total Phosphorus based on the in-house 5 year assessment. Elevated Total Phosphorus levels appear to occur during periods of heavy rainfall as shown in Figure WF-7. This indicates that agricultural fertilizers may be the source of the concern in this segment.

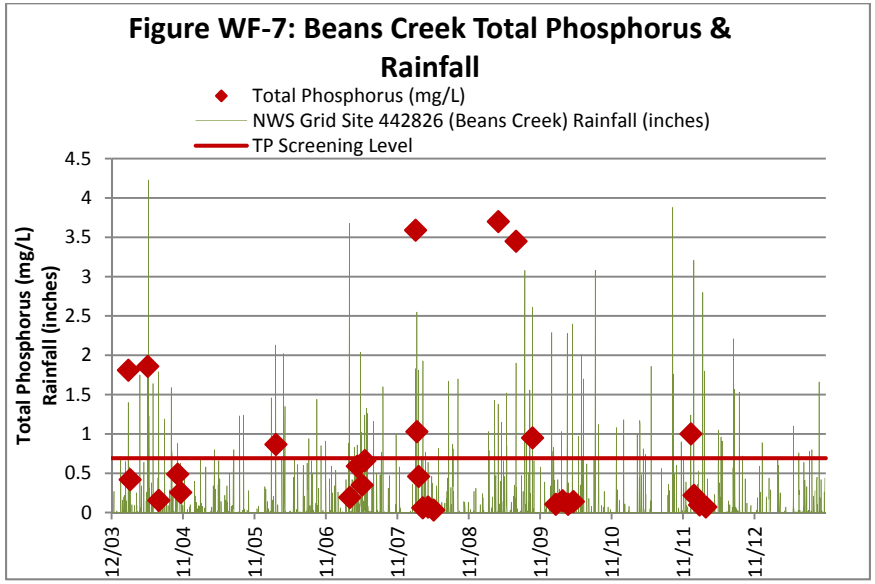




Image WF-2: Dam at Bridgeport

Contact Recreation Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
Beans Creek	Not Assessed (No Data)	Not Supporting
Big Creek	Not Assessed (No Data)	Not Supporting

Both Beans Creek and Big Creek were found to be not supporting due to elevated *E. coli* levels based on the in-house 5 year assessment. As shown in Figure WF-8, it appears that *E. coli* levels rise in conjunction with rainfall events.

Figure WF-8: Beans Creek & Big Creek *E. coli* & Rainfall

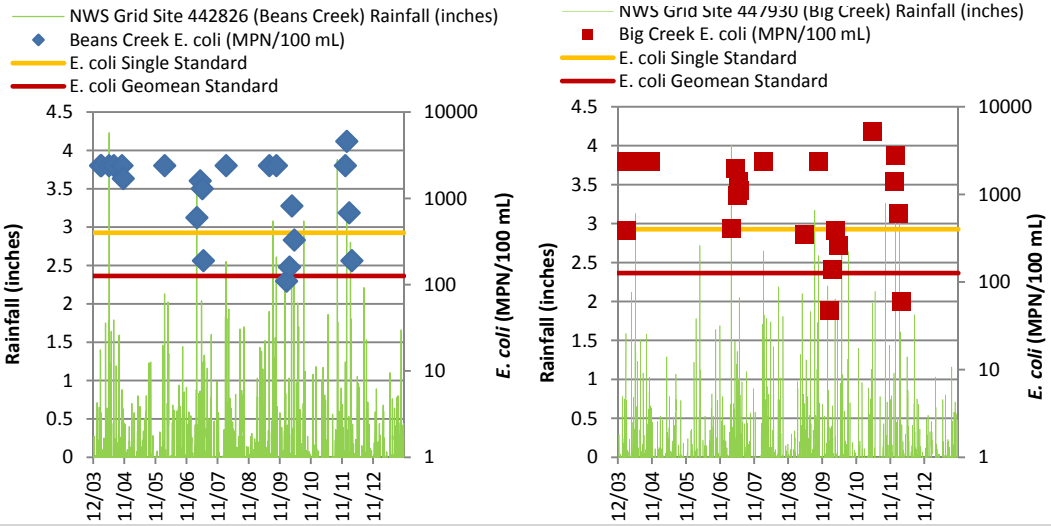




Image WF-3: Homes along Bridgeport

Public Water Supply Use:
Beans Creek
Big Creek

TCEQ Draft 2014 Integrated Report
Not Assessed (No Data)
Not Assessed (No Data)

In-House 5 Year Assessment
Fully Supporting
Fully Supporting

Fish Consumption Use:
Beans Creek
Big Creek

TCEQ Draft 2014 Integrated Report
Not Assessed (No Data)
Not Assessed (No Data)

In-House 5 Year Assessment
Not Assessed (No Data)
Not Assessed (No Data)

Trend Analysis Overview

Table WF-6: Trend Analysis Result Summary

West Fork		Secchi Depth			DO			Sp Cond			TSS			VSS			TDS			Chloride			SO4			NO3		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0811_01	16762			DN						DN							DN	DN	DN			DN						UP
0811_03	10970		DN			DN																DN			DN			UP
0811_04	15164																		DN			DN					UP	
Beans Creek	16737										DN			DN		DN												
Big Creek	16768													DN														

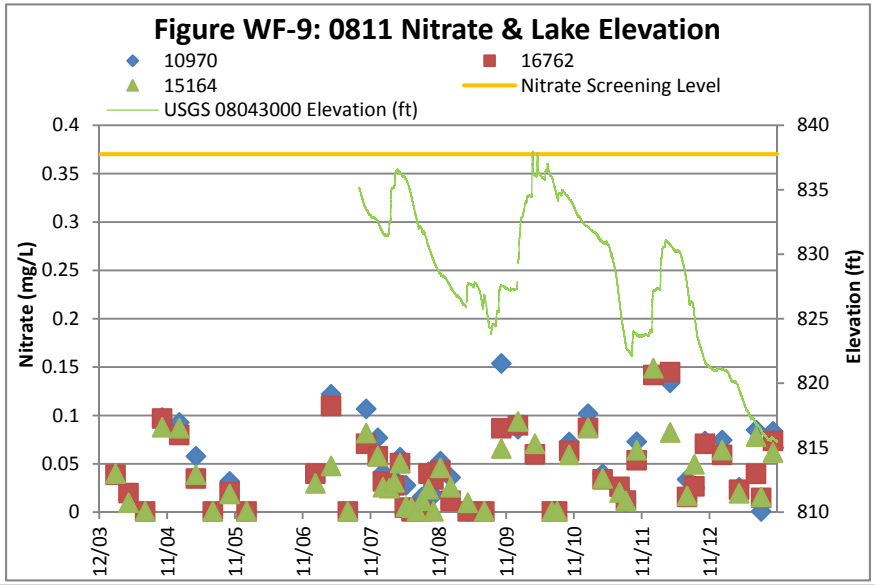
Table WF-6 Continued: Trend Analysis Result Summary

West Fork		TKN			OP			TP		
Seg_AU	Site	A	S	W	A	S	W	A	S	W
0811_01	16762	DN	DN	DN	DN	DN			DN	
0811_03	10970		DN	DN	DN			DN	DN	
0811_04	15164	DN	DN	DN	DN	DN			DN	
Beans Creek	16737					DN				
Big Creek	16768									

Trends Key
A-All Months
S-Summer/Grow ing Season (May-October)
W-Winter/Dormant Sesaon (November-April)
UP Increasing Trends
DN Decreasing Trends

There were 37 significant trends identified for this segment as summarized in Table WF-6. For additional detail on trend methods, see the Data Review Methodology section.

Trends (Classified Segments):
See Table WF-7 for details of the significant trends analysis summary presented in Table WF-6. Similar to the nitrate trends in 0807 and 0809, there are increasing trends for nitrate in 0811. The reported data are all below the screening level of 0.37 mg/L (Figure WF-9) which does not indicate an immediate issue. It appears that the increasing levels of nitrate in the lake may be related to decreasing lake elevations where either the lack of inflows are not providing dilution or evaporation is concentrating the nitrate. However, if this were the case, one would expect to see increasing trends in other parameters, such as, phosphorous and solids. Additional work will be needed to determine the cause of these increasing trends.



The remaining downward trends for the solids and nutrients are of no concern as they are desirable trends. The decreasing trends for Secchi Depth and DO have R^2's less than 0.17.

Table WF-7: 0811 Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0811_01	16762	Secchi Depth	Winter	0.14	-0.04	0.09	0.02	-1.77	0.99	0.43	22	0.94	1.70	1.10	0.89	0.69	0.38	0.41	2/26/04	11/7/13
0811_01	16762	Sp Cond	Winter	0.17	-0.01	0.05	0.01	-2.06	1.91	0.09	23	303.14	360.00	312.00	298.00	284.33	274.67	27.67	2/26/04	11/7/13
0811_01	16762	NO3	Winter	0.14	0.00	0.08	0.00	1.84	1.09	0.61	23	0.06	0.14	0.08	0.06	0.03	0.00	0.05	2/26/04	11/7/13
0811_01	16762	TKN	POR	0.36	-0.06	0.00	0.01	-5.02	0.84	0.78	46	0.47	1.20	0.61	0.50	0.35	0.10	0.26	2/26/04	11/7/13
0811_01	16762	TKN	Summer	0.46	-0.07	0.00	0.02	-4.20	0.75	0.52	23	0.49	1.20	0.63	0.53	0.10	0.10	0.53	5/6/04	9/4/13
0811_01	16762	TKN	Winter	0.31	-0.04	0.01	0.01	-3.08	-0.24	-0.25	23	0.45	0.86	0.53	0.47	0.35	0.10	0.18	2/26/04	11/7/13
0811_01	16762	TP	Summer	0.43	-0.22	0.00	0.05	-4.18	-1.71	-0.16	25	0.04	0.12	0.05	0.03	0.03	0.01	0.02	5/6/04	9/4/13
0811_01	16762	OP	POR	0.15	-0.16	0.01	0.06	-2.68	0.55	-1.88	44	0.01	0.05	0.01	0.01	0.00	0.00	0.01	2/26/04	11/7/13
0811_01	16762	OP	Summer	0.33	-0.22	0.00	0.07	-3.30	1.45	-1.34	24	0.00	0.02	0.01	0.00	0.00	0.00	0.01	5/6/04	9/4/13
0811_01	16762	Chloride	Winter	0.21	-0.03	0.03	0.01	-2.40	1.87	0.23	23	19.53	28.80	22.10	18.05	17.30	14.85	4.80	2/26/04	11/7/13
0811_01	16762	TDS	POR	0.17	-2.99	0.00	0.92	-3.26	0.90	0.34	53	178.32	220.35	188.00	175.00	167.00	134.00	21.00	2/26/04	11/7/13
0811_01	16762	TDS	Summer	0.18	-3.15	0.02	1.30	-2.43	1.08	0.29	29	177.68	220.35	188.00	174.00	164.00	139.00	24.00	5/6/04	9/4/13
0811_01	16762	TDS	Winter	0.16	-2.79	0.05	1.35	-2.06	0.12	0.63	24	179.09	215.15	187.50	176.50	169.50	134.00	18.00	2/26/04	11/7/13
0811_03	10970	Secchi Depth	Summer	0.12	-0.08	0.08	0.04	-1.83	0.67	-0.97	27	1.38	2.70	1.80	1.20	0.84	0.36	0.96	5/6/04	9/4/13
0811_03	10970	DO	Summer	0.17	-0.23	0.03	0.10	-2.27	-1.91	-0.21	28	7.63	9.70	8.73	8.02	6.90	4.20	1.83	5/6/04	9/4/13
0811_03	10970	NO3	Winter	0.14	0.01	0.08	0.00	1.82	0.97	0.01	23	0.07	0.15	0.09	0.07	0.04	0.00	0.06	2/26/04	11/7/13
0811_03	10970	TKN	Summer	0.59	-0.26	0.00	0.05	-5.55	-1.27	-0.79	23	0.53	1.65	0.70	0.50	0.10	0.10	0.60	8/4/04	9/4/13
0811_03	10970	TKN	Winter	0.40	-0.05	0.00	0.01	-3.75	-0.04	-0.06	23	0.45	0.91	0.58	0.47	0.35	0.10	0.23	2/26/04	11/7/13
0811_03	10970	TP	POR	0.14	0.00	0.01	0.00	-2.55	-0.03	-0.76	43	0.04	0.07	0.05	0.04	0.03	0.01	0.03	2/26/04	11/7/13
0811_03	10970	TP	Summer	0.13	0.00	0.09	0.00	-1.79	0.17	-0.34	24	0.04	0.07	0.05	0.04	0.02	0.01	0.03	8/4/04	9/4/13
0811_03	10970	OP	POR	0.17	-0.17	0.01	0.06	-2.86	1.53	-1.82	41	0.00	0.02	0.01	0.00	0.00	0.00	0.01	2/26/04	11/7/13
0811_03	10970	Chloride	Winter	0.16	-0.02	0.06	0.01	-1.97	1.63	0.14	23	19.63	29.20	22.60	18.80	17.23	14.97	5.37	2/26/04	11/7/13
0811_03	10970	SO4	Winter	0.34	-0.61	0.01	0.20	-2.98	0.35	-0.59	19	15.47	21.50	17.70	14.40	13.70	10.10	4.00	2/26/04	11/7/13
0811_04	15164	NO3	Summer	0.15	0.22	0.05	0.11	2.05	-0.90	-1.30	26	0.02	0.08	0.04	0.01	0.00	0.00	0.04	5/6/04	9/4/13
0811_04	15164	TKN	POR	0.42	-0.06	0.00	0.01	-5.64	0.52	-0.31	46	0.50	1.16	0.60	0.51	0.40	0.10	0.20	2/26/04	11/7/13
0811_04	15164	TKN	Summer	0.62	-0.09	0.00	0.02	-5.88	0.45	-0.64	23	0.50	1.16	0.67	0.54	0.10	0.10	0.57	5/6/04	9/4/13
0811_04	15164	TKN	Winter	0.22	-0.04	0.03	0.02	-2.41	0.01	0.25	23	0.50	0.93	0.58	0.50	0.41	0.10	0.17	2/26/04	11/7/13
0811_04	15164	TP	Summer	0.13	0.00	0.08	0.00	-1.84	1.79	-0.07	24	0.04	0.11	0.06	0.03	0.02	0.01	0.03	5/6/04	9/4/13
0811_04	15164	OP	POR	0.18	-0.17	0.00	0.06	-3.04	0.88	-1.24	43	0.01	0.06	0.01	0.01	0.00	0.00	0.01	2/26/04	11/7/13
0811_04	15164	OP	Summer	0.25	-0.20	0.01	0.07	-2.74	1.02	-1.32	24	0.00	0.02	0.01	0.00	0.00	0.00	0.01	5/6/04	9/4/13
0811_04	15164	Chloride	Winter	0.19	-0.03	0.04	0.01	-2.21	1.78	0.23	23	19.49	29.10	22.42	18.04	17.04	14.90	5.38	2/26/04	11/7/13
0811_04	15164	TDS	Winter	0.18	-2.42	0.04	1.09	-2.22	1.05	0.82	24	178.34	215.15	184.50	178.00	168.50	147.00	16.00	2/26/04	11/7/13

Trends (Unclassified Segments):

See Table WF-8 for details of the significant trends analysis summary presented in Table WF-6. There are no trends of concern in the unclassified segments as a majority are decreasing.

Table WF-8: Unclassified Tributary Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
Beans Creek	16737	TSS	POR	0.19	-0.31	0.04	0.14	-2.24	-0.82	-1.40	24	316.33	1536.50	487.70	170.50	10.75	4.00	476.95	2/25/04	3/26/12
Beans Creek	16737	VSS	POR	0.20	-0.46	0.03	0.19	-2.38	-0.93	-1.20	24	38.79	200.90	53.65	15.30	0.50	0.50	53.15	2/25/04	5/19/10
Beans Creek	16737	VSS	Winter	0.23	-0.47	0.08	0.25	-1.89	-0.67	-0.92	14	45.35	200.90	54.60	15.00	0.50	0.50	54.10	2/25/04	4/22/10
Beans Creek	16737	OP	Summer	0.40	-0.49	0.05	0.21	-2.31	-0.56	1.74	10	0.07	0.48	0.05	0.04	0.01	0.00	0.03	6/3/04	5/19/10
Big Creek	16768	VSS	POR	0.13	-0.35	0.10	0.20	-1.74	-0.09	-1.22	23	20.69	151.30	19.90	8.40	0.50	0.50	19.40	2/25/04	5/19/10

Segment 0810 – West Fork Trinity River Below Bridgeport

Overview

This 35 mile segment begins 0.4 miles downstream of the confluence of Oates Branch in Wise County and continues to the Bridgeport Dam in Wise County. The upper reaches are within the North Central Prairie and the middle and southern reaches traverse the Western Cross Timbers ecoregions. Land use in this segment is a mixture of agriculture/pasture and rangeland.

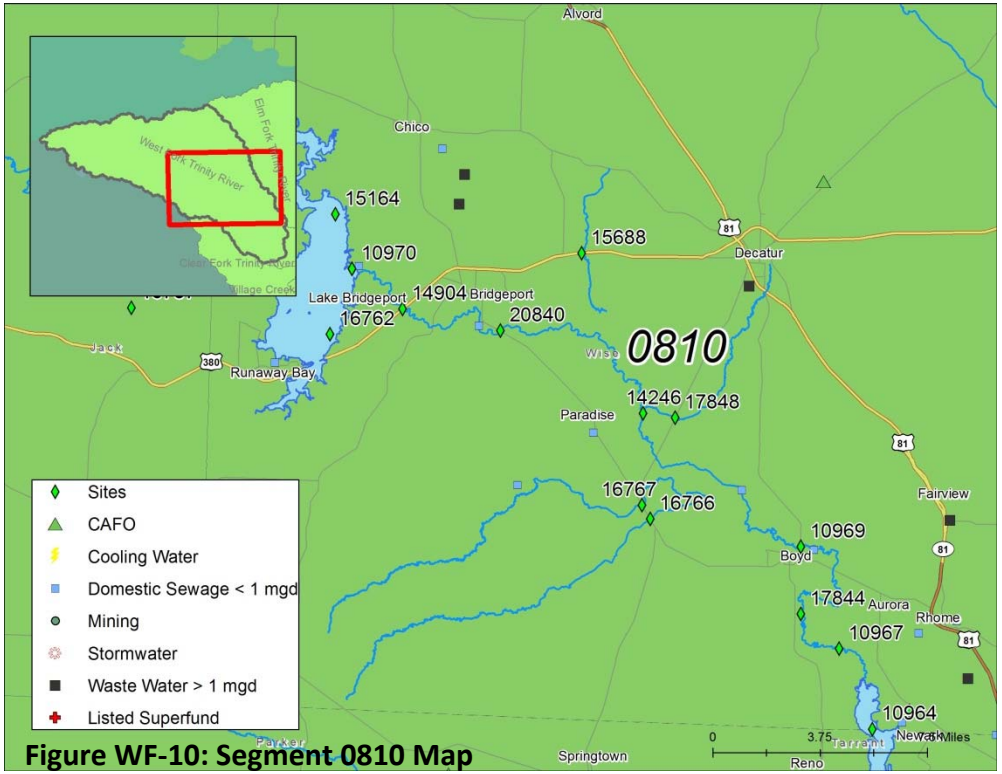


Figure WF-10: Segment 0810 Map

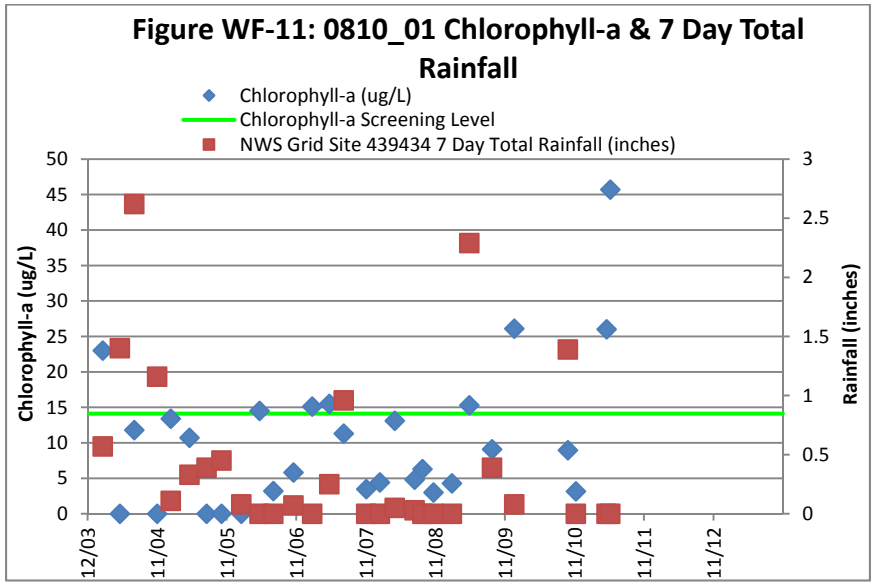
Assessments (Classified Segments):

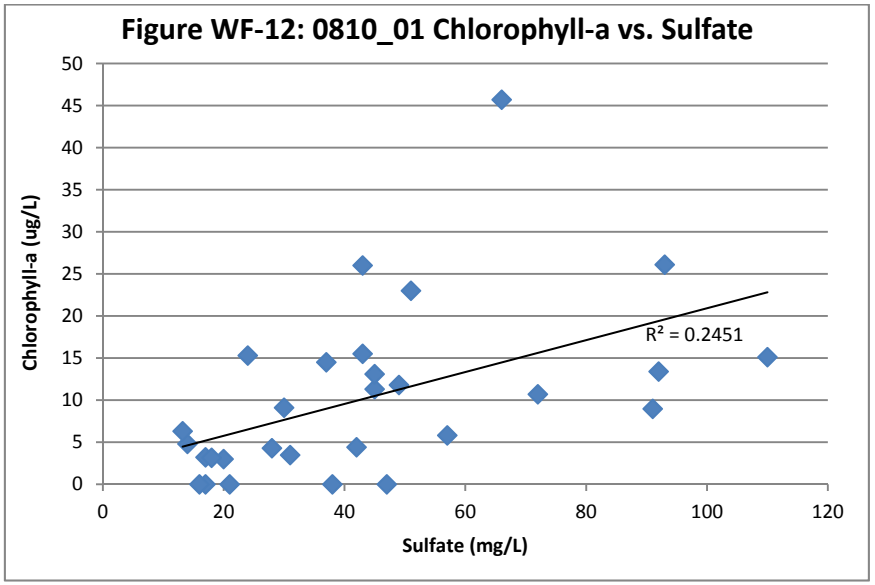
Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0810_01 - Lower 25 miles of segment	Fully Supporting	Fully Supporting
0810_02 - Upper 11 miles of segment	Fully Supporting	Fully Supporting

General Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0810_01	Concern	Concern
0810_02	Fully Supporting	Fully Supporting

The lower 25 miles of this segment were found to have concerns for chlorophyll-a by both the TCEQ Draft 2014 Integrated Report and the in-house 5 year assessment. There is a relatively weak association between chlorophyll-a concentrations and rainfall although a majority of the low concentrations occur during times of low rainfall as shown in Figure WF-11. The strongest relationship among available data is between chlorophyll-a and sulfate (Figure WF-12) although it is assumed that

this is not a true correlation. The relationship between sulfate and rainfall levels at the same site in this assessment unit is also weak which may indicate that there is a source of sulfates unrelated to increases caused by evaporation. The relationships between chlorophyll-a and secchi depth, water temperature, and nutrients are similarly weak. This indicates that there may be a dynamic other than nutrients, seasonality, or water clarity taking place. Potentially, residence time may be allowing ample time for algal populations to increase. Further study may be required to determine the cause of elevated chlorophyll-a in this assessment unit.





Contact Recreation Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0810_01	Not Supporting	Not Supporting
0810_02	Fully Supporting	Fully Supporting

The lower 25 miles of this segment were found to be not supporting due to elevated *E. coli* levels by both the TCEQ Draft 2014 Integrated Report and the in-house 5 year assessment. These findings are likely due to NPS loadings as many elevated *E. coli* values correspond to rainfall events.

Public Water Supply Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0810_01	Fully Supporting	Fully Supporting
0810_02	Fully Supporting	No Concern

Fish Consumption Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0810_01	Not Assessed (No Data)	Not Assessed (No Data)
0810_02	Not Assessed (No Data)	Not Assessed (No Data)

Assessments (Unclassified Segments):

Aquatic Life Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0810A_01 - Fifteen mile stretch of Big Sandy Creek running from confluence with Waggoner Creek to FM 1810 West of Alvord, Wise County	Fully Supporting	No Concern
0810B_01 - Eighteen mile stretch of Garrett Creek running upstream from confluence with Salt Creek to Wise County Road approximately 14 miles upstream of SH114	Fully Supporting	No Concern
0810C_01 - Eight mile stretch of Martin Branch running upstream from confluence with Center Creek to FM 730 south of Decatur, Wise County	Fully Supporting	Fully Supporting
0810D_01 - Eleven mile stretch of Salt Creek running upstream from confluence with Garrett Creek, Wise County	Fully Supporting	No Concern

General Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0810A_01	Not Assessed (No Data)	Concern
0810B_01	Not Assessed (No Data)	No Concern
0810C_01	Not Assessed (No Data)	Fully Supporting
0810D_01	Not Assessed (No Data)	Concern

Both 0810A_01 and 0810D_01 had concerns for Total Dissolved Solids based on the in-house 5 year assessment. Similar to the discussion above for sulfate in 0810_01, the relationships between sulfate and rainfall levels in these streams are weak as shown in Figure WF-13. This may indicate that there is a source of solids unrelated to increases caused by evaporation.

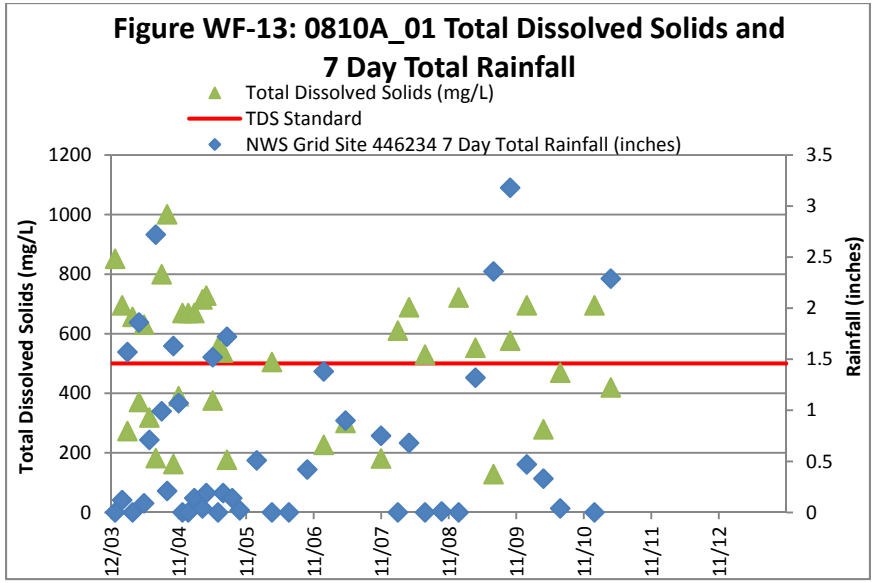




Image WF-4: Sand and driftwood along 0810

Contact Recreation Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0810A_01	Not Supporting	Not Supporting
0810B_01	Fully Supporting	Fully Supporting
0810C_01	Not Supporting	Not Supporting
0810D_01	No Concern	No Concern

Contact recreation uses were found to be not supported in 0810A_01 and 0810C_01 due to elevated *E. coli* levels by both the TCEQ Draft 2014 Integrated Report and the in-house 5 year assessment. These findings are likely due to NPS loadings as many elevated *E. coli* values correspond to rainfall events.

Public Water Supply Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0810A_01	Not Assessed (No Data)	No Concern
0810B_01	Not Assessed (No Data)	No Concern

0810C_01	Not Assessed (No Data)	No Concern
0810D_01	Not Assessed (No Data)	No Concern

Fish Consumption Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0810A_01	Not Assessed (No Data)	Not Assessed (No Data)
0810B_01	Not Assessed (No Data)	Not Assessed (No Data)
0810C_01	Not Assessed (No Data)	Not Assessed (No Data)
0810D_01	Not Assessed (No Data)	Not Assessed (No Data)

Trend Analysis Overview

Table WF-9: Trend Analysis Result Summary

West Fork		Flow Severity			Secchi Depth			pH			Sp Cond			*E. coli*			TDS			Fluoride		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0810_01	10967											DN				DN		DN				
0810_01	10969		DN			UP														DN	DN	DN
0810_01	14246		DN											DN		DN						
0810_02	14904		DN							UP												
0810_02	20840												DN			DN			DN			
0810A_01	15688			DN																		
0810B_01	16767			DN										DN	DN	DN						
0810C_01	17848			DN						UP				DN	DN	DN						
0810D_01	16766			DN																		

Trends Key
A-All Months
S-Summer/Growing Season (May-October)
W-Winter/Dormant Sesaon (November-April)
UP Increasing Trends
DN Decreasing Trends

There were 27 significant trends identified for this segment as summarized in Table WF-9. For additional detail on trend methods, see the Data Review Methodology section.

Trends (Classified Segments):
See Table WF-10 for details of the significant trends analysis summary presented in Table WF-9. The upward trend in pH for site 14904 has an R^2 of 0.13 with a shallow slope of 0.07. The maximum value in the data set was 8.4 so this trend does

not indicate a concern. There are no other trends of concern in this segment. Flow severity is subjective and categorical making it difficult to draw any conclusions from the dataset. With the exception of secchi depth, which is increasing, the remaining trends have R^2's less than 0.38 and are decreasing, which is generally desirable.

Table WF-10: 0810 Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0810_01	10967	Sp Cond	Summer	0.22	-0.06	0.02	0.02	-2.42	1.75	0.03	23	457.91	980.00	579.00	390.00	333.00	299.00	246.00	5/26/04	10/17/12
0810_01	10967	*E. coli*	Winter	0.27	-0.29	0.01	0.10	-2.80	0.54	2.70	23	593.00	8297.00	310.00	160.00	85.00	4.00	225.00	12/22/03	4/15/13
0810_01	10967	TDS	Summer	0.22	-0.06	0.02	0.02	-2.42	1.75	0.03	23	297.64	637.00	376.35	253.50	216.45	194.35	159.90	5/26/04	10/17/12
0810_01	10969	Secchi Depth	Summer	0.27	0.02	0.03	0.01	2.35	1.69	0.59	17	0.24	0.50	0.30	0.20	0.15	0.10	0.15	5/18/04	6/7/11
0810_01	10969	Fluoride	POR	0.30	-0.03	0.00	0.01	-3.43	0.81	-2.13	30	0.12	0.29	0.25	0.03	0.03	0.03	0.23	2/18/04	6/7/11
0810_01	10969	Fluoride	Summer	0.35	-0.03	0.01	0.01	-2.77	-0.34	-1.76	16	0.15	0.28	0.26	0.22	0.03	0.03	0.24	5/18/04	6/7/11
0810_01	10969	Fluoride	Winter	0.38	-0.03	0.02	0.01	-2.74	1.83	-0.34	14	0.09	0.29	0.21	0.03	0.03	0.03	0.19	2/18/04	12/8/10
0810_01	10969	Flow Severity	Summer	0.13	-0.13	0.01	0.05	-2.78	0.93	-2.17	53	3.60	5.00	5.00	3.00	3.00	2.00	2.00	5/18/04	10/28/13
0810_01	14246	Flow Severity	Summer	0.20	-0.19	0.04	0.09	-2.25	-0.78	-1.56	22	4.00	5.00	5.00	5.00	3.00	2.00	2.00	5/26/04	10/17/12
0810_01	14246	*E. coli*	POR	0.18	-0.24	0.00	0.08	-3.11	1.94	0.94	46	1185.15	24196.00	610.00	216.50	75.00	14.00	535.00	12/22/03	4/15/13
0810_01	14246	*E. coli*	Winter	0.26	-0.28	0.01	0.10	-2.79	1.71	1.27	24	1586.54	24196.00	633.00	367.00	120.00	38.00	513.00	12/22/03	4/15/13
0810_02	14904	pH	Winter	0.13	0.07	0.08	0.04	1.82	-0.91	-0.88	24	7.77	8.40	8.10	7.85	7.45	7.00	0.65	12/22/03	4/25/11
0810_02	14904	Flow Severity	Summer	0.25	-0.21	0.01	0.08	-2.67	-0.95	-1.52	23	4.04	5.00	5.00	5.00	3.00	2.00	2.00	5/26/04	10/17/12
0810_02	20840	Sp Cond	Winter	0.13	-52.79	0.08	28.89	-1.83	0.67	-1.86	24	638.04	1170.00	1020.00	405.00	313.50	260.00	706.50	12/22/03	4/25/11
0810_02	20840	*E. coli*	Winter	0.23	-0.38	0.02	0.15	-2.53	1.83	0.61	23	1642.35	19863.00	504.00	110.00	46.00	11.00	458.00	12/22/03	4/25/11
0810_02	20840	TDS	Winter	0.13	-34.31	0.08	18.78	-1.83	0.67	-1.86	24	414.73	760.50	663.00	263.25	203.78	169.00	459.23	12/22/03	4/25/11

Trends (Unclassified Segments):

See Table WF-11 for details of the significant trends analysis summary presented in TableWF-9. The upward trend in pH for site 17848 has an R^2 of 0.12 with a shallow slope of 0.04. The maximum value in the data set was 8.8 SU. Aside from this single high value, the next highest pH value is 8.3 so this trend does not indicate a concern. As discussed above, flow severity trends are not reliable. The remaining trends for *E. coli* are decreasing.

Table WF-11: 0810A, 0810B, 0810C, 0810D Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0810A_01	15688	Flow Severity	Winter	0.13	-0.20	0.09	0.11	-1.77	0.46	-0.96	23	3.48	6.00	5.00	3.00	3.00	1.00	2.00	12/22/03	4/25/11
0810B_01	16767	Flow Severity	Winter	0.14	-0.20	0.04	0.09	-2.20	1.84	0.10	31	2.10	5.00	3.00	2.00	1.00	1.00	2.00	12/22/03	4/25/11
0810B_01	16767	*E. coli*	POR	0.20	-0.45	0.00	0.13	-3.45	-1.37	1.39	50	1437.35	24196.00	727.00	229.00	88.00	0.50	639.00	12/22/03	4/25/11
0810B_01	16767	*E. coli*	Summer	0.31	-0.68	0.01	0.23	-2.92	-0.60	0.37	21	1841.71	24196.00	1300.00	200.00	58.00	1.00	1242.00	5/26/04	10/28/09
0810B_01	16767	*E. coli*	Winter	0.15	-0.34	0.04	0.16	-2.15	-1.45	2.25	29	1144.53	14136.00	474.00	230.00	96.00	0.50	378.00	12/22/03	4/25/11
0810C_01	17848	pH	Winter	0.12	0.04	0.09	0.03	1.76	-0.51	2.00	25	7.91	8.80	8.10	8.00	7.80	7.00	0.30	12/22/03	4/15/13
0810C_01	17848	Flow Severity	Winter	0.17	-0.03	0.02	0.01	-2.50	-0.59	2.03	33	2.85	5.00	3.00	3.00	3.00	2.00	0.00	12/22/03	4/15/13
0810C_01	17848	*E. coli*	POR	0.27	-0.26	0.00	0.06	-4.50	-0.17	0.46	57	2059.61	24196.00	2400.00	980.00	440.00	68.00	1960.00	12/22/03	4/15/13
0810C_01	17848	*E. coli*	Summer	0.17	-0.23	0.04	0.10	-2.20	0.75	1.04	26	1929.38	24196.00	1700.00	620.00	390.00	68.00	1310.00	5/26/04	10/17/12
0810C_01	17848	*E. coli*	Winter	0.41	-0.29	0.00	0.06	-4.50	-0.87	0.57	31	2168.84	10112.00	2400.00	1201.00	650.00	75.00	1750.00	12/22/03	4/15/13
0810D_01	16766	Flow Severity	Winter	0.30	-0.33	0.01	0.12	-2.82	0.68	-0.30	21	2.90	5.00	3.00	3.00	2.00	1.00	1.00	12/22/03	4/26/10

Segment 0809 – Eagle Mountain Reservoir

Overview

This segment covers 9,200 acres and stretches from Eagle Mountain Dam in Tarrant County to a point 0.4 miles downstream of the confluence of Oates Branch in Wise County, up to a normal pool elevation of 649.1 feet. The western portion of the watershed for Eagle Mountain Reservoir lies in the Western Cross Timbers ecoregion and the eastern portion lies in the Grand Prairie ecoregion. Large sections of land around the lake are classified as urban and the remainder is agriculture/pasture.

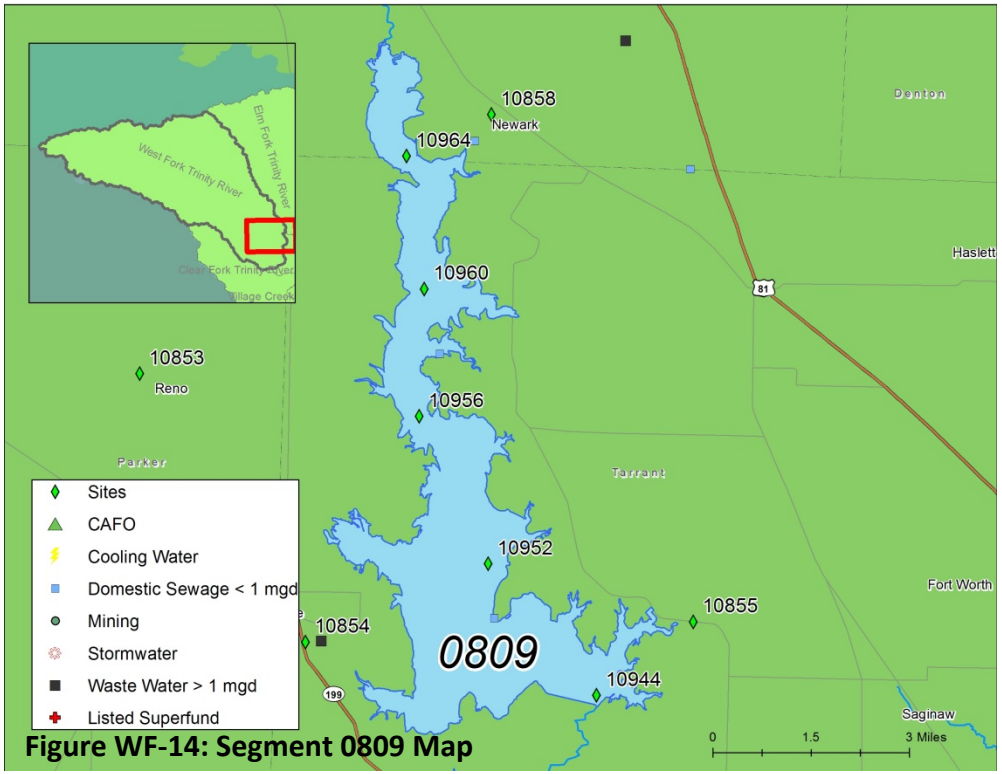


Figure WF-14: Segment 0809 Map

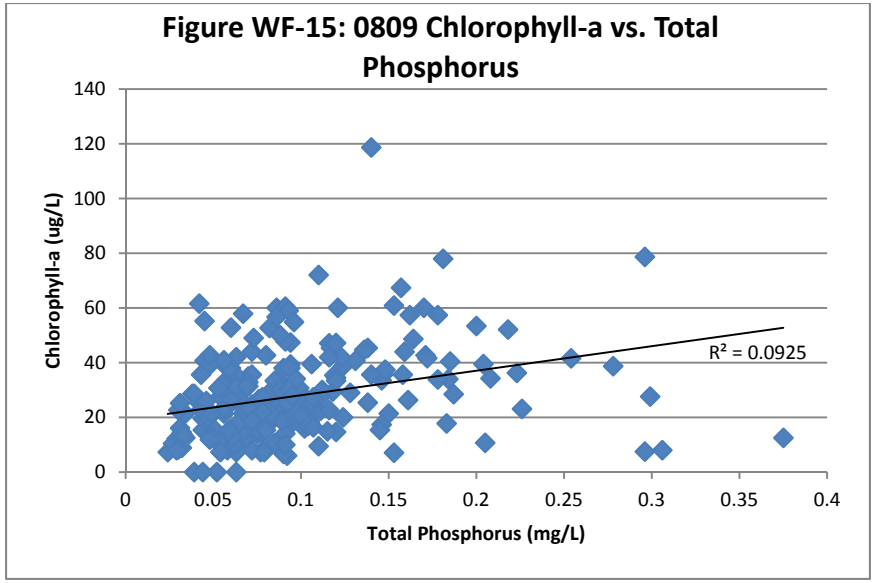
Assessments (Classified Segments):

Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0809_01 - Lowermost portion of reservoir near east end of dam	Fully Supporting	Fully Supporting
0809_02 - Dosier Slough cove	Not Assessed (No Data)	Not Assessed (No Data)
0809_03 - Ash Creek cove	Not Assessed (No Data)	Not Assessed (No Data)
0809_04 - Lowermost portion of reservoir near west end of dam	Not Assessed (No Data)	Not Assessed (No Data)
0809_05 - Lower portion of reservoir east of Walnut Creek cove	Fully Supporting	Fully Supporting
0809_06 - Walnut Creek cove	Not Assessed (No Data)	Not Assessed (No Data)
0809_07 - Old Ranch cove	Not Assessed (No Data)	Not Assessed (No Data)
0809_08 - Middle portion of reservoir	Fully Supporting	Fully Supporting

near Cole subdivision		
0809_09 - Indian Creek cove	Not Assessed (No Data)	Not Assessed (No Data)
0809_10 - Upper portion of reservoir near Indian Creek cove	Fully Supporting	Fully Supporting
0809_11 - Darrett Creek cove	Not Assessed (No Data)	Not Assessed (No Data)
0809_12 - Upper portion of reservoir near Newark Beach	Fully Supporting	Fully Supporting
0809_14 - Mid-Lake, from just above Walnut Cr. Cove to Oakwood Rd. peninsula	Not Assessed (No Data)	Not Assessed (No Data)

General Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0809_01	Concern	Concern
0809_02	Fully Supporting	Fully Supporting
0809_03	Concern	Fully Supporting
0809_04	Fully Supporting	Fully Supporting
0809_05	Concern	Concern
0809_06	Fully Supporting	Fully Supporting
0809_07	Fully Supporting	Fully Supporting
0809_08	Concern	Concern
0809_09	Concern	Fully Supporting
0809_10	Concern	Concern
0809_11	Fully Supporting	Fully Supporting
0809_12	Fully Supporting	Concern
0809_14	Concern	Fully Supporting

Assessment units 0809_01, 0809_05, 0809_08, 0809_09, 0809_10, 0809_12, and 0809_14 were found to have concerns for chlorophyll-a by either or both the TCEQ Draft 2014 Integrated Report and the in-house 5 year assessment. In addition, there was a concern for ammonia based on the TCEQ Draft 2014 Integrated Report. However, this finding was carried forward from previous assessments. Eagle Mountain Reservoir has been noted as being hypereutrophic by the TCEQ report Trophic Classification of Texas Reservoirs. This report states that reservoirs become more eutrophic as they age due to a buildup of nutrients. The relationship between chlorophyll-a and total phosphorus can be seen in Figure WF-15. This relationship indicates that algal populations are affected by total phosphorus availability in the reservoir.



Contact Recreation Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0809_01	Fully Supporting	Fully Supporting
0809_02	Not Assessed (No Data)	Not Assessed (No Data)
0809_03	Not Assessed (No Data)	Not Assessed (No Data)
0809_04	Not Assessed (No Data)	Not Assessed (No Data)
0809_05	Fully Supporting	Fully Supporting
0809_06	Not Assessed (No Data)	Not Assessed (No Data)
0809_07	Not Assessed (No Data)	Not Assessed (No Data)
0809_08	Fully Supporting	Fully Supporting
0809_09	Not Assessed (No Data)	Not Assessed (No Data)
0809_10	Fully Supporting	Fully Supporting
0809_11	Not Assessed (No Data)	Not Assessed (No Data)
0809_12	Fully Supporting	Fully Supporting
0809_14	Not Assessed (No Data)	Not Assessed (No Data)

Public Water Supply Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0809_01	Fully Supporting	Fully Supporting

0809_02	Fully Supporting	No Concern
0809_03	Fully Supporting	No Concern
0809_04	Fully Supporting	No Concern
0809_05	Fully Supporting	Fully Supporting
0809_06	Fully Supporting	No Concern
0809_07	Fully Supporting	No Concern
0809_08	Fully Supporting	Fully Supporting
0809_09	Fully Supporting	No Concern
0809_10	Fully Supporting	Fully Supporting
0809_11	Fully Supporting	No Concern
0809_12	Fully Supporting	Fully Supporting
0809_14	Fully Supporting	No Concern

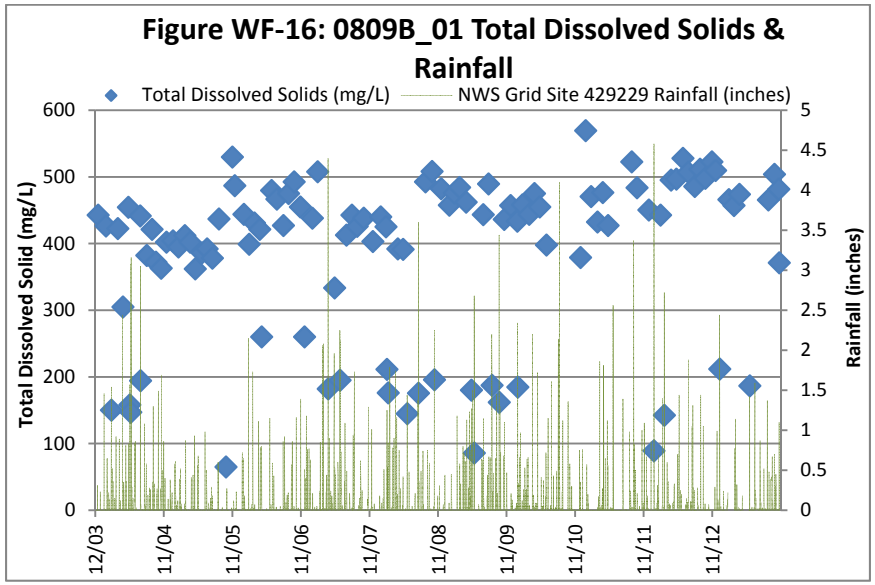
Fish Consumption Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0809_01	Not Assessed (No Data)	Not Assessed (No Data)
0809_02	Not Assessed (No Data)	Not Assessed (No Data)
0809_03	Not Assessed (No Data)	Not Assessed (No Data)
0809_04	Not Assessed (No Data)	Not Assessed (No Data)
0809_05	Not Assessed (No Data)	Not Assessed (No Data)
0809_06	Not Assessed (No Data)	Not Assessed (No Data)
0809_07	Not Assessed (No Data)	Not Assessed (No Data)
0809_08	Not Assessed (No Data)	Not Assessed (No Data)
0809_09	Not Assessed (No Data)	Not Assessed (No Data)
0809_10	Not Assessed (No Data)	Not Assessed (No Data)
0809_11	Not Assessed (No Data)	Not Assessed (No Data)
0809_12	Not Assessed (No Data)	Not Assessed (No Data)
0809_14	Not Assessed (No Data)	Not Assessed (No Data)

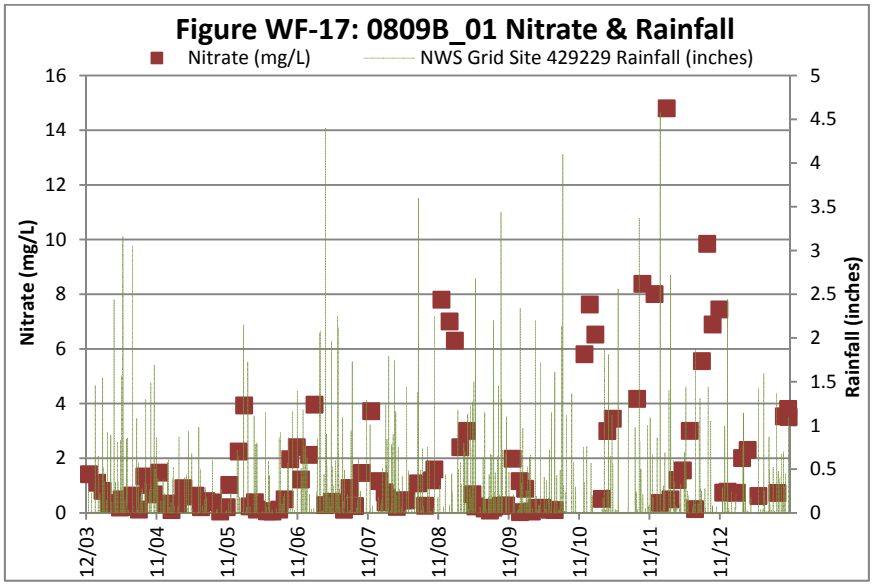
Assessments (Unclassified Segments):

Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0809A_01 - Entire segment	No Concern	Fully Supporting
0809B_01 - Entire segment	Fully Supporting	Fully Supporting
Derrett Creek - Entire water body	Not Assessed (No Data)	Fully Supporting
Dosier Creek - Entire water body	Not Assessed (No Data)	Fully Supporting

General Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0809A_01	No Concern	Not Supporting
0809B_01	Concern	Not Supporting
Derrett Creek	Not Assessed (No Data)	Not Supporting
Dosier Creek	Not Assessed (No Data)	Not Supporting

Concerns for nitrate and total phosphorus were identified by the TCEQ Draft 2014 Integrated Report in 0809B_01. The in-house 5 year assessment found all four streams to be not supporting due to elevated total dissolved solids. In addition, 0809B_01 was also found to have concerns for nitrate, orthophosphate, and total phosphorus by the in-house 5 year assessment. TDS in these streams increases during dry periods and decrease during rainfall events (Figure WF-16) indicating that evaporation may be a cause. Nutrients in 0809B_01, however, generally increase during rainfall events (Figure WF-17). These streams drain largely rural areas therefore elevated nutrients in the streams could be fertilizers washed in during rainfall events. However, there is an overall increasing trend in Nitrate that is not seen in other parameters. See the Trend Analysis section for further discussion.





Contact Recreation Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0809A_01	No Concern	Fully Supporting
0809B_01	Not Supporting	Not Supporting
Derrett Creek	Not Assessed (No Data)	Not Supporting
Dosier Creek	Not Assessed (No Data)	Not Supporting

0809B_01 was found to be not supporting due to elevated *E. coli* by the TCEQ Draft 2014 Integrated Report. The in-house 5 year assessment found this stream, as well as Derrett Creek and Dosier Creek, to also be not supporting contact recreation use. These findings are likely due to NPS loadings as many elevated *E. coli* values correspond to rainfall events.

Public Water Supply Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0809A_01	Not Assessed (No Data)	Fully Supporting
0809B_01	Not Assessed (No Data)	Fully Supporting
Derrett Creek	Not Assessed (No Data)	Fully Supporting
Dosier Creek	Not Assessed (No Data)	Fully Supporting

Fish Consumption Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0809A_01	Not Assessed (No Data)	Not Assessed (No Data)
0809B_01	Not Assessed (No Data)	Not Assessed (No Data)
Derrett Creek	Not Assessed (No Data)	Not Assessed (No Data)
Dosier Creek	Not Assessed (No Data)	Not Assessed (No Data)

Trend Analysis Overview

Table WF-12: Trend Analysis Result Summary

West Fork		Secchi Depth			pH			Sp Cond			*E. coli*			Chlorophyll-a			TSS			TDS			Chloride			SO4		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0809_01	10944							DN	DN			UP								DN	DN					DN		DN
0809_05	10952							DN	DN			UP			UP					DN	DN							
0809_08	10956		DN					DN	DN			UP			UP					DN	DN							
0809_10	10960		DN					DN	DN							DN		UP		DN	DN			DN				
0809_12	10964							DN												DN	DN		DN	DN				
0809A_01	10853																											
0809B_01	10854					UP																		UP				
Dosier Creek	10855																											
Derrett Creek	10858				DN	DN																						

Table WF-12 Continued: Trend Analysis Result Summary

West Fork		NH3			NO3			TKN			OP			TP		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0809_01	10944			DN	UP	UP		DN	DN	DN	DN	DN	DN		DN	
0809_05	10952				UP	UP				DN	DN	DN		DN	DN	
0809_08	10956				UP	UP				DN	DN	DN	DN			DN
0809_10	10960				UP	UP		DN	DN	DN	DN	DN	DN			DN
0809_12	10964				UP	UP		DN	DN	DN					DN	
0809A_01	10853											DN				
0809B_01	10854	DN	DN		UP	UP						UP				UP
Dosier Creek	10855	DN		DN				DN		DN						
Derrett Creek	10858		DN					DN	DN							

Trends Key

A-All Months

S-Summer/Growing Season (May-October)

W-Winter/Dormant Sesaon (November-April)

UP Increasing Trends

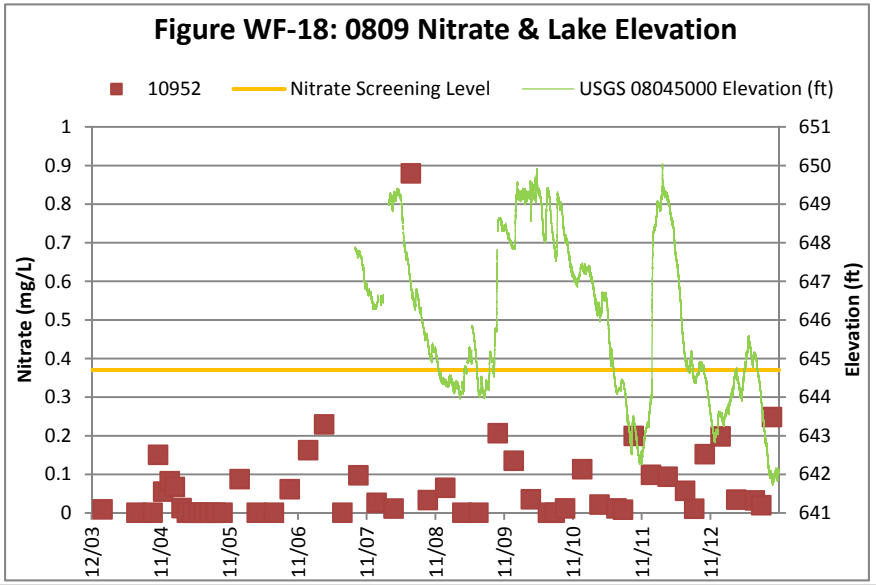
DN Decreasing Trends

There were 90 significant trends identified for this segment as summarized in Table WF-12. For additional detail on trend methods, see the Data Review Methodology section.

Trends (Classified Segments):

See Table WF-13 for details of the significant trends analysis summary presented in Table WF-12. Of particular interest in this segment are the increasing trends for Nitrate (Figure WF-18). R^2 values are between 0.15 and 0.44. A majority of the reported data are below the screening level of 0.37 mg/L which does not indicate an immediate issue as shown for station 10952 in Figure WF-18. Although the patterns with nitrate and lake elevation are not as pronounced as in segment 0807, it appears that the increasing levels of nitrate in the lake may be related to decreasing lake elevations where either the lack of inflows are not providing dilution or evaporation is concentrating the nitrate. However, if this were the case, one would expect to see increasing trends in other parameters such as phosphorous and solids. Additional work will be needed to determine the cause of these increasing

Figure WF-18: 0809 Nitrate & Lake Elevation



trends. The increasing *E. coli* trends are not an immediate concern as the highest reported summer value at the three sites was 59 MPN/100mL. The increasing chlorophyll-a trends have R^2's less than 0.22 and occur only during the summer months.

Table WF-13: 0809 Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0809_01	10944	Sp Cond	POR	0.16	-4.38	0.00	1.39	-3.14	0.10	-1.64	53	355.36	413.00	380.00	358.00	328.67	293.00	51.33	1/28/04	10/23/13
0809_01	10944	Sp Cond	Summer	0.32	-6.09	0.00	1.71	-3.57	1.01	-0.79	29	344.75	413.00	368.00	338.00	317.00	293.00	51.00	7/26/04	10/23/13
0809_01	10944	NH3	Winter	0.17	-0.21	0.06	0.11	-2.01	0.46	-1.59	22	0.04	0.16	0.05	0.02	0.00	0.00	0.05	1/28/04	4/16/13
0809_01	10944	NO3	POR	0.17	0.28	0.00	0.09	3.13	-1.25	-1.74	51	0.09	1.09	0.13	0.04	0.00	0.00	0.12	1/28/04	10/23/13
0809_01	10944	NO3	Summer	0.39	0.45	0.00	0.11	4.04	0.41	-1.44	28	0.09	1.09	0.09	0.01	0.00	0.00	0.09	7/26/04	10/23/13
0809_01	10944	TKN	POR	0.31	-0.05	0.00	0.01	-4.78	-1.28	1.64	52	0.79	1.45	0.95	0.82	0.64	0.10	0.31	1/28/04	10/23/13
0809_01	10944	TKN	Summer	0.19	-0.04	0.02	0.02	-2.46	-1.43	1.26	28	0.79	1.43	0.94	0.85	0.68	0.10	0.26	7/26/04	10/23/13
0809_01	10944	TKN	Winter	0.58	-0.07	0.00	0.01	-5.47	-0.09	1.46	24	0.79	1.45	0.95	0.81	0.60	0.10	0.35	1/28/04	4/16/13
0809_01	10944	TP	Summer	0.15	-0.04	0.04	0.02	-2.14	0.57	0.09	28	0.06	0.12	0.07	0.06	0.05	0.04	0.02	7/26/04	10/23/13
0809_01	10944	OP	POR	0.20	-0.19	0.00	0.06	-3.24	-0.13	-2.24	45	0.01	0.04	0.01	0.01	0.00	0.00	0.01	7/26/04	10/23/13
0809_01	10944	OP	Summer	0.11	-0.15	0.10	0.09	-1.72	0.91	-1.59	25	0.01	0.04	0.02	0.00	0.00	0.00	0.01	7/26/04	10/23/13
0809_01	10944	OP	Winter	0.18	0.00	0.06	0.00	-2.01	0.74	-0.59	20	0.01	0.02	0.01	0.01	0.00	0.00	0.01	11/18/04	4/16/13
0809_01	10944	SO4	POR	0.19	-0.58	0.00	0.18	-3.17	0.42	-0.32	44	24.96	34.20	27.95	24.50	22.30	16.90	5.65	1/28/04	10/23/13
0809_01	10944	SO4	Winter	0.29	-0.65	0.01	0.24	-2.74	0.30	-0.50	20	27.05	34.20	29.40	27.10	23.95	21.00	5.45	1/28/04	4/16/13
0809_01	10944	*E. coli*	Summer	0.23	0.16	0.03	0.07	2.32	1.03	-0.49	20	3.10	16.00	3.50	1.50	1.00	0.50	2.50	7/26/04	10/23/13
0809_01	10944	TDS	POR	0.20	-3.81	0.00	1.08	-3.54	-1.23	-0.52	53	204.05	253.50	223.00	209.00	188.00	147.00	35.00	1/28/04	10/23/13
0809_01	10944	TDS	Summer	0.37	-4.98	0.00	1.26	-3.95	-1.00	-0.64	29	195.06	237.00	212.00	199.00	180.00	147.00	32.00	7/26/04	10/23/13
0809_05	10952	Sp Cond	POR	0.19	-4.96	0.00	1.47	-3.38	0.14	-1.71	51	353.44	415.00	388.00	350.00	322.00	293.00	66.00	1/28/04	10/23/13
0809_05	10952	Sp Cond	Summer	0.37	-6.68	0.00	1.74	-3.83	1.27	-0.62	27	339.45	409.00	365.00	332.00	315.00	293.00	50.00	7/26/04	10/23/13
0809_05	10952	NO3	POR	0.15	0.27	0.01	0.09	2.88	-0.68	-2.02	51	0.07	0.88	0.10	0.03	0.00	0.00	0.10	1/28/04	10/23/13
0809_05	10952	NO3	Summer	0.35	0.43	0.00	0.12	3.70	0.93	-1.38	28	0.07	0.88	0.06	0.01	0.00	0.00	0.06	7/26/04	10/23/13
0809_05	10952	TKN	Winter	0.54	-0.07	0.00	0.01	-4.97	-0.79	1.05	23	0.82	1.36	1.05	0.81	0.66	0.10	0.39	1/28/04	4/16/13
0809_05	10952	TP	POR	0.13	0.00	0.01	0.00	-2.68	0.34	-0.29	52	0.07	0.12	0.08	0.07	0.05	0.03	0.02	1/28/04	10/23/13
0809_05	10952	TP	Summer	0.21	0.00	0.01	0.00	-2.65	-0.07	-0.82	28	0.07	0.10	0.08	0.07	0.06	0.03	0.03	7/26/04	10/23/13
0809_05	10952	OP	POR	0.18	-0.18	0.00	0.06	-2.98	-0.43	-2.22	42	0.01	0.03	0.02	0.01	0.00	0.00	0.01	7/26/04	10/23/13
0809_05	10952	OP	Summer	0.14	-0.16	0.07	0.08	-1.93	0.33	-1.76	24	0.01	0.03	0.01	0.01	0.00	0.00	0.01	7/26/04	10/23/13
0809_05	10952	*E. coli*	Summer	0.34	0.25	0.01	0.08	3.04	0.83	-1.06	20	3.85	22.00	4.00	1.50	0.50	0.50	3.50	7/26/04	10/23/13
0809_05	10952	TDS	POR	0.27	-4.42	0.00	1.02	-4.33	-0.44	-1.08	52	201.60	252.20	221.50	202.50	183.50	146.00	38.00	1/28/04	10/23/13
0809_05	10952	TDS	Summer	0.47	-5.02	0.00	1.04	-4.83	-0.12	-0.38	28	191.93	237.00	211.00	187.63	178.00	146.00	33.00	7/26/04	10/23/13
0809_05	10952	Chlorophyll-a	Summer	0.22	1.70	0.01	0.64	2.67	1.18	-0.07	28	30.09	55.20	36.80	28.70	22.05	10.70	14.75	7/26/04	10/23/13
0809_08	10956	Secchi Depth	Summer	0.32	-0.02	0.00	0.01	-3.42	0.26	1.61	27	0.58	0.89	0.64	0.58	0.53	0.36	0.11	7/26/04	10/23/13
0809_08	10956	Sp Cond	POR	0.21	-6.73	0.00	1.86	-3.61	0.94	-1.21	51	358.81	450.00	390.00	357.00	320.00	287.33	70.00	1/28/04	10/23/13
0809_08	10956	Sp Cond	Summer	0.48	-8.61	0.00	1.78	-4.85	1.99	0.69	27	336.61	441.00	363.00	329.00	307.33	287.33	55.67	7/26/04	10/23/13
0809_08	10956	NO3	POR	0.25	0.32	0.00	0.08	4.07	1.31	-1.25	51	0.04	1.06	0.04	0.01	0.00	0.00	0.03	1/28/04	10/23/13
0809_08	10956	NO3	Summer	0.44	0.42	0.00	0.09	4.55	1.58	-0.08	28	0.05	1.06	0.03	0.01	0.00	0.00	0.03	7/26/04	10/23/13
0809_08	10956	TKN	Winter	0.41	-0.06	0.00	0.02	-3.83	-1.19	2.18	23	0.89	1.40	1.04	0.88	0.74	0.10	0.30	1/28/04	4/16/13
0809_08	10956	TP	Winter	0.21	-0.07	0.02	0.03	-2.45	0.28	0.71	24	0.08	0.18	0.08	0.07	0.05	0.03	0.03	1/28/04	4/16/13
0809_08	10956	OP	POR	0.16	-0.18	0.01	0.06	-2.80	0.34	-2.00	44	0.01	0.06	0.02	0.01	0.00	0.00	0.01	7/26/04	10/23/13
0809_08	10956	OP	Summer	0.11	-0.15	0.10	0.09	-1.71	-0.14	-1.77	26	0.01	0.05	0.02	0.01	0.00	0.00	0.02	7/26/04	10/23/13
0809_08	10956	OP	Winter	0.37	-0.26	0.01	0.09	-3.05	0.67	-0.76	18	0.01	0.06	0.01	0.01	0.00	0.00	0.01	11/18/04	4/16/13
0809_08	10956	*E. coli*	Summer	0.28	0.25	0.02	0.09	2.67	1.78	0.18	20	7.28	59.00	6.00	2.00	0.75	0.50	5.25	7/26/04	10/23/13

Table WF-13 Continued: 0809 Trend Analysis Result Detail

0809_08	10956	TDS	POR	0.24	-5.03	0.00	1.28	-3.93	-0.73	-0.22	52	207.90	270.00	230.00	208.00	187.04	131.00	42.97	1/28/04	10/23/13
0809_08	10956	TDS	Summer	0.41	-5.78	0.00	1.37	-4.23	-0.82	0.44	28	193.70	257.00	208.50	200.50	183.00	131.00	25.50	7/26/04	10/23/13
0809_08	10956	Chlorophyll-a	Summer	0.16	1.47	0.04	0.67	2.19	0.55	-0.55	27	38.26	60.50	47.10	38.00	28.50	16.70	18.60	7/26/04	10/23/13
0809_10	10960	Secchi Depth	Summer	0.18	-0.02	0.03	0.01	-2.34	-0.12	-1.27	27	0.46	0.66	0.56	0.46	0.36	0.28	0.20	7/26/04	10/23/13
0809_10	10960	Sp Cond	POR	0.21	-7.75	0.00	2.15	-3.61	0.79	-1.17	51	365.09	478.00	400.00	362.00	320.00	281.00	80.00	1/28/04	10/23/13
0809_10	10960	Sp Cond	Summer	0.44	-0.03	0.00	0.01	-4.47	1.48	0.31	27	335.14	455.67	362.00	324.00	302.00	281.00	60.00	7/26/04	10/23/13
0809_10	10960	TSS	Summer	0.12	0.99	0.08	0.54	1.83	1.36	-0.37	27	23.60	43.57	29.00	24.00	15.30	12.20	13.70	7/26/04	10/23/13
0809_10	10960	NO3	POR	0.27	0.32	0.00	0.08	4.18	1.97	-0.60	50	0.04	1.06	0.02	0.00	0.00	0.00	0.02	1/28/04	10/23/13
0809_10	10960	NO3	Summer	0.44	0.41	0.00	0.09	4.40	1.71	0.11	27	0.05	1.06	0.03	0.01	0.00	0.00	0.03	7/26/04	10/23/13
0809_10	10960	TKN	POR	0.22	-0.05	0.00	0.01	-3.71	-0.34	2.42	51	0.92	1.93	1.13	0.89	0.76	0.10	0.37	1/28/04	10/23/13
0809_10	10960	TKN	Summer	0.20	-0.06	0.02	0.02	-2.53	-0.63	1.20	27	0.94	1.93	1.18	0.97	0.77	0.10	0.41	7/26/04	10/23/13
0809_10	10960	TKN	Winter	0.39	-0.05	0.00	0.01	-3.78	0.30	-0.35	24	0.88	1.32	1.02	0.86	0.75	0.41	0.27	1/28/04	4/16/13
0809_10	10960	TP	Winter	0.20	-0.07	0.03	0.03	-2.26	-0.66	0.66	23	0.09	0.23	0.11	0.08	0.06	0.03	0.04	1/28/04	4/16/13
0809_10	10960	OP	POR	0.19	-0.20	0.00	0.06	-3.17	-0.62	-1.90	46	0.01	0.07	0.02	0.01	0.00	0.00	0.02	7/26/04	10/23/13
0809_10	10960	OP	Summer	0.23	-0.22	0.02	0.08	-2.63	-0.59	-1.50	25	0.01	0.06	0.02	0.01	0.00	0.00	0.02	7/26/04	10/23/13
0809_10	10960	OP	Winter	0.16	-0.19	0.08	0.10	-1.87	-0.35	-1.18	21	0.01	0.07	0.02	0.01	0.00	0.00	0.01	11/18/04	4/16/13
0809_10	10960	Chloride	Summer	0.11	-0.76	0.08	0.42	-1.80	0.74	-0.38	27	30.42	46.70	34.20	31.10	23.90	18.57	10.30	7/26/04	10/23/13
0809_10	10960	TDS	POR	0.24	-5.45	0.00	1.39	-3.93	0.69	-0.79	52	212.15	291.00	235.50	207.50	187.81	145.00	47.69	1/28/04	10/23/13
0809_10	10960	TDS	Summer	0.41	-5.44	0.00	1.27	-4.28	1.03	1.22	28	193.91	266.00	207.50	192.50	177.00	145.00	30.50	7/26/04	10/23/13
0809_10	10960	Chlorophyll-a	Winter	0.18	-1.17	0.04	0.53	-2.22	0.77	-0.54	24	19.65	37.40	26.20	18.65	13.50	7.30	12.70	1/28/04	4/16/13
0809_12	10964	Sp Cond	POR	0.22	-0.03	0.00	0.01	-3.61	0.64	0.91	48	388.31	604.00	423.42	379.50	337.50	234.00	85.92	1/28/04	8/27/13
0809_12	10964	NO3	POR	0.20	0.33	0.00	0.10	3.25	1.24	-1.50	44	0.08	0.98	0.05	0.01	0.00	0.00	0.05	1/28/04	8/27/13
0809_12	10964	NO3	Summer	0.30	0.37	0.01	0.12	3.02	1.06	-0.76	23	0.06	0.98	0.04	0.01	0.00	0.00	0.04	7/26/04	8/27/13
0809_12	10964	TKN	POR	0.25	-0.06	0.00	0.02	-3.73	-1.05	-0.43	44	0.94	1.56	1.26	0.91	0.72	0.10	0.55	1/28/04	8/27/13
0809_12	10964	TKN	Summer	0.15	-0.05	0.07	0.03	-1.93	-0.73	-0.22	23	0.92	1.56	1.27	0.89	0.70	0.10	0.57	7/26/04	8/27/13
0809_12	10964	TKN	Winter	0.39	-0.08	0.00	0.02	-3.51	-0.80	-0.16	21	0.96	1.56	1.22	0.95	0.81	0.10	0.41	1/28/04	4/16/13
0809_12	10964	TP	Summer	0.15	-0.05	0.06	0.02	-1.96	0.63	0.62	23	0.17	0.38	0.19	0.16	0.12	0.09	0.07	7/26/04	8/27/13
0809_12	10964	Chloride	POR	0.15	-0.04	0.01	0.01	-2.85	0.05	0.23	47	34.19	64.76	39.70	32.40	26.40	14.50	13.30	1/28/04	8/27/13
0809_12	10964	Chloride	Summer	0.30	-0.05	0.00	0.02	-3.12	0.90	0.04	25	30.36	55.90	35.00	27.90	24.80	19.10	10.20	7/26/04	8/27/13
0809_12	10964	TDS	POR	0.23	-0.03	0.00	0.01	-3.74	0.88	-0.15	49	229.68	366.60	256.00	226.00	196.00	152.00	60.00	1/28/04	8/27/13
0809_12	10964	TDS	Summer	0.35	-0.03	0.00	0.01	-3.65	1.73	1.74	27	207.09	338.00	229.00	199.00	189.15	152.00	39.85	7/26/04	8/27/13

Trends (Unclassified Segments):

See Table WF-14 for details of the significant trends analysis summary presented in Table WF-12. Decreasing pH trends for station 10858 do not appear to be an immediate issue as the minimum reported value in the data set was 7 SU and the slopes are very shallow. Increasing trends for nitrate in 0809B are shown in Figure WF-17. Although there are spikes in the nitrate values that coincide with rain events, there is an overall increasing trend that is not explained by an increasing trend in rainfall. The remaining increasing trends do not present a concern. Those for TP, OP, and Chloride have R^2's less than 0.14. For ammonia, the maximum value for the dataset is 0.04 mg/L and there is currently no standard or screening level for this parameter.

Table WF-14: 0809A, 0809B, Unclassified Tributary Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0809A_01	10853	OP	Summer	0.14	-0.24	0.02	0.09	-2.53	-1.21	-0.75	42	0.08	0.35	0.14	0.02	0.01	0.00	0.13	5/25/04	6/18/13
0809B_01	10854	pH	Summer	0.10	0.03	0.02	0.01	2.36	-1.10	-0.85	50	7.77	8.20	8.00	7.80	7.60	7.20	0.40	5/25/04	10/28/13
0809B_01	10854	NH3	POR	0.29	-0.30	0.00	0.05	-6.46	1.12	-1.98	105	0.07	2.56	0.06	0.02	0.00	0.00	0.06	12/16/03	11/22/13
0809B_01	10854	NH3	Summer	0.29	-0.28	0.00	0.06	-4.44	-0.85	-2.03	51	0.05	0.35	0.06	0.04	0.00	0.00	0.06	5/25/04	10/28/13
0809B_01	10854	NO3	POR	0.14	0.18	0.00	0.04	4.13	0.02	-1.38	111	1.81	14.80	2.24	0.73	0.26	0.03	1.98	12/16/03	11/22/13
0809B_01	10854	NO3	Summer	0.21	0.21	0.00	0.06	3.61	1.32	-0.64	52	1.27	9.84	1.14	0.44	0.19	0.05	0.95	5/25/04	10/28/13
0809B_01	10854	TP	Winter	0.10	0.07	0.02	0.03	2.50	0.00	-0.75	57	0.63	2.73	0.80	0.53	0.32	0.15	0.48	12/16/03	11/22/13
0809B_01	10854	OP	Summer	0.11	0.05	0.02	0.02	2.34	1.81	-1.49	47	0.51	1.37	0.88	0.35	0.15	0.05	0.73	5/25/04	10/28/13
0809B_01	10854	Chloride	Summer	0.14	4.16	0.01	1.43	2.90	0.12	-1.00	52	60.32	138.00	88.22	61.24	35.52	5.90	52.70	5/25/04	10/28/13
Dosier Creek	10855	NH3	POR	0.17	-0.18	0.04	0.08	-2.17	1.14	-1.70	25	0.02	0.07	0.03	0.00	0.00	0.00	0.03	2/25/04	4/24/13
Dosier Creek	10855	NH3	Winter	0.19	-0.16	0.07	0.08	-1.94	1.49	-1.13	18	0.01	0.04	0.02	0.00	0.00	0.00	0.02	2/25/04	4/24/13
Dosier Creek	10855	TKN	POR	0.19	-0.07	0.02	0.03	-2.46	1.22	-0.34	27	0.77	1.78	1.10	0.66	0.35	0.10	0.75	2/25/04	4/24/13
Dosier Creek	10855	TKN	Winter	0.14	-0.06	0.10	0.03	-1.75	1.48	0.24	20	0.70	1.78	0.95	0.62	0.33	0.10	0.62	2/25/04	4/24/13
Derrett Creek	10858	pH	POR	0.21	-0.07	0.02	0.03	-2.47	0.53	-0.79	25	7.64	8.50	8.00	7.70	7.20	7.00	0.80	4/26/04	6/18/13
Derrett Creek	10858	pH	Summer	0.42	-0.10	0.02	0.04	-2.66	0.00	-0.54	12	7.69	8.50	8.00	7.70	7.30	7.00	0.70	6/2/04	6/18/13
Derrett Creek	10858	NH3	Summer	0.35	0.00	0.04	0.00	-2.34	1.60	-0.27	12	0.01	0.04	0.03	0.00	0.00	0.00	0.02	6/2/04	6/18/13
Derrett Creek	10858	TKN	POR	0.23	-0.07	0.01	0.03	-2.67	1.47	-0.65	26	0.53	1.37	0.85	0.46	0.15	0.08	0.70	4/26/04	6/18/13
Derrett Creek	10858	TKN	Summer	0.43	-0.10	0.02	0.04	-2.88	0.78	-0.93	13	0.52	1.23	0.85	0.55	0.10	0.10	0.75	6/2/04	6/18/13



Image WF-5: Eagle Mountain Lake docks near Hwy 1220



Image WF-6: Eagle Mountain Lake marina near dam

Segment 0808 – West Fork Trinity River Below Eagle Mountain Reservoir

Overview

This 2 mile segment runs from 2.5 miles downstream of Eagle Mountain Dam in Tarrant County back up to Eagle Mountain Dam in Tarrant County. Land use in this watershed is split between forest and agriculture/pasture. Segment 0808 drains the Western Cross Timbers ecoregion from the west and the Grand Prairie ecoregion from the east.

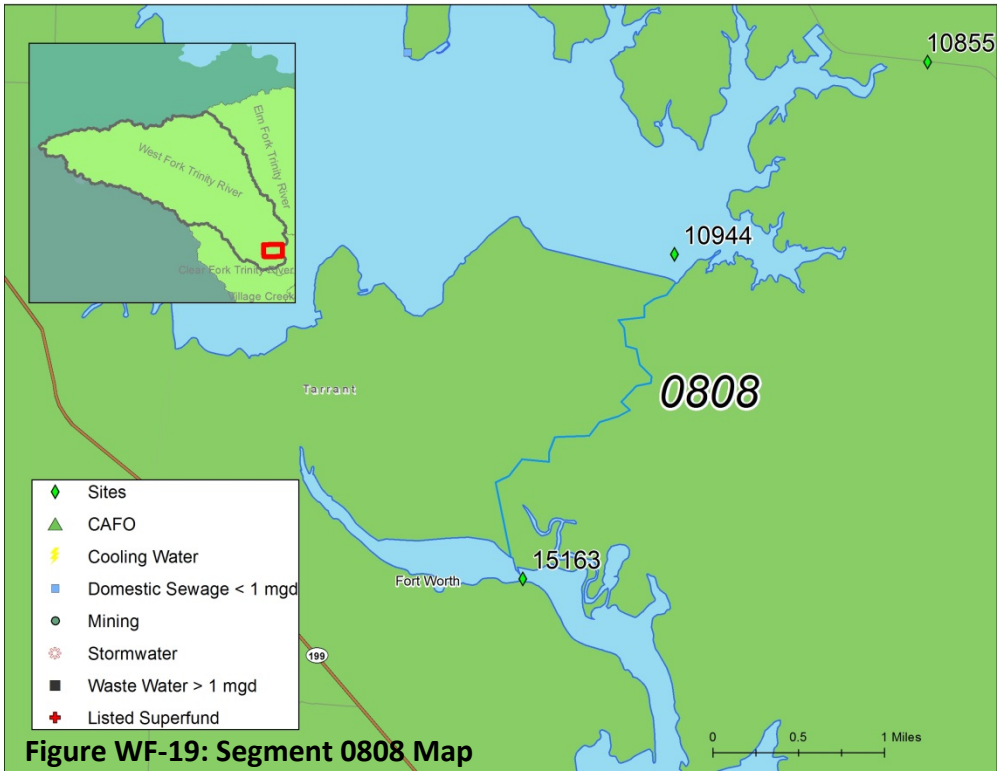


Figure WF-19: Segment 0808 Map

Assessments (Classified Segments):

Aquatic Life Use: 0808_01 - Entire segment	**TCEQ Draft 2014 Integrated Report** Not Assessed (No Data)	**In-House 5 Year Assessment** Not Assessed (No Data)
General Use: 0808_01	**TCEQ Draft 2014 Integrated Report** Not Assessed (No Data)	**In-House 5 Year Assessment** Not Assessed (No Data)
Contact Recreation Use: 0808_01	**TCEQ Draft 2014 Integrated Report** Not Assessed (No Data)	**In-House 5 Year Assessment** Not Assessed (No Data)
Public Water Supply Use: 0808_01	**TCEQ Draft 2014 Integrated Report** Not Assessed (No Data)	**In-House 5 Year Assessment** Not Assessed (No Data)

Fish Consumption Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0808_01	Not Supporting	Not Assessed (No Data)

Based on the TCEQ Draft 2014 Integrated Report, this segment was found to be not supporting due to Aldrin, Dieldrin, and PCBs in fish tissue. For Aldrin and Dieldrin, the listing category indicates that other pollution control requirements are reasonably expected to result in attainment of the standards in the near future. For PCBs, a TMDL is underway.

Assessments (Unclassified Segments):

Aquatic Life Use: Not Assessed (No Data)

General Use: Not Assessed (No Data)

Contact Recreation Use: Not Assessed (No Data)

Public Water Supply Use: Not Assessed (No Data)

Fish Consumption Use: Not Assessed (No Data)

Trend Analysis Overview

Trends (Classified Segments):
None

Trends (Unclassified Segments):
None



Image WF-5: 0808 at Ten Mile Bridge Road

Segment 0807 – Lake Worth

Overview

This segment covers 3,560 acres from Lake Worth Dam in Tarrant County to a point 2.5 miles downstream of Eagle Mountain Dam in Tarrant County up to a normal pool elevation of 594.3 feet. The watershed for Lake Worth is highly urbanized to the south and east with the remainder split about evenly between rangeland, forest, and agriculture/pasture. The entire segment is located in the Grand Prairie ecoregion.

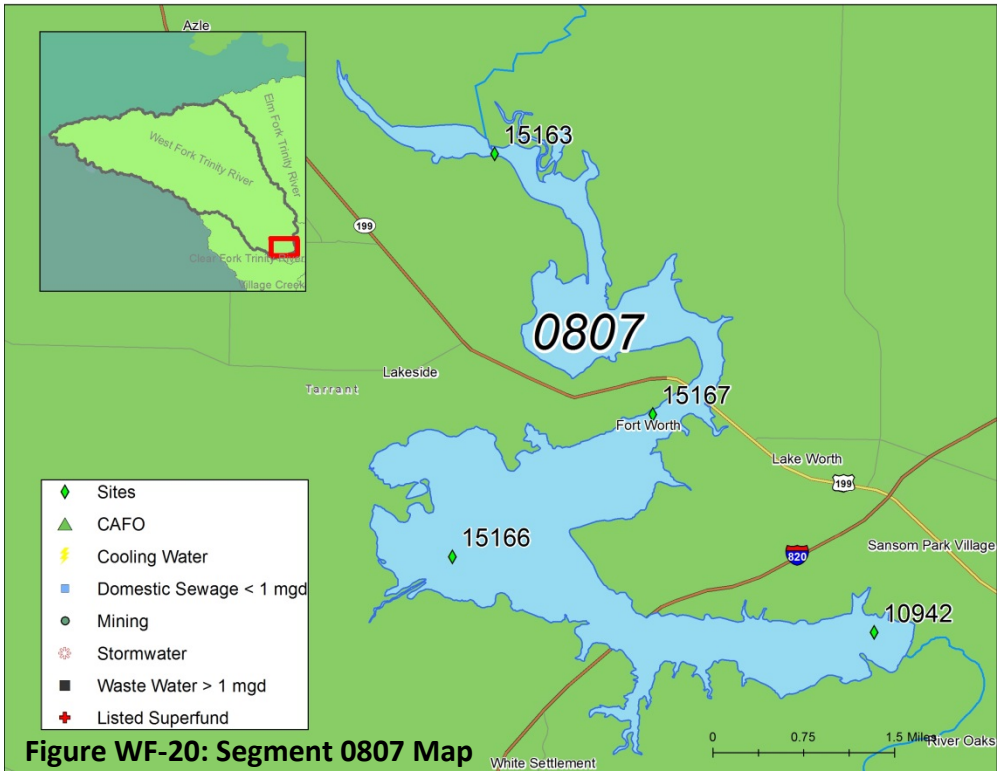


Figure WF-20: Segment 0807 Map

Assessments (Classified Segments):

Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0807_01 - Entire segment	Fully Supporting	Fully Supporting
General Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0807_01	Concern	Concern

This segment was found to have concerns for chlorophyll-a by both the TCEQ Draft 2014 Integrated Report and the in-house 5 year assessment. In addition, Lake Worth has been noted as being hypereutrophic by the TCEQ report Trophic Classification of Texas Reservoirs. Figure WC-21 illustrates the relationship between chlorophyll-a, temperature, and lake elevation. As seen in this figure, chlorophyll-a levels are seasonal as expected. When temperatures are higher and lake levels are lower, chlorophyll-a levels increase. In addition, there is some correlation between higher chlorophyll-a values and higher nutrient values as shown in Figures WC-22 and WC-23. It is important to note that the algal blooms associated with

these elevated chlorophyll-a values do not appear to be affecting aquatic life use as only one of 163 dissolved oxygen values were reported below the standard of 5 mg/L. However, increasing trends in chlorophyll-a have been identified (Table WF-15).

Figure WF-21: 0807_01 Chlorophyll-a, Water Temperature, & Reservoir Elevation

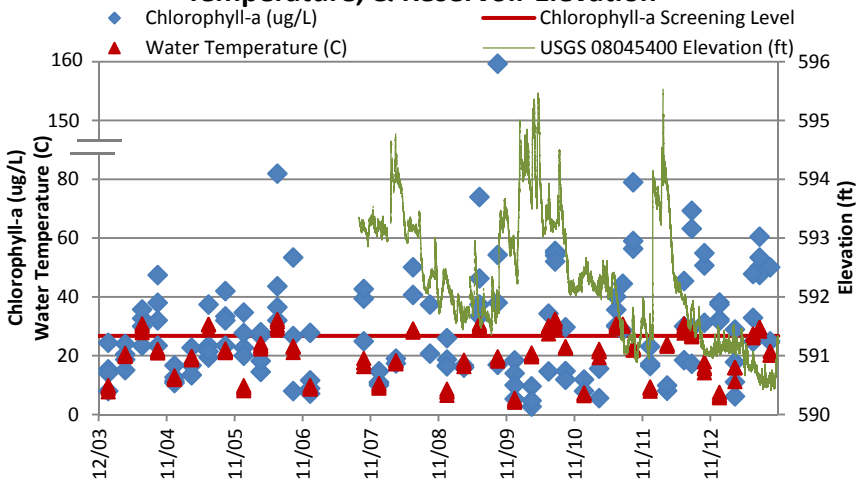


Figure WF-22: 0807_01 Chlorophyll-a vs. TKN

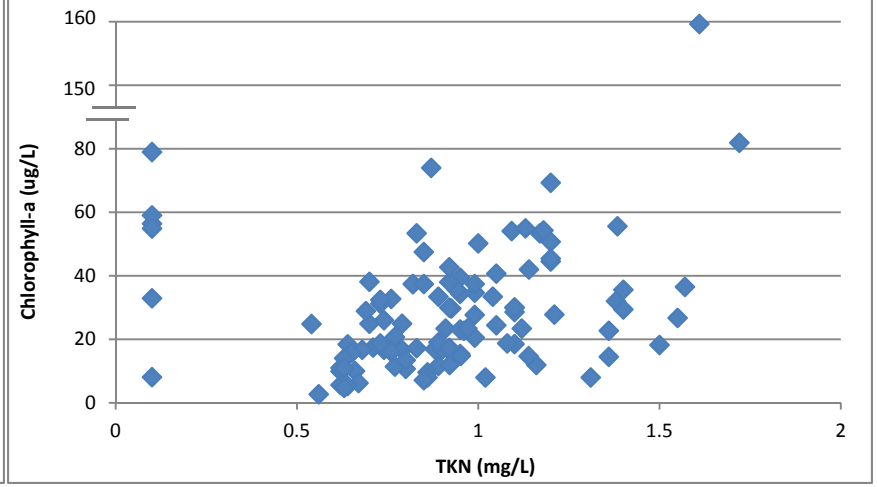


Figure WF-23: 0807_01 Chlorophyll-a vs. Total Phosphorus

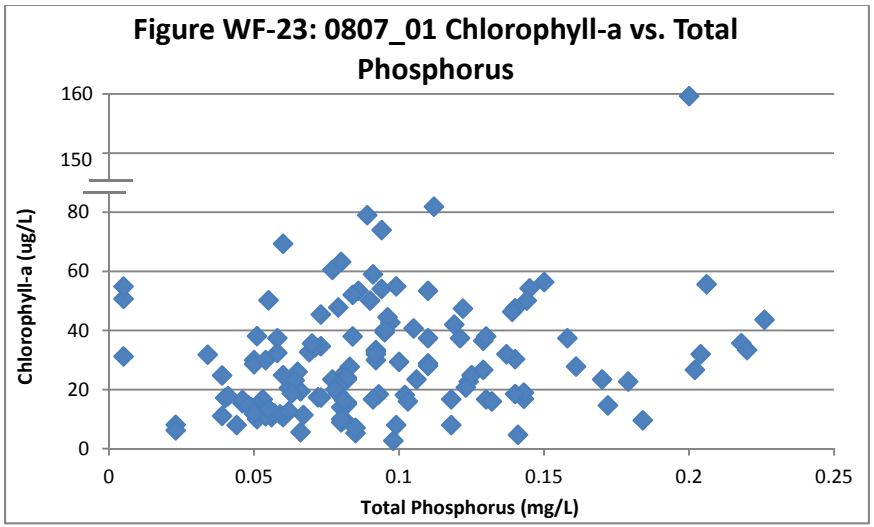




Image WF-6: Fishermen near Hwy 199

Contact Recreation Use: 0807_01	**TCEQ Draft 2014 Integrated Report** Fully Supporting	**In-House 5 Year Assessment** Fully Supporting
Public Water Supply Use: 0807_01	**TCEQ Draft 2014 Integrated Report** Fully Supporting	**In-House 5 Year Assessment** Fully Supporting
Fish Consumption Use: 0807_01	**TCEQ Draft 2014 Integrated Report** Not Supporting	**In-House 5 Year Assessment** Not Assessed (No Data)

Based on the TCEQ Draft 2014 Integrated Report, this segment was found to be not supporting due to Aldrin, Dieldrin, and PCBs in fish tissue. For Aldrin and Dieldrin, the listing category indicates that other pollution control requirements are reasonably expected to result in attainment of the standards in the near future. For PCBs, a TMDL is underway.

Assessments (Unclassified Segments):

Aquatic Life Use: Not Assessed (No Data)

General Use: Not Assessed (No Data)

Contact Recreation Use: Not Assessed (No Data)

Public Water Supply Use: Not Assessed (No Data)

Fish Consumption Use: Not Assessed (No Data)

Trend Analysis Overview

Table WF-15: Trend Analysis Result Summary

West Fork		Secchi Depth			Sp Cond			Chlorophyll-a			TSS			TDS			Chloride			NH3			NO3			TKN		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0807_01	10942	DN	DN																	DN	DN		UP	UP	UP			DN
0807_01	15163			UP	DN		DN						DN	DN		DN	DN		DN				UP	UP	UP	DN		DN
0807_01	15166		DN																				UP	UP	UP			
0807_01	15167				DN			UP	UP														UP	UP	UP			

Table WF-15 Continued: Trend Analysis Result Summary

West Fork		OP			TP		
Seg_AU	Site	A	S	W	A	S	W
0807_01	10942				DN	DN	
0807_01	15163					DN	
0807_01	15166						
0807_01	15167						

Trends Key
A-All Months
S-Summer/Grow ing Season (May-October)
W-Winter/Dormant Sesaon (November-April)
UP Increasing Trends
DN Decreasing Trends

There were 34 significant trends identified for this segment as summarized in Table XX-#. For additional detail on trend methods, see the Data Review Methodology section.

Trends (Classified Segments):
See Table WF-16 for details of the significant trends analysis summary presented in Table WF-15. Of particular interest in this segment are the increasing trends for Nitrate as they are occurring at all sites and seasons. In addition, they have R^2 values between 0.29 and 0.68. The reported data are all below the screening level of 0.37 mg/L as shown for station 15163 in Figure WF-24 which does not indicate an immediate issue. It appears that the increasing levels of nitrate in the lake may be related to decreasing lake elevations where either the lack of inflows are not providing dilution or evaporation is concentrating the nitrate. However, if this were the case, one would expect to see increasing trends in other parameters such as phosphorous and solids. Additional work will be needed to determine the cause of these increasing trends. See the General Use section above for discussion on chlorophyll-a in this segment.

Figure WF-24: 0807_01 Nitrate and Lake Elevation

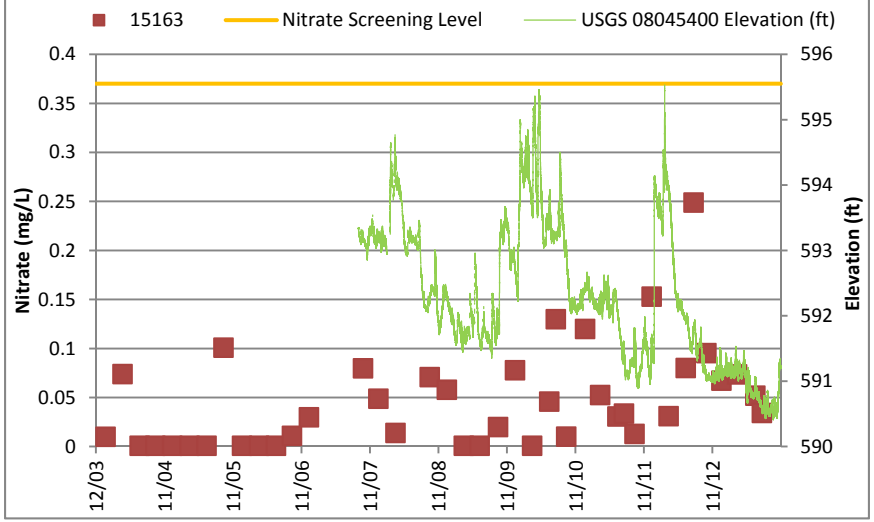


Table WF-16: 0807 Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0807_01	10942	Secchi Depth	POR	0.10	-0.02	0.04	0.01	-2.12	1.46	0.89	42	0.75	1.30	0.89	0.73	0.61	0.38	0.28	1/21/04	10/17/13
0807_01	10942	Secchi Depth	Summer	0.18	-0.03	0.04	0.01	-2.17	1.70	1.88	23	0.70	1.30	0.86	0.71	0.58	0.38	0.28	7/21/04	10/17/13
0807_01	10942	NH3	POR	0.11	-0.15	0.04	0.07	-2.09	1.67	-1.72	38	0.02	0.12	0.04	0.00	0.00	0.00	0.04	1/21/04	10/17/13
0807_01	10942	NH3	Summer	0.21	-0.20	0.04	0.09	-2.19	1.83	-0.63	20	0.02	0.12	0.02	0.00	0.00	0.00	0.02	7/21/04	10/17/13
0807_01	10942	NO3	POR	0.39	0.39	0.00	0.08	5.03	-0.26	-1.55	41	0.04	0.24	0.03	0.01	0.00	0.00	0.03	1/21/04	10/17/13
0807_01	10942	NO3	Summer	0.48	0.46	0.00	0.11	4.31	0.42	-1.19	22	0.03	0.24	0.03	0.01	0.00	0.00	0.03	7/21/04	10/17/13
0807_01	10942	NO3	Winter	0.50	0.40	0.00	0.10	4.15	-0.83	-0.54	19	0.04	0.21	0.05	0.02	0.01	0.00	0.05	1/21/04	4/11/13
0807_01	10942	TKN	Winter	0.23	-0.04	0.04	0.02	-2.25	-0.57	2.18	19	0.79	1.36	0.95	0.74	0.66	0.10	0.29	1/21/04	4/11/13
0807_01	10942	TP	POR	0.11	0.00	0.04	0.00	-2.16	0.83	0.13	41	0.07	0.14	0.09	0.07	0.05	0.01	0.04	1/21/04	10/17/13
0807_01	10942	TP	Summer	0.32	-0.01	0.01	0.00	-3.05	-0.25	0.27	22	0.08	0.14	0.10	0.08	0.06	0.01	0.04	7/21/04	10/17/13
0807_01	15163	Secchi Depth	Winter	0.27	0.04	0.03	0.02	2.44	0.89	-0.10	18	0.45	0.91	0.53	0.42	0.30	0.08	0.23	1/21/04	4/11/13
0807_01	15163	Sp Cond	POR	0.14	-4.92	0.02	1.98	-2.48	0.85	-0.52	40	377.99	467.00	401.50	381.25	342.75	320.00	58.75	1/21/04	8/21/13
0807_01	15163	Sp Cond	Winter	0.18	-5.26	0.07	2.75	-1.92	0.03	-0.03	19	399.14	467.00	421.33	395.33	382.00	325.33	39.33	1/21/04	4/11/13
0807_01	15163	TSS	Winter	0.18	-0.10	0.07	0.05	-1.95	0.04	-0.82	19	30.52	89.00	42.20	26.00	11.30	9.00	30.90	1/21/04	4/11/13
0807_01	15163	NO3	POR	0.33	0.36	0.00	0.08	4.30	-1.53	-1.59	40	0.05	0.25	0.07	0.03	0.00	0.00	0.07	1/21/04	8/21/13
0807_01	15163	NO3	Summer	0.39	0.39	0.00	0.11	3.48	-1.27	-0.85	21	0.05	0.25	0.08	0.03	0.01	0.00	0.07	7/21/04	8/21/13
0807_01	15163	NO3	Winter	0.29	0.01	0.02	0.00	2.66	1.81	0.60	19	0.04	0.15	0.07	0.03	0.00	0.00	0.07	1/21/04	4/11/13
0807_01	15163	TKN	POR	0.15	-0.04	0.02	0.02	-2.53	-1.28	1.85	39	0.91	1.55	1.10	0.91	0.73	0.10	0.37	1/21/04	8/21/13
0807_01	15163	TP	Summer	0.15	-0.01	0.08	0.00	-1.87	-1.18	0.48	21	0.14	0.22	0.17	0.14	0.12	0.01	0.05	7/21/04	8/21/13
0807_01	15163	TKN	Winter	0.23	-0.04	0.04	0.02	-2.23	1.67	0.09	19	0.92	1.55	1.05	0.89	0.68	0.62	0.37	1/21/04	4/11/13
0807_01	15163	Chloride	POR	0.11	-0.71	0.04	0.33	-2.18	0.74	-0.55	40	31.53	47.60	36.45	31.28	26.40	19.90	10.05	1/21/04	8/21/13
0807_01	15163	Chloride	Winter	0.18	-0.92	0.07	0.48	-1.91	1.04	-0.39	19	32.75	47.60	38.70	30.85	27.00	24.50	11.70	1/21/04	4/11/13
0807_01	15163	TDS	POR	0.17	-4.11	0.01	1.45	-2.84	0.01	0.13	41	218.58	283.00	235.00	218.00	206.00	157.00	29.00	1/21/04	8/21/13
0807_01	15163	TDS	Winter	0.26	-4.90	0.03	2.01	-2.44	-0.20	0.39	19	230.31	283.00	244.00	232.00	215.00	170.00	29.00	1/21/04	4/11/13
0807_01	15166	Secchi Depth	Summer	0.14	-0.01	0.07	0.01	-1.88	1.04	1.29	23	0.41	0.71	0.48	0.38	0.33	0.15	0.15	7/21/04	10/17/13
0807_01	15166	NO3	POR	0.51	0.40	0.00	0.07	5.41	0.26	-1.47	30	0.03	0.19	0.02	0.01	0.00	0.00	0.02	1/21/04	8/21/13
0807_01	15166	NO3	Summer	0.68	0.41	0.00	0.07	5.63	0.01	-1.41	17	0.01	0.07	0.02	0.01	0.00	0.00	0.02	7/21/04	8/21/13
0807_01	15166	NO3	Winter	0.55	0.47	0.00	0.13	3.64	-0.09	-1.14	13	0.04	0.19	0.03	0.02	0.00	0.00	0.03	1/21/04	4/11/13
0807_01	15167	Sp Cond	POR	0.10	-3.74	0.04	1.77	-2.11	0.94	-0.88	41	367.53	436.67	386.00	369.00	339.00	307.00	47.00	1/21/04	10/17/13
0807_01	15167	NO3	POR	0.44	0.37	0.00	0.08	4.78	0.63	-1.62	31	0.02	0.18	0.02	0.01	0.00	0.00	0.02	1/21/04	10/17/13
0807_01	15167	NO3	Summer	0.61	0.42	0.00	0.09	4.80	0.73	-1.32	17	0.02	0.09	0.02	0.00	0.00	0.00	0.02	7/21/04	10/17/13
0807_01	15167	NO3	Winter	0.46	0.41	0.01	0.13	3.20	0.14	-1.05	14	0.03	0.18	0.03	0.01	0.00	0.00	0.03	1/21/04	4/11/13
0807_01	15167	Chlorophyll-a	POR	0.26	2.58	0.00	0.83	3.11	1.17	-1.00	29	29.89	63.20	43.60	26.70	16.00	8.90	27.60	1/21/04	10/17/13
0807_01	15167	Chlorophyll-a	Summer	0.40	2.78	0.01	0.92	3.03	-0.43	-0.49	16	39.95	63.20	50.10	41.85	29.35	11.90	20.75	7/21/04	10/17/13

Trends (Unclassified Segments):

None

Segment 0834 – Lake Amon G. Carter

Overview

This 1,540 acre segment impounds Big Sandy Creek from Amon G. Carter Dam in Montague County up to the normal pool elevation of 920 feet. Much of the land use is classified as urban around the perimeter and to the west of the lake. The remainder of the watershed is a mix of rangeland and agriculture/pasture with scattered sections of forest. This segment falls entirely within the North Central Prairie ecoregion. Lake Amon G. Carter has been noted as being eutrophic by the TCEQ report Trophic Classification of Texas Reservoirs.

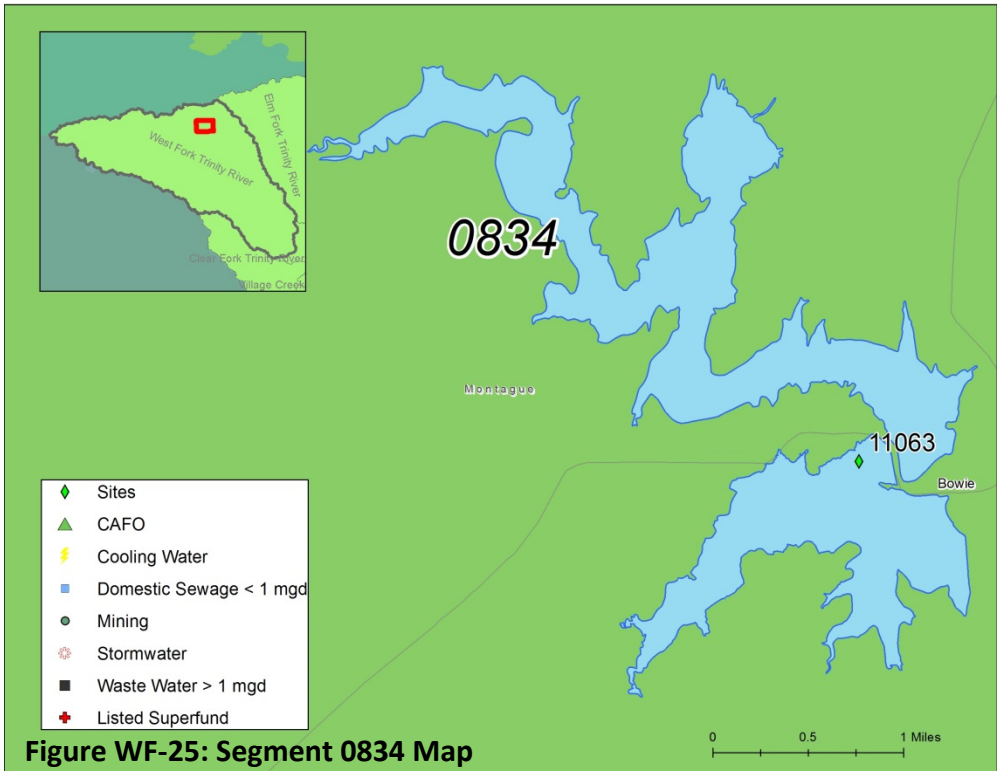


Figure WF-25: Segment 0834 Map

Assessments (Classified Segments):

Aquatic Life Use: 0834_01 - Entire reservoir	**TCEQ Draft 2014 Integrated Report** Fully Supporting	**In-House 5 Year Assessment** No Concern
General Use: 0834_01	**TCEQ Draft 2014 Integrated Report** Fully Supporting	**In-House 5 Year Assessment** Fully Supporting
Contact Recreation Use: 0834_01	**TCEQ Draft 2014 Integrated Report** No Concern	**In-House 5 Year Assessment** No Concern
Public Water Supply Use: 0834_01	**TCEQ Draft 2014 Integrated Report** Fully Supporting	**In-House 5 Year Assessment** No Concern

Fish Consumption Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0834_01	Not Assessed (No Data)	Not Assessed (No Data)

Assessments (Unclassified Segments):

Aquatic Life Use: Not Assessed (No Data)

General Use: Not Assessed (No Data)

Contact Recreation Use: Not Assessed (No Data)

Public Water Supply Use: Not Assessed (No Data)

Fish Consumption Use: Not Assessed (No Data)

Trend Analysis Overview

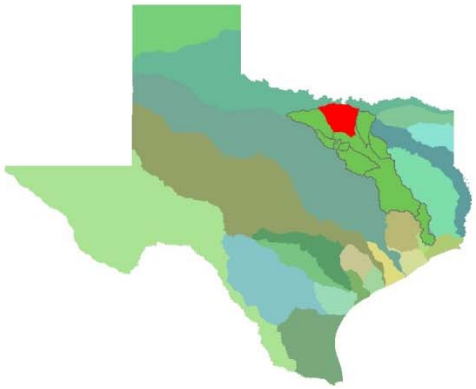
Trends (Classified Segments):
None

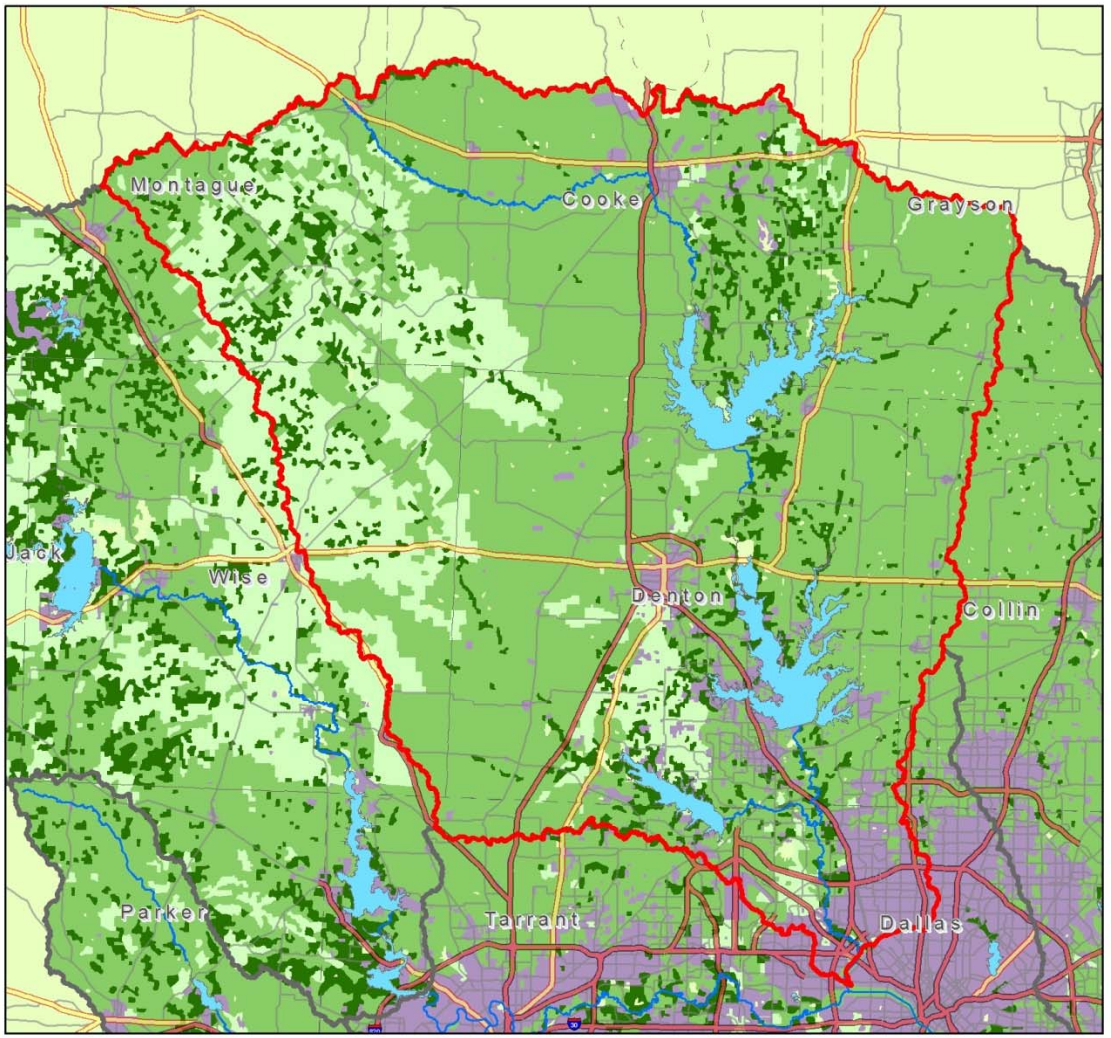
Trends (Unclassified Segments):
None



Image WF-7: Northwest edge of Lake Amon G Carter

Elm Fork Trinity River





ELM FORK TRINITY RIVER

Classified Segments Used in this Report – 7
Unclassified Segments Used in this Report – 13

0824 – Elm Fork Trinity River Above Ray Roberts
0839 – Elm Fork Trinity River Below Ray Roberts
0839A – Clear Creek
0840 – Ray Roberts Lake
0840A – Unnamed Tributary of Jordan Creek
0823 – Lewisville Lake
0823A – Little Elm Creek
0823B – Stewart Creek
0823C – Clear Creek
0823D – Doe Branch
0825 – Denton Creek
0822 – Elm Fork TR Below Lewisville
0822A – Cottonwood Branch
0822B – Grapevine Creek
0822C – Hackberry Creek
0822D – Ski Lake
0826 – Grapevine Lake
0826A – Denton Creek
0826B – Trail Creek
0826C – Henrietta Creek

Sites Used for Analysis:

2008 Integrated Report	57
2010 Integrated Report	86
2012 Integrated Report	101
Draft 2014 Integrated Report	108
5-Year Analysis	41
Valid Trends	31

Table ELM-1: Elm Fork Trinity River Count of Dischargers by Type and County

County	Cooling Water	Domestic Sewage <1mgd	Mining	Stormwater	Wastewater >1mgd	CAFO	Total Dischargers
COLLIN		2		1	2		5
COOKE		8			1		9
DALLAS		1		1	1		3
DENTON		22	3	1	14	1	41
GRAYSON		3			1		4
MONTAGUE		1					1
TARRANT				1	2		3
WISE		1			1	1	3
Total		38	3	4	22	2	69

The Elm Fork subwatershed is the northernmost watershed in the basin stretching to within a few miles of the Oklahoma border. The headwaters of the Elm Fork begin in Montague County and extend approximately 118 miles to the confluence with the Main Stem in Dallas County. The majority of the subwatershed is rural and becomes more urbanized as it approaches the DFW Metroplex, around the City of Denton and the shores of Lake Lewisville. The rural northern portion of the subwatershed includes row crop agriculture, cattle grazing, and dairy industry.

Ray Roberts Lake, Lake Lewisville, and Lake Grapevine are located in this subwatershed. Water rights permits for Ray Roberts Lake and Lake Lewisville are held by the cities of Dallas and Denton. Water rights permits for Lake Grapevine are held by the Park Cities Municipal Utility District (MUD), as well as, the cities of Dallas and Grapevine.

There are 21 Brownfield sites in this subwatershed. Thirteen hazmat events required action from the EPA OSC office. There are four sites being monitored for compliance with the EPA Resource Conservation and Recovery Act. Noncompliance events are reported on the Enforcement and Compliance History Online website. See Tables ELM-2, ELM-3, and ELM-4, for details and links to additional information.

Table ELM-2: EPA Brownfields

Segment	Site	Link to Additional EPA Information	Map Site	Assessment Complete Date	Cleanup Required	Cleanup Status	Redevelopment Status	Media Affected	Classes of Contaminants Found	Media Addressed	Classes of Contaminants Cleaned Up
0840	MUNICIPAL AIRPORT PROPERTY	EPA Link	Map It	5/3/2000	Unknown	Not Started	Not Started	None		None	
0823B	TRANSIT PARK	EPA Link	Map It	1/28/2011	Yes	Complete (11/15/2011)	Complete (11/15/2011)	Soil	Lead, Other Metals	None	
0822	PROPOSED FIRE STATION NO. 3	EPA Link	Map It	11/7/2001	Unknown	Not Started	Not Started	None		None	
0822	FARMERS BRANCH FIRE TRAINING CENTER	EPA Link	Map It	7/17/2002	Unknown	Not Started	Not Started	None		None	
0822	KEENAN BRIDGE ROAD PROPERTY	EPA Link	Map It	4/18/2002	Unknown	Not Started	Not Started	None		None	
0822	CENTENNIAL PLAZA	EPA Link	Map It	12/31/2002	Yes	Complete (6/30/1998)	In Progress (Started 3/31/1999)	None		None	
0822	10501 SHADY TRAIL	EPA Link	Map It	12/31/2003	Unknown	Not Started	Not Started	None		None	
0822	1618 E GRAUWYLER ROAD	EPA Link	Map It	12/31/2012	No	Not Started	Not Started	None		None	
0822	K&W AUTO	EPA Link	Map It	3/17/2012	Yes	Not Started	Not Started	Soil, Ground Water	Petroleum Products, Asbestos, PAHs	None	
0822	OLD ORCHARD VILLAGE EAST	EPA Link	Map It	2/1/2013	Unknown	Not Started	Not Started	Ground Water	Petroleum Products, Asbestos, VOCs, SVOCs	None	
0822	OFFICE/WAREHOUSE/STORAGE FACILITY	EPA Link	Map It	10/26/2013	Unknown	Not Started	Not Started	Soil, Ground Water	Other Contaminants	None	

0822	LEWISVILLE CENTER	EPA Link	Map It	10/7/2011	Unknown	Not Started	Not Started	None		None	
0822	AA AUTOMOTIVE SERVICES	EPA Link	Map It	10/11/2013	No	Not Started	Not Started	Soil	Lead	None	
0822	CURRENT TEAM ABC	EPA Link	Map It	1/27/2012	No	Not Started	Not Started	None		None	
0822	7.657 ACRES OF VACANT LAND	EPA Link	Map It	6/6/2012	Unknown	Not Started	Not Started	None		None	
0822	CHEVRON GAS STATION	EPA Link	Map It	7/3/2013	No	Not Started	In Progress (Started 11/1/2013)	Soil, Ground Water	Petroleum Products	None	
0822	LEWISVILLE FEED MILL	EPA Link	Map It	12/19/2013	Unknown	Not Started	Not Started	None		None	
0822	OFFICE/WAREHOUSE	EPA Link	Map It	1/18/2014	No	Not Started	Not Started	None		None	
0822	CHEVRON GAS STATION	EPA Link	Map It	6/23/2013	No	Not Started	Not Started		Asbestos		Asbestos
0826	FREEDOM OIL PROPERTY	EPA Link	Map It	5/6/2002	Unknown	Not Started	Not Started	None		None	
0826	4TH AND GULF WRECKING YARD	EPA Link	Map It	7/14/2010	Unknown	Not Started	Not Started	None		None	

Table ELM-3: EPA On- Scene Coordinator Investigations

Segment	Site	Link to Additional EPA Information	Map Site	Date	Contaminants Found
0839	STARRFOAM TRUCK FIRE	EPA Link	Map It	8/20/2010	Diesel Fuel, Styrofoam
0823	KRUM MERCURY	EPA Link	Map It	4/11/2005	Mercury
0823	NORTH TEXAS ALLERGY AND ASTHMA CENTER MERCURY SPILL	EPA Link	Map It	12/2/2008	Mercury
0823	ACME BRICK HF RELEASE	EPA Link	Map It	2/15/2008	Hydrogen Fluoride
0823A	GUNTER TRAIN COLLISION	EPA Link	Map It	5/19/2004	Diesel Fuel
0823B	I-35 GASOLINE SPILL	EPA Link	Map It	11/15/2007	Diesel Fuel
0823B	LANDSEER DRIVE DRUM	EPA Link	Map It	1/23/2009	Sodium Cyanide
0823B	PARKRIDGE DRIVE ABANDONED DRUMS	EPA Link	Map It	11/11/2011	Unknown Substance
0823B	DENTON ATMOS GAS COMPRESSOR EXPLOSION	EPA Link	Map It	7/20/2009	
0823B	UNT RESEARCH LAB	EPA Link	Map It	3/4/2007	Unknown Substance
0822	LEWISVILLE ALCOHOL TANKER SPILL	EPA Link	Map It	2/12/2007	Denatured Alcohol
0822	S & K PETROLEUM DIESEL SPILL	EPA Link	Map It		Diesel Fuel
0826	POCO GRAPHITE NAOH RELEASE	EPA Link	Map It	7/11/2012	Sodium Hydroxide

Table ELM-4: EPA Resource Conservation and Recovery Act (RCRA) and Enforcement and Compliance History Online (ECHO) Sites

Segment	Site	Link to Additional EPA RCRA Information	Link to Additional EPA ECHO Information	Map Site	Site Assessed	Solution for Cleanup Selected	Cleanup Implemented	Cleanup Complete	Media Affected	Contaminant
0823B	EXIDE TECHNOLOGIES FRISCO RECYCLING CENTER	EPA Link	EPA Link	Map It	12/1/1987	8/10/2006	8/10/2006		Air, Surface Water, Soil	Heavy Metals, Dioxins, Nitrates, Nitric Acid, Sodium Sulfate, Sulfuric Acid
0823B	SAFETY-KLEEN CORP	EPA Link	EPA Link	Map It	7/2/1986				Air	Solvents, Plastic/Chemical Precursors, Rust Removers
0822	WELLMARK INTERNATIONAL	EPA Link	EPA Link	Map It					Air	Insecticides, Pesticides
0822	SAFETY KLEEN SYSTEMS INCORPORATED	EPA Link	EPA Link	Map It	6/30/1992	2/19/2009	2/19/2009	8/27/2014	Air	PAHs, Lead, Ethylene Glycol

There are currently two special projects underway in this segment which are being managed by the TCEQ; one by the Total Maximum Daily Load (TMDL) team and one by the Surface Water Quality Monitoring (SWQM) team. The Cottonwood Branch and Grapevine Creek Bacteria TMDL is focused on the *E. coli* impairments in 0822A and 0822B. The report for this project has been submitted for approval. The Diurnal Dissolved Oxygen (DO) Dynamics in the Selected Least Disturbed Streams project is being undertaken in order to determine the appropriateness of existing DO criteria by monitoring DO in reference streams in each ecoregion. For this subwatershed, a site in Segment 0823 is being monitored.



Image ELM- 1: Flood waters over Lake Ray Roberts US377 bridge in Tioga

Segment 0824 – Elm Fork Trinity River Above Ray Roberts

Overview

This 86 mile segment runs from 5.9 miles downstream of the confluence of Pecan Creek in Cooke County to US 82 in Montague County. The entire segment runs through the Grand Prairie ecoregion with almost all land use classified as agriculture/pasture. Oil production has been heavy in the area over the last century and natural gas drilling has increased tremendously in the last 20 years.

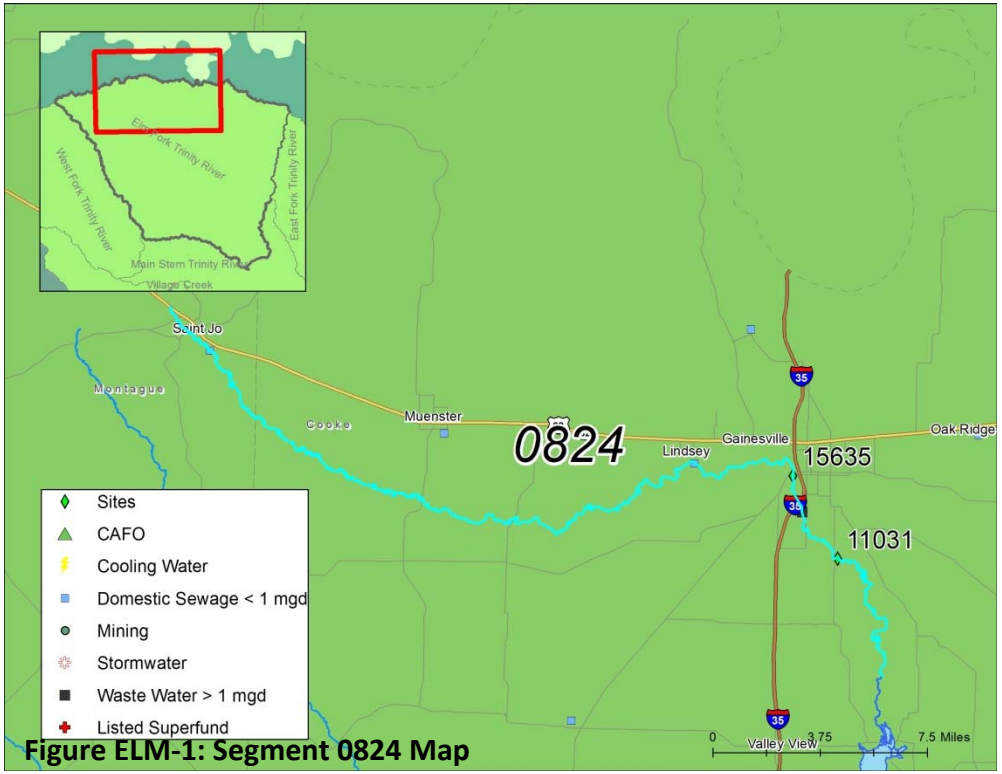


Figure ELM-1: Segment 0824 Map

Assessments (Classified Segments):

Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0824_01 - Lower 7.5 miles of segment	Fully Supporting	Fully Supporting
0824_02 - 2 mile reach near unmarked county road, 1.4 km downstream Gainesville WWTP	Not Assessed (No Data)	Not Assessed (No Data)
0824_03 - 3.5 mile reach near SH 51	Fully Supporting	Fully Supporting
0824_04 - 25 mile reach near FM 3108	Not Assessed (No Data)	Not Assessed (No Data)
0824_05 - Upper 48 miles of segment	Not Assessed (No Data)	Not Assessed (No Data)

General Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0824_01	Concern	Concern
0824_02	Concern	Fully Supporting
0824_03	Concern	Concern
0824_04	Fully Supporting	Fully Supporting
0824_05	Fully Supporting	Fully Supporting

Assessment units 0824_01 and 0824_03 were found to have concerns for chlorophyll-a by the TCEQ Draft 2014 Integrated Report. 0824_03 was also found to have concerns for chlorophyll-a by the in-house 5 year assessment. 0824_01 and 0824_02 were found to have concerns for nitrate by the TCEQ Draft 2014 Integrated Report. Additionally, 0824_01 was found to have concerns for nitrate, OP, and TP by the in-house 5 year assessment. 0824_01 is downstream of a wastewater treatment facility that is a potential source for the nutrient concerns in this assessment unit. Chlorophyll-a is well correlated to TKN as shown in Figure ELM-2. However, this correlation does not hold for nitrate which indicates that the organic nitrogen or ammonium component is leading to the chlorophyll-a concerns in these assessment units. The majority of the watershed upstream of 0824_03 is agricultural suggesting that nutrients upstream of Gainesville are from fertilizers while downstream of Gainesville, the wastewater treatment facility may also contribute to the nutrient loading for 0824.

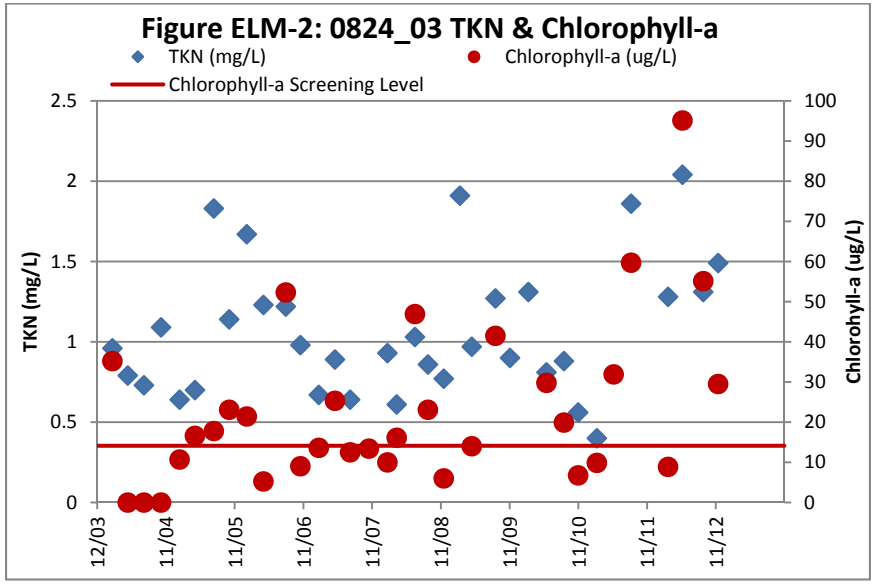


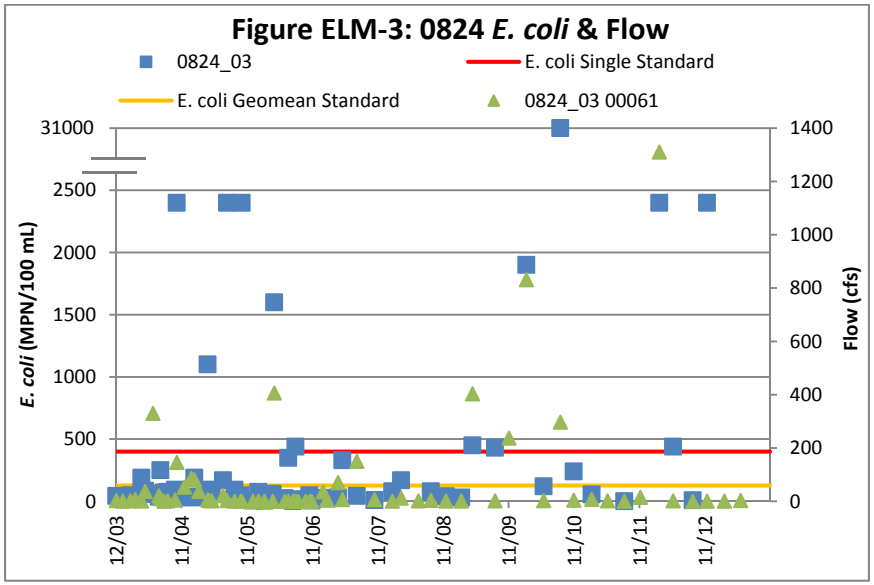


Image ELM- 2: 0824 at Old Denton Rd

Contact Recreation Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0824_01	No Concern	Not Supporting
0824_02	Not Assessed (No Data)	Not Assessed (No Data)
0824_03	Fully Supporting	Not Supporting
0824_04	Not Assessed (No Data)	Not Assessed (No Data)
0824_05	Not Assessed (No Data)	Not Assessed (No Data)

0824_01 and 0824_03 were found to be not supporting due to elevated levels of *E. coli* by the in-house 5 year assessment. Figure ELM-3 shows *E. coli* and flow for 0824_03. This data appears to show that there is some correlation between *E. coli* and increased stream flow. Livestock are a likely source of *E. coli* in this segment.

Figure ELM-3: 0824 *E. coli* & Flow



Public Water Supply Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0824_01	Fully Supporting	Fully Supporting
0824_02	Fully Supporting	No Concern
0824_03	Fully Supporting	Fully Supporting
0824_04	Fully Supporting	No Concern
0824_05	Fully Supporting	No Concern

Fish Consumption Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0824_01	Fully Supporting	Not Assessed (No Data)
0824_02	Fully Supporting	Not Assessed (No Data)
0824_03	Fully Supporting	Not Assessed (No Data)
0824_04	Fully Supporting	Not Assessed (No Data)
0824_05	Fully Supporting	Not Assessed (No Data)

Assessments (Unclassified Segments):

Aquatic Life Use: Not Assessed (No Data)

General Use: Not Assessed (No Data)

Contact Recreation Use: Not Assessed (No Data)

Public Water Supply Use: Not Assessed (No Data)

Fish Consumption Use: Not Assessed (No Data)

Trend Analysis Overview

Table ELM-5: Trend Analysis Result Summary

Elm Fork		Secchi Depth			*E. coli*			Chlorophyll-a			TSS			VSS			BOD5			Fluoride			NH3			NO3		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0824_01	11031																	UP									UP	UP	
0824_03	15635	DN	DN				UP		UP		UP			UP	UP					DN				DN					

Elm Fork		TKN			OP			TP		
Seg_AU	Site	A	S	W	A	S	W	A	S	W
0824_01	11031					UP			UP	
0824_03	15635		UP				DN			

Trends Key

A-All Months

S-Summer/Grow ing Season (May-October)

W-Winter/Dormant Sesaon (November-April)

UP Increasing Trends

DN Decreasing Trends

There were 16 significant trends identified for this segment as summarized in Table ELM-5. For additional detail on trend methods, see the Data Review Methodology section.

Trends (Classified Segments):
See Table ELM-6 for details of the significant trends analysis summary presented in Table ELM-5. Increasing trends for BOD5, nitrate, TKN, and *E. coli* have (R^2 values between 0.11 and 0.20. The trend for chlorophyll-a has an R^2 of 0.5 and may relate to the trends for TSS and VSS in assessment unit 0824_03. As discussed above in the General Use section of Assessments (Classified Segments), chlorophyll-a is a concern in this segment. Algae are a component of TSS and VSS which may be explained by the trend in chlorophyll-a.

Table ELM-6: 0824 Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0824_01	11031	BOD5	Summer	0.14	0.35	0.01	0.13	2.73	1.06	-0.09	46	4.67	12.00	6.00	5.00	2.00	1.00	4.00	5/12/04	10/22/13
0824_01	11031	NO3	POR	0.12	0.67	0.00	0.21	3.20	1.89	-1.09	77	8.18	22.40	12.50	7.55	3.13	0.01	9.37	12/30/03	11/7/13
0824_01	11031	NO3	Summer	0.20	0.80	0.01	0.27	2.99	0.65	-1.20	37	8.71	19.56	13.00	8.48	4.40	0.20	8.60	5/12/04	10/22/13
0824_01	11031	TP	Summer	0.15	0.15	0.01	0.06	2.64	-1.15	0.48	43	2.22	12.95	2.27	1.48	0.51	0.06	1.76	5/12/04	10/22/13
0824_01	11031	OP	Summer	0.16	0.19	0.01	0.07	2.73	-1.95	0.64	42	2.03	11.40	2.84	1.19	0.50	0.02	2.34	5/12/04	10/22/13
0824_03	15635	Secchi Depth	POR	0.13	-0.08	0.03	0.03	-2.34	-0.72	-0.98	38	0.39	1.00	0.60	0.37	0.25	0.10	0.35	2/19/04	6/18/13
0824_03	15635	Secchi Depth	Summer	0.25	-0.02	0.03	0.01	-2.33	1.01	-0.04	18	0.30	0.61	0.40	0.29	0.17	0.13	0.23	5/11/04	6/18/13
0824_03	15635	TSS	POR	0.16	0.13	0.02	0.05	2.36	0.60	-0.95	32	42.09	134.00	51.00	26.50	16.00	6.00	35.00	2/19/04	12/12/12
0824_03	15635	VSS	POR	0.13	0.17	0.04	0.08	2.10	-1.77	-0.72	32	7.70	25.00	10.00	6.00	3.00	0.50	7.00	2/19/04	12/12/12
0824_03	15635	VSS	Summer	0.29	1.27	0.04	0.55	2.32	1.15	-0.19	15	9.20	23.00	16.00	8.00	5.00	0.50	11.00	5/11/04	9/24/12
0824_03	15635	NH3	Summer	0.20	-0.30	0.06	0.15	-2.00	1.43	-0.83	18	0.06	0.52	0.07	0.00	0.00	0.00	0.07	5/11/04	9/24/12
0824_03	15635	TKN	Summer	0.19	0.07	0.08	0.04	1.89	1.79	0.09	17	1.12	2.04	1.27	0.97	0.81	0.64	0.46	5/11/04	9/24/12
0824_03	15635	OP	Winter	0.35	-0.52	0.03	0.21	-2.52	1.81	-0.41	14	0.02	0.11	0.02	0.00	0.00	0.00	0.02	2/19/04	3/9/11
0824_03	15635	Fluoride	POR	0.21	-0.20	0.01	0.07	-2.94	1.98	-1.20	34	0.12	0.85	0.20	0.03	0.03	0.03	0.18	2/19/04	12/12/12
0824_03	15635	*E. coli*	Winter	0.11	0.24	0.07	0.13	1.88	1.59	-0.41	31	456.32	2400.00	190.00	48.00	31.00	5.00	159.00	12/2/03	12/12/12
0824_03	15635	Chlorophyll-a	Summer	0.50	6.39	0.00	1.61	3.97	1.89	1.22	18	30.38	95.10	46.90	24.20	14.00	0.00	32.90	5/11/04	9/24/12

Trends (Unclassified Segments):
None

Segment 0839 – Elm Fork Trinity River Below Ray Roberts

Overview

This 12 mile segment stretches from 110 yards upstream of US 380 in Denton County to Ray Roberts Dam in Denton County. 0839 is essentially the boundary line between the Grand Prairie and Eastern Cross Timbers ecoregions. Land use in the watershed is generally classified as agriculture/pasture with large sections of rangeland to the south and urban to the southwest.

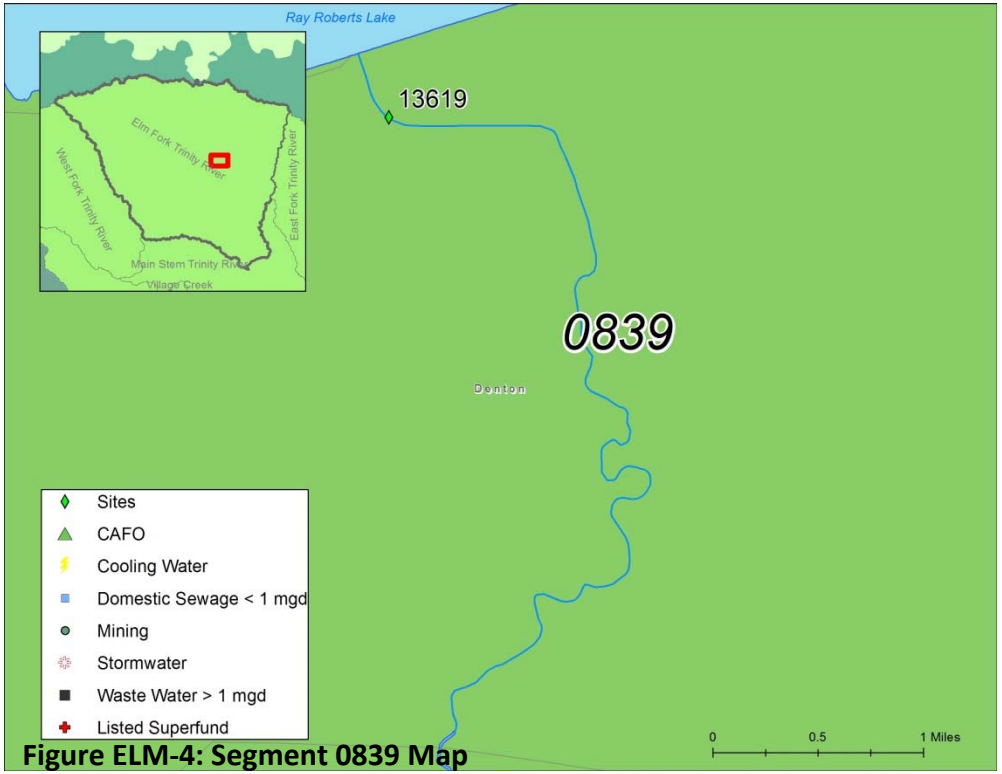


Figure ELM-4: Segment 0839 Map

Assessments (Classified Segments):

Aquatic Life Use: 0839_01 - Entire segment	**TCEQ Draft 2014 Integrated Report** Fully Supporting	**In-House 5 Year Assessment** Fully Supporting
General Use: 0839_01	**TCEQ Draft 2014 Integrated Report** Fully Supporting	**In-House 5 Year Assessment** Fully Supporting
Contact Recreation Use: 0839_01	**TCEQ Draft 2014 Integrated Report** Not Assessed (No Data)	**In-House 5 Year Assessment** Fully Supporting
Public Water Supply Use: 0839_01	**TCEQ Draft 2014 Integrated Report** Fully Supporting	**In-House 5 Year Assessment** Fully Supporting

Fish Consumption Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0839_01	Fully Supporting	Not Assessed (No Data)

Assessments (Unclassified Segments):

Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0839A_01 - Entire segment	Not Assessed (No Data)	Fully Supporting
General Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0839A_01	Not Assessed (No Data)	Fully Supporting
Contact Recreation Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0839A_01	Not Assessed (No Data)	Fully Supporting
Public Water Supply Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0839A_01	Not Assessed (No Data)	Fully Supporting
Fish Consumption Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0839A_01	Not Assessed (No Data)	Not Assessed (No Data)



Image ELM- 3: Ray Roberts subsistence release into 0839

Trend Analysis Overview

Table ELM-7: Trend Analysis Result Summary

Elm Fork		Flow			Water Temp 24HR Avg			Water Temp 24HR Max			Water Temp 24HR Min			DO 24HR Avg			pH			Sp Cond			Chlorophyll-a			NO3		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0839_01	13619																	UP										
0839A_01	10859				DN			DN			DN			UP						DN					UP		DN	
0839A_01	13618			UP																								

Elm Fork		TP		
Seg_AU	Site	A	S	W
0839_01	13619			DN
0839A_01	10859	UP		
0839A_01	13618			

Trends Key

A-All Months

S-Summer/Grow ing Season (May-October)

W-Winter/Dormant Sesaon (November-April)

UP Increasing Trends

DN Decreasing Trends

There were 11 significant trends identified for this segment as summarized in Table ELM-7. For additional detail on trend methods, see the Data Review Methodology section.

Trends (Classified Segments):

See Table ELM-8 for details of the significant trends analysis summary presented in Table ELM-7. Trends in this segment have R^2's less than 0.17 with very shallow slopes. Therefore, there are no trends of concern in this segment.

Table ELM-8: 0839 Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0839_01	13619	pH	Summer	0.17	0.06	0.00	0.02	3.25	1.62	0.94	52	7.82	8.90	8.00	7.80	7.50	6.90	0.50	5/20/04	10/22/13
0839_01	13619	TP	Winter	0.15	-0.19	0.01	0.07	-2.58	-0.75	-0.51	39	0.09	0.65	0.09	0.05	0.02	0.01	0.07	2/26/04	11/7/13

Trends (Unclassified Segments):

See Table ELM-9 for details of the significant trends analysis summary presented in Table ELM-7. The increasing trend for TP has an R^2 of 0.11. Although the increasing trend for chlorophyll-a occurs only in the winter months, it has an R^2 of 0.52. However, as shown in Figure ELM-5, this trend is heavily weighted by a single high value at the end of the period of record which suggests that this trend may not present a concern.

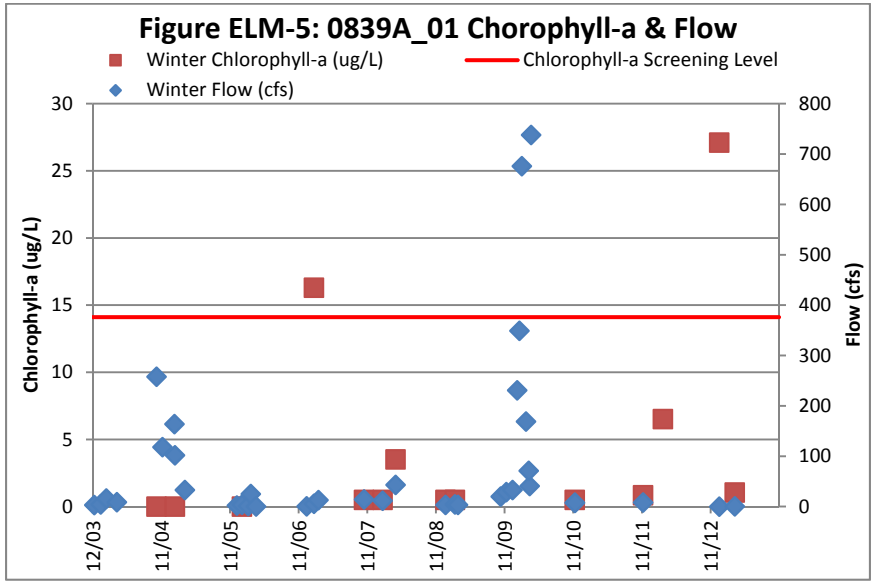




Image ELM- 4: 0839 at about 7500cfs

Table ELM-9: 0839A Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0839A_01	10859	Sp Cond	POR	0.10	-0.05	0.08	0.03	-1.80	-0.97	1.89	31	604.10	1491.00	680.00	610.00	427.00	190.00	253.00	11/4/04	6/18/13
0839A_01	10859	Water Temp 24HR Avg	POR	0.33	-2.40	0.01	0.80	-2.99	-1.65	-0.02	20	21.58	29.40	27.80	23.05	17.20	6.20	10.60	5/11/04	12/9/10
0839A_01	10859	Water Temp 24HR Max	POR	0.33	-2.51	0.01	0.84	-2.97	-1.61	-0.03	20	24.16	33.30	30.54	26.15	19.25	8.00	11.29	5/11/04	12/9/10
0839A_01	10859	Water Temp 24HR Min	POR	0.33	-2.37	0.01	0.79	-2.98	-1.33	-0.52	20	18.84	26.70	24.95	20.10	13.60	5.00	11.35	5/11/04	12/9/10
0839A_01	10859	NO3	Summer	0.31	-0.58	0.03	0.24	-2.43	1.32	-1.15	15	0.07	0.32	0.15	0.00	0.00	0.00	0.15	5/3/05	6/18/13
0839A_01	10859	TP	POR	0.11	0.21	0.07	0.11	1.87	1.69	-1.12	30	0.06	0.63	0.09	0.01	0.01	0.01	0.09	11/4/04	6/18/13
0839A_01	10859	Chlorophyll-a	Winter	0.52	1.11	0.00	0.31	3.58	-1.77	0.03	14	4.13	27.10	3.51	0.50	0.50	0.00	3.01	11/4/04	4/8/13
0839A_01	10859	DO 24HR Avg	POR	0.15	0.29	0.09	0.16	1.81	1.10	0.02	20	7.89	10.40	8.50	7.75	7.05	5.60	1.45	5/11/04	12/9/10
0839A_01	13618	Flow	Winter	0.29	0.40	0.03	0.16	2.45	-1.25	0.94	17	137.61	738.00	164.00	33.00	16.00	0.20	148.00	12/9/03	4/20/10

Segment 0840 – Ray Roberts Lake

Overview

This 29,350 acre reservoir impounds the Elm Fork Trinity River from Ray Roberts Dam in Denton County to a point 5.9 miles upstream of the confluence of Pecan Creek in Cooke County up to the normal pool elevation of 632.5 feet. Land use in this segment is nearly all classified as agriculture/pasture. The eastern portion of the watershed is in the Eastern Cross Timbers ecoregion and the western portion is in the Grand Prairie ecoregion. Ray Roberts Lake has been noted as being eutrophic by the TCEQ report Trophic Classification of Texas Reservoirs.

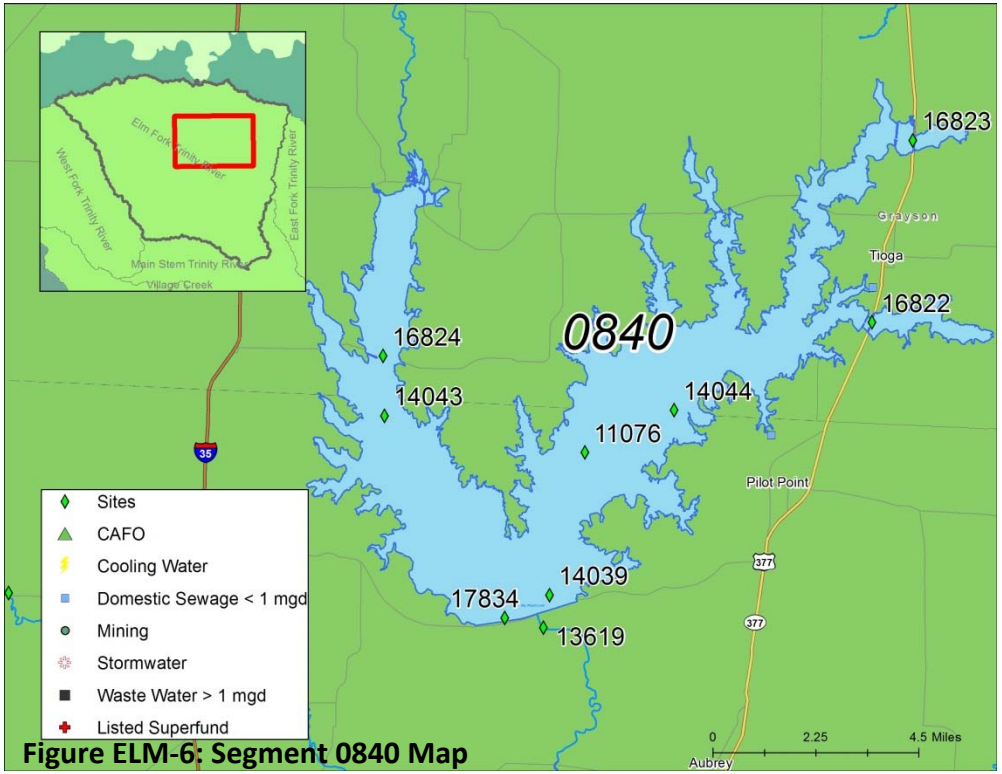


Figure ELM-6: Segment 0840 Map

Assessments (Classified Segments):

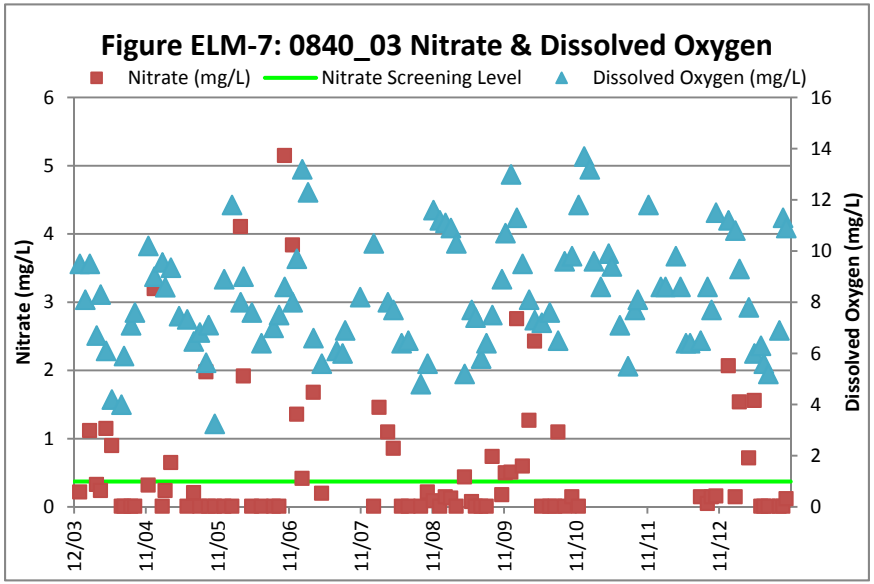
Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0840_01 - Lowermost portion of reservoir adjacent to dam	Fully Supporting	Fully Supporting
0840_02 - Lower portion of Jordan Creek arm west of Pilot Point	Fully Supporting	Fully Supporting
0840_03 - Upper portion of Jordan Creek arm	Fully Supporting	Fully Supporting
0840_04 - Buck Creek cove	Fully Supporting	Fully Supporting
0840_05 - Lower portion of Elm Fork arm	Not Assessed (No Data)	Not Assessed (No Data)
0840_06 - Middle portion of Elm Fork arm	Fully Supporting	Fully Supporting
0840_07 - Upper portion of Elm Fork arm	Fully Supporting	Fully Supporting
0840_08 - Remainder of reservoir	Concern	Not Assessed (No Data)

0840_08 was found to have concerns for depressed dissolved oxygen by the TCEQ Draft 2014 Integrated Report. As there is no current data in this assessment unit, the finding was carried forward from previous Integrated Reports.

General Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0840_01	Fully Supporting	Fully Supporting
0840_02	Fully Supporting	Fully Supporting
0840_03	Concern	Concern
0840_04	Concern	Concern
0840_05	Fully Supporting	Fully Supporting
0840_06	Fully Supporting	Fully Supporting
0840_07	Fully Supporting	Fully Supporting
0840_08	Fully Supporting	Fully Supporting

0840_03 and 0840_04 were found to have concerns for ammonia and nitrate by the TCEQ Draft 2014 Integrated Report. 0840_03 was also found to have concerns for nitrate by the in-house 5 year assessment. 0840_03 was found to have concerns for TP by both the TCEQ Draft 2014 Integrated Report and the in-house 5 year assessment. In addition, 0840_03 and 0840_04 were found to have concerns for OP by the in-house 5 year assessment. As with nitrate (Figure ELM-7), these nutrients are regularly at concentrations above the screening levels due to the eutrophic nature of the reservoir. However, these elevated nutrients do not appear to be causing algal blooms that affect dissolved oxygen levels.

Figure ELM-7: 0840_03 Nitrate & Dissolved Oxygen



Contact Recreation Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0840_01	No Concern	Fully Supporting
0840_02	Not Assessed (No Data)	Fully Supporting
0840_03	Not Assessed (No Data)	Fully Supporting
0840_04	Not Assessed (No Data)	Fully Supporting
0840_05	Not Assessed (No Data)	Not Assessed (No Data)
0840_06	No Concern	No Concern
0840_07	Not Assessed (No Data)	Not Assessed (Inadequate Data)
0840_08	Not Assessed (No Data)	Not Assessed (No Data)

Public Water Supply Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0840_01	Fully Supporting	Fully Supporting
0840_02	Fully Supporting	Fully Supporting
0840_03	Fully Supporting	Fully Supporting
0840_04	Fully Supporting	Fully Supporting
0840_05	Fully Supporting	No Concern
0840_06	Fully Supporting	Fully Supporting
0840_07	Fully Supporting	Fully Supporting
0840_08	Fully Supporting	No Concern

Fish Consumption Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0840_01	Fully Supporting	Not Assessed (No Data)
0840_02	Fully Supporting	Not Assessed (No Data)
0840_03	Fully Supporting	Not Assessed (No Data)
0840_04	Fully Supporting	Not Assessed (No Data)
0840_05	Fully Supporting	Not Assessed (No Data)
0840_06	Fully Supporting	Not Assessed (No Data)
0840_07	Fully Supporting	Not Assessed (No Data)
0840_08	Fully Supporting	Not Assessed (No Data)

Assessments (Unclassified Segments):

Aquatic Life Use: Not Assessed (No Data)

General Use: Not Assessed (No Data)

Contact Recreation Use: Not Assessed (No Data)

Public Water Supply Use: Not Assessed (No Data)

Fish Consumption Use: Not Assessed (No Data)

Trend Analysis Overview

Table ELM-10: Trend Analysis Result Summary

Elm Fork		DO			pH			Sp Cond			*E. coli*			Pheophytin-a			Lab Turb			TSS			TDS			Chloride		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0840_01	17834									DN	UP	UP		UP					UP	UP	UP	UP			DN	DN	DN	DN
0840_02	11076							DN		DN	UP			UP	UP						UP					DN		DN
0840_03	16823			UP	UP	UP						DN						UP			UP				DN			
0840_04	16822																										DN	
0840_07	16824							DN		DN				UP	UP													DN

Elm Fork		NO3		
Seg_AU	Site	A	S	W
0840_01	17834			
0840_02	11076			UP
0840_03	16823			
0840_04	16822			
0840_07	16824			

Trends Key
A-All Months
S-Summer/Growing Season (May-October)
W-Winter/Dormant Sesaon (November-April)
UP Increasing Trends
DN Decreasing Trends

There were 34 significant trends identified for this segment as summarized in Table ELM-10. For additional detail on trend methods, see the Data Review Methodology section.

Trends (Classified Segments):

See Table ELM-11 for details of the significant trends analysis summary presented in Table ELM-10. Most increasing trends have R^2's less than 0.18. However, there are trends for pheophytin-a, TSS, and *E. coli* that have R^2's greater than 0.30 as shown in Figures ELM-8 and ELM-9. Each of these trends occurs as the lake elevation is trending downward. This indicates that some constituents such as TSS may be concentrating due to evaporation or algal population growth. Algal and *E. coli* populations may be multiplying due to increased residence times in the reservoir.

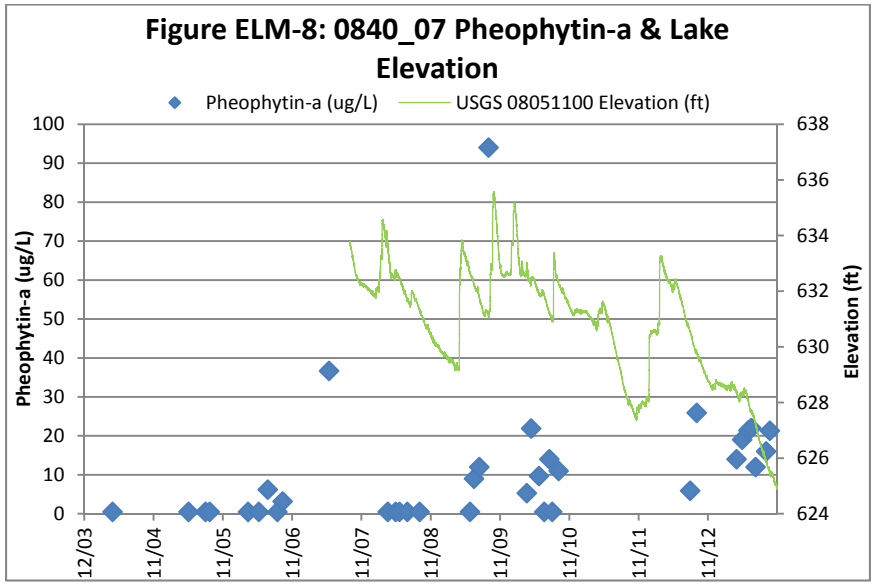


Figure ELM-8: 0840_07 Pheophytin-a & Lake Elevation

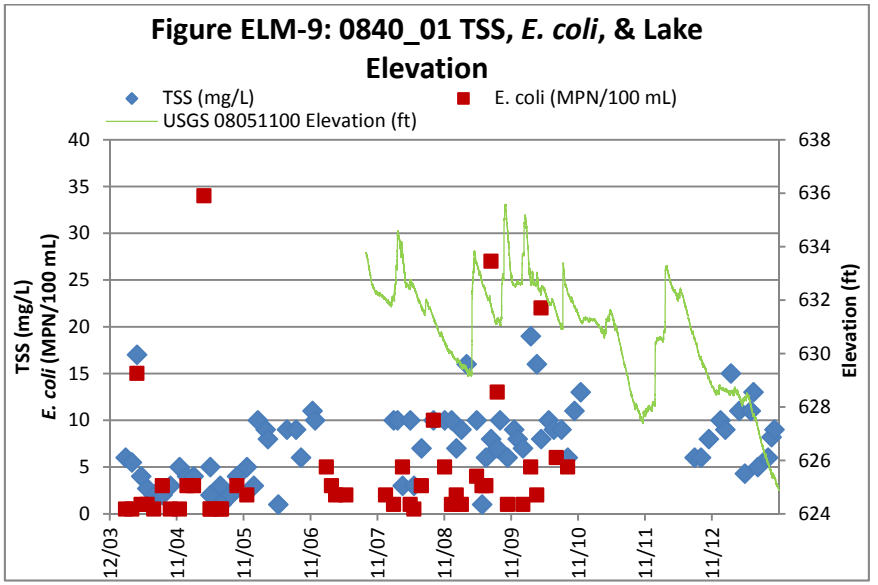


Figure ELM-9: 0840_01 TSS, *E. coli*, & Lake Elevation

Table ELM-11: 0840 Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0840_01	17834	Sp Cond	Winter	0.23	-4.56	0.00	1.19	-3.83	-0.08	1.55	50	269.48	340.00	289.00	266.50	254.00	187.00	35.00	1/22/04	11/7/13
0840_01	17834	TSS	POR	0.18	0.55	0.00	0.14	3.91	1.82	0.49	74	7.50	19.00	10.00	8.00	4.30	1.00	5.70	2/26/04	11/7/13
0840_01	17834	TSS	Summer	0.33	0.59	0.00	0.14	4.22	0.37	-1.35	39	5.94	13.00	9.00	6.00	3.00	1.00	6.00	5/20/04	10/22/13
0840_01	17834	TSS	Winter	0.13	0.49	0.03	0.22	2.22	1.48	0.26	35	9.24	19.00	11.00	9.00	6.00	3.00	5.00	2/26/04	11/7/13
0840_01	17834	Chloride	POR	0.24	-0.84	0.00	0.17	-4.91	0.47	-0.43	79	18.03	32.00	22.00	18.00	14.00	6.00	8.00	2/26/04	11/7/13
0840_01	17834	Chloride	Summer	0.16	-0.51	0.01	0.18	-2.77	-0.19	-0.93	41	16.90	24.80	20.00	17.00	13.37	8.75	6.63	5/20/04	10/22/13
0840_01	17834	Chloride	Winter	0.34	-1.22	0.00	0.28	-4.29	-0.45	-0.60	38	19.25	32.00	24.00	20.25	14.00	6.00	10.00	2/26/04	11/7/13
0840_01	17834	*E. coli*	POR	0.15	0.21	0.01	0.08	2.77	1.43	-0.47	45	4.56	34.00	5.00	2.00	1.00	0.50	4.00	2/26/04	10/5/10
0840_01	17834	*E. coli*	Summer	0.54	0.41	0.00	0.08	4.94	0.83	-0.84	23	4.80	27.00	5.00	3.00	0.50	0.50	4.50	5/20/04	10/5/10
0840_01	17834	Pheophytin-a	POR	0.15	0.23	0.02	0.09	2.43	-1.59	-1.10	35	14.37	91.00	21.00	10.00	0.50	0.50	20.50	4/28/04	10/22/13
0840_01	17834	TDS	Winter	0.21	-2.61	0.00	0.74	-3.54	0.98	0.06	50	176.66	221.00	188.00	174.50	166.00	144.00	22.00	1/22/04	11/7/13
0840_01	17834	Lab Turb	Winter	0.14	0.06	0.02	0.03	2.49	0.36	-0.09	39	11.03	30.00	14.00	9.40	7.60	3.97	6.40	2/26/04	11/7/13
0840_02	11076	Sp Cond	POR	0.11	-2.57	0.00	0.72	-3.57	1.87	1.17	100	269.16	340.00	285.00	268.00	256.00	220.00	29.00	1/22/04	11/7/13
0840_02	11076	Sp Cond	Winter	0.18	-3.91	0.00	1.21	-3.23	1.58	0.05	50	270.68	340.00	290.00	268.00	250.00	226.00	40.00	1/22/04	11/7/13
0840_02	11076	TSS	Summer	0.10	0.09	0.05	0.04	2.06	-0.35	-0.08	39	5.75	34.00	8.00	5.00	2.00	1.00	6.00	5/20/04	10/22/13
0840_02	11076	NO3	Winter	0.15	0.01	0.01	0.01	2.67	-0.47	-0.46	43	0.16	0.39	0.22	0.18	0.11	0.01	0.11	2/26/04	11/7/13
0840_02	11076	Chloride	POR	0.24	-0.05	0.00	0.01	-5.05	-0.84	2.67	81	19.13	46.00	22.00	19.00	14.14	6.00	7.86	2/26/04	11/7/13
0840_02	11076	Chloride	Winter	0.25	-1.15	0.00	0.32	-3.60	0.38	0.02	40	20.26	37.00	24.00	21.00	15.00	6.00	9.00	2/26/04	11/7/13
0840_02	11076	*E. coli*	POR	0.12	0.16	0.07	0.08	1.89	0.57	-1.58	29	2.81	16.00	4.00	2.00	0.50	0.50	3.50	2/26/04	11/7/13
0840_02	11076	Pheophytin-a	POR	0.36	0.39	0.00	0.09	4.32	-0.63	-1.89	35	12.36	80.00	17.50	9.00	0.50	0.50	17.00	4/28/04	10/22/13
0840_02	11076	Pheophytin-a	Summer	0.30	0.36	0.00	0.11	3.42	-0.76	-1.59	29	13.32	80.00	17.50	9.00	0.50	0.50	17.00	8/31/05	10/22/13
0840_03	16823	DO	Winter	0.11	0.22	0.02	0.09	2.46	-1.30	1.76	52	9.69	13.70	11.15	9.53	8.60	3.25	2.56	12/30/03	11/7/13
0840_03	16823	pH	POR	0.10	0.05	0.00	0.01	3.43	-0.20	1.56	107	7.76	9.00	8.08	7.80	7.50	6.50	0.58	12/30/03	11/7/13
0840_03	16823	pH	Summer	0.11	0.05	0.01	0.02	2.57	0.16	1.45	54	7.84	9.00	8.10	7.80	7.60	6.60	0.50	5/12/04	10/22/13
0840_03	16823	TSS	Summer	0.14	0.06	0.02	0.02	2.51	-0.07	0.32	40	47.18	144.00	59.50	39.50	32.50	14.00	27.00	5/12/04	10/22/13
0840_03	16823	*E. coli*	Summer	0.13	-0.30	0.01	0.12	-2.55	1.72	-0.61	44	180.75	2400.00	52.50	6.00	1.00	0.50	51.50	5/12/04	10/22/13
0840_03	16823	TDS	Winter	0.17	-6.97	0.00	2.15	-3.24	1.17	0.05	53	179.52	304.00	205.00	182.00	148.00	79.95	57.00	12/30/03	11/7/13
0840_03	16823	Lab Turb	Summer	0.11	0.08	0.03	0.04	2.28	-1.58	1.85	45	36.38	120.00	40.00	31.00	17.10	2.59	22.90	5/12/04	10/22/13
0840_04	16822	Chloride	Summer	0.12	-0.57	0.02	0.23	-2.42	1.82	-0.50	45	16.86	28.00	20.00	16.00	13.00	10.00	7.00	5/12/04	10/22/13
0840_07	16824	Sp Cond	POR	0.11	-0.01	0.00	0.00	-3.50	0.97	2.37	100	270.96	360.00	280.00	270.00	259.00	215.00	21.00	1/22/04	11/7/13
0840_07	16824	Sp Cond	Winter	0.23	-0.01	0.00	0.00	-3.84	1.68	1.37	50	275.18	360.00	294.00	270.00	261.00	232.00	33.00	1/22/04	11/7/13
0840_07	16824	Chloride	Winter	0.28	-1.05	0.00	0.28	-3.82	-0.80	-0.41	40	19.26	30.00	24.00	19.50	15.00	5.00	9.00	2/26/04	11/7/13
0840_07	16824	Pheophytin-a	POR	0.43	0.41	0.00	0.08	5.00	0.05	-2.01	35	11.08	94.00	16.00	5.90	0.50	0.50	15.50	4/28/04	10/22/13
0840_07	16824	Pheophytin-a	Summer	0.37	0.40	0.00	0.10	4.08	-0.21	-1.85	30	12.24	94.00	19.00	7.60	0.50	0.50	18.50	6/2/05	10/22/13

Trends (Unclassified Segments):

None

Segment 0823 – Lewisville Lake

Overview

This 23,280 acre reservoir impounds the Elm Fork Trinity River from Lewisville Dam in Denton County to a point 110 yards upstream of US 380 in Denton County up to normal pool elevation of 515 feet. Land use to the east of the segment is generally classified as agriculture/pasture and urban and rangeland to the west. Moving from northwest to southeast, the watershed covers portions of the Grand Prairie, Eastern Cross Timbers, and Blackland Prairie ecoregions, respectively. Over the last 20 years, the Lake Lewisville watershed has seen tremendous urbanization.

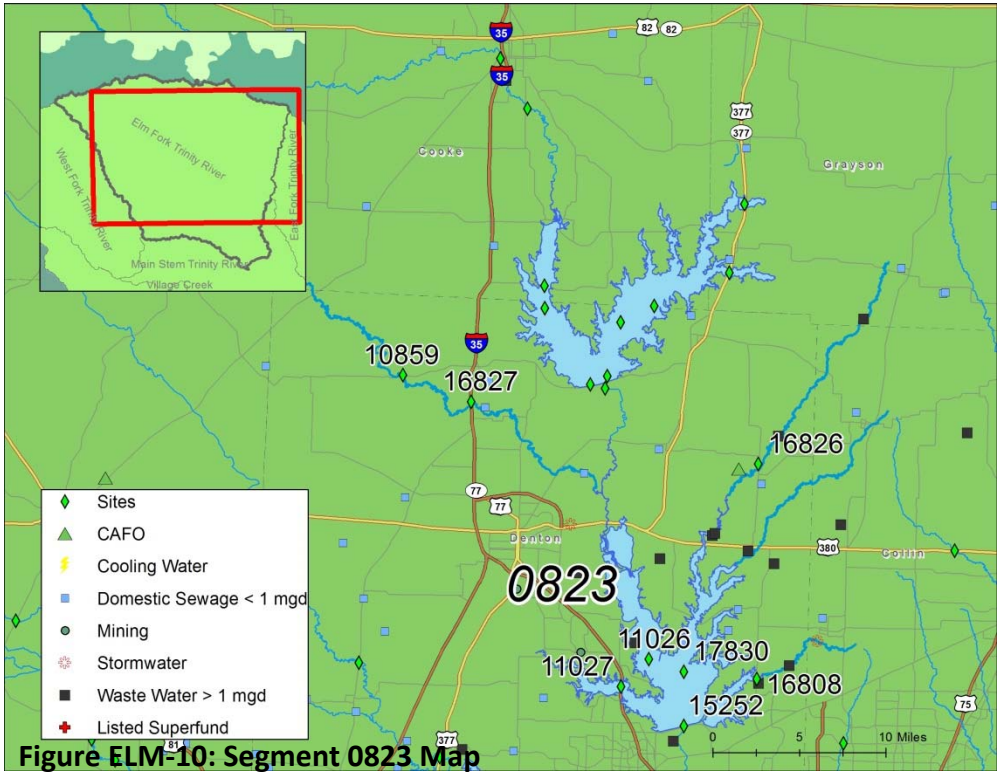


Figure ELM-10: Segment 0823 Map

Assessments (Classified Segments):

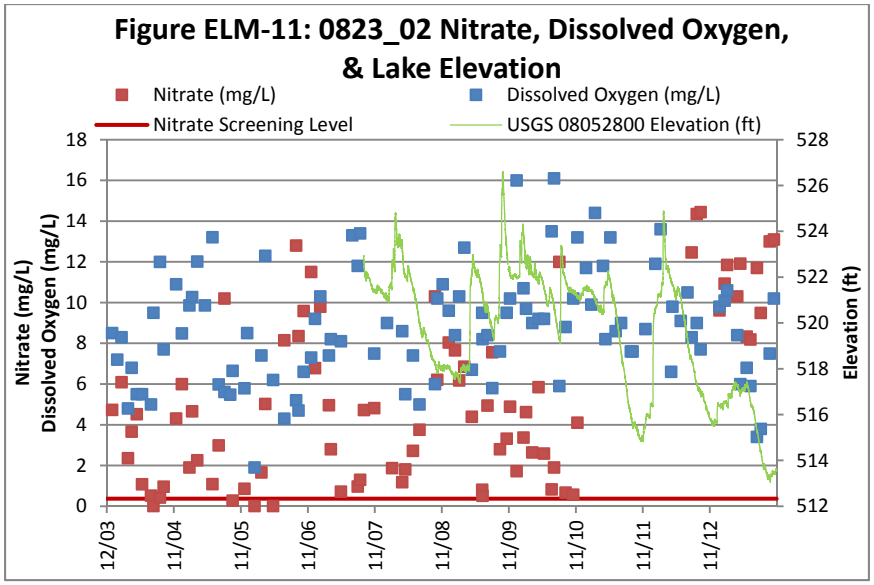
Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0823_01 - Lowermost portion of reservoir	Not Assessed (Inadequate Data)	Not Assessed (No Data)
0823_02 - Stewart Creek arm	Fully Supporting	Fully Supporting
0823_03 - Hickory Creek arm	Fully Supporting	Fully Supporting
0823_04 - Little Elm Creek arm	Fully Supporting	Fully Supporting
0823_05 - Middle portion of reservoir east of Lake Dallas	Fully Supporting	Fully Supporting
0823_06 - Remainder of reservoir	Not Assessed (No Data)	Not Assessed (No Data)

General Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0823_01	Fully Supporting	Fully Supporting

0823_02	Concern	Concern
0823_03	Concern	Concern
0823_04	Fully Supporting	Fully Supporting
0823_05	Concern	Concern
0823_06	Fully Supporting	Fully Supporting

0823_02 was found to have concerns for ammonia, nitrate, and TP by both the TCEQ Draft 2014 Integrated Report and the in-house 5 year assessment. The in-house 5 year assessment also found this assessment unit to have concerns for OP. 0823_03 was found to have concerns for chlorophyll-a by the TCEQ Draft 2014 Integrated Report and for OP by the in-house 5 year assessment. 0823_05 was found to have concerns for chlorophyll-a by both the TCEQ Draft 2014 Integrated Report and the in-house 5 year assessment. In addition, the in-house 5 year assessment found 0823_05 to have concerns for OP and TP. Similar to conditions in Segment 0840, nutrients in 0823 are regularly above the screening levels. As shown for nitrate in Figure ELM-11, elevated nutrients do not appear to be causing algal blooms that affect dissolved oxygen levels.

Figure ELM-11: 0823_02 Nitrate, Dissolved Oxygen, & Lake Elevation



Contact Recreation Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0823_01	Not Assessed (No Data)	Not Assessed (No Data)
0823_02	Not Assessed (No Data)	Fully Supporting

0823_03	Not Assessed (No Data)	No Concern
0823_04	Not Assessed (No Data)	Not Assessed (Inadequate Data)
0823_05	Not Assessed (No Data)	Fully Supporting
0823_06	Not Assessed (No Data)	Not Assessed (No Data)

Public Water Supply Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0823_01	Fully Supporting	No Concern
0823_02	Fully Supporting	Fully Supporting
0823_03	Fully Supporting	Fully Supporting
0823_04	Fully Supporting	Fully Supporting
0823_05	Fully Supporting	Fully Supporting
0823_06	Fully Supporting	No Concern

Fish Consumption Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0823_01	Fully Supporting	Not Assessed (No Data)
0823_02	Fully Supporting	Not Assessed (No Data)
0823_03	Fully Supporting	Not Assessed (No Data)
0823_04	Fully Supporting	Not Assessed (No Data)
0823_05	Fully Supporting	Not Assessed (No Data)
0823_06	Fully Supporting	Not Assessed (No Data)

Assessments (Unclassified Segments):

Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0823A_01 - From the confluence with Lake Lewisville in Denton Co., up to FM 455 in Collin Co. (Lower 12 miles of segment)	Fully Supporting	Fully Supporting
0823A_02 - From FM 455 in Collin Co., up to 1.4 km above FM 121 in Grayson, Co. near Guenther. (Upper 15 miles of segment)	Not Assessed (No Data)	Not Assessed (No Data)
0823B_01 - Entire segment	Fully Supporting	Not Assessed (No Data)
0823C_01 - Lower 25 miles of segment	Fully Supporting	Fully Supporting
0823C_02 - Upper 40 miles of segment	Not Assessed (No Data)	Not Assessed (No Data)

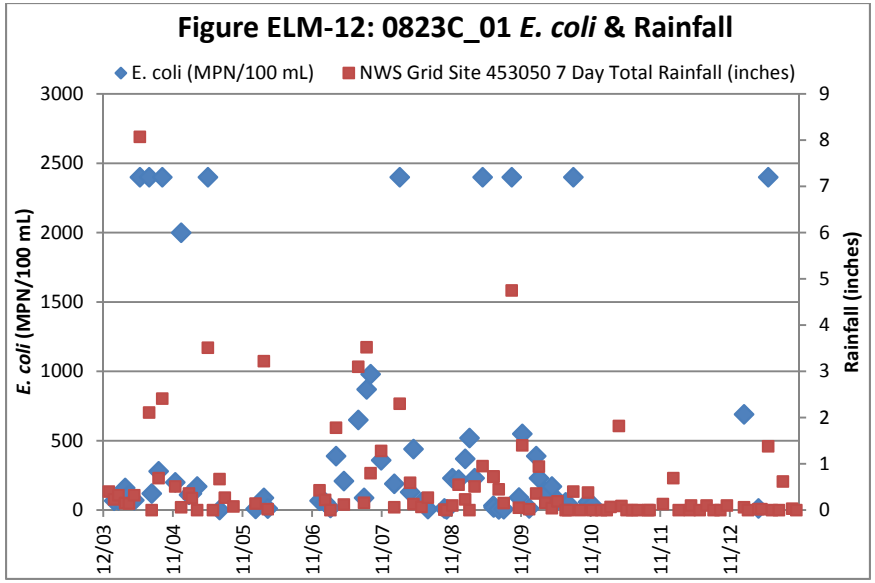
0823D_01 - From the confluence (NHD RC 12030103023518) with Lake Lewisville/Elm Fork Trinity in Denton County to the headwaters (NHD RC 12030103005935) northeast of Celina, Collin Co., TX	Fully Supporting	Fully Supporting

General Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0823A_01	Not Assessed (No Data)	Fully Supporting
0823A_02	Not Assessed (No Data)	Fully Supporting
0823B_01	Concern	Not Assessed (No Data)
0823C_01	No Concern	Fully Supporting
0823C_02	Not Assessed (No Data)	Fully Supporting
0823D_01	No Concern	Fully Supporting

0823B_01 was found to have concerns for nitrate and TP by the TCEQ Draft 2014 Integrated Report. However, this finding was carried forward from previous Integrated Reports as there is not current data for this stream.

Contact Recreation Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0823A_01	No Concern	Fully Supporting
0823A_02	Not Assessed (No Data)	Not Assessed (No Data)
0823B_01	No Concern	Not Assessed (No Data)
0823C_01	Fully Supporting	Not Supporting
0823C_02	Not Assessed (No Data)	Not Assessed (No Data)
0823D_01	No Concern	Fully Supporting

0823C_01 was found to be not supporting due to elevated levels of *E. coli* by the in-house 5 year assessment. As shown in Figure ELM-12, *E. coli* and rainfall are well correlated (correlation coefficient=0.62). Livestock and wildlife are likely sources of the impairment on this creek.



Public Water Supply Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0823A_01	Not Assessed (No Data)	Fully Supporting
0823A_02	Not Assessed (No Data)	No Concern
0823B_01	Not Assessed (No Data)	Not Assessed (No Data)
0823C_01	Not Assessed (No Data)	Fully Supporting
0823C_02	Not Assessed (No Data)	No Concern
0823D_01	Not Assessed (No Data)	Fully Supporting

Fish Consumption Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0823A_01	Fully Supporting	Not Assessed (No Data)
0823A_02	Fully Supporting	Not Assessed (No Data)
0823B_01	Fully Supporting	Not Assessed (No Data)
0823C_01	Fully Supporting	Not Assessed (No Data)
0823C_02	Fully Supporting	Not Assessed (No Data)
0823D_01	No Concern	Not Assessed (No Data)

Trend Analysis Overview

Table ELM-12: Trend Analysis Result Summary

Elm Fork		Days Since Precip			Flow Severity			Flow			DO			Pheophytin-a			TSS			TDS			Chloride			BOD5		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0823_02	16808			UP		DN							UP					DN										
0823_03	11027													UP	UP										DN	UP	UP	
0823_04	17830													UP	UP													
0823_05	11026													UP	UP								DN	DN	DN		UP	
0823A_01	16826									UP		UP																
0823C_01	16827		UP		DN	DN																DN						

Elm Fork		NH3			NO3			OP			TP			D. Ni		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0823_02	16808	DN		DN		UP	UP						DN			DN
0823_03	11027															
0823_04	17830															
0823_05	11026															
0823A_01	16826									UP						
0823C_01	16827															

Trends Key
A-All Months
S-Summer/Growing Season (May-October)
W-Winter/Dormant Sesaon (November-April)
UP Increasing Trends
DN Decreasing Trends

There were 30 significant trends identified for this segment as summarized in Table ELM-12. For additional detail on trend methods, see the Data Review Methodology section.

Trends (Classified Segments):
See Table ELM-13 for details of the significant trends analysis summary presented in Table ELM-12. Increasing trends for BOD5 at station 11026 and 11027 have R^2's less than 0.16. There are no dissolved oxygen issues in this segment to indicate that the BOD5 trends are affecting water quality. Likewise, increasing nitrate and TP trends at station 16808 do not appear to be negatively impacting water quality as discussed above in the General Use section of Assessments (Classified

Segments). In addition, as seen in Figure ELM-11, increasing trends for nitrate appear to be occurring as there is a decreasing trend in the reservoir elevation which may indicate that nitrate is concentrating due to evaporation, especially in the summer months when the R^2 is 0.35.

Increasing trends for pheophytin-a have R^2's less than 0.27 but occur over the period of record and during the summer months at three sites (11026, 11027, and 17830) indicating that there may be changes in water quality at these locations. This is best illustrated by pheophytin-a levels at site 11026 in Figure ELM-13. As with other parameters, pheophytin-a is increasing as the lake elevation is trending downward. This may be causing the apparent pheophytin-a trends as concentrations of various parameters typically increase due to evaporation. In addition, algal populations may be increasing due to the long residence time in the lake and the lack of dilution from inflows could cause an increasing trend in related parameters including pheophytin-a.

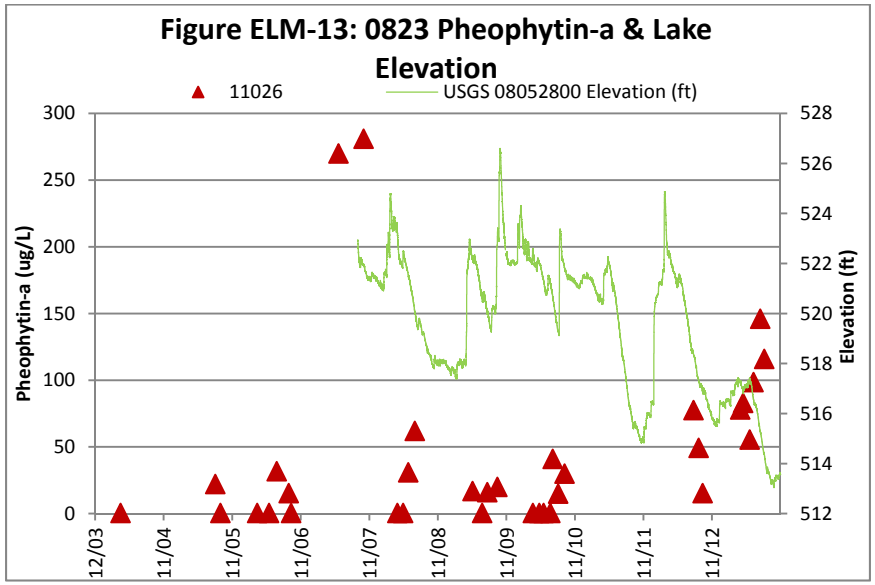




Image ELM- 5: Fishermen at Lake Lewisville

Table ELM-13: 0823 Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0823_02	16808	DO	Winter	0.22	0.40	0.00	0.11	3.70	-0.57	2.41	50	9.58	16.00	10.70	9.75	8.40	1.90	2.30	12/30/03	11/14/13
0823_02	16808	TSS	Summer	0.14	-0.10	0.02	0.04	-2.47	0.17	2.05	39	65.85	438.00	64.00	49.00	32.00	6.00	32.00	5/12/04	10/23/13
0823_02	16808	NH3	POR	0.16	-0.33	0.00	0.09	-3.87	-1.06	-0.19	79	1.81	29.30	0.97	0.21	0.08	0.00	0.89	2/19/04	11/14/13
0823_02	16808	NH3	Winter	0.27	-0.48	0.00	0.13	-3.58	-0.95	0.09	36	3.45	29.30	1.73	0.35	0.15	0.00	1.58	2/19/04	11/14/13
0823_02	16808	NO3	Summer	0.35	0.93	0.00	0.20	4.66	1.55	-1.53	43	5.27	14.44	9.49	3.76	0.96	0.01	8.53	5/12/04	10/23/13
0823_02	16808	NO3	Winter	0.21	0.56	0.00	0.18	3.17	1.50	-0.66	40	5.32	13.10	7.25	4.78	2.50	0.01	4.75	12/30/03	11/14/13
0823_02	16808	TP	Winter	0.15	-0.11	0.01	0.04	-2.62	-1.15	-0.30	41	1.28	4.03	1.92	1.12	0.64	0.16	1.28	12/30/03	4/29/13
0823_02	16808	D. Ni	Winter	0.44	-0.04	0.04	0.02	-2.50	1.85	2.10	10	4.02	6.00	4.06	3.84	3.61	3.12	0.45	12/13/04	11/14/13
0823_02	16808	Flow Severity	Summer	0.14	-0.03	0.01	0.01	-2.85	0.35	0.28	51	2.96	5.00	3.00	3.00	3.00	2.00	0.00	5/12/04	10/23/13
0823_02	16808	Days Since Precip	Winter	0.11	0.28	0.02	0.12	2.38	0.46	-2.12	49	3.77	7.00	7.00	4.00	2.00	0.50	5.00	12/30/03	11/14/13
0823_03	11027	BOD5	POR	0.16	0.10	0.00	0.03	3.76	1.81	-2.56	79	2.59	11.00	4.00	1.00	1.00	1.00	3.00	12/30/03	11/14/13
0823_03	11027	BOD5	Summer	0.16	0.27	0.01	0.10	2.78	1.34	-1.37	42	3.02	7.00	4.00	3.00	1.00	1.00	3.00	5/26/04	10/23/13
0823_03	11027	Chloride	Winter	0.11	-0.79	0.04	0.37	-2.15	-0.47	-0.45	38	22.76	34.00	28.00	22.78	19.00	8.00	9.00	12/30/03	11/14/13
0823_03	11027	Pheophytin-a	POR	0.25	3.43	0.00	1.06	3.23	1.19	-1.36	34	20.88	60.00	40.20	16.39	0.50	0.50	39.70	4/14/04	10/23/13
0823_03	11027	Pheophytin-a	Summer	0.27	3.89	0.00	1.25	3.13	0.65	-1.52	28	23.27	60.00	41.60	17.10	3.75	0.50	37.85	9/1/05	10/23/13
0823_04	17830	Pheophytin-a	POR	0.12	0.24	0.04	0.11	2.12	-0.86	-1.61	34	21.36	164.00	24.00	10.89	0.50	0.50	23.50	4/14/04	10/23/13
0823_04	17830	Pheophytin-a	Summer	0.11	0.23	0.08	0.13	1.84	-1.17	-1.16	29	23.71	164.00	24.00	12.40	0.50	0.50	23.50	9/1/05	10/23/13
0823_05	11026	BOD5	Summer	0.12	0.24	0.03	0.10	2.27	1.46	-0.68	41	3.23	8.00	5.00	3.00	1.00	1.00	4.00	5/26/04	9/4/13
0823_05	11026	Chloride	POR	0.16	-0.96	0.00	0.25	-3.87	1.12	-0.28	79	23.58	43.00	29.00	22.18	19.00	9.00	10.00	12/31/03	9/4/13
0823_05	11026	Chloride	Summer	0.12	-0.83	0.03	0.36	-2.32	1.72	0.09	41	23.84	43.00	28.00	22.00	19.00	12.52	9.00	5/26/04	9/4/13
0823_05	11026	Chloride	Winter	0.24	-1.19	0.00	0.35	-3.39	-0.61	-0.86	38	23.30	33.50	29.00	22.59	19.00	9.00	10.00	12/31/03	4/29/13
0823_05	11026	Pheophytin-a	POR	0.22	0.40	0.01	0.13	2.97	-0.75	-1.86	34	46.39	281.00	61.97	18.42	0.50	0.50	61.47	4/14/04	9/4/13
0823_05	11026	Pheophytin-a	Summer	0.14	0.32	0.05	0.15	2.09	-1.32	-1.20	29	51.63	281.00	61.97	22.10	0.50	0.50	61.47	9/1/05	9/4/13

Trends (Unclassified Segments):

See Table ELM-14 for details of the significant trends analysis summary presented in Table ELM-12. There is an increasing trend for OP with an R^2 of 0.12 and a shallow slope of 0.11.

Table ELM-14: 0823A, 0823C Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0823A_01	16826	Flow	Winter	0.31	0.61	0.09	0.32	1.90	1.28	-0.09	10	0.91	2.60	1.50	0.55	0.20	0.01	1.30	1/3/06	1/29/08
0823A_01	16826	DO	Summer	0.27	0.29	0.00	0.07	4.28	-1.14	-0.44	51	5.94	9.00	7.00	6.20	4.80	2.37	2.20	5/12/04	10/23/13
0823A_01	16826	OP	Winter	0.12	0.11	0.03	0.05	2.29	0.32	0.32	42	0.25	1.07	0.25	0.15	0.11	0.02	0.14	12/30/03	11/14/13
0823C_01	16827	Flow Severity	POR	0.20	-0.16	0.00	0.03	-4.80	0.59	0.94	92	2.76	5.00	3.00	3.00	2.00	1.00	1.00	12/30/03	11/14/13
0823C_01	16827	Flow Severity	Summer	0.32	-0.25	0.00	0.06	-4.48	0.81	-0.80	45	2.69	5.00	3.00	3.00	1.00	1.00	2.00	5/12/04	10/23/13
0823C_01	16827	TDS	Winter	0.13	-12.31	0.02	4.92	-2.50	-1.71	2.73	44	344.21	557.00	393.75	356.50	283.35	31.00	110.40	12/30/03	4/29/13
0823C_01	16827	Days Since Precip	Summer	0.12	0.34	0.02	0.14	2.47	1.12	-2.50	46	3.37	7.00	7.00	2.00	1.00	0.50	6.00	5/12/04	10/23/13

Segment 0825 – Denton Creek

Overview

This 12 mile segment runs from the confluence with the Elm Fork Trinity River in Dallas County to Grapevine Dam in Tarrant County. This segment has undergone extensive urbanization although there are still some small areas of agriculture/pasture. Segment 0825 is located entirely within the Blackland Prairie ecoregion.

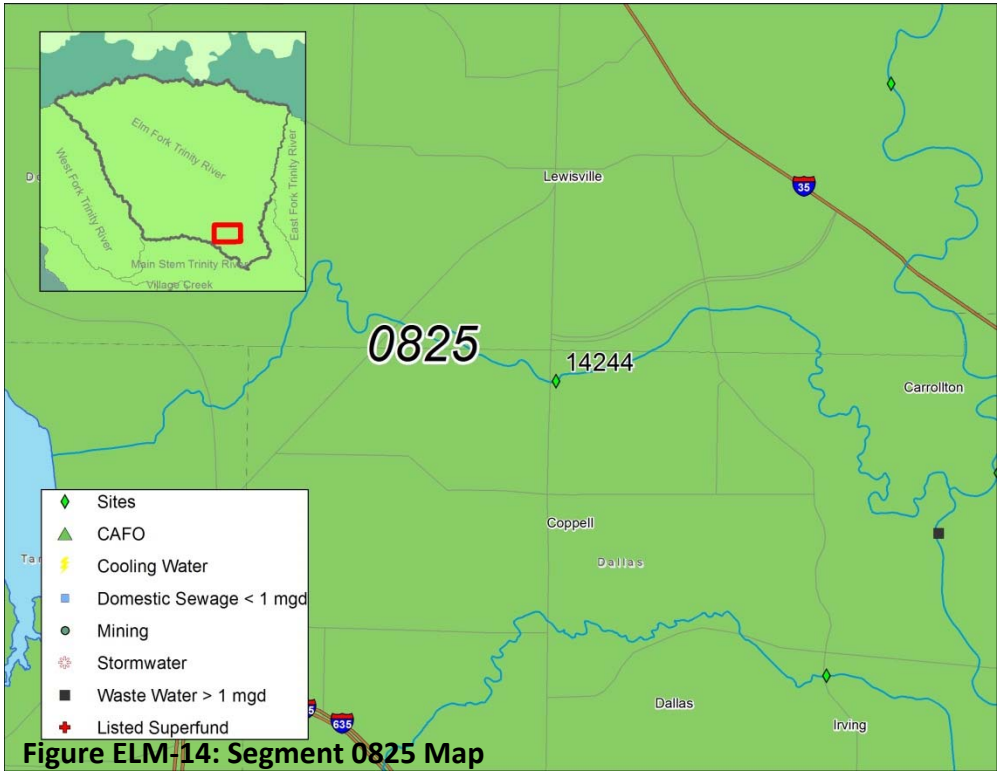


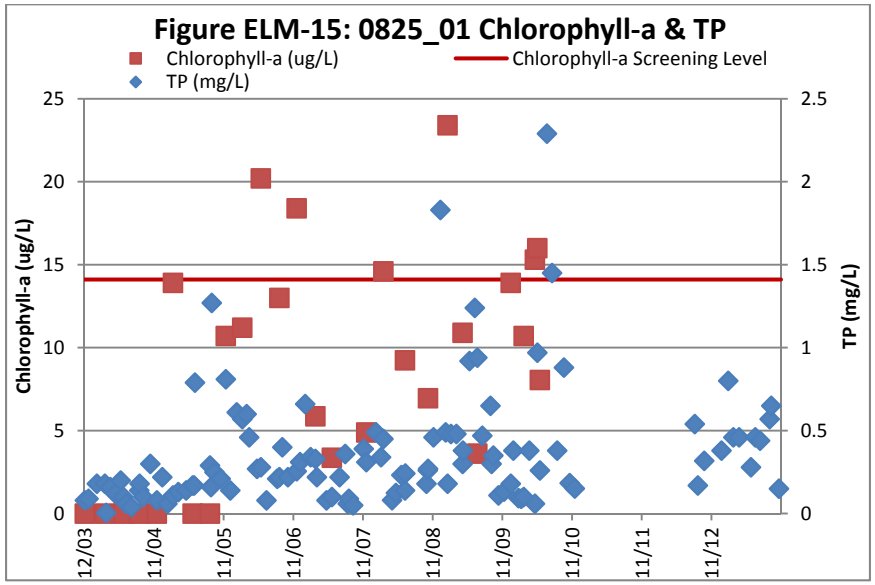
Figure ELM-14: Segment 0825 Map

Assessments (Classified Segments):

Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0825_01 - Entire segment	Fully Supporting	Fully Supporting
General Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0825_01	Fully Supporting	Concern

This segment was found to have concerns for chlorophyll-a, nitrate, and OP by the in-house 5 year assessment. Chlorophyll-a is positively correlated to several nutrients including ammonia, TKN, OP, and TP as shown in Figure ELM-15 for chlorophyll-a and TP. Nutrients, specifically nitrate and OP, are negatively correlated to stream flow as in Figure ELM-16. As discussed in the Data Review Methodology section, OP is no longer assessed by the TCEQ. Correlation coefficients for nutrients, chlorophyll-a, and flow are presented in Table ELM-15. As there is a wide range of values for these parameters at low flows, a constant source such as an upstream wastewater treatment facility is a likely source. There are dense

residential areas throughout the segment, as well as, golf courses and sports fields. Runoff from over-watering in these areas may also be contributing to the nutrient concerns in this segment.



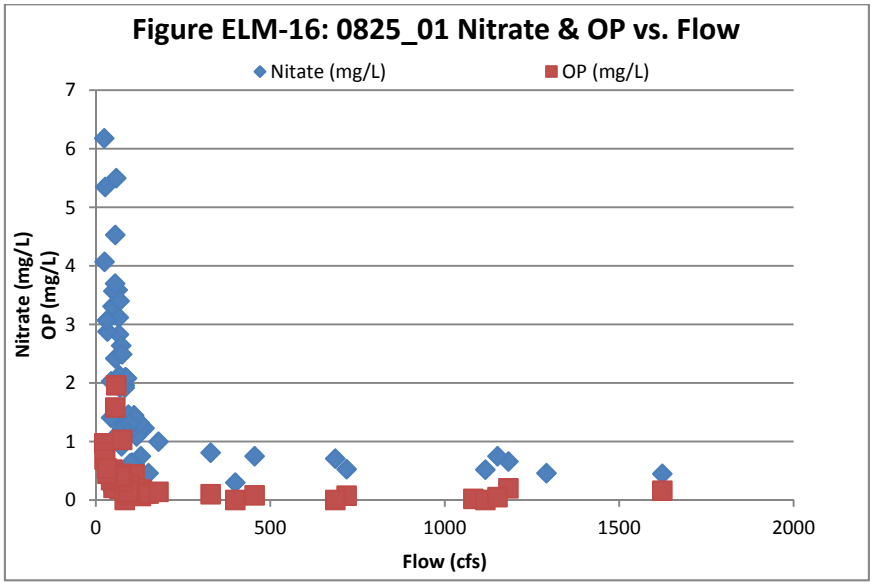


Table ELM-15: 0825_01 Correlation Coefficients

	Ammonia	Nitrate	TKN	TP	OP	Chlorophyll-a	Flow
Ammonia	1						
Nitrate	0.029159	1					
TKN	0.956382	0.253113	1				
TP	0.183727	0.683251	0.685051	1			
OP	0.167885	0.742611	0.664392	0.913569	1		
Chlorophyll-a	0.152685	-0.05512	0.255956	0.17457	0.111871	1	
Flow	-0.16292	-0.44242	-0.19869	-0.30498	-0.32966	0.144238	1

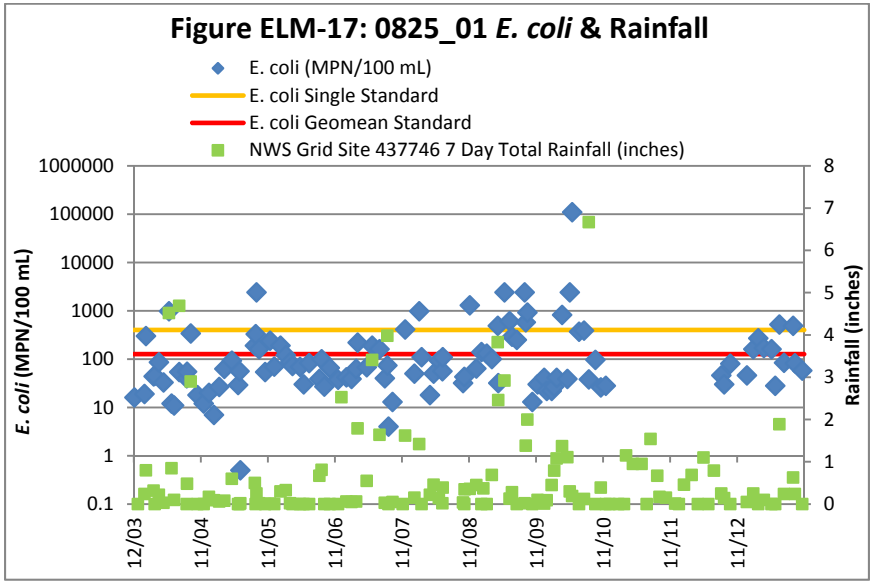
Contact Recreation Use:
0825_01

TCEQ Draft 2014 Integrated Report
Concern

In-House 5 Year Assessment
Not Supporting

This segment was found to have concerns for elevated levels of *E. coli* by the TCEQ Draft 2014 Integrated Report but was found to be not supporting by the in-house 5 year assessment. Although there are occasions when high *E. coli* levels are seen during rainfall events, there are also many high values seen when there has been little or no rain (Figure ELM-17). Similar to the nutrients in this segment, this seems to indicate a constant source of *E. coli* into the stream. Again, runoff from over-watering of residential yards, golf courses and sports fields may be introducing *E. coli* into the stream during dry periods.

Figure ELM-17: 0825_01 *E. coli* & Rainfall



Public Water Supply Use:
0825_01

TCEQ Draft 2014 Integrated Report
Fully Supporting

In-House 5 Year Assessment
Fully Supporting

Fish Consumption Use:
0825_01

TCEQ Draft 2014 Integrated Report
Fully Supporting

In-House 5 Year Assessment
Not Assessed (No Data)

Assessments (Unclassified Segments):

Aquatic Life Use: Not Assessed (No Data)

General Use: Not Assessed (No Data)

Contact Recreation Use: Not Assessed (No Data)

Public Water Supply Use: Not Assessed (No Data)

Fish Consumption Use: Not Assessed (No Data)

Trend Analysis Overview

Table ELM-16: Trend Analysis Result Summary

Elm Fork		Chlorophyll-a			Chloride			TP			D. Ba			D. Ni		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0825_01	14244	UP	UP	UP		UP			UP			DN	DN			DN

Trends Key
A-All Months
S-Summer/Growing Season (May-October)
W-Winter/Dormant Sesaon (November-April)
UP Increasing Trends
DN Decreasing Trends

There were 8 significant trends identified for this segment as summarized in Table ELM-16. For additional detail on trend methods, see the Data Review Methodology section.

Trends (Classified Segments):
See Table ELM-17 for details of the significant trends analysis summary presented in Table ELM-16. Increasing trends were observed for chlorophyll-a, chloride, and TP and had R^2 values less than 0.31. However, trends may be influenced by the nature of the watershed. As discussed above in the General Use section of Assessments (Classified Segments), nutrients may be introduced into the stream due to over-watering of lawns, golf courses, and sports fields. Irrigation can also increase chlorides as salts left over after evaporation are washed into the stream when areas are over-watered or during rain events. In addition, and as discussed above, chlorophyll-a is positively correlated to several nutrients including TP (Figure ELM-15). As nutrients are washed into the stream, algal populations appear to be taking advantage of those additional resources.

Table ELM-17: 0825 Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0825_01	14244	TP	Summer	0.22	0.16	0.00	0.04	4.02	0.59	-0.65	59	0.39	2.29	0.46	0.25	0.14	0.04	0.32	5/11/04	10/10/13
0825_01	14244	Chloride	Summer	0.11	1.18	0.01	0.44	2.66	-0.61	-0.74	58	35.23	54.00	43.50	35.50	26.50	9.00	17.00	5/11/04	10/10/13
0825_01	14244	D. Ba	Summer	0.40	-1.92	0.05	0.82	-2.33	-1.65	1.29	10	52.80	64.00	58.87	54.84	51.20	32.26	7.67	5/11/04	6/5/13
0825_01	14244	D. Ba	Winter	0.31	-0.87	0.10	0.46	-1.89	0.03	-0.18	10	52.77	59.88	55.33	52.74	49.52	44.57	5.81	11/11/04	11/19/13
0825_01	14244	D. Ni	Winter	0.33	-0.07	0.08	0.04	-1.97	1.13	0.57	10	2.71	3.53	3.00	2.66	2.45	2.20	0.55	11/11/04	11/19/13
0825_01	14244	Chlorophyll-a	POR	0.27	1.71	0.01	0.56	3.06	0.52	-0.96	27	8.67	23.40	13.90	9.24	0.00	0.00	13.90	12/4/03	6/15/10
0825_01	14244	Chlorophyll-a	Summer	0.30	1.73	0.05	0.79	2.18	0.51	-0.91	13	7.67	20.20	13.00	8.05	0.00	0.00	13.00	6/23/04	6/15/10
0825_01	14244	Chlorophyll-a	Winter	0.31	1.91	0.04	0.82	2.33	0.29	-0.36	14	9.61	23.40	13.90	10.70	4.89	0.00	9.01	12/4/03	3/22/10

Trends (Unclassified Segments):

None



Image ELM- 6: Denton Creek upstream of US377

Segment 0822 – Elm Fork TR Below Lewisville

Overview

This 30 mile segment begins at the confluence with the West Fork Trinity River in Dallas County and runs to Lewisville Lake in Denton County. The northeastern portion of the watershed is generally classified as agriculture/pasture. The middle and lower portions are highly urbanized and include DFW International Airport. Segment 0822 falls completely within the Blackland Prairie ecoregion.

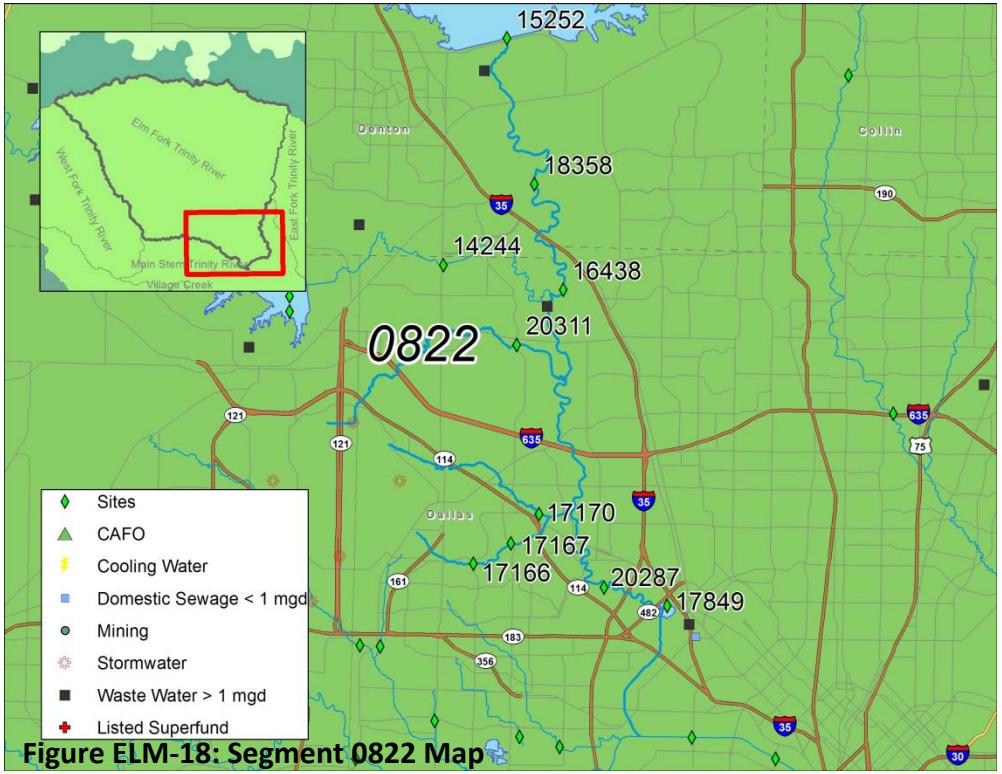
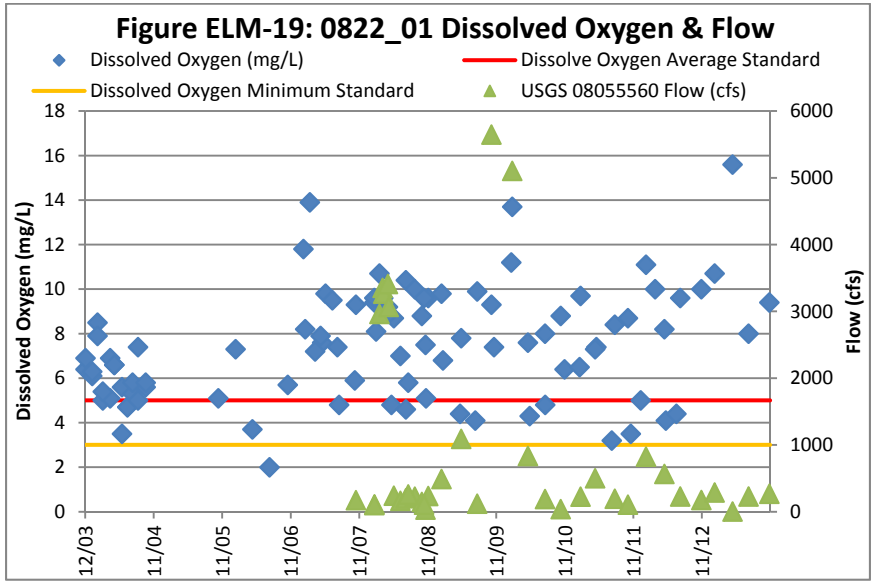


Figure ELM-18: Segment 0822 Map

Assessments (Classified Segments):

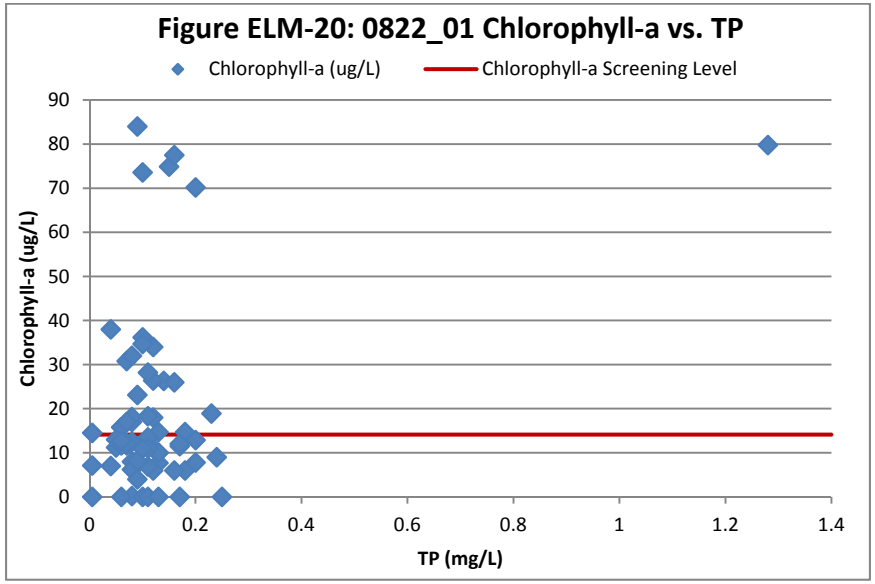
Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0822_01 - Lower 11 miles of segment	Concern	Not Supporting
0822_02 - 4.5 miles upstream to 7.5 miles downstream DWU intake	Concern	Fully Supporting
0822_03 - 1.0 mi upstream to 4.5 miles SH 121 downstream	Fully Supporting	Fully Supporting
0822_04 - Upper 1.5 miles of segment	Fully Supporting	Fully Supporting

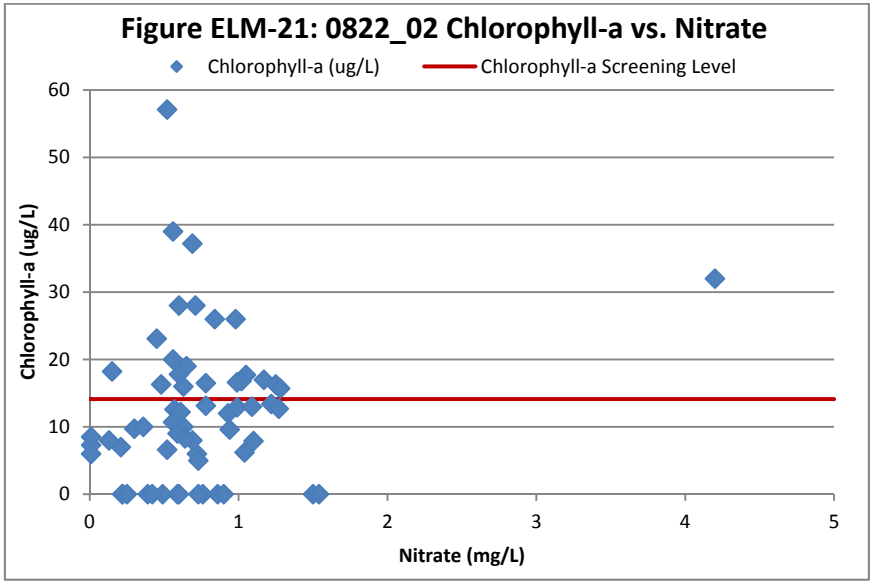
Assessment units 0822_01 and 0822_02 were found to have concerns for depressed dissolved oxygen by the TCEQ Draft 2014 Integrated Report. 0822_01 was found to be not supporting due to depressed dissolved oxygen by the in-house 5 year assessment. Dissolved oxygen in 0822_01 is correlated to flow as shown in Figure ELM-19. Although there is no flow data for 0822_02, it could be presumed that there is a similar relationship to dissolved oxygen in this assessment unit.



General Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0822_01	Concern	Concern
0822_02	Concern	Concern
0822_03	Fully Supporting	Fully Supporting
0822_04	Concern	Fully Supporting

0822_01, 0822_02, and 0822_04 were found to have concerns for chlorophyll-a by the TCEQ Draft 2014 Integrated Report. The in-house 5 year assessment also found 0822_01 and 0822_02 to have concerns for chlorophyll-a. As this segment is downstream of Lake Lewisville, chlorophyll-a concerns may be partially related to the chlorophyll-a concerns in the reservoir. However, chlorophyll-a in this segment is positively correlated to several nutrients as shown in Figures ELM-20 and ELM-21. Similar to segment 0825, there may also be inputs of nutrients from the surrounding residential areas, golf courses, and sports fields when these areas are over-watered. This may be a likely case as nutrients are either negatively or very weakly positively correlated to flow or rainfall amounts. Also, as shown in Figures ELM-20 and ELM-21, there appears to be an ideal range of nutrient values where algal populations increase. At values higher than this ideal range, the algae either cannot use the additional resources or have reached maximum population densities using other resources not represented in the available data sets.





Contact Recreation Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0822_01	Fully Supporting	Fully Supporting
0822_02	Fully Supporting	Fully Supporting
0822_03	Not Assessed (No Data)	Fully Supporting
0822_04	Not Assessed (No Data)	Fully Supporting

Public Water Supply Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0822_01	Fully Supporting	Fully Supporting
0822_02	Fully Supporting	Fully Supporting
0822_03	Fully Supporting	Fully Supporting
0822_04	Fully Supporting	Fully Supporting

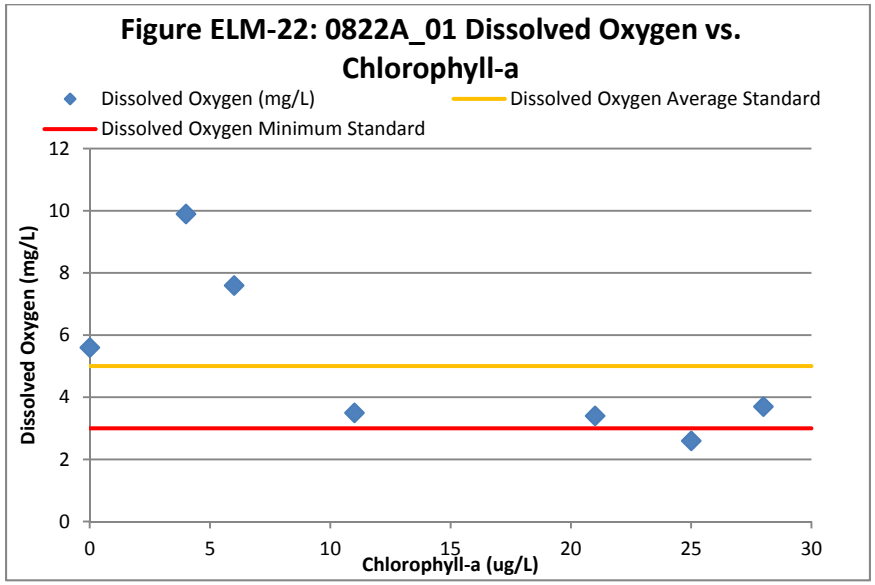
Fish Consumption Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0822_01	Fully Supporting	Not Assessed (No Data)
0822_02	Fully Supporting	Not Assessed (No Data)
0822_03	Fully Supporting	Not Assessed (No Data)
0822_04	Fully Supporting	Not Assessed (No Data)

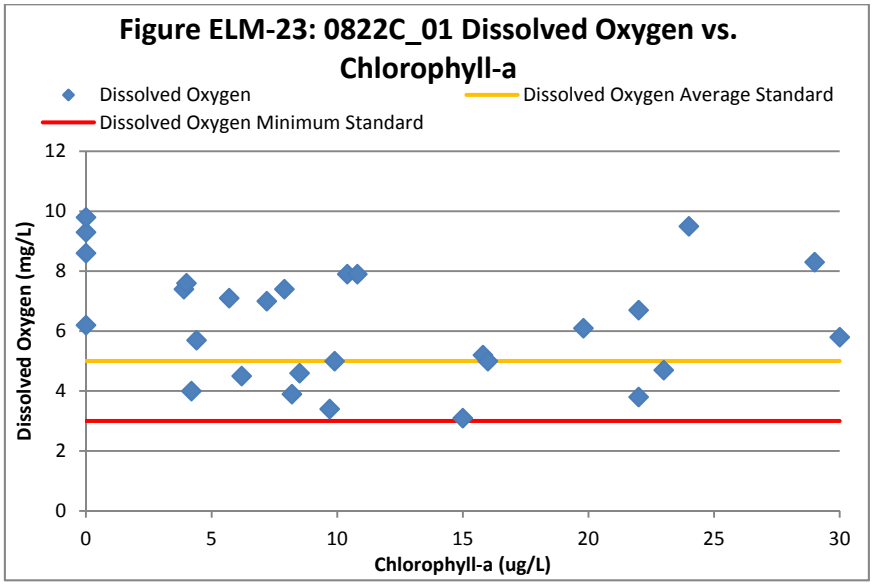
Assessments (Unclassified Segments):

Aquatic Life Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0822A_01 - A 2.5 mile stretch of Cottonwood Branch running upstream from confluence with Hackberry Creek to approx. 0.5 miles downstream of N. Story Rd., Dallas Co.	Not Assessed (Inadequate Data)	Not Supporting
0822A_02 - A 3. 5 mile stretch of Cottonwood Branch running upstream from approximately 0.5 miles downstream of N. Story Rd. to Valley View Rd, Dallas, County	Fully Supporting	Not Supporting
0822B_01 - Entire water body	Fully Supporting	Not Supporting
0822C_01 - A 5.5 mile stretch of Hackberry Creek running upstream from confluence with S. Fork Hackberry Creek to approximately 2.4 miles upstream of SH 114 in Irving, Dallas County	Concern	Not Supporting
0822D_01 - Entire segment	Fully Supporting	Fully Supporting

0822C_01 was found to have concerns for depressed dissolved oxygen by the TCEQ Draft 2014 Integrated Report. 0822A_01, 0822A_02, 0822B_01, and 0822C_01 were found to be not supporting due to depressed dissolved oxygen by the in-house 5 year assessment. In 0822A_01, dissolved oxygen generally decreases with increasing chlorophyll-a (Figure ELM-22). Although there are no chlorophyll-a data available in 0822A_02 or 0822B_01, a similar relationship may exist in these assessment units. For 0822C_01, this relationship also exists to some extent (Figure ELM-23). However, there are some high DO values at chlorophyll-a levels above 15 ug/L. Many of these samples were taken rather early in the morning when it

would be expected that DO levels would still be recovering from overnight algal respiration. There may be other factors involved that are not represented in the available data set for this assessment unit.





General Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0822A_01	Not Assessed (Inadequate Data)	Concern
0822A_02	Not Assessed (No Data)	Fully Supporting
0822B_01	No Concern	Not Supporting
0822C_01	Concern	Concern
0822D_01	Concern	Concern

0822C_01 and 0822D_01 were found to have concerns for chlorophyll-a by the TCEQ Draft 2014 Integrated Report. 0822A_01 and 0822C_01 were found to have concerns for chlorophyll-a by the in-house 5 year assessment. 0822B was found to be not supporting due to elevated levels of TDS by the in-house 5 year assessment. 0822D was found to have concerns for nitrate and OP by the in-house 5 year assessment. In 0822A_01, chlorophyll-a is not positively correlated to any nutrient parameter. However, this stream runs through a golf course with several dams along the reach. Therefore, algal populations are most likely related to the long retention times in these dammed reaches. 0822D_01 is a small off channel reservoir. Similar to 0822A_01, it is presumed that algal populations are elevated in this assessment unit due to high

retention times in the reservoir. In addition, the concerns for nitrate and OP are likely related to the fact that the source of water for the reservoir is the Elm Fork. Screening levels for nitrate and OP in the Elm Fork are 1.95 mg/L and 0.37 mg/L, respectively. In 0822D_01, the screening level for nitrate is 0.37 mg/L and 0.05 mg/L for OP.

Although the dataset is rather small, the TDS issue in 0822B_01 appears to be related to rainfall (correlation coefficient=-0.58). Figure ELM-24 shows that during periods of little to no rainfall, TDS levels increase.

Chlorophyll-a in 0822C_01 is positively correlated to both nitrate and TP; correlation coefficients are 0.27 and 0.21, respectively. Chlorophyll-a and nitrate are shown in Figure ELM-25. The location of the sampling station in this assessment unit is at the upstream end of a dammed pool which frequently has no flow moving through the dam. Therefore, algae are likely taking advantage of long residence times and available nutrients to increase their populations.

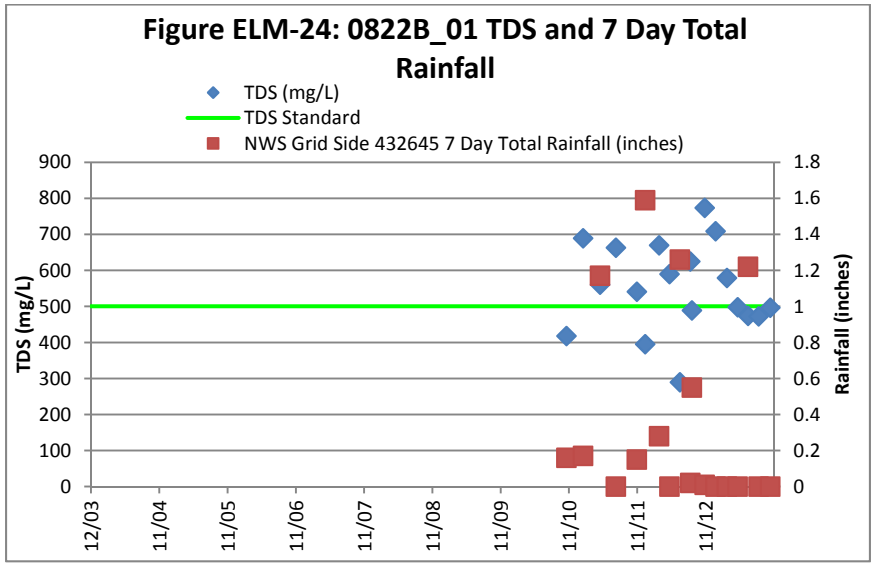


Figure ELM-24: 0822B_01 TDS and 7 Day Total Rainfall

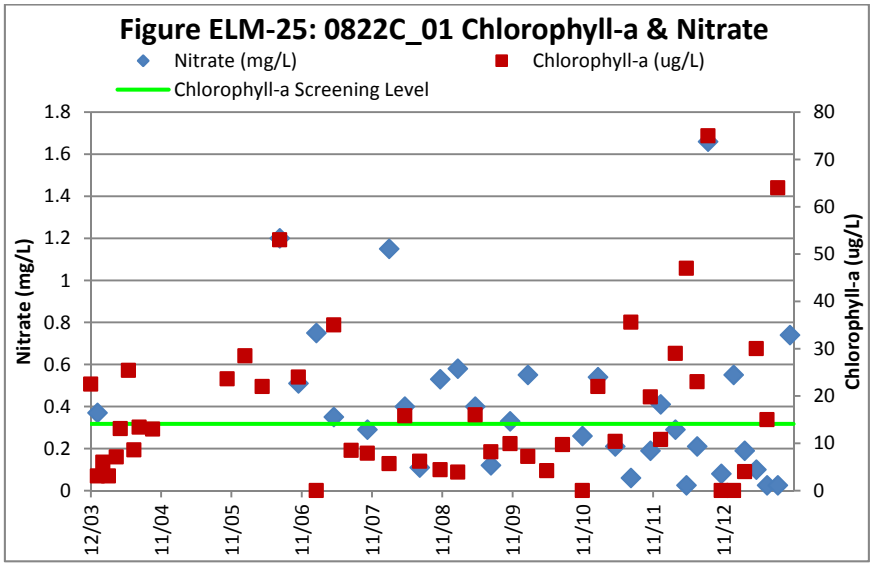
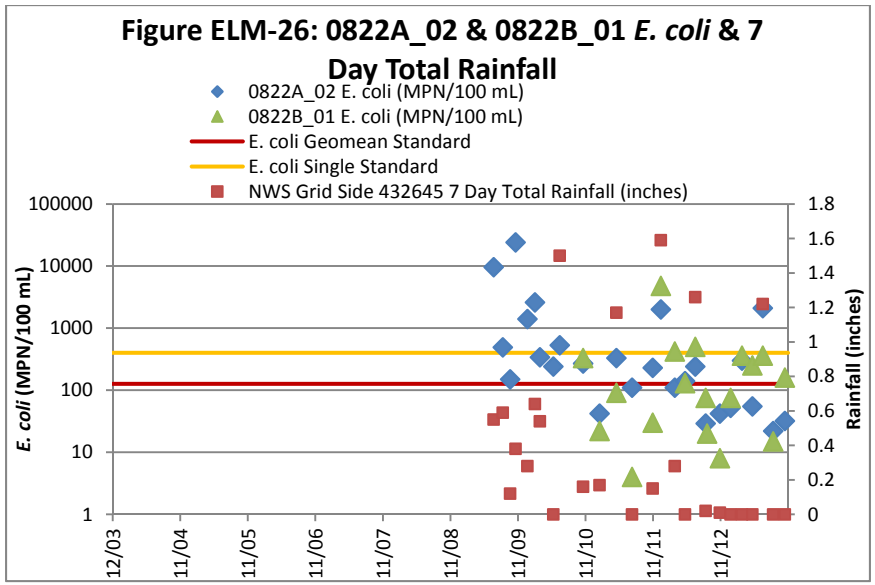


Figure ELM-25: 0822C_01 Chlorophyll-a & Nitrate

Contact Recreation Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0822A_01	Not Assessed (Inadequate Data)	No Concern
0822A_02	Not Supporting	Not Supporting
0822B_01	Not Supporting	Fully Supporting
0822C_01	Fully Supporting	Fully Supporting
0822D_01	Not Assessed (No Data)	Fully Supporting

0822A_02 and 0822B_01 were found to be not supporting due to elevated levels of *E. coli* by the TCEQ Draft 2014 Integrated Report. The in-house 5 year assessment also found 0822A_02 to be not supporting due to elevated levels of *E. coli*. As shown in Figure ELM-26, *E. coli* in both of these assessment units tend to increase during rainfall events. Both of these streams run through residential areas; 0822A_02 through multifamily housing and 0822B_01 through single family housing. Pet waste may be a major source of *E. coli* in these streams. In addition, 0822A_02 has a wooded area in the middle of the reach while 0822B_01 has a wooded riparian zone along most of the reach. Therefore, wildlife may also be contributing to the impairment.



Public Water Supply Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0822A_01	Not Assessed (No Data)	No Concern
0822A_02	Not Assessed (No Data)	No Concern
0822B_01	Not Assessed (No Data)	No Concern
0822C_01	Not Assessed (No Data)	Fully Supporting
0822D_01	Not Assessed (No Data)	Fully Supporting

Fish Consumption Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0822A_01	Not Assessed (Inadequate Data)	Not Assessed (No Data)
0822A_02	Not Assessed (Inadequate Data)	Not Assessed (No Data)
0822B_01	Not Assessed (No Data)	Not Assessed (No Data)
0822C_01	Fully Supporting	Not Assessed (No Data)
0822D_01	Fully Supporting	Not Assessed (No Data)

Trend Analysis Overview

Table ELM-18: Trend Analysis Result Summary

Elm Fork		Air Temp			Days Since Precip			Flow Severity			Secchi Depth			DO			pH			Sp Cond			*E. coli*			Chlorophyll-a		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0822_01	20287			DN	UP	UP		DN	DN									UP			UP						UP	
0822_01	17163													UP	UP	UP												
0822_01	18310								DN			UP								UP	UP				UP			
0822_02	16438																	UP										
0822_02	17162								DN			UP									UP							
0822_03	18358																											
0822_04	15252																											
0822C_01	17170																											
0822D_01	17849																											

Elm Fork		Pheophytin-a			NH3			NO3			TKN			OP			TP			Hardness			D. Ba			D. Cu		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0822_01	20287					DN							DN							DN		DN						
0822_01	17163																											
0822_01	18310												DN									DN						UP
0822_02	16438	UP	UP							UP													DN	DN				
0822_02	17162										DN		DN		UP							DN						UP
0822_03	18358																	UP					DN	DN				
0822_04	15252															DN								DN				
0822C_01	17170							DN	DN																			
0822D_01	17849	UP	UP						UP																			

Trends Key

A-All Months

S-Summer/Grow ing Season (May-October)

W-Winter/Dormant Sesaon (November-April)

UP Increasing Trends

DN Decreasing Trends

There were 47 significant trends identified for this segment as summarized in Table ELM-18. For additional detail on trend methods, see the Data Review Methodology section.

Trends (Classified Segments):
See Table ELM-19 for details of the significant trends analysis summary presented in Table ELM-18. Many of the increasing trends have low R^2 values. However, there are increasing trends for chlorophyll-a and pH at station 20287 and for dissolved copper at station 18310 that have R^2 values greater than 0.26. As discussed in the General Use section of Assessments (Classified Segments), chlorophyll-a in 0822_01 may be related to discharge from Lake Lewisville. It may also be related to nutrient inputs from the surrounding area. The increasing trend for pH at station 20287 appears to be very much related to the increasing trend for chlorophyll-a at this station (Figure ELM-27).

The increasing trend for dissolved copper does not appear to be an issue as it is weighted by a single exceptionally high value occurring at the end of the data set in conjunction with a heavy rainfall event (Figure ELM-28). Although this value is concerning, the station at which this value was seen is located just upstream of the confluence with the Lower West Fork Trinity River and the source could be anywhere in the Elm Fork watershed. However, there is a dense industrial area in the immediate watershed so it is possible that the dissolved copper originated in this area.

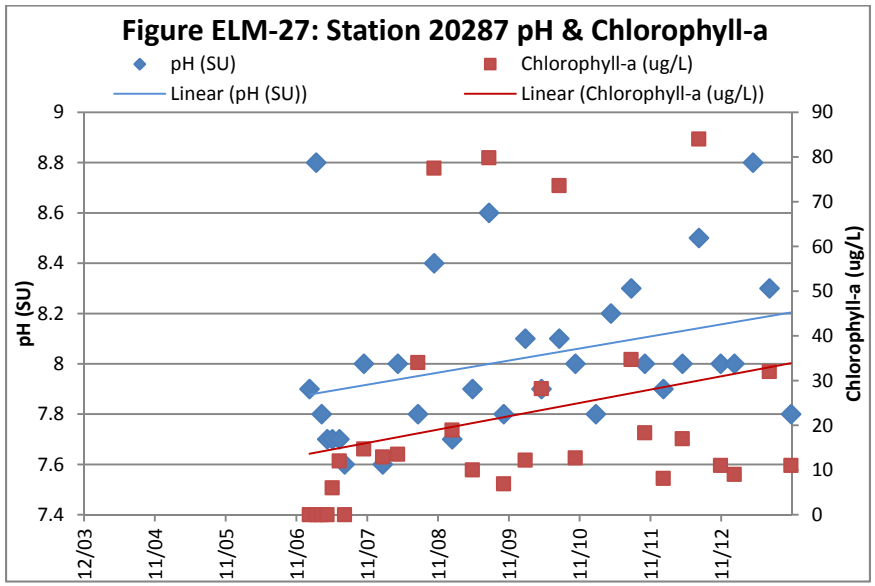


Figure ELM-27: Station 20287 pH & Chlorophyll-a

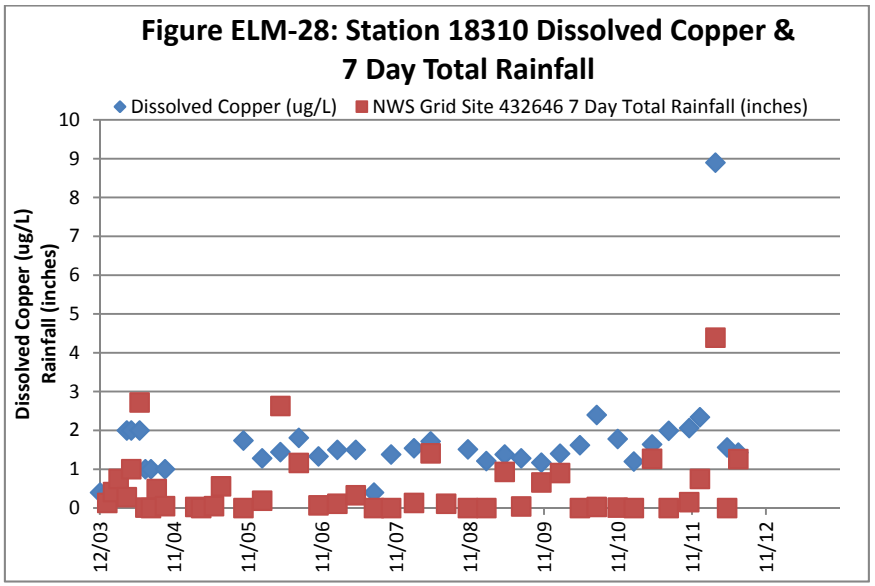


Figure ELM-28: Station 18310 Dissolved Copper & 7 Day Total Rainfall

Table ELM-19: 0822 Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0822_01	17163	DO	POR	0.65	0.74	0.00	0.12	6.23	-0.14	-1.46	23	7.69	10.70	9.60	7.50	5.60	4.70	4.00	12/2/03	12/2/08
0822_01	17163	DO	Summer	0.72	0.79	0.00	0.15	5.09	0.19	-1.01	12	7.44	10.40	9.00	7.20	5.60	4.70	3.40	5/4/04	10/29/08
0822_01	17163	DO	Winter	0.62	0.70	0.00	0.18	3.79	-0.44	-1.02	11	7.95	10.70	9.60	8.50	6.10	5.00	3.50	12/2/03	12/2/08
0822_01	18310	Secchi Depth	Summer	0.29	0.09	0.05	0.04	2.22	1.90	0.78	14	0.22	0.51	0.25	0.20	0.15	0.15	0.10	10/18/04	7/17/12
0822_01	18310	Sp Cond	POR	0.14	0.03	0.02	0.01	2.49	0.70	-0.14	40	412.10	637.00	464.00	390.00	345.50	244.00	118.50	12/2/03	7/17/12
0822_01	18310	Sp Cond	Summer	0.45	0.05	0.00	0.01	3.83	1.53	0.80	20	397.60	635.00	419.50	380.50	344.00	280.00	75.50	5/4/04	7/17/12
0822_01	18310	TKN	Winter	0.40	-0.16	0.00	0.05	-3.29	-1.41	2.06	18	0.86	2.50	0.90	0.75	0.50	0.10	0.40	12/2/03	3/26/12
0822_01	18310	Hardness	Winter	0.17	-4.74	0.07	2.44	-1.94	-0.11	-1.07	20	164.15	220.00	188.00	169.00	132.50	108.00	55.50	12/2/03	3/26/12
0822_01	18310	D. Cu	Winter	0.51	0.18	0.00	0.04	4.29	0.42	1.66	20	1.70	8.90	1.76	1.39	1.19	0.40	0.58	12/2/03	3/26/12
0822_01	18310	Flow Severity	Summer	0.26	-0.18	0.02	0.07	-2.54	1.72	0.31	20	3.10	5.00	3.00	3.00	2.50	2.00	0.50	5/4/04	7/17/12
0822_01	18310	*E. coli*	Winter	0.14	0.20	0.09	0.11	1.79	0.40	0.12	22	172.18	1500.00	135.00	44.00	19.00	2.00	116.00	12/2/03	3/26/12
0822_01	20287	Air Temp	Winter	0.24	-1.42	0.05	0.68	-2.09	-1.13	0.03	16	18.63	28.00	24.50	19.50	15.50	5.00	9.00	2/6/07	11/25/13
0822_01	20287	Sp Cond	Summer	0.24	8.40	0.06	4.02	2.09	0.79	0.80	16	398.13	473.00	414.50	391.50	379.00	322.00	35.50	5/8/07	8/6/13
0822_01	20287	pH	Summer	0.61	0.13	0.00	0.03	4.65	1.01	-0.39	16	8.07	8.80	8.30	8.00	7.75	7.60	0.55	5/8/07	8/6/13
0822_01	20287	NH3	Summer	0.35	-0.01	0.02	0.00	-2.64	1.01	-0.51	15	0.03	0.08	0.05	0.03	0.00	0.00	0.05	6/4/07	8/6/13
0822_01	20287	TKN	Winter	0.37	-0.08	0.02	0.03	-2.78	0.01	0.45	15	0.67	1.30	0.82	0.78	0.50	0.10	0.32	2/6/07	11/25/13
0822_01	20287	Hardness	POR	0.17	-3.95	0.02	1.64	-2.41	0.98	-0.18	31	134.55	184.00	147.00	132.00	117.00	102.00	30.00	2/6/07	11/25/13
0822_01	20287	Hardness	Winter	0.22	-4.19	0.07	2.12	-1.97	0.62	-0.08	16	142.19	184.00	156.00	140.00	128.50	108.00	27.50	2/6/07	11/25/13
0822_01	20287	Flow Severity	POR	0.17	-0.19	0.02	0.08	-2.44	1.62	-1.16	31	3.52	5.00	5.00	3.00	3.00	2.00	2.00	2/6/07	11/25/13
0822_01	20287	Flow Severity	Summer	0.49	-0.36	0.00	0.10	-3.57	-0.08	-1.48	15	3.87	5.00	5.00	3.00	3.00	2.00	2.00	5/8/07	8/6/13
0822_01	20287	Chlorophyll-a	Summer	0.28	7.25	0.05	3.34	2.17	1.50	-0.24	14	30.34	84.00	34.70	22.60	10.00	0.00	24.70	5/8/07	8/6/13
0822_01	20287	Days Since Precip	POR	0.17	0.23	0.02	0.09	2.46	0.35	-1.34	31	4.71	23.00	7.00	3.00	1.00	0.50	6.00	2/6/07	11/25/13
0822_01	20287	Days Since Precip	Summer	0.51	0.45	0.00	0.12	3.67	0.67	-1.05	15	5.43	23.00	7.00	1.00	1.00	0.50	6.00	5/8/07	8/6/13
0822_02	16438	pH	Summer	0.19	0.01	0.00	0.00	3.58	1.68	1.84	56	7.71	8.80	7.90	7.70	7.43	6.80	0.47	5/11/04	10/10/13
0822_02	16438	NO3	Winter	0.12	0.07	0.03	0.03	2.26	-0.82	-0.20	39	0.90	2.90	1.17	0.84	0.49	0.23	0.68	12/23/03	11/19/13
0822_02	16438	D. Ba	POR	0.15	-0.66	0.09	0.37	-1.80	0.15	0.61	20	45.10	56.00	47.59	45.43	41.94	34.95	5.65	5/11/04	11/19/13
0822_02	16438	D. Ba	Summer	0.43	-1.43	0.04	0.58	-2.47	-0.48	-0.04	10	46.09	56.00	48.80	46.22	44.74	34.95	4.06	5/11/04	6/5/13
0822_02	16438	Pheophytin-a	POR	0.17	0.25	0.01	0.10	2.57	-1.85	-0.61	35	25.58	116.30	41.31	16.16	6.00	0.50	35.31	4/15/04	10/10/13
0822_02	16438	Pheophytin-a	Summer	0.16	0.24	0.03	0.11	2.27	-1.93	-0.17	30	28.24	116.30	44.50	18.93	6.00	0.50	38.50	5/18/05	10/10/13
0822_02	17162	Secchi Depth	Summer	0.23	0.01	0.08	0.01	1.88	0.04	-0.87	14	0.26	0.35	0.35	0.25	0.20	0.15	0.15	10/18/04	7/17/12
0822_02	17162	Sp Cond	Summer	0.25	8.49	0.02	3.43	2.48	-0.25	-0.89	20	373.35	453.00	409.50	376.50	334.50	290.00	75.00	5/4/04	7/17/12
0822_02	17162	TKN	POR	0.17	-0.05	0.02	0.02	-2.53	1.23	0.39	33	0.83	1.90	0.90	0.80	0.60	0.40	0.30	12/2/03	7/17/12
0822_02	17162	TKN	Winter	0.20	-0.05	0.08	0.03	-1.91	1.82	0.53	17	0.85	1.60	1.00	0.80	0.60	0.40	0.40	12/2/03	3/26/12
0822_02	17162	OP	Summer	0.26	0.01	0.03	0.00	2.45	0.67	-0.67	19	0.05	0.13	0.07	0.05	0.00	0.00	0.07	5/4/04	7/17/12
0822_02	17162	Hardness	Winter	0.26	-4.57	0.02	1.81	-2.52	-0.37	-1.20	20	152.55	192.00	174.00	156.00	132.00	104.00	42.00	12/2/03	3/26/12
0822_02	17162	D. Cu	Winter	0.20	0.08	0.05	0.04	2.13	-0.69	-0.67	20	1.19	2.12	1.53	1.25	0.76	0.40	0.77	12/2/03	3/26/12
0822_02	17162	Flow Severity	Summer	0.24	-0.16	0.03	0.07	-2.31	1.97	0.66	19	3.05	5.00	3.00	3.00	2.00	2.00	1.00	5/4/04	7/17/12
0822_03	18358	TP	Summer	0.13	0.08	0.01	0.03	2.54	1.33	-0.07	46	0.20	0.74	0.21	0.14	0.09	0.04	0.12	5/11/04	10/1/13
0822_03	18358	D. Ba	POR	0.21	-0.36	0.04	0.17	-2.18	-0.92	-0.46	20	44.73	48.20	46.19	45.18	43.56	40.09	2.63	5/11/04	11/19/13
0822_03	18358	D. Ba	Summer	0.41	-0.47	0.05	0.20	-2.36	-1.85	1.85	10	45.29	48.00	46.38	45.76	43.98	40.09	2.40	5/11/04	6/5/13
0822_04	15252	D. Ba	Summer	0.46	-0.65	0.03	0.25	-2.59	0.11	-0.22	10	47.12	52.20	48.94	47.27	44.39	42.69	4.55	5/11/04	6/5/13

Trends (Unclassified Segments):

See Table ELM-20 for details of the significant trends analysis summary presented in Table ELM-18. Increasing trends for nitrate and pheophytin-a occur in 0822D. As discussed in the General Use section of Assessments (Unclassified Segments), the source of water for this small reservoir is the Elm Fork. Chlorophyll-a was identified as a concern and is likely due to the retention time in the reservoir. Therefore, it could also be expected that as these algal populations die off, there would be a corresponding pheophytin-a concern.

Table ELM-20: 0822C, 0822D Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0822C_01	17170	NO3	Summer	0.31	-0.31	0.04	0.13	-2.35	0.20	-0.55	14	0.35	1.66	0.40	0.17	0.06	0.03	0.34	8/9/06	9/9/13
0822D_01	17849	NO3	Summer	0.10	0.19	0.04	0.09	2.12	-0.73	-2.28	42	0.26	1.63	0.40	0.16	0.01	0.01	0.39	5/11/04	10/10/13
0822D_01	17849	Pheophytin-a	POR	0.20	4.12	0.01	1.43	2.88	1.76	-0.87	36	28.07	82.50	46.25	17.45	8.30	0.50	37.95	4/15/04	10/10/13
0822D_01	17849	Pheophytin-a	Summer	0.13	3.41	0.05	1.64	2.07	1.36	-0.98	31	28.39	82.50	48.00	21.00	8.00	0.50	40.00	5/18/05	10/10/13

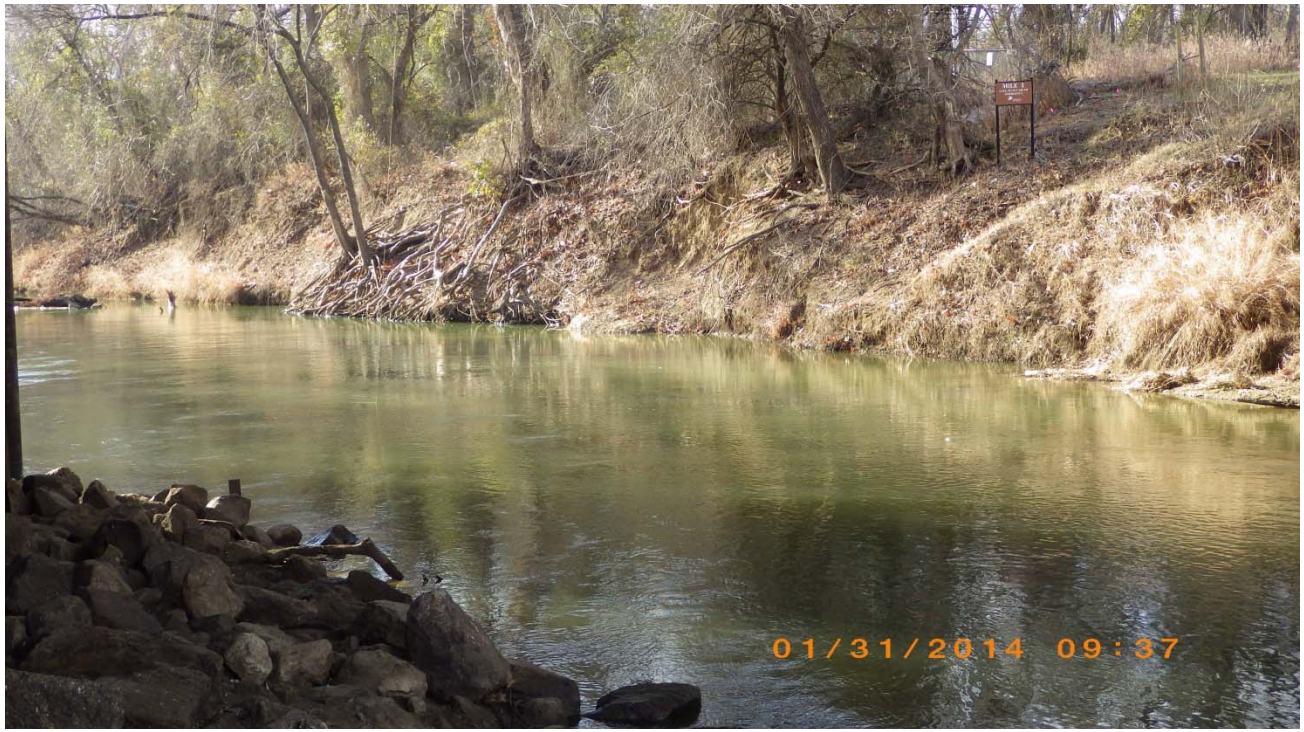


Image ELM- 7: 0822 upstream of hwy 121 bridge

Segment 0826 – Grapevine Lake

Overview

This 7,280 acre segment impounds Denton Creek up to a normal pool elevation of 535 feet. 0826 is located within the Eastern and Western Cross Timbers and the Grand Prairie ecoregions. Land use in this segment is classified as crop and range land with small areas of forest and urban development.

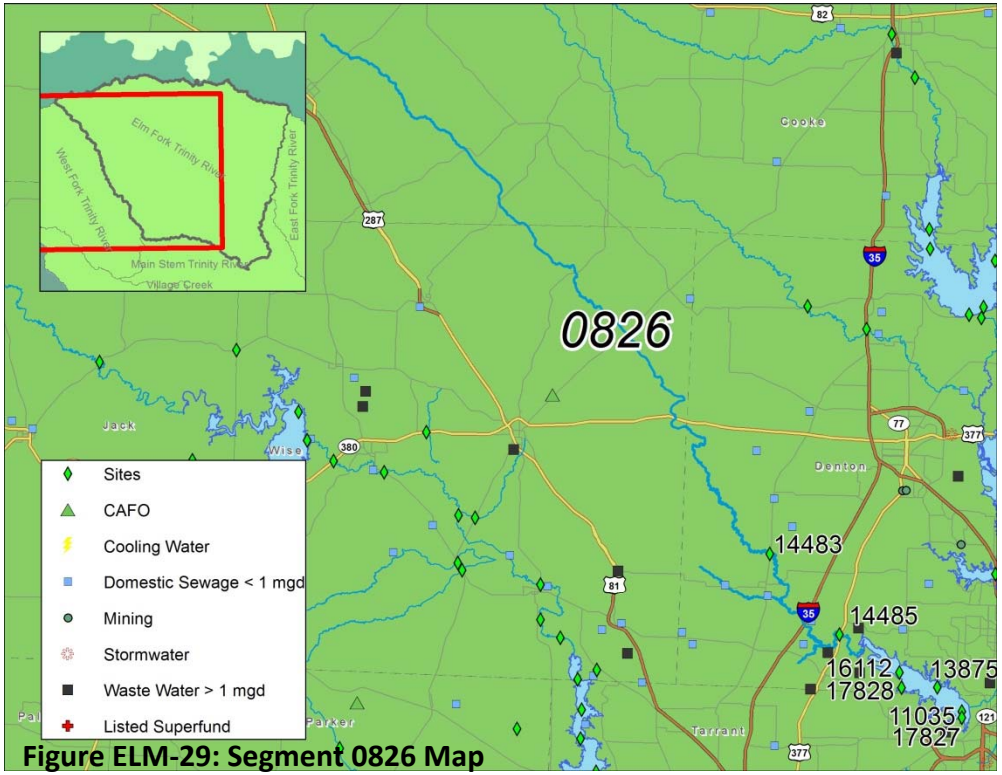


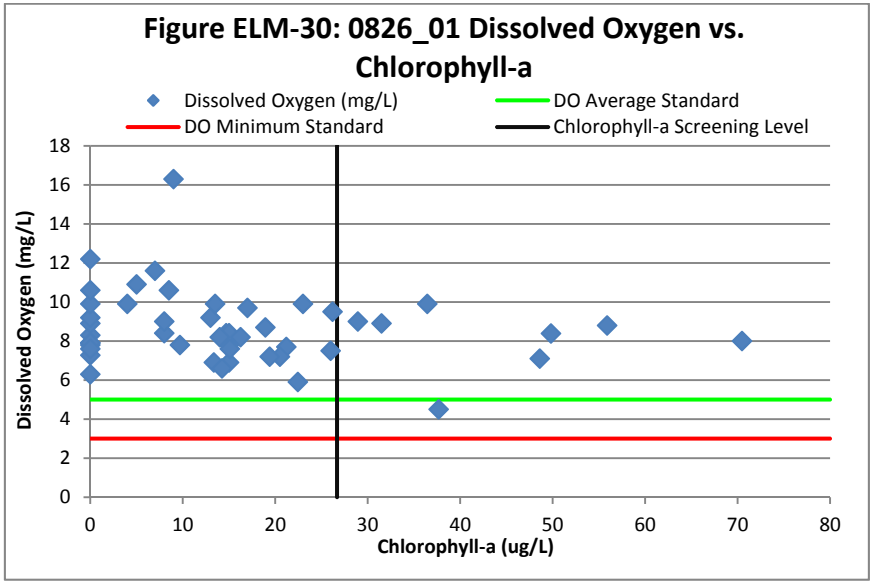
Figure ELM-29: Segment 0826 Map

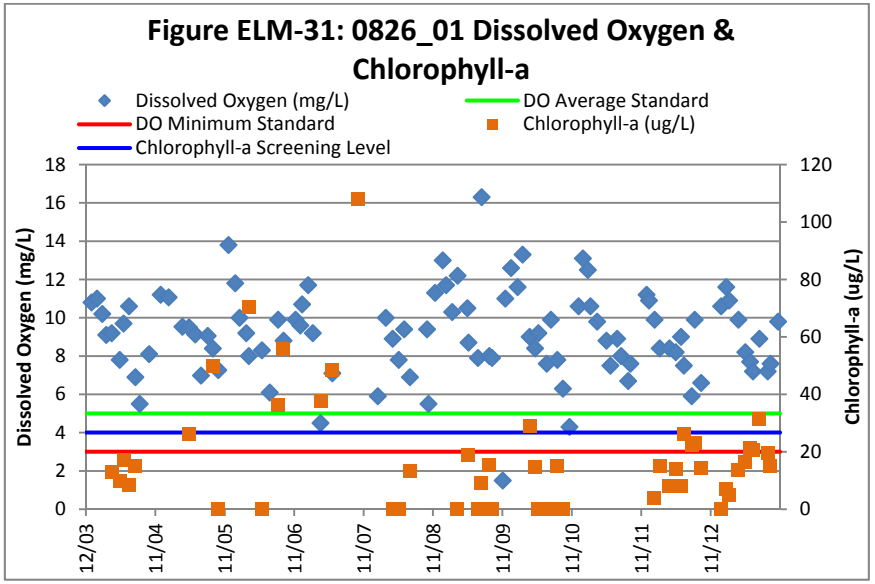
Assessments (Classified Segments):

Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0826_01 - Lowermost portion of reservoir	Concern	Fully Supporting
0826_02 - Morehead Creek cove	Fully Supporting	Not Assessed (No Data)
0826_03 - Lower portion of reservoir north of Oak Grove Park	Not Assessed (No Data)	Not Assessed (No Data)
0826_04 - North Main Slough cove	Fully Supporting	Not Assessed (No Data)
0826_05 - Middle portion of reservoir east of Meadowmere Park	Fully Supporting	Fully Supporting
0826_06 - Middle portion of reservoir southeast of Walnut Grove Park	Fully Supporting	Fully Supporting
0826_07 - Upper portion of reservoir east of Marshall Creek Park	Concern	Not Assessed (No Data)

0826_08 - Remainder of reservoir Fully Supporting Not Assessed (No Data)

Assessment unit 0826_01 and 0826_07 were found to have concerns for depressed dissolved oxygen by the TCEQ Draft 2014 Integrated Report. Although not a concern in 0826_01, chlorophyll-a levels have exceeded the screening level several times and appear to be at least a minor factor in the dissolved oxygen concerns in this lake (Figure ELM-30 & ELM-31).





General Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0826_01	Fully Supporting	Concern
0826_02	Fully Supporting	Fully Supporting
0826_03	Fully Supporting	Fully Supporting
0826_04	Fully Supporting	Fully Supporting
0826_05	Fully Supporting	Concern
0826_06	Concern	Concern
0826_07	Not Supporting	Fully Supporting
0826_08	Fully Supporting	Fully Supporting

0826_01 was found to have concerns for nitrate and OP by the in-house 5 year assessment. 0826_05 was also found to have concerns for OP by the in-house 5 year assessment. 0826_06 was found to have concerns for chlorophyll-a by both the TCEQ Draft 2014 Integrated Report and the in-house 5 year assessment. The in-house 5 year assessment also found this assessment unit to have concerns for OP. 0826_07 was found to be not supporting due to elevated pH as well as concerns for nitrate by the TCEQ Draft 2014 Integrated Report. There is no data available for this assessment unit; the fully supporting finding is based on the whole lake average for solids.

Across the lake, nitrate and OP appear to correlate to lake elevation as shown in Figure ELM-32 with lower values reported at lower lake elevations. This indicates that inflows to the lake are bringing in nutrients from the surrounding land; potentially from agricultural or residential fertilizers. However, based on the available data, the only area showing a positive correlation between nitrate or OP and chlorophyll-a is 0806_06 (Table ELM-21).

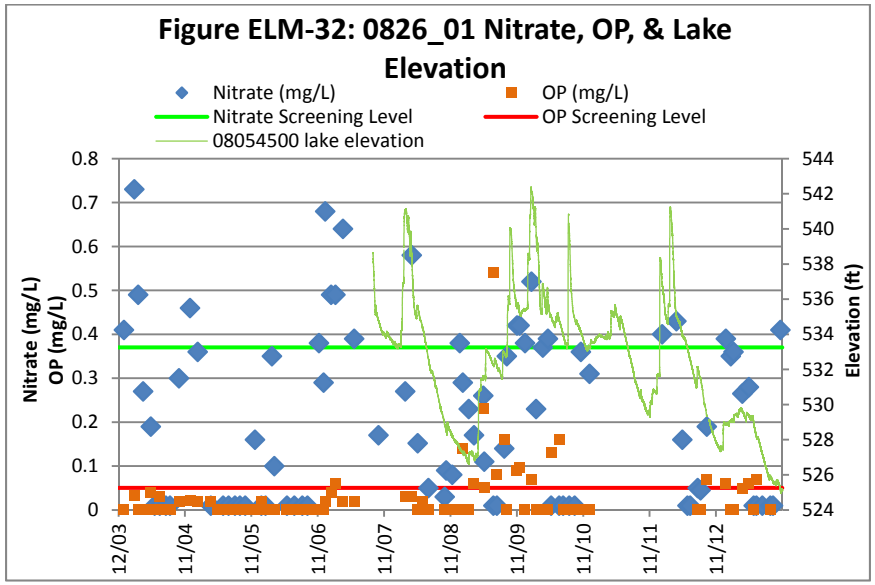


Table ELM-21: 0826 Chlorophyll-a & Nutrient Correlations

	Chlorophyll-a Correlation Coefficients			
	Ammonia	Nitrate	TP	OP
0826_01	0.155955	-0.03066	-0.11993	-0.25747
0826_05	0.340771	-0.05806	-0.20725	-0.07176
0826_06	0.137151	0.01448	-0.03947	0.12861

Contact Recreation Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0826_01	No Concern	Fully Supporting
0826_02	Not Assessed (No Data)	Not Assessed (No Data)
0826_03	Not Assessed (No Data)	Not Assessed (No Data)
0826_04	Not Assessed (No Data)	Not Assessed (No Data)

0826_05	Not Assessed (No Data)	No Concern
0826_06	No Concern	Fully Supporting
0826_07	Not Assessed (No Data)	Not Assessed (No Data)
0826_08	Not Assessed (No Data)	Not Assessed (No Data)

Public Water Supply Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0826_01	Fully Supporting	Fully Supporting
0826_02	Fully Supporting	No Concern
0826_03	Fully Supporting	No Concern
0826_04	Fully Supporting	No Concern
0826_05	Fully Supporting	Fully Supporting
0826_06	Fully Supporting	Fully Supporting
0826_07	Fully Supporting	No Concern
0826_08	Fully Supporting	No Concern

Fish Consumption Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0826_01	Fully Supporting	Not Assessed (No Data)
0826_02	Fully Supporting	Not Assessed (No Data)
0826_03	Fully Supporting	Not Assessed (No Data)
0826_04	Fully Supporting	Not Assessed (No Data)
0826_05	Fully Supporting	Not Assessed (No Data)
0826_06	Fully Supporting	Not Assessed (No Data)
0826_07	Fully Supporting	Not Assessed (No Data)
0826_08	Fully Supporting	Not Assessed (No Data)

Assessments (Unclassified Segments):

Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0826A_01 - Lower 7.9 miles of creek	Fully Supporting	Fully Supporting
0826A_02 - 15.7 miles upstream to 7.4 miles downstream of FM 156	Fully Supporting	Fully Supporting

General Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0826A_01	Concern	Concern
0826A_02	Not Assessed (No Data)	Fully Supporting

0826A_01 was found to have concerns for nitrate by both the TCEWQ Draft 2014 Integrated Report and the in-house 5 year assessment. The in-house 5 year assessment also found this assessment unit to have concerns for OP and TP. As shown in Table ELM-22, nutrients are negatively correlated to 7 day total rainfall. This indicates that nutrient sources may be upstream wastewater treatment facilities.

Table ELM-22: 0826A_01 Correlation Coefficients

	Ammonia	Nitrate	TP	OP
NWS Grid Site 439442 7 Day Total Rainfall	-0.0983575	-0.3368662	-0.1441462	-0.1967849

Contact Recreation Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0826A_01	Not Assessed (No Data)	Fully Supporting
0826A_02	Not Assessed (No Data)	Not Supporting

0826A_02 was found to be not supporting due to elevated levels of *E. coli* by the in-house 5 year assessment. *E. coli* in this assessment unit increase during high flow events (Figure ELM-33). As this portion of the watershed is largely rangeland, the source is most likely livestock wastes being washed into the stream during rain events.

Figure ELM-33: 0826A_02 *E. coli* & Flow

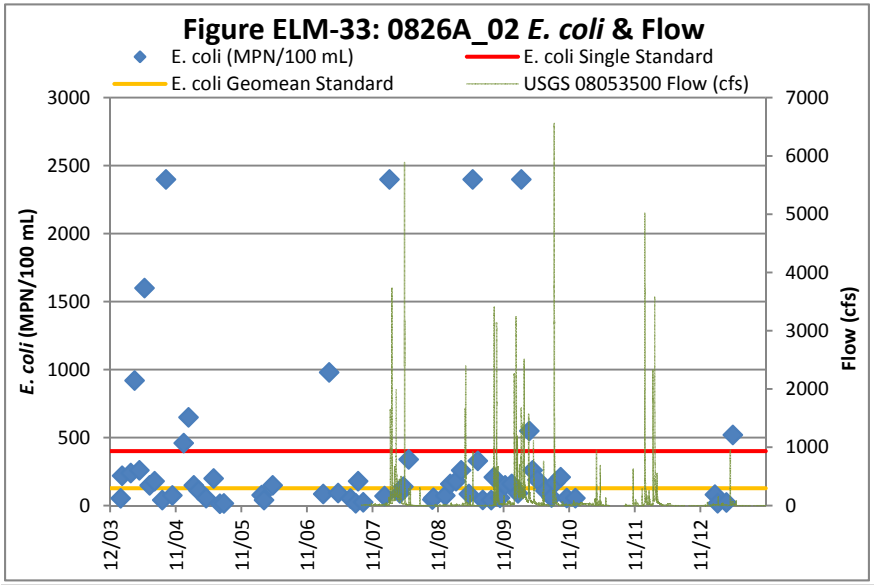




Image ELM- 8: Grapevine Lake park with dam in background

Public Water Supply Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0826A_01	Not Assessed (No Data)	Fully Supporting
0826A_02	Not Assessed (No Data)	Fully Supporting

Fish Consumption Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0826A_01	Fully Supporting	Not Assessed (No Data)
0826A_02	Fully Supporting	Not Assessed (No Data)

Trend Analysis Overview

Table ELM-23: Trend Analysis Result Summary

Elm Fork		Flow Severity			Pheophytin-a			Chloride			BOD5			D. Ba		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0826_01	17827				UP	UP						UP				
0826_05	13875				UP	UP					UP	UP		DN	DN	
0826_06	17828										UP	UP	UP	DN		
0826A_01	14485											UP				
0826A_02	14483	DN	DN							DN						

Trends Key

A-All Months

S-Summer/Growing Season (May-October)

W-Winter/Dormant Sesaon (November-April)

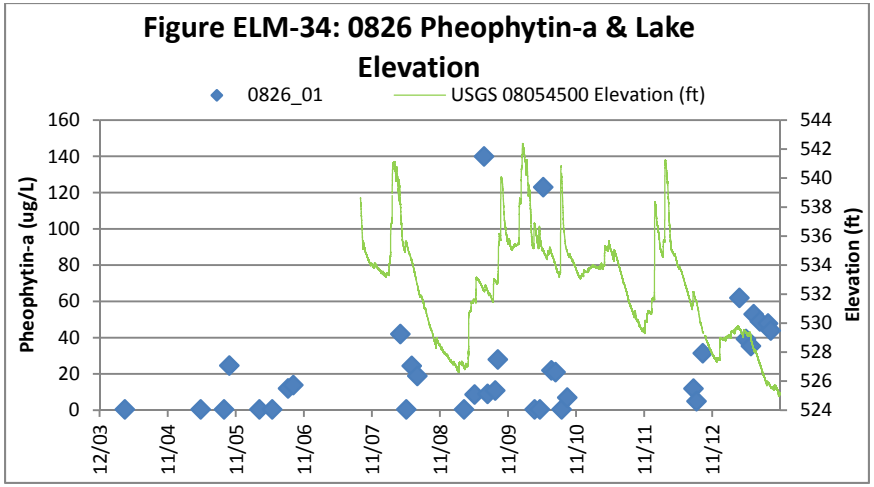
UP Increasing Trends

DN Decreasing Trends

There were 17 significant trends identified for this segment as summarized in Table ELM-23. For additional detail on trend methods, see the Data Review Methodology section.

Trends (Classified Segments):

See Table ELM-24 for details of the significant trends analysis summary presented in Table ELM-23. Increasing trends for pheophytin-a and BOD5 have R^2 values less than 0.29, however they occur in several assessment units during the period of record and the summer months which indicates that changes in water quality may be occuring. Figures ELM-34 and ELM-35 show the data for pheophytin-a and BOD5 in 0826_01. These parameters' increasing trends appear to be occurring at the same time as a decreasing trend in lake elevation. These trends are likely related as increased residence times in reservoirs create conditions under which algal populations can increase. As the algae die off and decompose, pheophytin-a and BOD5 can increase.



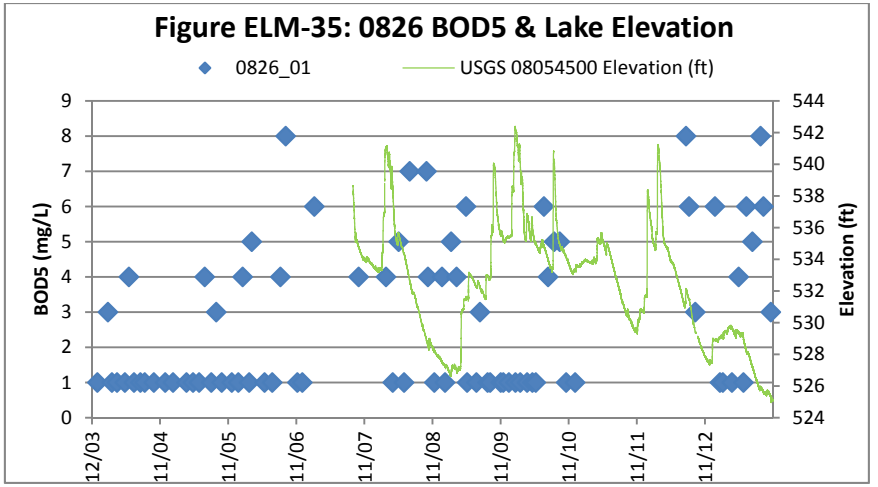


Table ELM-24: 0826 Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0826_01	17827	BOD5	Summer	0.22	0.38	0.00	0.11	3.43	1.40	-1.51	43	3.28	8.00	5.00	3.00	1.00	1.00	4.00	5/26/04	10/10/13
0826_01	17827	Pheophytin-a	POR	0.29	0.38	0.00	0.10	3.66	-1.30	-1.48	35	25.41	140.00	39.30	13.85	0.50	0.50	38.80	4/14/04	10/10/13
0826_01	17827	Pheophytin-a	Summer	0.22	0.31	0.01	0.11	2.81	-1.96	-0.38	30	27.52	140.00	39.30	19.98	7.00	0.50	32.30	5/26/05	10/10/13
0826_05	13875	BOD5	POR	0.10	0.09	0.00	0.03	2.95	1.99	-2.58	78	2.65	9.00	4.00	1.00	1.00	1.00	3.00	12/30/03	11/19/13
0826_05	13875	BOD5	Summer	0.17	0.11	0.01	0.04	2.81	0.74	-2.20	42	3.02	9.00	5.00	2.00	1.00	1.00	4.00	5/26/04	9/25/13
0826_05	13875	D. Ba	POR	0.25	-0.55	0.02	0.22	-2.45	1.13	0.22	20	54.28	61.00	56.13	53.80	51.89	48.40	4.24	5/26/04	11/19/13
0826_05	13875	D. Ba	Summer	0.33	-0.58	0.08	0.29	-1.99	1.66	1.13	10	54.19	61.00	56.06	53.45	51.54	51.30	4.52	5/26/04	5/30/13
0826_05	13875	Pheophytin-a	POR	0.21	0.32	0.00	0.10	3.09	-1.10	-1.92	39	20.13	68.00	34.75	14.00	0.50	0.50	34.25	4/14/04	9/25/13
0826_05	13875	Pheophytin-a	Summer	0.17	3.19	0.02	1.28	2.50	1.81	-0.71	33	20.75	65.40	34.75	18.00	0.50	0.50	34.25	5/26/05	9/25/13
0826_06	17828	BOD5	POR	0.13	0.09	0.00	0.03	3.28	1.37	-2.91	77	2.52	9.00	4.00	1.00	1.00	1.00	3.00	12/30/03	11/19/13
0826_06	17828	BOD5	Summer	0.14	0.10	0.02	0.04	2.49	0.66	-2.29	41	2.80	9.00	4.00	1.00	1.00	1.00	3.00	5/26/04	9/25/13
0826_06	17828	D. Ba	POR	0.21	-0.51	0.04	0.23	-2.19	0.37	-0.87	20	54.25	60.00	56.62	53.49	51.75	48.42	4.87	5/26/04	11/19/13
0826_06	17828	BOD5	Winter	0.11	0.08	0.05	0.04	2.00	1.22	-2.01	36	2.19	6.00	3.50	1.00	1.00	1.00	2.50	12/30/03	11/19/13

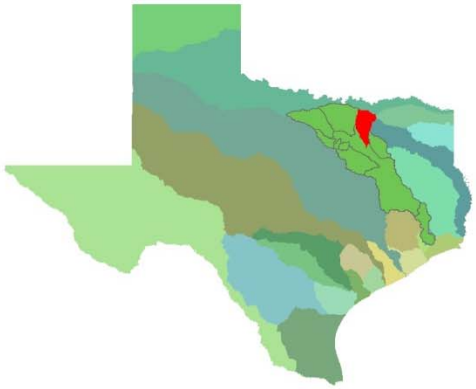
Trends (Unclassified Segments):

See Table ELM-25 for details of the significant trends analysis summary presented in Table ELM-23. There is an increasing summer trend for BOD5 with an R^2 of 0.13.

Table ELM-25: 0826A Trend Analysis Result Detail

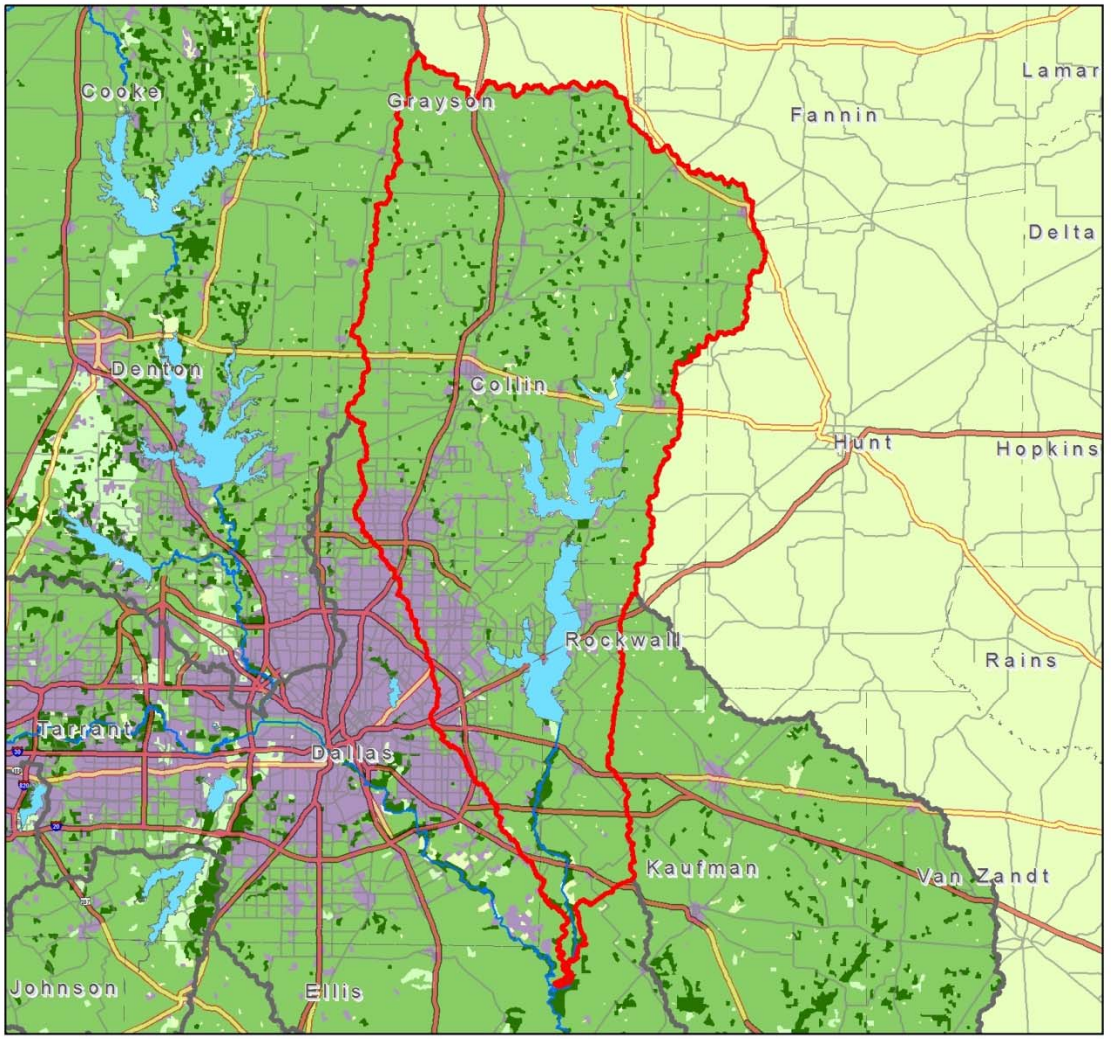
Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0826A_01	14485	BOD5	Summer	0.13	0.28	0.02	0.11	2.51	1.12	1.57	46	4.48	12.00	6.00	4.50	3.00	1.00	3.00	5/11/04	10/10/13
0826A_02	14483	Chloride	Winter	0.11	-0.05	0.07	0.03	-1.89	0.62	1.89	32	49.19	174.00	58.00	45.50	31.50	16.00	26.50	12/23/03	4/24/13
0826A_02	14483	Flow Severity	POR	0.24	-0.19	0.00	0.04	-5.23	0.64	-0.43	88	2.72	5.00	3.00	3.00	2.00	1.00	1.00	12/23/03	11/19/13
0826A_02	14483	Flow Severity	Summer	0.40	-0.28	0.00	0.05	-5.32	1.42	-0.79	44	2.41	5.00	3.00	3.00	1.00	1.00	2.00	5/11/04	10/10/13

East Fork Trinity River



Land Use Type

- Rangeland
- Urban, Industrial and Residential
- Crop, Pasture and other Agriculture
- Forest



EAST FORK TRINITY RIVER

Classified Segments Used in this Report – 3
Unclassified Segments Used in this Report – 9

0821 – Lake Lavon
0821A – Pilot Grove Creek
0821B – Sister Grove Creek
0821C – Wilson Creek
0821D – East Fork Trinity River Above Lake Lavon
0820 – Lake Ray Hubbard
0820A – Cottonwood Creek
0820B – Rowlett Creek
0820C – Muddy Creek
0819 – East Fork Trinity River
0819A – Duck Creek
0819B – Buffalo Creek

Sites Used for Analysis:

2008 Integrated Report	15
2010 Integrated Report	27
2012 Integrated Report	31
Draft 2014 Integrated Report	30
5-Year Analysis	15
Valid Trends	12

Table EAST-1: East Fork Trinity River Count of Dischargers by Type and County

County	Cooling Water	Domestic Sewage <1mgd	Mining	Stormwater	Wastewater >1mgd	CAFO	Total Dischargers
COLLIN		25			5	1	31
DALLAS					4		4
FANNIN		2					2
GRAYSON		5					5
KAUFMAN		3		1	3		7
ROCKWALL		1			3		4
Total		36		1	15	1	53

The East Fork Trinity River subwatershed extends approximately 107 river miles from Grayson County to the confluence with the Main Stem Trinity in Kaufman County. The subwatershed is primarily rural with row crop agriculture but is highly urbanized around Lake Ray Hubbard. Major population centers include the cities of McKinney and Rockwall, as well as, the communities of the Eastern DFW Metroplex. Water supply permits for Lake Lavon and Lake Ray Hubbard are held by North Texas Municipal Water District (NTMWD) and the City of Dallas, respectively.

This subwatershed receives between 36 and 44 inches of precipitation annually and lies within the Blackland Prairie ecoregion which is typified by flat terrain.

There are ten Brownfield sites in this subwatershed. Six hazmat events required action by the EPA OSC office although one of these is outside of the period of record for this report. In addition, three sites are being monitored for compliance with the EPA Resource Conservation and Recovery Act. Noncompliance events are reported on the Enforcement and Compliance History Online website. See Tables EAST-2, EAST-3 and EAST-4, for details and links to additional information.

Table EAST-2: EPA Brownfields

Segment	Site	Link to Additional EPA Information	Map Site	Assessment Complete Date	Cleanup Required	Cleanup Status	Redevelopment Status	Media Affected	Classes of Contaminants Found	Media Addressed	Classes of Contaminants Cleaned Up
0821	401 E. LOUISIANA ST./NORTHWEST FINANCIAL CORPORATION SITE	EPA Link	Map It	6/20/2012	No	Not Started	Not Started	Soil, Ground Water		None	
0821	CITY OF MCKINNEY - AREA 1	EPA Link	Map It	7/30/2012 Phase 1	Unknown	Not Started	Not Started	None		None	
0821	CITY OF MCKINNEY - AREA 2	EPA Link	Map It	7/31/2012 Phase 1	Unknown	Not Started	Not Started	None		None	
0821	BF STAPP SURVEY, ABSTRACT NO. 837, TRACT 18	EPA Link	Map It	12/30/2011	No	Not Started	Complete (1/27/2014)	None		None	
0821A	MHA VARIOUS LOTS - FENET	EPA Link	Map It	12/18/2013	No	Not Started	Not Started	None		None	
0821A	MHA - 603 BUMPAS	EPA Link	Map It	12/18/2013	No	Not Started	Not Started		Asbestos, Lead	None	
0821A	1202 ROOSEVELT	EPA Link	Map It	12/12/2013	No	Not Started	Not Started	None		None	
0820	FORMER DDI FACILITY	EPA Link	Map It	10/13/2003	Yes	Not Started	In Progress (Started 11/30/2004)	Ground Water	VOCs, SVOCs, Other Metals	Ground Water	VOCs, Other Metals
0820	HOLFORD ROAD PROPERTY	EPA Link	Map It	7/11/2005	Yes	Not Started	Not Started	Soil	Other Contaminants	Soil	Other Contaminants
0819	CONTINENTAL EMSCO PLANT 1	EPA Link	Map It	1/4/2000	Unknown	Not Started	Not Started	None		None	

Table EAST-3: EPA On- Scene Coordinator Investigations

Segment	Site	Link to Additional EPA Information	Map Site	Date	Contaminants Found
0820A	HOUSTON TRUCK PESTICIDES	EPA Link	Map It	8/14/2010	Bimethylamine
0820A	MAXWELL CREEK DRUMS	EPA Link	Map It	10/12/2010	Unknown Substance
0820A	WYLIE ACID SPILL	EPA Link	Map It	4/3/2014	Hydrofluorosilicic Acid
0819	DEBUSK CREEK PARK RESPONSE	EPA Link		10/19/2006	Unknown Substance
0819	HALLIBURTON PLANT FIRE	EPA Link	Map It	8/7/2009	Drilling Mud Chemicals
0819	SUNNYVALE MERCURY RESPONSE	EPA Link	Map It	8/12/2009	Mercury

Table EAST-4: EPA Resource Conservation and Recovery Act (RCRA) and Enforcement and Compliance History Online (ECHO) Sites

Segment	Site	Link to Additional EPA RCRA Information	Link to Additional EPA ECHO Information	Map Site	Site Assessed	Solution for Cleanup Selected	Cleanup Implemented	Cleanup Complete	Media Affected	Contaminant
0821A	MCKINNEY SMELTING INCORPORATED	EPA Link	EPA Link	Map It	9/16/1998					
0820	PHIBRO ANIMAL HEALTH CORP	EPA Link	EPA Link	Map It	2/6/1991	10/6/2009	3/23/2011	1/25/2011		
0819	ASHLAND DISTRIBUTION CO GARLAND TX	EPA Link	EPA Link	Map It	3/23/1992	8/4/2010	1/28/2011	1/28/2011	Air, Surface Water, Soil	Solvents, Plasticizer, Plastic/Chemical Precursors, Surfactants

Segment 0821 – Lake Lavon

Overview

This 21,400 acre segment impounds the East Fork Trinity River up to a normal pool elevation of 492 feet. 0821 is located entirely within the Blackland Prairie ecoregion and the land use is classified mostly as agriculture/pasture with large sections of urban development.

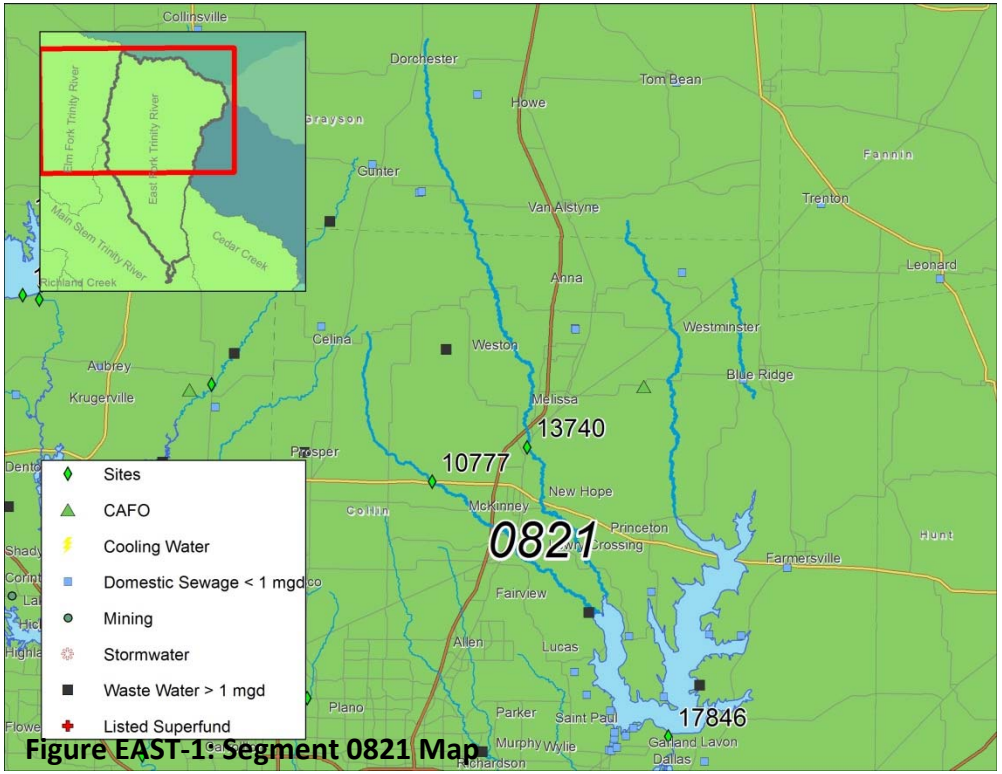


Figure EAST-1: Segment 0821 Map

Assessments (Classified Segments):

Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0821_01 - Lowermost portion of reservoir	Not Assessed (No Data)	Not Assessed (No Data)
General Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0821_01	Concern	Not Assessed (No Data)

This segment was found to have concerns for nitrate by the TCEQ Draft 2014 Integrated Report. However, this finding was carried forward from previous Integrated Reports as there is no current data.

Contact Recreation Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0821_01	Not Assessed (No Data)	Not Assessed (No Data)

Public Water Supply Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0821_01	Not Assessed (No Data)	Not Assessed (No Data)

Fish Consumption Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0821_01	Not Assessed (No Data)	Not Assessed (No Data)

Assessments (Unclassified Segments):

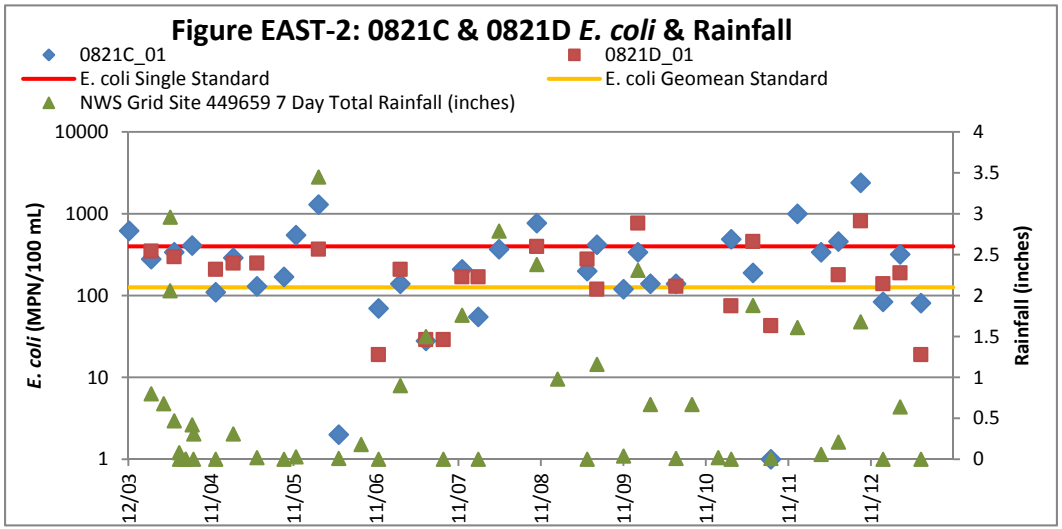
Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0821C_01 - Entire water body	Fully Supporting	Fully Supporting
0821D_01 - Entire water body	Fully Supporting	Fully Supporting

General Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0821C_01	No Concern	Fully Supporting
0821D_01	No Concern	Fully Supporting

Contact Recreation Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0821C_01	Not Supporting	Not Supporting
0821D_01	Not Supporting	Not Supporting

0821C_01 and 0821D_01 were found to be not supporting due to elevated levels of *E. coli* by both the TCEQ Draft 2014 Integrated Report and the in-house 5 year assessment (Figure EAST-2). As expected, *E. coli* levels increase during rain events. Due to the nature of the watershed around Wilson Creek and the East Fork above Lake Lavon, it is assumed that pet and livestock wastes contribute to the impairment.

Figure EAST-2: 0821C & 0821D *E. coli* & Rainfall



Public Water Supply Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0821C_01	Not Assessed (No Data)	Fully Supporting
0821D_01	Not Assessed (No Data)	Fully Supporting

Fish Consumption Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0821C_01	Not Assessed (No Data)	Not Assessed (No Data)
0821D_01	Not Assessed (No Data)	Not Assessed (No Data)

Trend Analysis Overview

Table EAST-5: Trend Analysis Result Summary

East Fork		Days Since Precip			Flow Severity			Flow			Secchi Depth			Sp Cond			Chlorophyll-a			TDS			Chloride		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0821C_01	10777										UP	UP	UP		UP				UP	UP					
0821D_01	13740		DN		DN	DN		DN															UP		

Trends Key
A-All Months
S-Summer/Growing Season (May-October)
W-Winter/Dormant Sesaon (November-April)
UP Increasing Trends
DN Decreasing Trends

There were 11 significant trends identified for this segment as summarized in Table EAST-5. For additional detail on trend methods, see the Data Review Methodology section.

Trends (Classified Segments):
None

Trends (Unclassified Segments):
See Table EAST-6 for details of the significant trends analysis summary presented in Table EAST-5. Increasing trends for specific conductance, TDS, and chloride have R^2 values less than 0.14 and have shallow slopes. However, the increasing winter trend for chlorophyll-a in 0821C has an R^2 of 0.65. Figure EAST-3 shows these data. Chlorophyll-a is fairly well correlated to TP (correlation coefficient=0.47). Most of the chlorophyll-a values, especially during the winter months, are well below the screening level and don't present a concern at this time.

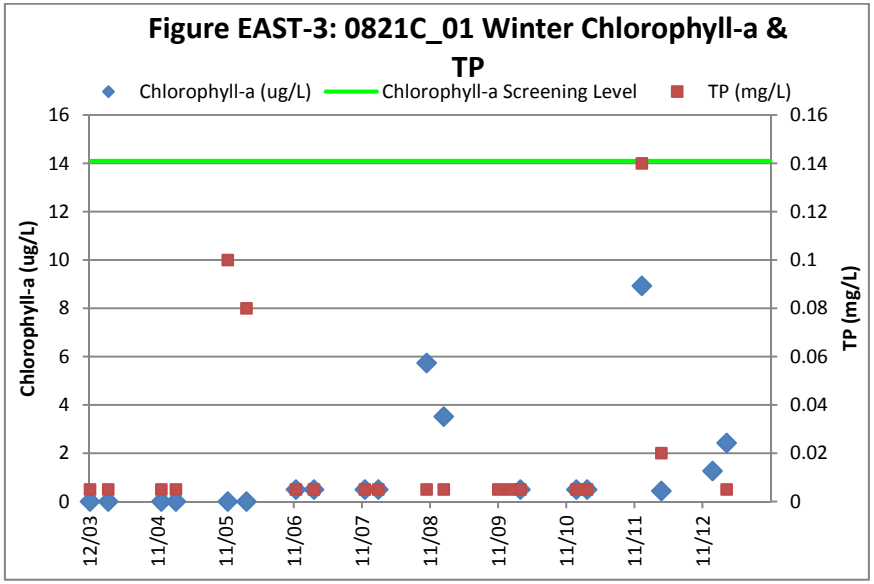




Image EF- 1: Bank of Lake Lavon

Table EAST-6: 0821C, 0821D Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0821C_01	10777	Secchi Depth	POR	0.19	0.03	0.00	0.01	3.13	0.38	-0.53	43	0.45	0.80	0.60	0.43	0.30	0.10	0.30	12/4/03	7/10/13
0821C_01	10777	Secchi Depth	Summer	0.21	0.02	0.03	0.01	2.35	-0.40	0.06	23	0.41	0.70	0.51	0.40	0.30	0.10	0.21	5/5/04	7/10/13
0821C_01	10777	Secchi Depth	Winter	0.17	0.03	0.07	0.01	1.91	0.12	-0.88	20	0.49	0.80	0.63	0.50	0.30	0.15	0.33	12/4/03	4/9/13
0821C_01	10777	TDS	POR	0.13	0.02	0.01	0.01	2.58	1.44	0.81	46	362.06	620.00	394.00	355.00	308.10	249.28	85.90	12/4/03	7/10/13
0821C_01	10777	Sp Cond	Summer	0.14	0.02	0.09	0.01	1.79	1.69	1.19	22	540.05	913.00	592.00	514.00	459.00	366.00	133.00	5/5/04	7/10/13
0821C_01	10777	Chlorophyll-a	Winter	0.65	1.20	0.00	0.21	5.62	-1.28	-1.25	19	1.36	8.93	1.27	0.50	0.00	0.00	1.27	12/4/03	4/9/13
0821D_01	13740	Flow	POR	0.13	-0.30	0.10	0.17	-1.73	-0.94	-0.52	24	61.18	588.00	51.00	14.50	1.35	0.00	49.65	3/11/04	4/9/13
0821D_01	13740	Chloride	POR	0.14	0.07	0.04	0.03	2.11	1.27	-0.54	30	15.23	41.00	19.00	12.50	9.00	6.00	10.00	3/11/04	7/10/13
0821D_01	13740	Flow Severity	POR	0.11	-0.16	0.05	0.08	-2.00	1.44	-1.30	35	3.66	6.00	5.00	3.00	3.00	2.00	2.00	12/4/03	4/9/13
0821D_01	13740	Flow Severity	Summer	0.45	-0.38	0.00	0.11	-3.41	1.67	-0.34	16	3.38	6.00	4.00	3.00	2.00	2.00	2.00	6/21/04	10/16/12
0821D_01	13740	Days Since Precip	Summer	0.20	-0.45	0.08	0.24	-1.88	-0.19	-1.48	16	3.84	7.00	6.50	5.00	1.00	0.50	5.50	6/21/04	10/16/12

Segment 0820 – Lake Ray Hubbard

Overview

This 22,745 acre segment impounds the East Fork Trinity River from Rockwall-Forney Dam to Lavon Dam in Collin County up to a normal pool elevation of 435.5 feet. Land use classifications are generally urban to the west and agriculture/pasture to the east. Watershed and shoreline development is increasing at a high rate. This segment is located entirely within the Blackland Prairie ecoregion. Lake Ray Hubbard has been noted as being hypereutrophic by the TCEQ report Trophic Classification of Texas Reservoirs.

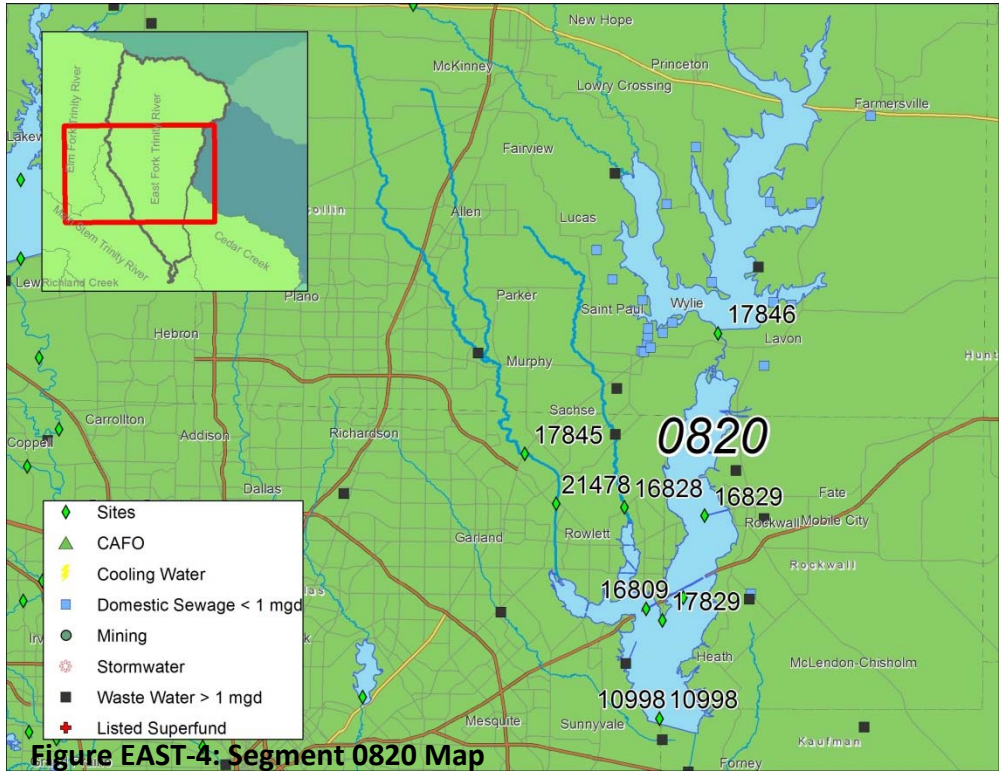


Figure EAST-4: Segment 0820 Map

Assessments (Classified Segments):

Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0820_01 - Lower portion of East Fork arm, centering on IH 30	Fully Supporting	Fully Supporting
0820_02 - Middle portion of East Fork arm, centering on SH 66	Fully Supporting	Fully Supporting
0820_04 - Lower portion of main body of reservoir extending up from dam to Yankee Cr. arm	Fully Supporting	Fully Supporting
0820_05 - Mid-reservoir, I30 crossing Rowlett Cr. arm to Yankee Cr. arm	Fully Supporting	Fully Supporting
0820_06 - Outfall canal from Lake Lavon Dam	Fully Supporting	Fully Supporting

General Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0820_01	Concern	Concern
0820_02	Concern	Concern
0820_04	Concern	Concern
0820_05	Fully Supporting	Fully Supporting
0820_06	Fully Supporting	Concern

0820_01, 0820_02, and 0820_04 were found to have concerns for chlorophyll-a by both the TCEQ Draft 2014 Integrated Report and the in-house 5 year assessment as shown for 0820_01 in Figure EAST-5. This is due to the hypereutrophic nature of the lake. Depending on the area of the lake, chlorophyll-a is weakly correlated to several nutrients (see Table EAST-7). In all three assessment units, chlorophyll-a is positively correlated to ammonia while it is also positively correlated to TP in 0820_04 and OP in 0820_02. Nutrients in the reservoir are likely due to wastewater treatment facilities in the watershed in addition to agricultural and residential fertilizers.

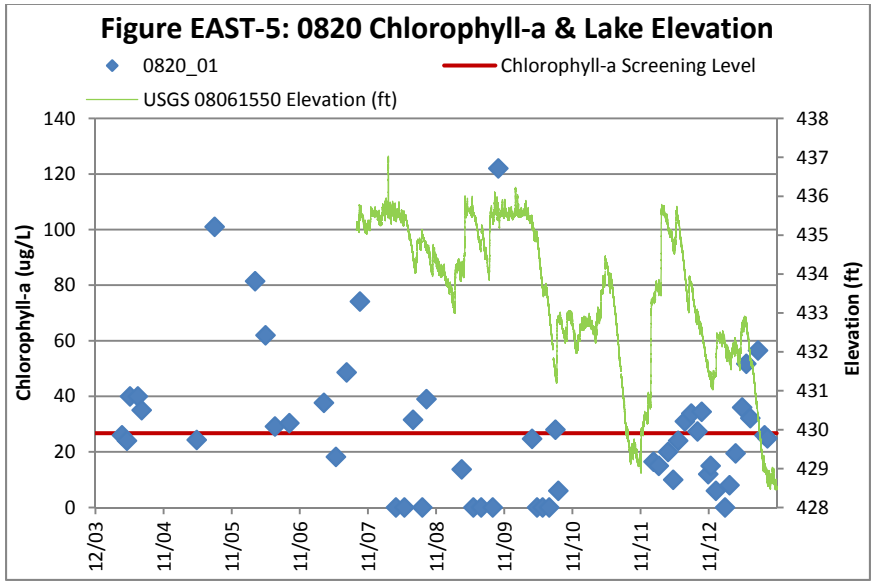


Figure EAST-5: 0820 Chlorophyll-a & Lake Elevation

Table EAST-7: 0820 Chlorophyll-a Correlation Coefficients

	Ammonia	Nitrate	TP	OP
0820_01	0.120314421	-0.070140637	-0.077808091	-0.007863459
0820_02	0.236052813	-0.245770408	-0.055871972	0.070898621
0820_04	0.061878603	-0.24016626	0.207503982	-0.003237458

Additionally, 0826_06 was found to have concerns for OP by the in-house 5 year assessment. The concern for OP in this assessment unit is likely related to OP levels in Lake Lavon, however, there is no data available for Lake Lavon at this time to determine the extent of the concern.

Contact Recreation Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0820_01	Not Assessed (No Data)	Not Assessed (No Data)
0820_02	Not Assessed (No Data)	Not Assessed (No Data)
0820_04	No Concern	Fully Supporting
0820_05	Not Assessed (No Data)	Fully Supporting
0820_06	Not Assessed (No Data)	Fully Supporting

Public Water Supply Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0820_01	Fully Supporting	Fully Supporting
0820_02	Fully Supporting	Fully Supporting
0820_04	Fully Supporting	Fully Supporting
0820_05	Fully Supporting	Fully Supporting
0820_06	Fully Supporting	Fully Supporting

Fish Consumption Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0820_01	Fully Supporting	Not Assessed (No Data)
0820_02	Fully Supporting	Not Assessed (No Data)
0820_04	Fully Supporting	Not Assessed (No Data)
0820_05	Fully Supporting	Not Assessed (No Data)
0820_06	Fully Supporting	Not Assessed (No Data)

Assessments (Unclassified Segments):

Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0820B_01 - Entire water body	Fully Supporting	Fully Supporting
0820C_01 - Entire creek	Fully Supporting	Concern

0820C was found to have concerns for elevated levels of copper by the in-house 5 year assessment. The data shown in Figure EAST-6 indicates that levels of dissolved copper are higher in the stream when there is little rainfall and decrease due to dilution when rainfall events occur. This points to a discharger in the watershed releasing dissolved copper. It is recommended that additional sampling be undertaken to identify the location of the source.

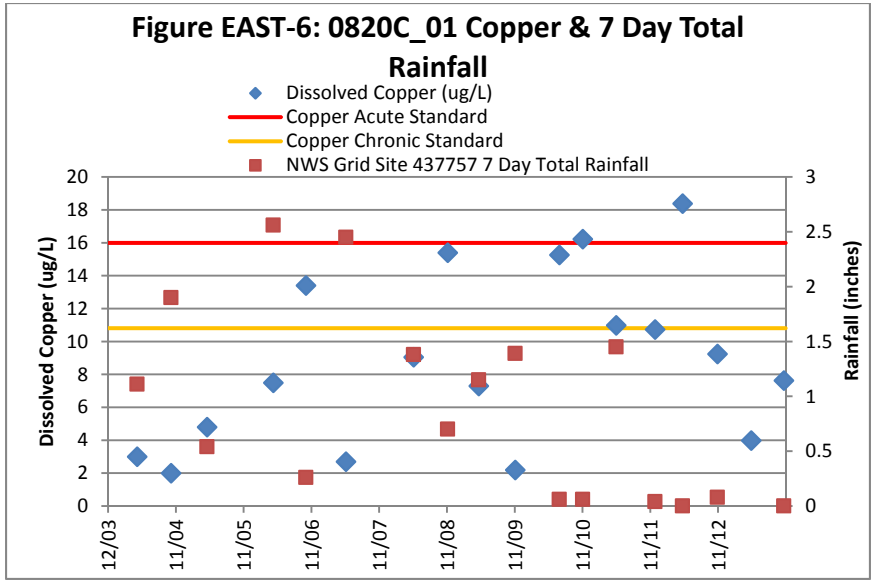
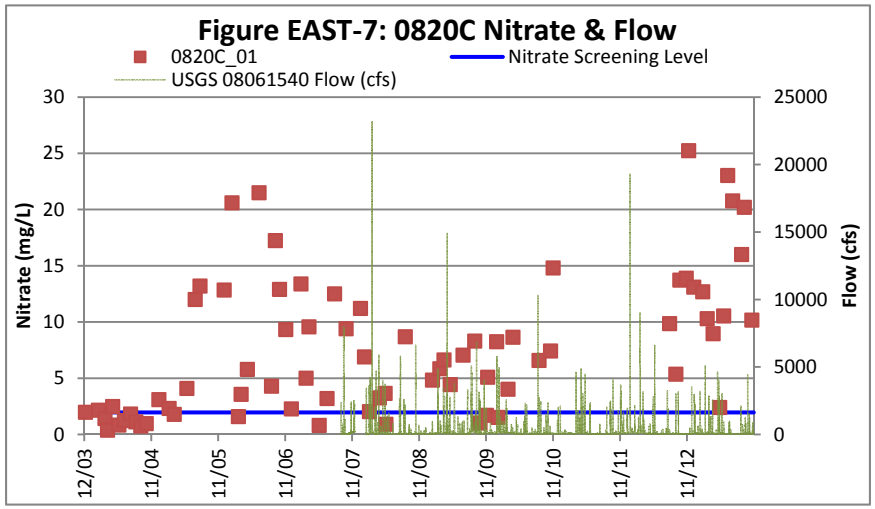




Image EF- 2: Marina at Lake Ray Hubbard

General Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0820B_01	Concern	Concern
0820C_01	Concern	Concern

0820B and 0820C were found to have concerns for nitrate by both the TCEQ Draft 2014 Integrated Report and the in-house 5 year assessment. 0820C was also found to have concerns for OP and TP by the in-house 5 year assessment. As illustrated for nitrate in 0820C_01 in Figure EAST-7, nutrients in these streams are higher when stream flow is low. The watersheds for these streams are highly urbanized. This indicates that wastewater treatment facilities and residential fertilizers/irrigation runoff may be the sources of nutrients in these assessment units. The peaks seen in 2005, 2006, and in 2013 are likely due to drought conditions in those years.



Contact Recreation Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0820B_01	Not Supporting	Not Supporting
0820C_01	Fully Supporting	Fully Supporting

0820B was found to be not supporting due to elevated levels of *E. coli* by both the TCEQ Draft 2014 Integrated Report and the in-house 5 year assessment. *E. coli* levels increase with flow as shown in Figure EAST-8 suggesting that the source of *E. coli* in 0820B may be wastes from residential pets or wildlife in the riparian areas.

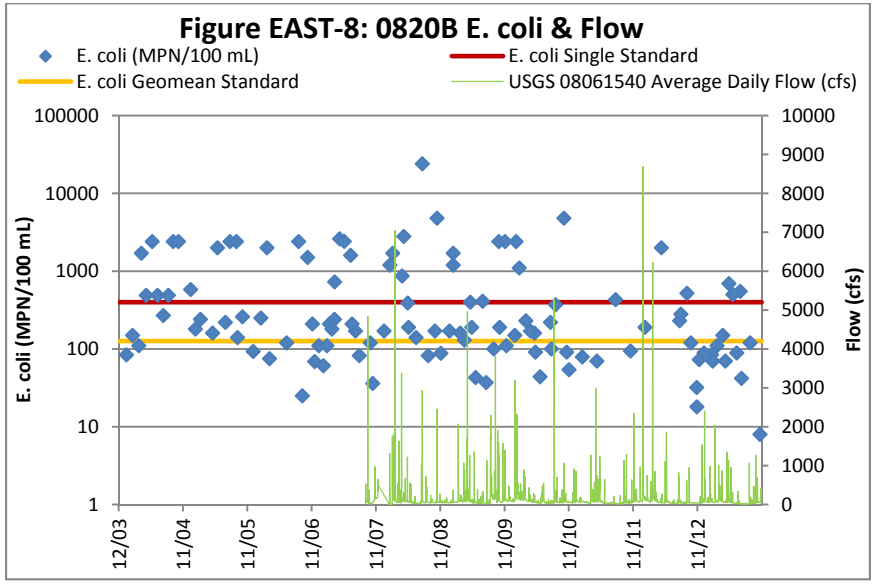




Image EF- 3: Bank at Lake Ray Hubbard

Public Water Supply Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0820B_01	Not Assessed (No Data)	Fully Supporting
0820C_01	Not Assessed (No Data)	Fully Supporting

Fish Consumption Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0820B_01	Fully Supporting	Not Assessed (No Data)
0820C_01	Fully Supporting	Not Assessed (No Data)

Trend Analysis Overview

Table EAST-8: Trend Analysis Result Summary

East Fork		Air Temp			Days Since Precip			Flow Est			Secchi Depth			DO			Sp Cond			*E. coli*			Pheophytin-a			Lab Turb		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0820_01	16809																						UP	UP				
0820_02	16829																						UP	UP				
0820_04	10998																						UP	UP				
0820_05	17829																						UP	UP				UP
0820_06	17846																	DN	DN									
0820B_01	10753				UP	UP						UP		DN														
0820B_01	17845			DN												UP				DN	DN	DN						
0820C_01	16828			DN						UP												DN					DN	

East Fork		TSS			Chloride			BOD5			NH3			NO3			TKN			OP			Hardness		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0820_01	16809							UP	UP				DN												
0820_02	16829						DN	UP	UP																
0820_04	10998								UP	UP															
0820_05	17829	UP	UP	UP					UP																
0820_06	17846				DN	DN	DN																		
0820B_01	10753														UP		DN		DN		UP	UP			DN
0820B_01	17845																								
0820C_01	16828	DN	DN	DN				DN	DN	DN	DN	DN		UP	UP	UP									

Trends Key

A-All Months

S-Summer/Grow ing Season (May-October)

W-Winter/Dormant Sesaon (November-April)

UP Increasing Trends

DN Decreasing Trends

There were 56 significant trends identified for this segment as summarized in Table EAST-8. For additional detail on trend methods, see the Data Review Methodology section.

Trends (Classified Segments):
See Table EAST-9 for details of the significant trends analysis summary presented in Table EAST-8. Increasing trends for BOD5, TSS, and pheophytin-a in 0820 have R^2 values between 0.17 and 0.48 and may be related. Pheophytin-a is a degradation product of chlorophyll-a in algal cells. As discussed above in the General Use section of Assessments (Classified Segments), there are concerns for chlorophyll-a in the reservoir. In addition, algal cells are a component of TSS. Furthermore, increasing trends for pheophytin-a suggests that algal populations are dying off which can lead to increases in BOD5 as the algae decompose.

Table EAST-9: 0820 Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0820_01	16809	BOD5	POR	0.10	0.08	0.00	0.03	2.95	1.10	-2.97	80	2.70	8.00	4.00	1.00	1.00	1.00	3.00	12/19/03	11/20/13
0820_01	16809	BOD5	Summer	0.24	0.37	0.00	0.11	3.50	0.99	-1.38	40	3.45	8.00	5.00	3.50	1.00	1.00	4.00	5/18/04	10/10/13
0820_01	16809	NH3	Winter	0.18	-0.26	0.00	0.09	-3.01	0.49	-2.12	44	0.08	0.78	0.10	0.03	0.00	0.00	0.10	12/19/03	11/20/13
0820_01	16809	Pheophytin-a	POR	0.43	0.51	0.00	0.10	5.23	-0.96	-1.96	38	31.60	135.10	42.00	20.30	0.50	0.50	41.50	4/21/04	10/10/13
0820_01	16809	Pheophytin-a	Summer	0.39	0.47	0.00	0.11	4.36	-1.40	-1.40	32	35.57	135.10	47.58	21.40	0.50	0.50	47.08	5/27/05	10/10/13
0820_02	16829	BOD5	POR	0.19	0.11	0.00	0.02	4.38	1.88	-2.93	82	2.41	7.00	4.00	1.00	1.00	1.00	3.00	12/19/03	11/20/13
0820_02	16829	BOD5	Summer	0.29	0.35	0.00	0.09	4.06	0.78	-1.85	43	3.07	7.00	5.00	3.00	1.00	1.00	4.00	5/18/04	10/10/13
0820_02	16829	Chloride	Winter	0.10	-1.02	0.04	0.47	-2.17	0.07	-1.94	43	38.84	54.20	48.00	39.00	30.00	25.00	18.00	12/19/03	11/20/13
0820_02	16829	Pheophytin-a	POR	0.48	0.59	0.00	0.11	5.39	-0.47	-2.22	34	29.76	144.00	47.75	22.00	0.50	0.50	47.25	4/21/04	10/10/13
0820_02	16829	Pheophytin-a	Summer	0.44	0.58	0.00	0.13	4.52	-1.21	-1.61	28	34.43	144.00	50.05	24.85	0.50	0.50	49.55	9/14/05	10/10/13
0820_04	10998	BOD5	Summer	0.22	0.13	0.00	0.04	3.38	0.63	-2.29	42	3.10	10.00	5.00	2.00	1.00	1.00	4.00	5/18/04	10/10/13
0820_04	10998	BOD5	Winter	0.33	0.34	0.00	0.08	4.39	1.97	-1.28	41	2.39	6.00	4.00	1.00	1.00	1.00	3.00	12/19/03	11/20/13
0820_04	10998	Pheophytin-a	POR	0.20	0.34	0.00	0.11	3.04	-0.66	-1.91	39	32.26	152.00	49.10	12.20	0.50	0.50	48.60	4/21/04	10/10/13
0820_04	10998	Pheophytin-a	Summer	0.17	0.31	0.02	0.12	2.47	-0.99	-1.43	32	35.50	152.00	46.55	14.65	0.50	0.50	46.05	5/27/05	10/10/13
0820_05	17829	BOD5	Summer	0.20	0.31	0.00	0.09	3.24	1.51	-1.12	43	2.95	8.00	4.00	3.00	1.00	1.00	3.00	5/18/04	10/10/13
0820_05	17829	TSS	POR	0.22	0.15	0.00	0.03	4.67	0.02	1.82	79	22.11	211.00	24.00	12.00	8.00	1.00	16.00	12/19/03	11/20/13
0820_05	17829	TSS	Summer	0.25	0.17	0.00	0.05	3.53	0.58	2.23	40	24.58	211.00	20.50	11.50	8.00	1.00	12.50	5/18/04	10/10/13
0820_05	17829	TSS	Winter	0.19	0.14	0.01	0.05	2.98	-0.76	0.21	39	19.57	77.00	26.00	12.00	6.00	1.00	20.00	12/19/03	11/20/13
0820_05	17829	Pheophytin-a	POR	0.29	0.42	0.00	0.11	3.82	-0.76	-2.12	38	31.23	178.00	44.10	21.70	0.50	0.50	43.60	4/21/04	10/10/13
0820_05	17829	Pheophytin-a	Summer	0.22	0.37	0.01	0.13	2.88	-1.00	-1.83	32	34.57	178.00	46.05	23.70	0.50	0.50	45.55	5/27/05	10/10/13
0820_05	17829	Lab Turb	Winter	0.12	0.08	0.03	0.04	2.31	1.42	-0.64	43	11.33	42.00	15.00	7.18	5.09	2.80	9.91	12/19/03	11/20/13
0820_06	17846	Sp Cond	Summer	0.38	-0.03	0.00	0.01	-5.53	1.19	-0.37	52	374.67	539.00	412.00	365.00	323.50	277.00	88.50	5/5/04	9/25/13
0820_06	17846	Sp Cond	Winter	0.10	-0.02	0.02	0.01	-2.36	1.94	1.22	51	383.18	610.00	411.00	369.00	344.00	279.00	67.00	12/8/03	11/20/13
0820_06	17846	Chloride	POR	0.44	-0.11	0.00	0.01	-8.01	0.93	-0.47	84	36.94	135.00	45.75	33.00	23.25	12.00	22.50	12/8/03	11/20/13
0820_06	17846	Chloride	Summer	0.55	-0.13	0.00	0.02	-7.12	0.83	0.13	43	37.71	135.00	49.00	33.00	22.36	12.00	26.64	5/5/04	9/25/13
0820_06	17846	Chloride	Winter	0.33	-0.09	0.00	0.02	-4.37	0.44	-0.85	41	36.13	88.00	45.00	32.00	23.50	14.00	21.50	12/8/03	11/20/13

Trends (Unclassified Segments):
See Table EAST-10 for details of the significant trends analysis summary presented in Table EAST-8. The decreasing trend for dissolved oxygen at station 10753 has an R^2 of 0.13. Adding the data from station 17845 in the same assessment unit creates an insignificant increasing trend with an R^2 of 0.0004. Therefore, this data does not suggest a concern at this time.

As discussed above in the General Use section of Assessments (Unclassified Segments), nutrients in 0820B and 0820C may be from wastewater treatment facilities and residential fertilizers/irrigation runoff in the watersheds. Again, there are peaks in 2005, 2006, and in 2013 that are most likely due to the drought conditions of those years. Therefore, the increasing trend for nutrients in these streams may be an artifact of the period of record for this Basin Summary Report and the 2013 drought occurring at the end of that time period.

Table EAST-10: 0820B, 0820C Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0820B_01	10753	Secchi Depth	Summer	0.25	0.04	0.06	0.02	2.05	0.42	-0.75	15	0.33	0.60	0.49	0.30	0.15	0.03	0.34	5/8/07	7/31/13
0820B_01	10753	DO	POR	0.13	-0.26	0.03	0.12	-2.21	0.87	-1.00	35	8.36	11.80	9.80	8.40	7.00	5.80	2.80	11/8/06	11/20/13
0820B_01	10753	NO3	Summer	0.28	0.70	0.06	0.34	2.09	1.39	0.91	13	4.77	11.48	5.78	4.58	2.70	0.69	3.08	6/4/07	7/31/13
0820B_01	10753	TKN	POR	0.10	-0.03	0.08	0.02	-1.83	0.54	0.91	31	0.66	1.30	0.80	0.67	0.50	0.10	0.30	11/8/06	11/20/13
0820B_01	10753	TKN	Winter	0.25	-0.07	0.04	0.03	-2.26	0.40	-0.37	17	0.66	1.30	0.90	0.70	0.40	0.10	0.50	11/8/06	11/20/13
0820B_01	10753	OP	Summer	0.24	0.18	0.07	0.09	2.01	0.71	-0.64	15	0.18	0.54	0.28	0.11	0.06	0.04	0.22	6/4/07	7/31/13
0820B_01	10753	OP	Winter	0.41	0.02	0.01	0.01	3.24	1.92	0.76	17	0.10	0.27	0.13	0.08	0.06	0.00	0.07	11/8/06	11/20/13
0820B_01	10753	Hardness	Winter	0.16	-10.68	0.09	5.96	-1.79	-0.02	-0.61	19	269.89	372.00	324.00	274.00	228.00	156.00	96.00	11/8/06	11/20/13
0820B_01	10753	Days Since Precip	POR	0.12	0.17	0.04	0.08	2.10	-0.49	-1.35	34	4.24	15.00	7.00	2.50	1.00	0.50	6.00	11/8/06	11/20/13
0820B_01	10753	Days Since Precip	Summer	0.21	0.26	0.08	0.14	1.88	0.35	-1.18	15	3.80	15.00	7.00	2.00	0.50	0.50	6.50	5/8/07	7/31/13
0820B_01	17845	Air Temp	Winter	0.13	-0.91	0.01	0.33	-2.74	-1.04	-0.59	51	16.95	31.20	22.90	17.10	11.40	-2.00	11.50	12/8/03	4/23/13
0820B_01	17845	DO	Winter	0.15	0.17	0.00	0.06	2.95	-1.37	0.66	50	9.19	11.50	10.20	9.05	8.30	5.20	1.90	12/8/03	4/23/13
0820B_01	17845	*E. coli*	POR	0.12	-0.14	0.00	0.05	-3.17	1.92	-0.95	79	564.09	2400.00	500.00	170.00	100.00	18.00	400.00	1/14/04	9/25/13
0820B_01	17845	*E. coli*	Summer	0.13	-0.15	0.02	0.06	-2.36	1.03	-0.77	40	602.70	2400.00	495.00	215.00	110.00	25.00	385.00	5/5/04	9/25/13
0820B_01	17845	*E. coli*	Winter	0.11	-0.14	0.04	0.07	-2.09	1.76	-0.35	39	524.49	2400.00	580.00	170.00	93.00	18.00	487.00	1/14/04	4/23/13
0820C_01	16828	Air Temp	Winter	0.15	-0.89	0.01	0.31	-2.92	-1.13	-0.24	52	17.06	30.70	22.10	16.80	11.75	-1.80	10.35	12/8/03	11/20/13
0820C_01	16828	BOD5	POR	0.33	-0.16	0.00	0.03	-6.33	1.01	-2.47	84	3.53	14.00	5.00	3.00	1.00	1.00	4.00	12/8/03	11/20/13
0820C_01	16828	BOD5	Summer	0.23	-0.13	0.00	0.04	-3.47	0.41	-1.53	43	3.60	14.00	4.00	3.00	1.00	1.00	3.00	5/5/04	10/10/13
0820C_01	16828	BOD5	Winter	0.46	-0.21	0.00	0.04	-5.80	1.07	-1.86	41	3.47	14.00	5.00	1.00	1.00	1.00	4.00	12/8/03	11/20/13
0820C_01	16828	TSS	POR	0.17	-0.14	0.00	0.04	-3.95	-0.48	0.60	78	28.11	207.00	39.00	13.00	8.00	1.00	31.00	12/8/03	11/20/13
0820C_01	16828	TSS	Summer	0.15	-0.11	0.01	0.04	-2.62	1.00	-1.25	40	27.29	114.00	39.50	13.00	9.30	4.00	30.20	5/5/04	10/10/13
0820C_01	16828	TSS	Winter	0.20	-0.18	0.00	0.06	-3.04	-0.55	0.41	38	28.97	207.00	36.70	13.00	7.00	1.00	29.70	12/8/03	11/20/13
0820C_01	16828	NH3	POR	0.10	-0.28	0.00	0.09	-3.08	0.68	-2.26	84	0.63	9.20	0.29	0.08	0.00	0.00	0.29	2/17/04	11/20/13
0820C_01	16828	NH3	Summer	0.14	-0.32	0.01	0.12	-2.63	0.70	-1.59	43	0.69	9.20	0.31	0.08	0.00	0.00	0.31	5/5/04	10/10/13
0820C_01	16828	NO3	POR	0.29	0.18	0.00	0.03	5.45	-1.68	-1.23	74	7.65	25.23	12.00	6.21	2.27	0.38	9.73	12/8/03	11/20/13
0820C_01	16828	NO3	Summer	0.23	1.00	0.00	0.32	3.12	1.90	-0.54	34	8.08	23.03	12.50	6.18	2.40	0.74	10.10	5/5/04	10/10/13
0820C_01	16828	NO3	Winter	0.34	0.19	0.00	0.04	4.43	-1.45	-0.26	40	7.29	25.23	10.75	6.23	2.22	0.38	8.53	12/8/03	11/20/13
0820C_01	16828	*E. coli*	Winter	0.15	-0.22	0.00	0.07	-3.07	1.79	-0.95	55	523.20	2400.00	340.00	110.00	55.00	17.00	285.00	1/14/04	11/20/13
0820C_01	16828	Flow Est	Winter	0.21	1.40	0.10	0.78	1.79	-1.67	0.89	14	22.21	150.00	16.00	4.00	1.00	0.01	15.00	11/9/04	12/18/07
0820C_01	16828	Lab Turb	Summer	0.26	-0.13	0.00	0.03	-3.85	0.87	-0.40	44	16.96	84.00	20.00	11.90	7.30	2.40	12.70	5/5/04	10/10/13

Segment 0819 – East Fork Trinity River

Overview

This 30 mile segment stretches from the confluence of the Main Stem Trinity River in Kaufman County up to the Rockwall-Forney Dam in Kaufman County. Land use is generally classified as agriculture/pasture throughout the watershed with a significant portion of the riparian areas classified as forest. This segment is located entirely within the Blackland Prairie ecoregion.

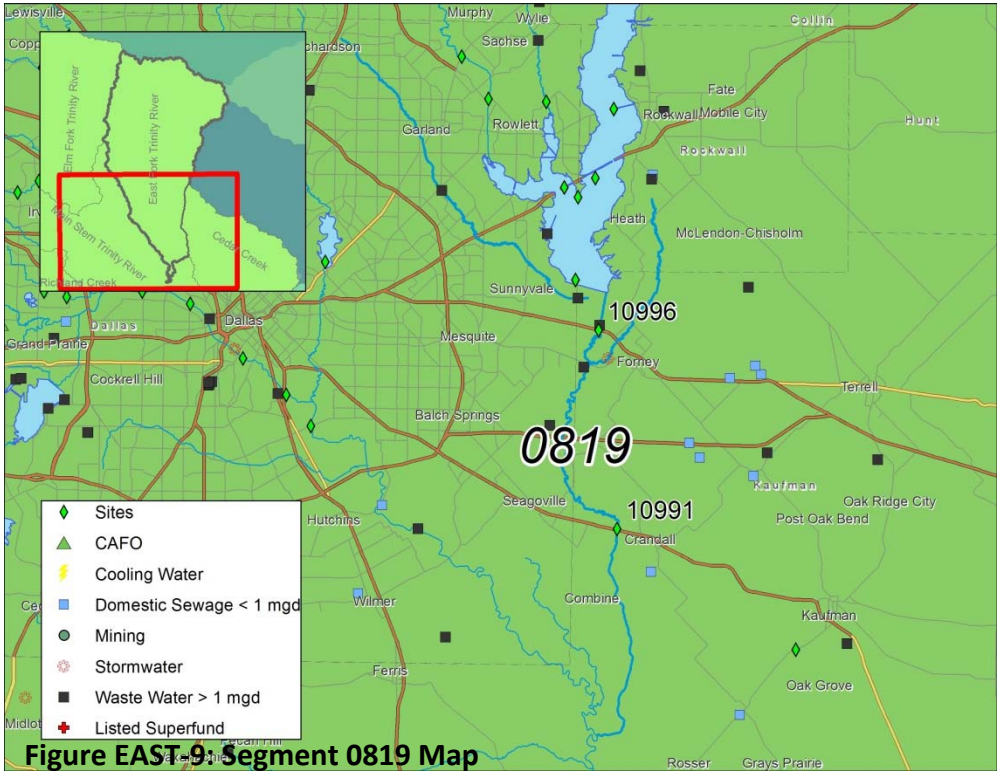


Figure EAST-9: Segment 0819 Map

Assessments (Classified Segments):

Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0819_01 - Entire segment	Fully Supporting	Fully Supporting

General Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0819_01	Not Supporting	Concern

This segment was found to be not supporting due to elevated levels of sulfate and TDS by the TCEQ Draft 2014 Integrated Report. It appears that high TDS and sulfate may be natural in this segment as decreases occur during periods of high flow (Figure EAST-10). As discussed in the TRA CRP 2010 Basin Summary Report, the excessively high values seen in 2005 and 2006 occurred during the drought of those years. In addition to the natural geology of the segment, lack of rainfall and evaporation likely increased the concentration of these parameters in the surface water.

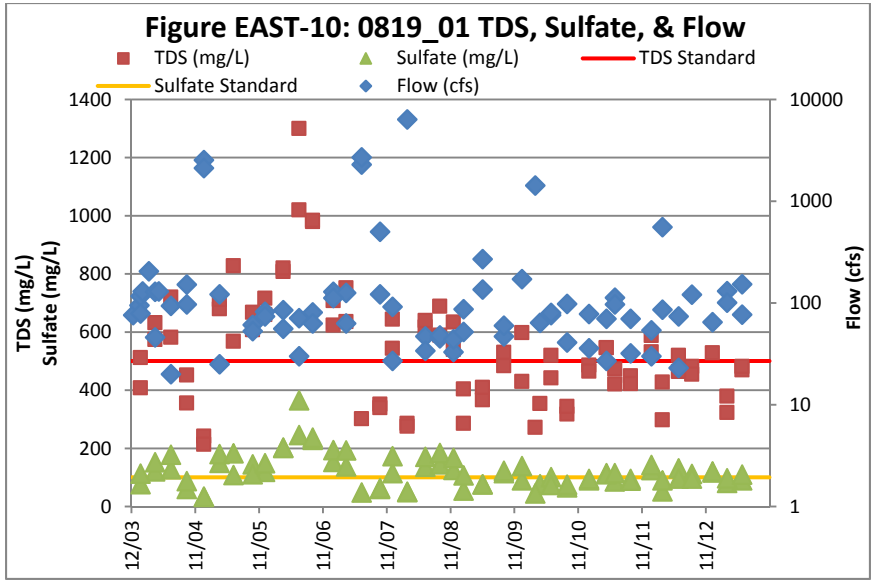
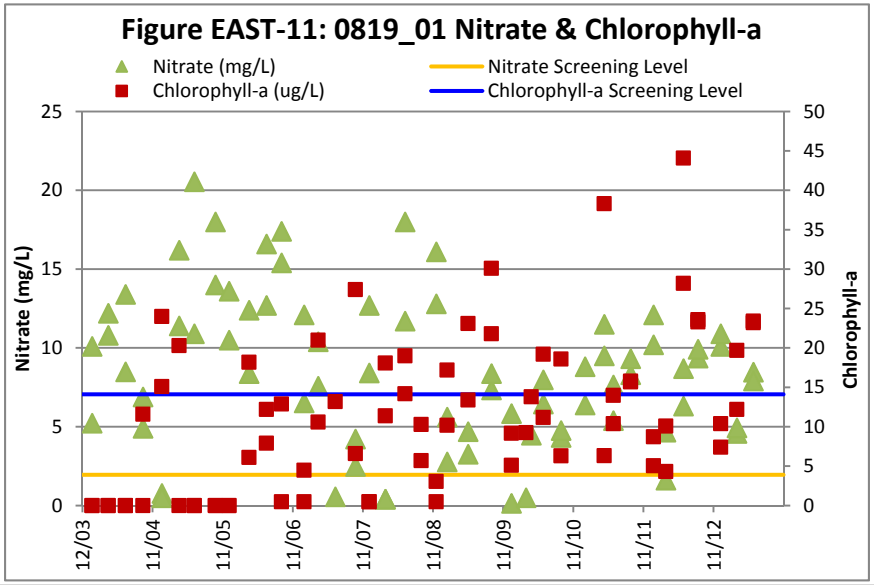




Image EF- 4 East Fork Trinity and nearby vegetation during Winter

This segment was found to have concerns for chlorophyll-a, nitrate, and TP by both the TCEQ Draft 2014 Integrated Report and the in-house 5 year assessment. The TCEQ Draft 2014 Integrated Report also identified concerns for ammonia while the in-house 5 year assessment identified concerns for OP. Figure EAST-11 best illustrates the relationship between chlorophyll-a and nutrients. Chlorophyll-a does not increase in response to increasing nutrient levels. Nutrients from wastewater treatment facilities and agricultural fertilizers may contribute to the nutrient issues in this segment. As this segment is downstream from a reservoir, algal populations have a long residence time available to reproduce which likely contributes to the chlorophyll-a concern.



Contact Recreation Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0819_01	Fully Supporting	Fully Supporting
Public Water Supply Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0819_01	Not Assessed (No Data)	Fully Supporting
Fish Consumption Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0819_01	Not Assessed (No Data)	Not Assessed (No Data)

Assessments (Unclassified Segments):

Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0819B_01 - Entire water body	Not Assessed (No Data)	Not Assessed (No Data)
General Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0819B_01	Concern	Not Assessed (No Data)

0819B was found to have concerns for nitrate and TP by the TCEQ Draft 2014 Integrated Report. However, these findings were carried forward from previous Integrated Reports as there is not current data.

Contact Recreation Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0819B_01	Not Assessed (No Data)	Not Assessed (No Data)
Public Water Supply Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0819B_01	Not Assessed (No Data)	Not Assessed (No Data)
Fish Consumption Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0819B_01	Not Assessed (No Data)	Not Assessed (No Data)

Trend Analysis Overview

Table EAST-11: Trend Analysis Result Summary

East Fork		Days Since Precip			Secchi Depth			DO			pH			Sp Cond			*E. coli*			Chlorophyll-a			TSS			VSS		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0819_01	10991		UP						UP									DN			UP							
0819_01	10996	UP	UP		DN	DN		UP	UP			UP		DN	DN					UP	UP			UP			UP	

East Fork		TDS			Chloride			SO4			Fluoride			NH3			NO3			TKN			OP		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0819_01	10991				DN	DN	DN				DN	DN			DN										
0819_01	10996	DN	DN		DN	DN	DN		DN						DN		DN	DN			DN			DN	

Trends Key
A-All Months
S-Summer/Grow ing Season (May-October)
W-Winter/Dormant Sesaon (November-April)
UP Increasing Trends
DN Decreasing Trends

There were 34 significant trends identified for this segment as summarized in Table EAST-11. For additional detail on trend methods, see the Data Review Methodology section.

Trends (Classified Segments):
See Table EAST-12 for details of the significant trends analysis summary presented in Table EAST-11. Many of the identified trends are decreasing, however, there are increasing trends for chlorophyll-a, TSS, and VSS which have R^2 values between 0.18 and 0.56. As shown above in Figure EAST-11 and again in Figure EAST-12, there is a pronounced increasing trend in chlorophyll-a. Data in this graph includes both stations 10991 and 10996. This trend may be related to algal populations introduced from Lake Ray Hubbard upstream in addition to residence times in the stream. It is very likely that the TSS and VSS trends are related to the chlorophyll-a trend as algae are a component of TSS and VSS.

Figure EAST-12: 0819_01 TSS, VSS, & Chlorophyll-a

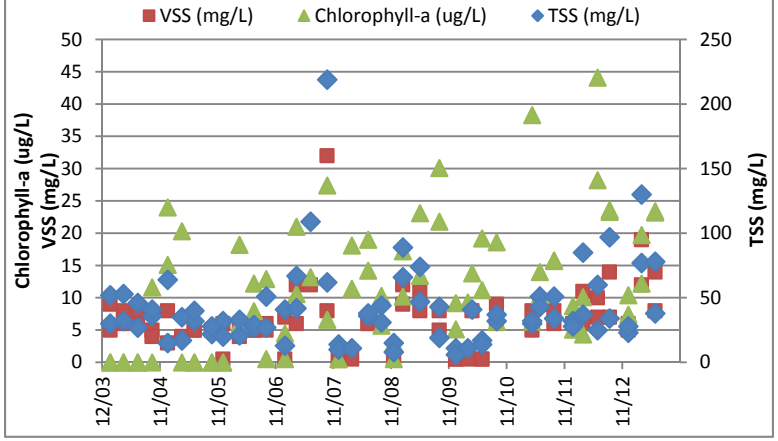
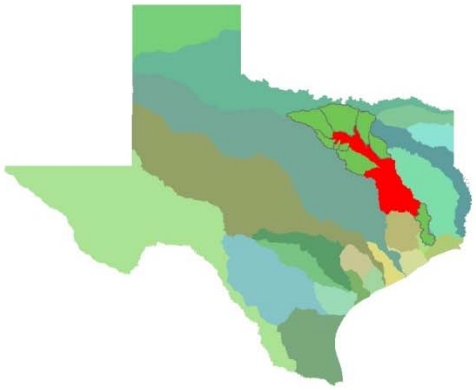


Table EAST-12: 0819 Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0819_01	10991	DO	Summer	0.44	0.39	0.00	0.11	3.64	-0.20	2.70	19	6.22	10.20	7.00	6.50	5.50	2.30	1.50	7/13/04	6/26/13
0819_01	10991	NH3	Summer	0.31	-0.44	0.01	0.15	-2.86	-1.20	-0.87	20	0.31	1.65	0.39	0.17	0.02	0.00	0.37	7/13/04	6/26/13
0819_01	10991	Chloride	POR	0.12	-0.07	0.03	0.03	-2.24	0.61	0.04	38	90.16	265.00	111.00	76.00	50.00	24.00	61.00	1/21/04	6/26/13
0819_01	10991	Chloride	Summer	0.17	-0.08	0.08	0.04	-1.84	1.58	0.25	19	99.89	265.00	111.00	78.00	56.00	43.00	55.00	7/13/04	6/26/13
0819_01	10991	Chloride	Winter	0.17	-6.30	0.08	3.36	-1.88	1.62	0.39	19	80.42	191.00	117.00	69.00	48.00	24.00	69.00	1/21/04	4/1/13
0819_01	10991	Fluoride	POR	0.12	-0.02	0.04	0.01	-2.18	1.03	-0.26	38	0.57	0.94	0.65	0.57	0.43	0.29	0.22	1/21/04	6/26/13
0819_01	10991	Fluoride	Summer	0.16	-0.02	0.09	0.01	-1.80	0.70	-0.07	19	0.61	0.94	0.66	0.60	0.45	0.34	0.21	7/13/04	6/26/13
0819_01	10991	*E. coli*	Summer	0.16	-0.19	0.10	0.11	-1.76	0.99	1.11	18	237.50	2400.00	160.00	79.50	35.00	7.00	125.00	5/5/04	6/26/13
0819_01	10991	Chlorophyll-a	Summer	0.46	2.93	0.00	0.75	3.90	1.42	0.41	20	15.98	44.10	23.15	13.05	8.45	0.00	14.70	7/13/04	6/26/13
0819_01	10991	Days Since Precip	Summer	0.27	0.41	0.02	0.16	2.56	-0.86	-0.14	20	5.03	9.00	7.00	5.00	4.00	0.50	3.00	5/5/04	6/26/13
0819_01	10996	Secchi Depth	POR	0.18	-0.08	0.01	0.03	-2.70	-0.23	-0.25	36	0.43	1.00	0.55	0.36	0.30	0.10	0.25	1/21/04	6/26/13
0819_01	10996	Secchi Depth	Summer	0.25	-0.02	0.04	0.01	-2.25	1.69	2.02	17	0.31	0.60	0.35	0.30	0.20	0.15	0.15	7/13/04	6/26/13
0819_01	10996	Sp Cond	POR	0.12	-0.05	0.03	0.02	-2.21	0.03	0.47	37	906.14	2030.00	1090.00	790.00	680.00	330.00	410.00	1/21/04	6/26/13
0819_01	10996	Sp Cond	Summer	0.29	-0.07	0.02	0.03	-2.61	1.91	0.65	19	936.89	2030.00	1070.00	751.00	680.00	532.00	390.00	7/13/04	6/26/13
0819_01	10996	DO	POR	0.10	0.21	0.05	0.10	2.02	1.25	-0.14	37	7.83	11.60	8.80	7.60	6.70	4.90	2.10	1/21/04	6/26/13
0819_01	10996	DO	Summer	0.62	0.35	0.00	0.07	5.25	-0.48	-0.87	19	6.95	8.80	7.80	7.20	6.10	4.90	1.70	7/13/04	6/26/13
0819_01	10996	pH	Summer	0.29	0.05	0.02	0.02	2.60	0.10	-1.11	19	7.51	7.90	7.80	7.50	7.30	7.10	0.50	7/13/04	6/26/13
0819_01	10996	TSS	Summer	0.18	3.16	0.07	1.65	1.92	1.62	0.60	19	45.26	97.00	60.00	41.00	29.00	14.00	31.00	7/13/04	6/26/13
0819_01	10996	VSS	Summer	0.30	0.66	0.02	0.25	2.60	0.68	0.11	18	7.31	14.00	9.00	7.00	5.00	0.50	4.00	7/13/04	6/26/13
0819_01	10996	NH3	Summer	0.41	-0.49	0.00	0.14	-3.42	-1.15	-0.91	19	0.28	1.58	0.36	0.18	0.00	0.00	0.36	7/13/04	6/26/13
0819_01	10996	NO3	POR	0.14	-0.68	0.02	0.29	-2.34	0.04	-0.73	37	9.49	20.54	12.70	9.92	5.62	0.14	7.08	1/21/04	6/26/13
0819_01	10996	NO3	Summer	0.26	-0.96	0.03	0.41	-2.36	0.84	-0.91	18	10.57	20.54	16.60	8.85	6.45	2.49	10.15	7/13/04	6/26/13
0819_01	10996	TKN	Summer	0.22	-0.05	0.04	0.02	-2.19	1.03	-0.01	19	1.60	2.92	1.93	1.51	1.24	1.02	0.69	7/13/04	6/26/13
0819_01	10996	OP	Summer	0.43	-0.40	0.02	0.15	-2.74	-0.09	-1.19	12	2.41	4.43	3.49	2.67	1.12	0.52	2.37	7/13/04	9/28/10
0819_01	10996	Chloride	POR	0.22	-0.10	0.00	0.03	-3.13	0.27	0.17	37	103.16	340.00	126.00	83.00	58.00	22.00	68.00	1/21/04	6/26/13
0819_01	10996	Chloride	Summer	0.41	-0.13	0.00	0.04	-3.30	1.70	0.18	18	112.00	340.00	127.00	77.00	62.00	48.00	65.00	7/13/04	6/26/13
0819_01	10996	Chloride	Winter	0.21	-7.97	0.05	3.77	-2.12	0.96	-0.62	19	94.79	200.00	126.00	84.00	50.00	22.00	76.00	1/21/04	4/1/13
0819_01	10996	SO4	Summer	0.19	-0.07	0.06	0.04	-2.02	1.50	0.34	19	133.89	365.00	178.00	111.00	87.00	63.00	91.00	7/13/04	6/26/13
0819_01	10996	TDS	POR	0.12	-0.04	0.04	0.02	-2.19	-0.37	0.71	38	563.48	1300.00	689.00	529.23	428.00	214.00	261.00	1/21/04	6/26/13
0819_01	10996	TDS	Summer	0.28	-0.07	0.02	0.03	-2.55	1.67	0.61	19	585.73	1300.00	689.00	481.65	442.00	340.00	247.00	7/13/04	6/26/13
0819_01	10996	Chlorophyll-a	POR	0.28	1.70	0.00	0.46	3.69	1.00	-1.46	37	10.21	28.20	18.10	9.19	0.50	0.00	17.60	1/21/04	6/26/13
0819_01	10996	Chlorophyll-a	Summer	0.56	2.60	0.00	0.56	4.65	0.26	-1.13	19	12.21	28.20	21.80	13.40	0.50	0.00	21.30	7/13/04	6/26/13
0819_01	10996	Days Since Precip	POR	0.13	0.29	0.02	0.12	2.39	-1.54	-1.07	39	5.12	9.00	7.00	6.00	3.00	0.50	4.00	1/21/04	6/26/13
0819_01	10996	Days Since Precip	Summer	0.29	0.46	0.01	0.17	2.73	-1.27	-0.34	20	5.23	9.00	7.00	5.50	4.00	0.50	3.00	7/13/04	6/26/13

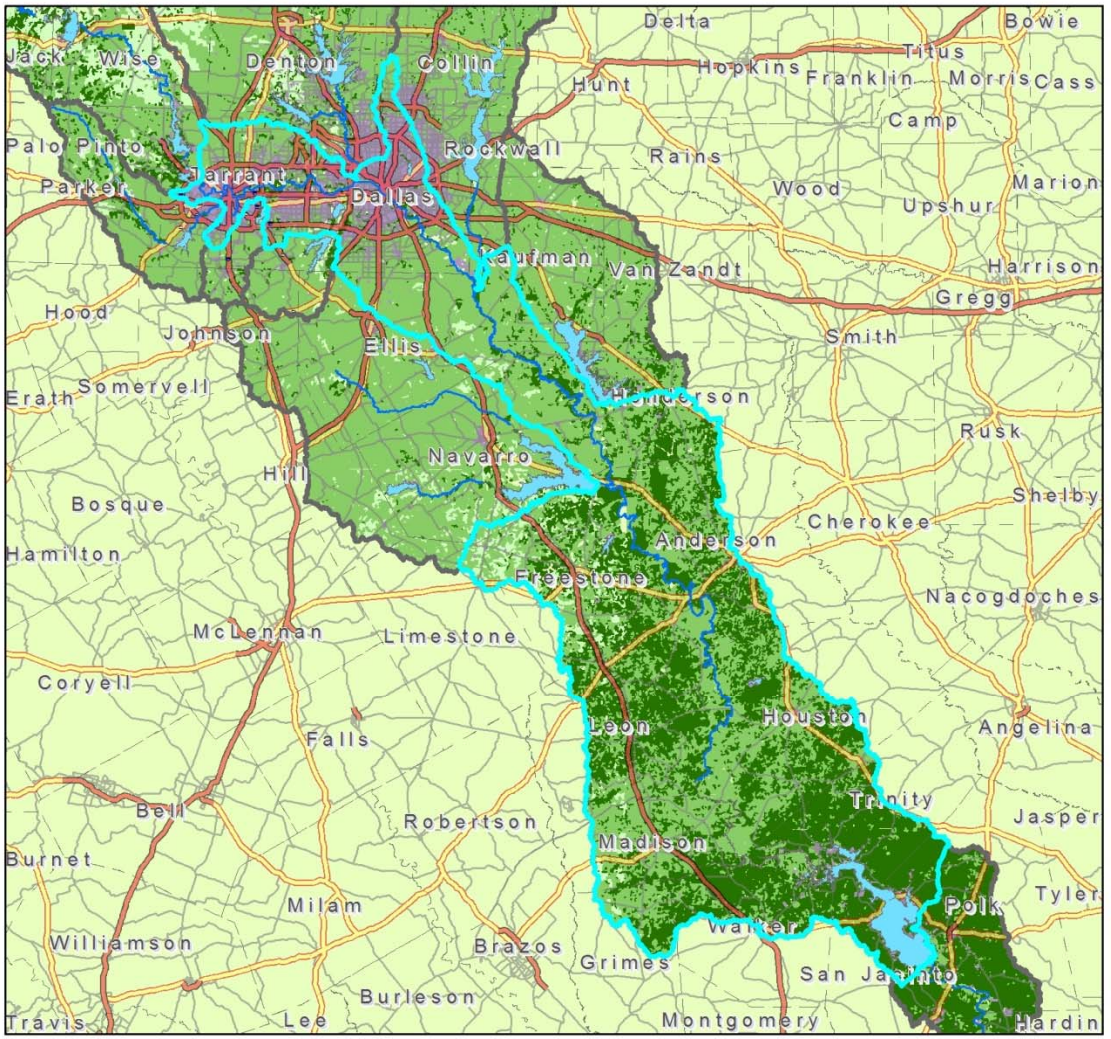
Trends (Unclassified Segments):
None

Main Stem Trinity River



Land Use Type

- Rangeland
- Urban, Industrial and Residential
- Crop, Pasture and other Agriculture
- Forest



MAIN STEM TRINITY RIVER

Classified Segments Used in this Report – 8
Unclassified Segments & Tributaries Used in this Report– 52

0806 – West Fork Trinity River Below Lake Worth
0806A – Fosdic Lake
0806B – Echo Lake
0806C – Big Fossil Creek
0806D – Marine Creek
0806E – Sycamore Creek
0806F – Little Fossil Creek
0841 – Lower West Fork Trinity River
0841A – Mountain Creek Lake
0841B – Bear Creek
0841C – Arbor Creek
0841D – Big Bear Creek
0841E – Copart Branch Mountain Creek
0841F – Cottonwood Creek
0841G – Dalworth Creek
0841H – Delaware Creek
0841I – Dry Branch Creek
0841J – Estelle Creek
0841K – Fish Creek
0841L – Johnson Creek
0841M – Kee Branch
0841N – Kirby Creek
0841O – Mountain Creek
0841P – North Fork Cottonwood Creek
0841Q – North Fork Fish Creek
0841R – Rush Creek
0841S – Vilbig Lakes
0841T – Village Creek
0841U – West Irving Creek
0841V – Crockett Branch
0805 – Upper Trinity River
0805A – Red Oak Creek
0805B – Parsons Slough
0805C – White Rock Creek below White Rock Lake
0805D – Five Mile Creek
0835 – Richland Creek below Richland-Chambers Reservoir
0804 – Trinity River Above Lake Livingston
0804A – Box Creek
0804B – Keechi Creek
0804C – Mims Creek
0804D – Toms Creek
0804E – Northwest Branch
0804F – Tehuacana Creek
0804G – Catfish Creek
0804H – Upper Keechi Creek
0804I – Big Brown Creek
0804J – Fairfield Lake
Lower Keechi Creek – An unclassified tributary
0803 – Lake Livingston
0803A – Harmon Creek
0803B – White Rock Creek
0803C – Turkey Creek
0803D – Parker Creek
0803E – Nelson Creek
0803F – Bedias Creek

0803G – Lake Madisonville
0827 – White Rock Lake
0827A – White Rock Creek above White Rock Lake
0827B – White Rock Creek below White Rock Lake
0813 – Houston County Lake

Sites Used for Analysis:

2008 Integrated Report	45
2010 Integrated Report	159
2012 Integrated Report	166
Draft 2014 Integrated Report	167
5-Year Analysis	89
Valid Trends	63

Table MS-1: Main Stem Trinity River Count of Dischargers by Type and County

County	Cooling Water	Domestic Sewage <1mgd	Mining	Stormwater	Wastewater >1mgd	CAFO	Total Dischargers
ANDERSON		6			5	2	13
DALLAS		4		2	17	1	25
ELLIS		1			1		2
FREESTONE	1	6	1		4		12
GRIMES		2					2
HENDERSON		6			2		8
HOUSTON		6		1	2	1	10
KAUFMAN		1					1
LEON		5					5
MADISON		3		3	1	1	8
NAVARRO		2				1	3
POLK		7					7
SAN JACINTO		8					8
TARRANT		1		6	2		9
TRINITY		13					13
WALKER		3			2	1	6
Total	1	74	1	12	36	7	132

The Main Stem Trinity River runs 421 miles from the Lake Worth Dam past the confluence with the Clear Fork just north of downtown Fort Worth. It flows east through the mid-cities of the Dallas-Fort Worth Metroplex before being joined by the Elm Fork. South of Dallas, the East Fork connects to the Main Stem and it continues 200 miles south to headwaters of Lake Livingston near the city of Crockett. The Main Stem terminates at the Lake Livingston Dam which crosses Polk and San Jacinto counties. In general, the Main Stem is highly urbanized and developed in the upper reaches around the DFW Metroplex. It becomes more rural with row crop agriculture as the river travels south to Trinidad, Palestine, and Crockett.

Through much of the DFW Metroplex, the Main Stem Trinity River has been channelized and leveed. Development along the urbanized portions of the river is taking place. The City of Fort Worth has created the Trinity River Vision which plans for an urban lake and development along the shoreline near downtown Fort Worth. The City of Dallas has begun construction on the Trinity River Corridor Project which will recreate natural meanders between the levees in the downtown area. Additionally, plans call for the creation of a series of urban and natural lakes to promote economic development and increase recreational opportunities along the river.

The Main Stem subwatershed averages 32 inches of rain per year in the upper portion of the watershed and 50 inches in the south. The subwatershed begins in the Grand Prairies before flowing through the Eastern Cross Timbers, Blackland Prairies, Post Oak Savannah, and finally into the Piney Woods ecoregion surrounding Lake Livingston.

There are 170 Brownfield and 4 Superfund sites in this subwatershed. The Superfund designations are due to heavy metals in soil and Trichloroethene and volatile organic chemicals in ground water. Twenty-nine hazmat events required action by the EPA OSC office. However, two of these are outside of the period of record for this report. There are 21 sites being monitored for compliance with the EPA Resource Conservation and Recovery Act. Noncompliance events are reported on the Enforcement and Compliance History Online website. See Tables MS-2 to MS-5, for details and links to additional information.

Table MS-2: EPA Brownfields

Segment	Site	Link to Additional EPA Information	Map Site	Assessment Complete Date	Cleanup Required	Cleanup Status	Redevelopment Status	Media Affected	Classes of Contaminants Found	Media Addressed	Classes of Contaminants Cleaned Up
0806	SAGINAW AREA CHAMBER OF COMMERCE	EPA Link	Map It	7/3/2000	Unknown	Not Started	Not Started	None		None	
0806	SANSOM PARK FORMER GAS STATION	EPA Link	Map It	5/10/2011	Unknown	Not Started	Not Started	None		None	
0806	HERITAGE CENTER	EPA Link	Map It	12/31/2000	Yes	Not Started	In Progress (Started 9/30/2003)	None		None	
0806	ELLIS PECAN CO	EPA Link	Map It	12/31/2000	No	Not Started	Not Started	None		None	

0806	LAGRAVE FIELD/AMERICAN CYANAMID	EPA Link	Map It	6/30/2003	Yes	Not Started	In Progress (Started 6/30/2003)	None		None	
0806	FOURTH AND ELM DOWNTOWN	EPA Link	Map It	6/30/2003	No	Not Started	Not Started	None		None	
0806	COTTON DEPOT DOWNTOWN	EPA Link	Map It	6/30/2003		Complete (6/30/2003)	In Progress (Started 6/30/2003)	None		None	
0806	1058 EVANS AVENUE	EPA Link	Map It	10/31/2004	Unknown	Not Started	Not Started	None		None	
0806	SUPER LUCKY LADY 3	EPA Link	Map It	6/19/2012	No	Not Started	Not Started	Ground Water	Asbestos	None	
0806	6205 AND 6209 MCCULLAR RD.	EPA Link	Map It	6/30/2003	Unknown	Not Started	Not Started	None		None	
0806	OLD DENTON HWY.	EPA Link	Map It	6/30/2003	No	Not Started	Not Started	None		None	
0806	UP RAILROAD	EPA Link	Map It	6/30/2003	Unknown	Not Started	Not Started	None		None	
0806	MIDWAY RD. AND BIG FOSSIL CREEK	EPA Link	Map It	6/30/2003	No	Not Started	Not Started	None		None	
0806	UCC-BETHLEHEM	EPA Link	Map It	8/30/2012	No	Not Started	Not Started	Soil	Petroleum Products, Lead, VOCs, SVOCs	None	
0806	FORMER TEXAS TANNING	EPA Link	Map It	8/31/2006	Yes	Not Started	Not Started	Soil, Ground Water	Asbestos, Lead, PAHs, VOCs, SVOCs, Other Metals, Other Contaminants	None	
0806	800 MISSOURI AVENUE	EPA Link	Map It	12/31/2000	Yes	Complete (12/31/2004)	Not Started	None		None	
0806	2451 E. VICKERY	EPA Link	Map It	4/17/2007	Unknown	Not Started	Not Started	None		None	
0806	3010 DECATUR, LOT 11	EPA Link	Map It	7/17/2007	Unknown	Not Started	In Progress (Started 8/13/2007)	None	Unknown	None	
0806	3010 DECATUR, LOT 12	EPA Link	Map It	7/17/2007	Unknown	Not Started	In Progress (Started 8/13/2007)	None	Unknown	None	
0806	3206 OSCAR AVE, BLK 33, LOT 9	EPA Link	Map It	7/17/2007	Yes	Not Started	In Progress (Started 8/13/2007)	None	Unknown	None	
0806	3208 OSCAR, BLK 33, LOT 8	EPA Link	Map It	6/30/2007	Unknown	Not Started	In Progress (Started 8/13/2007)	None	Unknown	None	
0806	3210 OSCAR AVE., BLK 33, LOT 7	EPA Link	Map It	7/17/2007	Unknown	Not Started	In Progress (Started 8/13/2007)	None	Unknown	None	
0806	3160 HARDY STREET, BLK 4, LOT 2A	EPA Link	Map It	10/16/2007	No	Not Started	In Progress (Started 10/16/2007)	None	Unknown	None	
0806	3207 OSCAR AVE, BLK 34, LOT 4	EPA Link	Map It	10/16/2007	Unknown	Not Started	In Progress (Started 10/16/2007)	None	Unknown	None	
0806	800 N. MAIN	EPA Link	Map It	8/29/2007	Unknown	Not Started	Not Started	None	Unknown	None	
0806	808 N. MAIN STREET	EPA Link	Map It	8/29/2007	Unknown	Not Started	Not Started	None	Unknown	None	

0806	7324 TRIMBLE	EPA Link	Map It	9/14/2007	Unknown	Not Started	In Progress (Started 9/14/2007)	None		None	
0806	3616 E. LANCASTER	EPA Link	Map It	8/15/2007	Unknown	Not Started	In Progress (Started 8/15/2007)	None	Unknown	None	
0806	3000 MISSISSIPPI AVE.	EPA Link	Map It	9/14/2007	No	Not Started	In Progress (Started 9/14/2007)	None	Unknown	None	
0806	801 BEACH	EPA Link	Map It	10/16/2007	Unknown	Not Started	In Progress (Started 10/16/2007)	None	Unknown	None	
0806	1000 EVANS	EPA Link	Map It	10/16/2007	Unknown	Not Started	In Progress (Started 10/16/2007)	None	Unknown	None	
0806	1402 E. LANCASTER	EPA Link	Map It	2/14/2008	Unknown	Not Started	In Progress (Started 2/14/2008)	None	Unknown	None	
0841	HERITAGE SITE # 3	EPA Link	Map It	2/27/2010	Unknown	Not Started	Not Started	None		None	
0841	HERITAGE SITE # 1	EPA Link	Map It	2/27/2010	No	Not Started	Not Started	None		None	
0841	HERITAGE SITE # 2	EPA Link	Map It	2/27/2010	Unknown	Not Started	Not Started	None		None	
0841	HERITAGE SITE # 4	EPA Link	Map It	6/30/2010	Yes	Not Started	Not Started	None		None	
0841	CONOVER, BF #101	EPA Link	Map It	12/31/2003	Unknown	Not Started	Not Started	None		None	
0841	100 W ROCK ISLAND	EPA Link	Map It	10/14/2010	No	Not Started	Not Started	None		None	
0841	123 W IRVING BOULEVARD	EPA Link	Map It	10/14/2010	No	Not Started	Not Started	None		None	
0841	124 S O'CONNOR ROAD	EPA Link	Map It	10/14/2010	No	Not Started	Not Started	None		None	
0841	801 LEE STREET	EPA Link	Map It	6/20/2013	Yes	Not Started	In Progress (Started 5/2/2009)	Soil, Ground Water	Lead, VOCs, Selenium, Arsenic, Mercury, SVOCs, Other Metals	None	
0841	SECOND STREET PARCEL, 303 E. SECOND ST.	EPA Link	Map It	1/11/2011	No	Not Started	In Progress (Started 6/30/2011)	None		None	
0841	SECOND STREET PARCEL, 309 E. SECOND ST.	EPA Link	Map It	1/11/2011	No	Not Started	In Progress (Started 6/30/2011)	None		None	
0841	SECOND STREET PARCEL, 317 SECOND STREET	EPA Link	Map It	1/11/2011	No	Not Started	In Progress (Started 6/30/2011)	None		None	
0841	SECOND STREET PARCEL, 321 E. SECOND STREET	EPA Link	Map It	1/11/2011	No	Not Started	In Progress (Started 6/30/2011)	None		None	
0841	403 W. IRVING BOULEVARD	EPA Link	Map It	1/11/2011	Unknown	Not Started	In Progress (Started 9/30/2011)	Soil, Ground Water		None	
0841	105 E. SHADY GROVE	EPA Link	Map It	8/31/2011	Unknown	Not Started	Not Started	Soil, Ground Water		None	
0841	222 EAST IRVING BLVD	EPA Link	Map It	10/9/2012	Unknown	Not Started	Not Started	None		None	
0841	HERITAGE CROSSING TRACT 9	EPA Link	Map It	6/23/2014	Unknown	Not Started	Not Started	None		None	

0841	CROCKETT CONCRETE CO INC	EPA Link	Map It	8/17/2004	Unknown	Not Started	Not Started	None	Other Contaminants	None	Other Contaminants
0841	XTO ENERGY PROPERTY	EPA Link	Map It	9/2/2009	Unknown	Not Started	Not Started	None		None	
0841	RAINES TRACT	EPA Link	Map It	12/8/2009	Yes	Not Started	Complete (5/25/2012)	None	Asbestos	None	
0841	500 E ABRAM	EPA Link	Map It	11/2/2009	Unknown	Not Started	Not Started	None		None	
0841	TAQUERIA	EPA Link	Map It	10/14/2009	No	Not Started	Not Started	Soil, Ground Water	Petroleum Products, Asbestos, Lead	Soil, Ground Water	Petroleum Products, Asbestos, Lead
0841	BROWNE PROPERTY 1	EPA Link	Map It	10/20/2009	No	Not Started	Complete (10/14/2011)	None		None	
0841	BROWNE PROPERTY 2	EPA Link	Map It	10/20/2009	No	Not Started	Complete (10/14/2011)	None		None	Asbestos
0841	KERBY HOUSE & DUPLEX	EPA Link	Map It	5/3/2011	No	Not Started	Complete (8/2/2012)	None	Asbestos	None	Asbestos
0841	KERBY DUPLEX	EPA Link	Map It	5/3/2011	No	Not Started	Complete (8/2/2012)	None	Asbestos	None	Asbestos
0841	UTA HOUSE 1	EPA Link	Map It	5/3/2011	No	Not Started	Complete (8/2/2012)	None	Asbestos	None	Asbestos
0841	UTA HOUSE 2	EPA Link	Map It	5/3/2011	No	Not Started	Complete (8/2/2012)	None	Asbestos	None	Asbestos
0841	OLD MONTGOMERY WARD	EPA Link	Map It	11/20/2009	No	Not Started	Not Started	Soil, Ground Water	Petroleum Products, VOCs, SVOCs	Soil, Ground Water	Petroleum Products, VOCs, SVOCs
0841	UTA OFFICE BUILDING	EPA Link	Map It	9/30/2010	No	Not Started	Complete (8/2/2012)	Ground Water	Petroleum Products	Ground Water	Petroleum Products
0841	UTA VACANT LAND	EPA Link	Map It	9/30/2010	Yes	Not Started	Complete (10/14/2011)	Ground Water	Petroleum Products	None	Petroleum Products
0841	M&K INVESTMENTS	EPA Link	Map It	In Progress (Started 2/4/2010)	Unknown	Not Started	Not Started	None		None	
0841	GALLETTA SITE	EPA Link	Map It	4/12/2010	No	Not Started	Not Started	None		None	
0841	STUDENT HOUSING 1	EPA Link	Map It	3/30/2010	Yes	Not Started	Complete (10/14/2011)	None	Asbestos	None	Asbestos
0841	STUDENT HOUSING 2	EPA Link	Map It	3/30/2010	Yes	Not Started	Complete (10/14/2011)	None	Asbestos	None	Asbestos
0841	STUDENT HOUSING 3	EPA Link	Map It	3/30/2010	Yes	Not Started	Complete (10/14/2011)	None	Asbestos	None	Asbestos
0841	STUDENT HOUSING 4	EPA Link	Map It	3/30/2010	Yes	Not Started	Complete (10/14/2011)	None	Asbestos	None	Asbestos
0841	SUNSTAR	EPA Link	Map It	4/30/2010	Unknown	Not Started	Not Started	None		None	
0841	UTA OFFICE BUILDING	EPA Link	Map It	5/28/2010	Yes	Not Started	Not Started	None	Asbestos	None	
0841	UTA HOUSE 3	EPA Link	Map It	5/25/2010	No	Not Started	Complete (8/2/2012)	None		None	
0841	KAY LYNN 1	EPA Link	Map It	5/25/2010	No	Not Started	Not Started	None		None	
0841	KAY LYNN 2	EPA Link	Map It	5/25/2010	No	Not Started	Not Started	None		None	
0841	KAY LYNN 3	EPA Link	Map It	5/25/2010	No	Not Started	Not Started	None		None	

0841	FORMER STADIUM MART	EPA Link	Map It	8/25/2010	Yes	Not Started	Not Started	Soil, Ground Water	Petroleum Products	None	
0841	FEDERAL SIGNAL ARLINGTON	EPA Link	Map It	11/12/2010	No	Not Started	Not Started	None		None	
0841	SPSD1	EPA Link	Map It	4/26/2011	Yes	Not Started	Not Started	Soil, Ground Water	Asbestos, VOCs, SVOCs, Other Contaminants	None	
0841	SPSD2	EPA Link	Map It	2/10/2011	Yes	Not Started	Not Started	Soil, Ground Water	VOCs, SVOCs, Other Contaminants	None	
0841	REMINGTON MEADOWS	EPA Link	Map It	In Progress (Started 12/15/2010)	No	Not Started	Not Started	None		None	
0841	LEV INVESTMENTS 1	EPA Link	Map It	11/9/2010	No	Not Started	Not Started	None		None	
0841	LEV INVESTMENTS 2	EPA Link	Map It	11/9/2010	No	Not Started	Not Started	None		None	
0841	LEV INVESTMENTS 3	EPA Link	Map It	11/9/2010	No	Not Started	Not Started	None		None	
0841	LEV INVESTMENTS 4	EPA Link	Map It	11/9/2010	No	Not Started	Not Started	None		None	
0841	LEV INVESTMENTS 5	EPA Link	Map It	11/9/2010	No	Not Started	Not Started	None		None	
0841	METRO ENG OFFICE	EPA Link	Map It	3/2/2011	Unknown	Not Started	Not Started	None		None	
0841	DIVISION WAREHOUSE	EPA Link	Map It	3/7/2011	Unknown	Not Started	Not Started	None		None	
0841	LYNN MICHAEL	EPA Link	Map It	4/20/2011	No	Not Started	Not Started	None		None	
0841	4621 W SUBLETT	EPA Link	Map It	5/24/2011	No	Not Started	Not Started	None		None	
0841	WILKERSON'S 1	EPA Link	Map It	5/5/2011 Phase 1	Yes	Not Started	Not Started	Soil, Ground Water		None	
0841	WILKERSON'S 2	EPA Link	Map It	5/5/2011 Phase 1	Yes	Not Started	Not Started	Soil, Ground Water		None	
0841	SSYO ENT & YAS AUTO TRADING	EPA Link	Map It	11/28/2012	Yes	Not Started	Not Started	None	Asbestos	None	
0841	ABRAM TRADING CORP	EPA Link	Map It	12/5/2012	Unknown	Not Started	Not Started	None		None	
0841	SALVAGE PROPERTY	EPA Link	Map It	12/5/2012	Unknown	Not Started	Not Started	None		None	
0841	FORMER ARLINGTON CREATIVE ARTS THEATRE AND SCHOOL	EPA Link	Map It	12/20/2012	Unknown	Not Started	Not Started	None		None	
0841	EASTERN STAR	EPA Link	Map It	4/18/2014	No	Not Started	Not Started	Ground Water	Petroleum Products	None	
0841	AUTOMOTIVE COMPLEX	EPA Link		12/13/2013	Unknown	Not Started	Not Started	None		None	
0841	VACANT LOT	EPA Link	Map It	12/20/2013	Unknown	Not Started	Not Started	None		None	
0841	CARPLEX AUTO GROUP	EPA Link	Map It	12/30/2013	Unknown	Not Started	Not Started	None		None	
0841	FORMER INTERNATIONAL AUTO SALES	EPA Link	Map It	12/18/2013	Unknown	Not Started	Not Started	None		None	
0841	COOPER MINI MART	EPA Link	Map It	3/27/2009	No	Not Started	Complete (10/29/2012)	None		None	
0841	COMET CLEANERS	EPA Link	Map It	3/27/2009	Yes	Not Started	Not Started	Ground Water	Petroleum Products, VOCs, SVOCs	None	
0841	FORMER WAFFLE HOUSE	EPA Link	Map It	2/17/2009	Yes	Not Started	Not Started	None	Asbestos	None	
0841	CAMBRIDGE TERRACE APTS	EPA Link	Map It	2/16/2009	Yes	Not Started	Not Started	None	Asbestos	None	Asbestos
0841	DIPERT TRAVEL AGENCY	EPA Link	Map It	2/27/2009	No	Not Started	Not Started	None		None	

0841	110 & 112 E THIRD	EPA Link	Map It	3/31/2009	No	Not Started	Not Started	None	Asbestos	None	Asbestos
0841	201 E FOURTH	EPA Link	Map It	3/31/2009	No	Not Started	Not Started	None	Asbestos	None	Asbestos
0841	202 E THIRD	EPA Link	Map It	3/31/2009	No	Not Started	Not Started	None	Asbestos	None	Asbestos
0841	704 GLENN CROSSETT	EPA Link	Map It	3/31/2009	No	Not Started	Not Started	None	Asbestos	None	Asbestos
0841	706 GLENN CROSSETT	EPA Link	Map It	3/31/2009	No	Not Started	Not Started	None	Asbestos	None	Asbestos
0805	UNDEVELOPED PROPERTY AT 1320 BICKERS STREET	EPA Link	Map It	5/20/2009	No	Not Started	Not Started	Soil	Lead	None	
0805	CATELLUS	EPA Link	Map It	1/1/1997	Unknown	Not Started	Not Started	None		None	
0805	MAGDELINE STREET	EPA Link	Map It	1/13/1997	Unknown	Not Started	Not Started	None		None	
0805	LARRY JOHNSON RECREATION CENTER	EPA Link	Map It	7/16/1996	Unknown	Not Started	Not Started	None		None	
0805	UNION GOSPEL MISSION	EPA Link	Map It	10/20/1999	Unknown	Not Started	Not Started	None		None	
0805	DALLAS POLICE HEADQUARTERS OLD SEARS AUTOMOTIVE	EPA Link	Map It	1/10/2007	Unknown	Not Started	Not Started	None		None	
0805	ST. MARY'S MIXED USE DEVELOPMENT	EPA Link	Map It	6/6/2001	Unknown	Not Started	Not Started	None		None	
0805	DALLAS AREA HABITAT FOR HUMANITY	EPA Link	Map It	5/13/2002	Unknown	Not Started	Not Started	None		None	
0805	DALLAS STAR PARKING	EPA Link	Map It	3/10/2010	Unknown	Not Started	Not Started	Soil, Ground Water		None	
0805	2306 MOTOR STREET	EPA Link	Map It	5/12/2004	Yes	Not Started	Not Started	Soil, Ground Water	Lead, VOCs, SVOCs	Soil, Ground Water	Lead
0805	PROPOSED BELO GARDEN	EPA Link	Map It	Not Started		Complete (1/1/2011)	In Progress (Started 3/1/2011)	None	Lead, PAHs, Other Metals	None	Lead, PAHs, Other Metals
0805	AMERICAN PALLET RECYCLERS	EPA Link	Map It	Not Started		Complete (9/30/1997)	In Progress (Started 9/30/1997)	Soil		None	
0805	SUNDOWN SITE	EPA Link	Map It	12/31/1997	No	Not Started	Not Started	None		None	
0805	DALLAS ECO PARK	EPA Link	Map It	Not Started		Complete (6/30/2000)	In Progress (Started 6/30/2000)	None		None	
0805	WOOTEN METAL WORKS	EPA Link	Map It	9/30/1997	No	Not Started	Not Started	None		None	
0805	LARRY JOHNSON REC CENTER	EPA Link	Map It	9/30/1997	No	Not Started	In Progress (Started 9/30/1997)	None		None	
0805	JEFFERSON NORTH END	EPA Link	Map It	12/31/2002	Yes	Complete (9/30/1997)	In Progress (Started 9/30/1997)	None		None	
0805	EMPIRE STEMMONS	EPA Link	Map It	12/31/2002	Yes	Not Started	In Progress (Started 9/30/1997)	Ground Water		None	
0805	CITY OF DALLAS FIRE STATION 34	EPA Link	Map It	12/31/1997	Yes	Complete (6/30/2000)	In Progress (Started 6/30/2000)	Soil, Ground Water		None	

0805	SOUTH SIDE ON LAMAR	EPA Link	Map It	Not Started		Complete (6/30/2000)	In Progress (Started 6/30/2000)	None		None	
0805	27 LOTS IN ST. MARY'S PROJECT	EPA Link	Map It	12/31/2000	Unknown	Not Started	Not Started	None		None	
0805	DALLAS SPORTS ARENA	EPA Link	Map It	12/31/2002	Yes	Complete (3/31/2000)	In Progress (Started 9/30/1999)	None		None	
0805	RIVER LEVEE	EPA Link	Map It	9/30/1999	No	Not Started	In Progress (Started 12/31/2002)	None		None	
0805	AUSTIN STREET BIKE TRAIL	EPA Link	Map It	6/30/2000	Yes	Not Started	In Progress (Started 6/30/2000)	None		None	
0805	FISHBURN CLEANERS	EPA Link	Map It	9/30/2000	Yes	Not Started	In Progress (Started 12/31/2002)	None		None	
0805	JEFFERSON AT KESSLER HEIGHTS	EPA Link	Map It	12/31/2002	Yes	Complete (6/30/2000)	In Progress (Started 6/30/2000)	None		None	
0805	1919 SOUTH AKARD STREET	EPA Link	Map It	9/30/2004	Unknown	Not Started	Not Started	None		None	
0805	1500 SOUTH INDUSTRIAL BOULEVARD	EPA Link	Map It	9/30/2004	No	Not Started	Not Started	None		None	
0805	GRAND PLAZA SHOPPING CENTER	EPA Link	Map It	6/7/2005	Unknown	Not Started	Not Started	None		None	
0805	BAC5 BUSINESS AND JOB TRAINING COMPLEX	EPA Link	Map It	5/19/2005	Unknown	Not Started	Not Started	None		None	
0805	ALFORD REFRIGERATED WAREHOUSE PROPERTY	EPA Link	Map It	1/16/2006	Unknown	Not Started	Not Started	Soil, Ground Water	Petroleum Products, Asbestos, Lead, PAHs, VOCs, SVOCs, Other Metals	None	
0805	PROPOSED ST. PHILIP'S FOOD PANTRY	EPA Link	Map It	6/19/2013	Unknown	Not Started	Not Started	None		None	
0805	3434 NAVARO STREET	EPA Link	Map It	8/31/2005	Unknown	Not Started	Not Started	None		None	
0805	SAINT MARY MIXED DEVELOPMENT - LOT 3 BAYONNE ST	EPA Link	Map It	5/30/2005	Yes	Complete (10/13/2005)	In Progress (Started 3/18/2008)	Soil	Lead	Soil	Lead
0805	UNDEVELOPED PROPERTY AT 1320 BICKERS STREET	EPA Link	Map It	1/5/2005	No	Not Started	Not Started	None		None	
0805	UNDEVELOPED PROPERTY AT 1320 BICKERS STREET	EPA Link	Map It	10/27/2004	No	Not Started	Not Started	None		None	
0805	ST. MARY MIXED USE DEVELOPMENT	EPA Link	Map It	6/17/2004	Unknown	Not Started	Not Started	None		None	
0805	ST. MARY MIXED USE DEVELOPMENT	EPA Link	Map It	6/17/2004	Unknown	Not Started	Not Started	None		None	
0805	ST. MARY MIXED USE DEVELOPMENT	EPA Link	Map It	6/17/2004	Unknown	Not Started	Not Started	None		None	
0805	ST. MARY MIXED USE DEVELOPMENT	EPA Link	Map It	6/17/2004	Unknown	Not Started	Not Started	None		None	

0805	ST. MARY MIXED USE DEVELOPMENT	EPA Link	Map It	6/17/2004	Unknown	Not Started	Not Started	None		None	
0805	2920 N. BECKLEY AVENUE	EPA Link	Map It	5/19/2006	Yes	Not Started	Not Started	Soil, Ground Water	Petroleum Products, Lead, PAHs, VOCs, SVOCs, Other Metals	None	
0805	BELLEVIEW-LAMAR CONDOS	EPA Link	Map It	4/14/2006	Unknown	Not Started	Not Started	None	Unknown	None	
0805	700 & 701 BELLEVIEW STREET	EPA Link	Map It	8/31/2007	Unknown	Not Started	Not Started	None	Unknown	None	
0805	1008-1022 SOUTH LAMAR STREET	EPA Link	Map It	12/12/2007	No	Not Started	Not Started	None		None	
0805	ST. MARY MIXED USE DEVELOPMENT - LOT 17 MUNCIE AVE	EPA Link	Map It	Not Started		Complete (10/13/2005)	Not Started	Soil	Lead	Soil	Lead
0805	4585 & 5323 LAWNVIEW AVENUE	EPA Link	Map It	3/6/2008	Unknown	Not Started	Not Started	None	Unknown	None	
0805	2214 SOUTH INDUSTRIAL BOULEVARD	EPA Link	Map It	5/30/2008	No	Not Started	Not Started	None	Unknown	None	
0805	969 & 971 S. LAMAR STREET	EPA Link	Map It	3/28/2008	No	Not Started	Not Started	None	Unknown	None	
0805	1300 CORINTH STREET	EPA Link	Map It	6/11/2007	Unknown	Not Started	Not Started	None	Unknown	None	
0805	1203 & 1205 SOUTH INDUSTRIAL BOULEVARD	EPA Link	Map It	6/11/2007	No	Not Started	Not Started	None		None	
0805	800 CADIZ STREET & 1005 S. LAMAR STREET	EPA Link	Map It	3/28/2008	No	Not Started	Not Started	None	Unknown	None	
0805	BELLE-LAMAR CONDOS - 1300	EPA Link	Map It	3/21/2006	Yes	Not Started	Not Started	Soil, Surface Water	Lead, Other Metals	None	
0805	1601 AND 1700 S. LAMAR	EPA Link	Map It	11/17/2006	Unknown	Not Started	Not Started	Soil, Ground Water	Petroleum Products, Lead, Other Metals	None	
0805	2400 & 2500 BLOCKS OF MEYERS, JEFFRIES, AND MERLIN	EPA Link	Map It	6/22/2006	Unknown	Not Started	Not Started	None		None	
0805	SOUTH SIDE BOUTIQUE HOTEL	EPA Link	Map It	5/1/2006	Unknown	Not Started	Not Started	None		None	
0805	1919 SOUTH AKARD STREET	EPA Link	Map It	9/16/2008	Unknown	Not Started	Not Started	None	Unknown	None	
0805	4106-4110-4114 SOUTH LAMAR STREET	EPA Link	Map It	11/13/2008	Unknown	Not Started	Not Started	None	Unknown	None	
0805	EUBANKS PROPERTY	EPA Link	Map It	7/28/2009	Unknown	Not Started	Not Started	None		None	
0805	GATEWAY ESTATES SUBDIVISION, GLENN HEIGHTS	EPA Link	Map It	10/28/2011	No	Not Started	Not Started	None		None	

Table MS-3: EPA Superfund Sites

Segment	Site	Link to Additional EPA Information	Map Site	1st Cleanup Action Initiated	Proposed to National Priority List (NPL)	Listed as Final on the NPL	Final Remedy Selected	Construction Complete	Deleted From NPL	Media Affected	Contaminant
0806	PESSES CHEMICAL CO.	EPA Link	Map It	4/19/1983	10/15/1984	6/10/1986	12/22/1988	9/28/1992	9/28/1995	Soil	Cadmium, Nickel
0806	U.S. AIR FORCE FORT WORTH PLANT 4	EPA Link	Map It	08/01/1999	10/15/1984	08/30/1990	08/26/1996	09/15/2006		Ground Water	Trichloroethene
0841	BIO-ECOLOGY SYSTEMS INC	EPA Link	Map It	08/05/1985	12/30/1982	09/08/1983		04/12/1993	08/05/1996	Soil, Ground Water	Heavy Metals, VOCs
0805	RSR CORPORATION	EPA Link	Map It	10/01/1991	05/10/1993	09/29/1995		09/28/2004		Soil	Lead

Table MS-4: EPA On- Scene Coordinator Investigations

Segment	Site	Link to Additional EPA Information	Map Site	Date	Contaminants Found
0806	EFFLUENT RECYCLING	EPA Link	Map It	9/11/2012	Waste Oil
0806	NORTH FORT WORTH PLATING	EPA Link	Map It	9/4/2009	Chrome Plating Waste
0806	NORTH FORT WORTH PLATING COMPANY	EPA Link	Map It	9/4/2009	Chrome Plating Equipment
0806	VALLEY SOLVENT AND CHEMICAL FIRE	EPA Link	Map It	7/28/2005	Flammable Solvents
0806	BEACH ST. TRANSPORT FIRE	EPA Link	Map It	3/28/2011	Gasoline
0806	HALTOM CITY CHEMICAL WAREHOUSE FIRE	EPA Link	Map It	6/25/2007	Lacquer, Thinner, Brake-wash, Methanol, Kerosene, Mineral spirits, Hexane, Degreasers, Dyes, Perfumes
0806	PECAN STREET RESIDENTIAL LEAD SITE	EPA Link	Map It	11/1/2006	Tanning Chemicals and Wastes
0806	TEXAS TANNING ASSESSMENT	EPA Link	Map It	9/30/2004	Unknown Substance
0806	TEXAS TANNING REMOVAL	EPA Link	Map It	9/30/2004	Tanning Chemicals and Wastes
0841	DELFASCO FORGE	EPA Link	Map It	8/19/2008	Trichloroethylene
0841	AMERICAN AIRLINES	EPA Link	Map It	2/11/2014	Ethylene Glycol
0841	COLLEYVILLE SULFURIC ACID SPILL	EPA Link	Map It		Sulfuric Acid
0841	GT PRODUCTS, INC.	EPA Link	Map It	7/8/2011	Formaldehyde, 2,4-Toluene Diisocyante
0841	SIGNATURE CONTRACTING SERVICES, LLC	EPA Link	Map It	7/8/2011	Diesel Fuel
0841	FIBER FIRE	EPA Link	Map It	12/10/2004	Fiberglass
0805	AL-KEL ALLIANCE TOTE RESPONSE	EPA Link	Map It	11/10/2010	Unknown Substance
0805	DYO CHEMICAL FIRE	EPA Link	Map It	9/30/2007	Shoe Polish, Cleaners, Dyes
0805	DUNCANVILLE 55 GALLON ABANDONED DRUM	EPA Link	Map It	2/11/2007	Unknown Substance
0805	CAND G AIRCRAFT CHEMICAL RELEASE	EPA Link	Map It		
0805	ROGERS CHROME	EPA Link	Map It	9/7/2004	Plating Wastes
0804B	TAG OPERATING SPILL	EPA Link	Map It	2/6/2010	Oil
0804B	BUFFALO HF INVESTIGATION	EPA Link	Map It	10/18/2010	Hydrofluoric Acid
0804D	MITCHAM STREET DRUMS	EPA Link	Map It	3/18/2008	Plating Wastes
0804D	OAKWOOD DERAILMENT	EPA Link	Map It	4/23/2009	Diesel Fuel
0803	ENTERPRISE CRUDE PIPELINE SPILL	EPA Link	Map It	1/27/2011	Crude Oil
0803A	QEP RESOURCES SPILL	EPA Link	Map It	3/11/2014	Crude Oil
0803B	EXPLORER PIPELINE - HUNTSVILLE RESPONSE	EPA Link	Map It	7/14/2007	Jet Fuel
0827	KCS TRAIN DERAILMENT IN RICHARDSON	EPA Link	Map It	5/22/2004	Diesel Fuel
0827	DATACENTER OIL SPILL FPN E14601	EPA Link	Map It	11/2/2013	Diesel Fuel

Table MS-5: EPA Resource Conservation and Recovery Act (RCRA) and Enforcement and Compliance History Online (ECHO) Sites

Segment	Site	Link to Additional EPA RCRA Information	Link to Additional EPA ECHO Information	Map Site	Site Assessed	Solution for Cleanup Selected	Cleanup Implemented	Cleanup Complete	Media Affected	Contaminant
0806	ADJUTANT GENERALS DEPARTMENT OF TEXAS	EPA Link	EPA Link	Map It		11/30/2010				
0806	US NAVY NAVAL AIR STATION JOINT RESERVE BASE FORT WORTH	EPA Link	EPA Link	Map It	3/31/1989	7/21/2006	7/21/2006	1/19/2007	Air	Ethylbenzene, Lead, Napthalene
0806	HUNTINGTON PACIFIC CERAMICS	EPA Link	EPA Link	Map It	9/22/1993	8/26/2014	8/26/2014			
0806	SAFETY-KLEEN SYSTEMS INC	EPA Link	EPA Link	Map It	1/15/1990	8/28/2014	8/28/2014	8/28/2014		
0806	TECHNICOATS SITE	EPA Link	EPA Link	Map It		2/28/2006	2/28/2006			
0841	TRIUMPH AEROSTRUCTURES-VOUGHT INEGRATED PROGRAMS DIV	EPA Link	EPA Link	Map It	5/1/1993				Air, Surface Water, Soil	Solvents, Flame Retardants, Nitric Acid, Nitrates, Heavy Metals
0841	DALLAS NAVAL AIR STATION	EPA Link	EPA Link	Map It	3/31/1989		7/24/2008			
0841	LOCKHEED MARTIN MISSILES & FIRE CONTROL	EPA Link	EPA Link	Map It		3/7/2011	3/7/2011		Surface Water	Lead
0841	NORTH AMERICAN GALVANIZING	EPA Link	EPA Link	Map It	4/5/1990	10/8/2009	10/8/2009		Air, Surface Water	Lead, Zinc Compounds
0841	BELL HELICOPTER PLANT 1	EPA Link	EPA Link	Map It	4/4/1990		6/21/2000	9/20/2000	Air, Surface Water	Heavy Metals, Nitrates, Nitric Acid
0841	DETREX ARLINGTON	EPA Link	EPA Link	Map It	2/18/1992					
0805	OCCIDENTAL CHEMICAL DALLAS	EPA Link	EPA Link	Map It	9/1/1987					
0805	DAL CHROME	EPA Link	EPA Link	Map It	9/20/1991	2/2/2006	2/2/2006	2/2/2006		
0805	DIXIE METALS CO DALLAS	EPA Link	EPA Link	Map It	8/26/1992	2/18/2009	2/18/2009			
0805	UNIV OF TEXAS SOUTHWESTERN MED CNTR	EPA Link	EPA Link	Map It	3/31/1986	7/11/2012	7/11/2012	4/12/1990		
0805	TERIS LLC (DBA HEAT TREATMENT SERVICES)	EPA Link	EPA Link	Map It	10/30/1992					
0805	DAL-TILE CORP DALLAS MANUFACTURING	EPA Link	EPA Link	Map It	9/11/1998				Air	Diisocyanates, Hydrogen Fluoride, Zinc
0805	DAL TILE WALTON LANDFILL	EPA Link	EPA Link	Map It		2/18/2009	2/18/2009			
0804D	MOOG AUTOMOTIVE MURRAY DIV	EPA Link	EPA Link	Map It	4/17/1992	2/5/2014	7/21/2006	2/25/2004		
0804D	P CHEM INC	EPA Link	EPA Link	Map It					Air	Solvents, Chemical Precursors
0827	WASTE CHEMICAL CENTER	EPA Link	EPA Link	Map It	4/4/1989	8/21/2013	8/21/2013			

There are five projects underway in this subwatershed which are being managed by TCEQ; three by the TMDL team, one by the SWQM team, and one by the Non-Point Source team. The Trinity River polychlorinated biphenyls (PCBs) in Tissue TMDL project has no active sampling at this time. This project covers portions of both the Clear Fork and the Main Stem

Trinity River. For this subwatershed, Segments 0806, 0841, and 0805 are the areas of concern. There is a fish possession ban and consumption advisory in effect due to elevated levels of PCBs in edible fish tissue. The goal of this project is to determine the sources of PCBs and the extent of fish contamination in order to make consumption safe in the affected segments. There are TMDLs for *E. coli* for thirteen assessment units in Segment 0841; 0841_01 and 0841_02, as well as, 0841B, C, E, G, H, J, L, M, R, T, and U. These TMDLs are being covered under the Implementation Plan for Seventeen TMDLs for Bacteria in the Greater Trinity River Region. In addition to the thirteen assessments units affected in 0841, TMDLs for 0805_03, 0805_04, 0822A_02, and 0822B_01 are also being covered. 0822A and 0822B are Cottonwood Branch and Grapevine Creek in the Elm Fork subwatershed. The Diurnal Dissolved Oxygen (DO) Dynamics in Selected Least Disturbed Streams project is being undertaken in order to determine the appropriateness of existing DO criteria by monitoring DO in reference streams in each ecoregion. For this subwatershed, a site in Segment 0804 is being monitored. In addition, a low impact development project is being developed for Segment 0805 in order to address TMDLs for legacy pollutants. Low impact development is a way of handling storm water as a resource by building rain gardens, green roofs, rainwater harvesters, detention ponds, or pervious groundcovers to improve the quality of stormwater and reduce loadings of pollutants into water bodies.



Image MS- 1: Trinity River in Fort Worth

Segment 0806 – West Fork Trinity River Below Lake Worth

Overview

This 32 mile segment of the West Fork Trinity River travels 33 miles southeast from the Lake Worth dam to the confluence of Village Creek in Tarrant County. This highly urbanized segment begins in the Grand Prairies and ends in the Eastern Cross Timbers ecoregion.

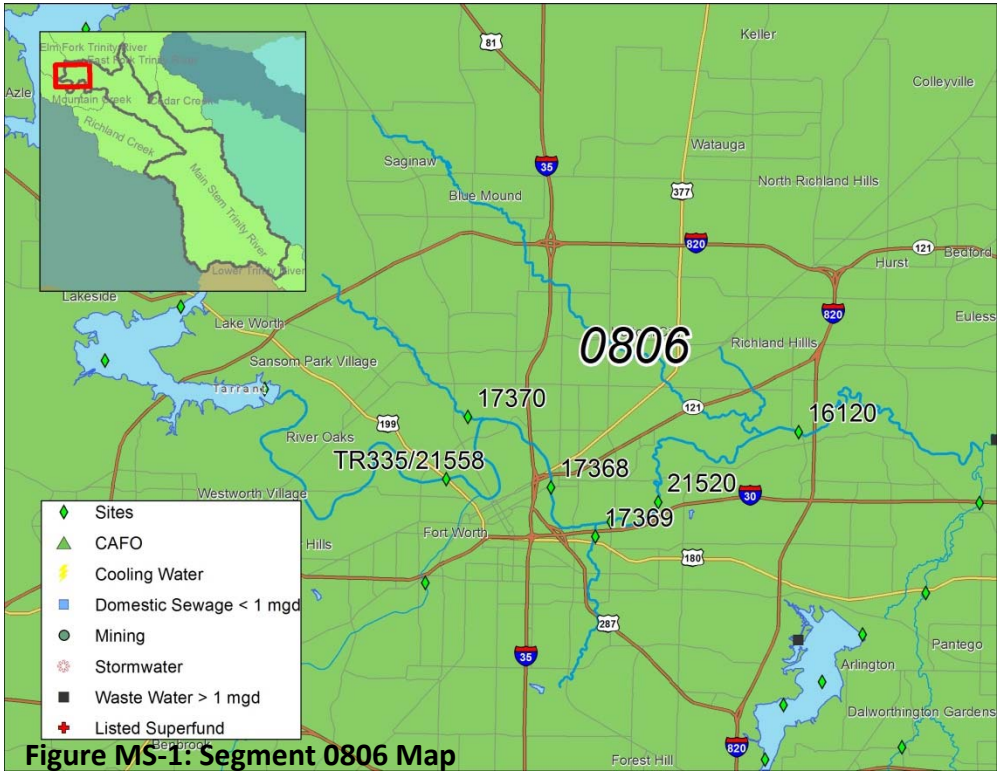


Figure MS-1: Segment 0806 Map

Assessments (Classified Segments):

Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0806_01 - From confluence of Village Creek upstream to confluence of Clear Fork Trinity River	Fully Supporting	Fully Supporting
0806_02 - From confluence of Clear Fork Trinity River upstream to Lake Worth Dam	No Concern	Not Assessed (No Data)

General Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0806_01	Concern	Concern
0806_02	Fully Supporting	Fully Supporting

0806_01 was found to have concerns for chlorophyll-a by both the TCEQ Draft 2014 Integrated Report and the in-house 5 year assessment. This assessment unit is downstream of both Lake Worth and Lake Benbrook; both of which were noted as being hypereutrophic by the TCEQ report Trophic Classification of Texas Reservoirs. Releases from these reservoirs may have some influence on the chlorophyll-a in 0806_01 by seeding the river with algal populations from the reservoirs. Chlorophyll-a is not well correlated with nutrients in this assessment unit (see Table MS-6). This seems to indicate that chlorophyll-a may be coming from upstream sources.

Table MS-6: 0806_01 Chlorophyll-a Correlation Coefficients

	Ammonia	Nitrate	TKN	TP	OP
Chlorophyll-a	-0.367443	-0.175417	0.177407	0.085765	-0.07759

Contact Recreation Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0806_01	Fully Supporting	Fully Supporting
0806_02	Not Assessed (No Data)	Not Assessed (No Data)

Public Water Supply Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0806_01	Fully Supporting	Fully Supporting
0806_02	Fully Supporting	No Concern

Fish Consumption Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0806_01	Not Supporting	Not Assessed (No Data)
0806_02	Not Supporting	Not Assessed (No Data)

Both portions of this segment were found to be not supporting due to elevated levels of dioxins and PCBs in fish tissue by the TCEQ Draft 2014 Integrated Report. A TMDL is currently underway to address this issue.

Assessments (Unclassified Segments):

Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0806A_01 - Entire lake	Not Assessed (No Data)	Not Assessed (No Data)
0806B_01 - Entire lake	Not Assessed (No Data)	Not Assessed (No Data)
0806D_01 - Entire segment	Not Assessed (No Data)	Fully Supporting
0806E_01 - Five mile stretch of Sycamore Creek running upstream from	Not Assessed (No Data)	Fully Supporting

confluence with the W. Fork of Trinity River to confluence with Echo Lake Tributary in Fort Worth		
0806F_01 - Entire water body	Not Assessed (No Data)	Not Assessed (Inadequate Data)

General Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0806A_01	Not Assessed (No Data)	Not Assessed (No Data)
0806B_01	Not Assessed (No Data)	Not Assessed (No Data)
0806D_01	Not Assessed (No Data)	Fully Supporting
0806E_01	Not Assessed (No Data)	Fully Supporting
0806F_01	Not Assessed (No Data)	Not Assessed (Inadequate Data)

Contact Recreation Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0806A_01	Not Assessed (No Data)	Not Assessed (No Data)
0806B_01	Not Assessed (No Data)	Not Assessed (No Data)
0806D_01	Not Assessed (No Data)	Not Supporting
0806E_01	Not Supporting	Not Supporting
0806F_01	Concern	Not Assessed (Inadequate Data)

0806D was found to be not supporting due to elevated levels of *E. coli* by the in-house 5 year assessment. 0806E was found to be not supporting by both the TCEQ Draft 2014 Integrated Report and the in-house 5 year assessment. 0806F was found to have concerns by the TCEQ Draft 2014 Integrated Report. *E. coli* in 0806D_01 and 0806E_1 exhibit weak positive correlations to 7 day rainfall totals; correlation coefficients are 0.06 and 0.11 respectively. The sampling location in 0806D_01 is downstream of the Fort Worth Stockyards and there is a horse stable and riding trail immediately adjacent to the stream that may be potential sources of *E. coli*. A large portion of 0806E_01 has a wooded riparian area. Additionally, a golf course and residential areas are located upstream of the sampling location. Likely sources of *E. coli* in this stream are wildlife and pet wastes.

Public Water Supply Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0806A_01	Not Assessed (No Data)	Not Assessed (No Data)
0806B_01	Not Assessed (No Data)	Not Assessed (No Data)
0806D_01	Not Assessed (No Data)	No Concern
0806E_01	Not Assessed (No Data)	No Concern
0806F_01	Not Assessed (No Data)	Not Assessed (Inadequate Data)

Fish Consumption Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0806A_01	Concern	Not Assessed (No Data)
0806B_01	Concern	Not Assessed (No Data)
0806D_01	Not Assessed (No Data)	Not Assessed (No Data)
0806E_01	Not Assessed (No Data)	Not Assessed (No Data)
0806F_01	Not Assessed (No Data)	Not Assessed (No Data)

0806A_01 and 0806B_01 were found to have concerns due to elevated levels of arsenic in fish tissue by the TCEQ Draft 2014 Integrated Report.

Trend Analysis Overview

Table MS-7: Trend Analysis Result Summary

Main Stem		Days Since Precip			Flow Severity			Secchi Depth			DO			Sp Cond			*E. coli*			TDS			TKN		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0806_01	10938		UP				UP							UP		UP			UP	UP		UP			
0806_01	16120		UP				UP							UP	UP					UP	UP				
0806_01	17368		UP					UP				DN		UP	UP	UP				UP	UP	UP			
0806_01	17863		UP												UP								DN	DN	DN
0806D_01	17370		UP				UP								UP						UP				
0806E_01	17369		UP								DN		DN	UP	UP					UP	UP				

Trends Key
A-All Months
S-Summer/Growing Season (May-October)
W-Winter/Dormant Sesaon (November-April)
UP Increasing Trends
DN Decreasing Trends

There were 38 significant trends identified for this segment as summarized in Table MS-7. For additional detail on trend methods, see the Data Review Methodology section.

Trends (Classified Segments):
See Table MS-8 for details of the significant trends analysis summary presented in Table MS-7. There is a decreasing trend for dissolved oxygen at station 17368 with an R^2 of 0.14. However, there are no associated chlorophyll-a data available to

determine if this trend is related to algal blooms. The increasing winter trend for *E. coli* at station 10938 has an R^2 of 0.11 and is well correlated to rainfall as shown in Figure MS-2.

There are trends for specific conductivity and TDS for most stations and timeframes. The trends for TDS are redundant due to the fact that much of the data for this parameter is calculated from specific conductivity. Most of the standard conductivity trends have R^2's less than 0.19. There are two summer trends with R^2's greater than 0.27; one at station 16120 and the other at station 17368. As shown in Figure MS-3, these trends appear to be due to dry weather conditions that frequently occur during the summer when salts and other dissolved solids in the water concentrate due to evaporation.

Figure MS-2: Station 10938 *E. coli* vs. NWS Grid Site 428835 7 Day Total Rainfall

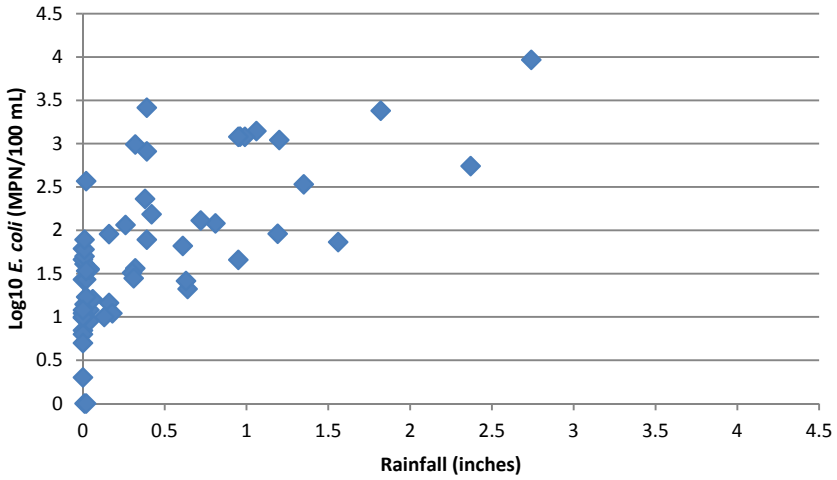


Figure MS-3: Stations 16120 & 17368 Specific Conductivity vs. NWS Grid Site 425835 7 Day Total Rainfall

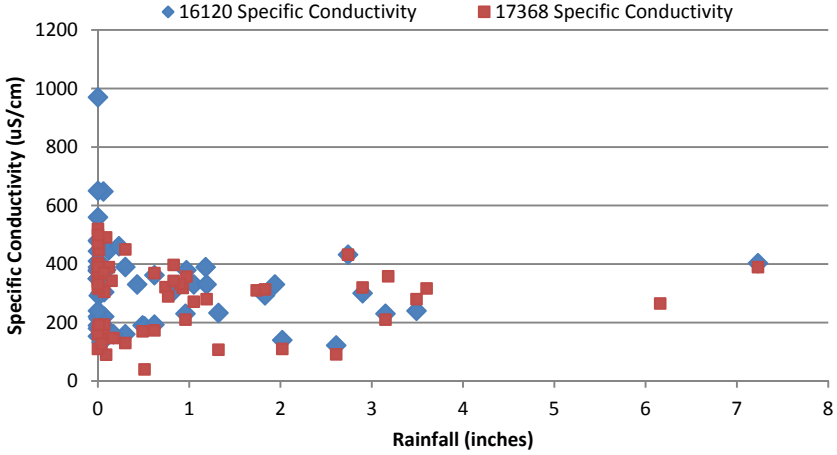


Table MS-8: 0806 Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0806_01	10938	Sp Cond	POR	0.12	16.44	0.00	3.61	4.55	0.98	-0.33	155	355.25	760.00	440.00	360.00	260.00	100.00	180.00	12/9/03	11/12/13
0806_01	10938	Sp Cond	Winter	0.10	16.08	0.00	5.53	2.91	-1.20	-1.03	76	391.58	650.00	478.00	403.83	315.50	100.00	162.50	12/9/03	11/12/13
0806_01	10938	Flow Severity	Winter	0.15	0.04	0.00	0.01	3.08	1.16	-0.06	56	3.25	5.00	3.00	3.00	3.00	2.00	0.00	12/9/03	11/12/13
0806_01	10938	*E. coli*	Winter	0.11	0.22	0.01	0.08	2.74	1.05	-0.50	63	441.32	9280.00	230.00	46.00	14.00	1.00	216.00	12/9/03	11/12/13
0806_01	10938	TDS	POR	0.12	10.69	0.00	2.35	4.55	0.98	-0.33	155	230.91	494.00	286.00	234.00	169.00	65.00	117.00	12/9/03	11/12/13
0806_01	10938	TDS	Winter	0.10	10.45	0.00	3.59	2.91	-1.20	-1.03	76	254.53	422.50	310.70	262.49	205.08	65.00	105.63	12/9/03	11/12/13
0806_01	10938	Days Since Precip	Summer	0.20	0.19	0.00	0.05	3.87	-0.59	-1.10	61	7.18	49.00	7.00	5.00	2.00	0.50	5.00	5/11/04	10/8/13
0806_01	16120	Sp Cond	POR	0.19	0.07	0.00	0.01	5.26	-1.59	-0.77	121	362.75	970.00	447.00	370.00	230.00	113.00	217.00	12/9/03	11/12/13
0806_01	16120	Sp Cond	Summer	0.32	0.08	0.00	0.02	5.22	-0.27	-0.12	61	332.97	970.00	390.00	330.00	220.00	122.00	170.00	5/11/04	10/8/13
0806_01	16120	Flow Severity	Winter	0.15	0.03	0.00	0.01	3.09	1.68	-0.56	58	3.47	5.00	5.00	3.00	3.00	2.00	2.00	12/9/03	11/12/13
0806_01	16120	TDS	POR	0.19	0.07	0.00	0.01	5.26	-1.59	-0.77	121	235.79	630.50	290.55	240.50	149.50	73.45	141.05	12/9/03	11/12/13
0806_01	16120	TDS	Summer	0.32	0.08	0.00	0.02	5.22	-0.27	-0.12	61	216.43	630.50	253.50	214.50	143.00	79.30	110.50	5/11/04	10/8/13
0806_01	16120	Days Since Precip	Summer	0.20	0.19	0.00	0.05	3.93	-0.53	-1.08	62	7.10	49.00	7.00	5.00	2.00	0.50	5.00	5/11/04	10/8/13
0806_01	17368	Secchi Depth	POR	0.18	0.02	0.04	0.01	2.18	1.42	0.04	24	0.54	0.91	0.64	0.52	0.40	0.35	0.25	6/28/04	9/18/13
0806_01	17368	Sp Cond	POR	0.15	18.04	0.00	3.69	4.89	-0.73	-1.36	140	335.97	620.00	431.00	353.00	225.00	40.00	206.00	12/9/03	11/12/13
0806_01	17368	Sp Cond	Summer	0.27	19.78	0.00	3.90	5.07	-1.35	-1.07	70	301.60	520.00	377.00	320.00	193.00	40.00	184.00	5/11/04	10/8/13
0806_01	17368	Sp Cond	Winter	0.11	17.16	0.01	6.05	2.84	-1.28	-1.12	70	370.35	620.00	473.00	383.17	241.00	40.00	232.00	12/9/03	11/12/13
0806_01	17368	DO	Summer	0.14	-0.04	0.00	0.01	-3.33	0.08	0.79	69	6.98	15.40	7.93	7.10	5.80	3.50	2.13	5/11/04	10/8/13
0806_01	17368	TDS	POR	0.15	11.73	0.00	2.40	4.89	-0.73	-1.36	140	218.38	403.00	280.15	229.45	146.25	26.00	133.90	12/9/03	11/12/13
0806_01	17368	TDS	Summer	0.27	12.85	0.00	2.53	5.07	-1.35	-1.07	70	196.04	338.00	245.05	208.00	125.45	26.00	119.60	5/11/04	10/8/13
0806_01	17368	TDS	Winter	0.11	11.16	0.01	3.93	2.84	-1.28	-1.12	70	240.73	403.00	307.45	249.06	156.65	26.00	150.80	12/9/03	11/12/13
0806_01	17368	Days Since Precip	Summer	0.20	0.19	0.00	0.05	3.75	-0.43	-1.23	58	7.28	49.00	7.00	5.00	1.00	0.50	6.00	5/11/04	10/8/13
0806_01	17863	Sp Cond	Summer	0.11	9.63	0.06	4.96	1.94	-0.91	1.35	32	367.16	530.00	414.50	368.00	334.00	170.00	80.50	5/3/04	8/7/12
0806_01	17863	TKN	POR	0.18	-0.06	0.00	0.02	-3.48	-0.04	1.26	57	0.88	2.10	1.00	0.80	0.70	0.34	0.30	12/15/03	8/7/12
0806_01	17863	TKN	Summer	0.11	-0.05	0.09	0.03	-1.75	0.22	1.56	27	0.96	2.10	1.00	0.90	0.80	0.36	0.20	6/7/04	8/7/12
0806_01	17863	TKN	Winter	0.25	-0.06	0.00	0.02	-3.08	1.74	0.59	30	0.81	1.50	0.90	0.80	0.60	0.34	0.30	12/15/03	2/14/12
0806_01	17863	Days Since Precip	Summer	0.13	0.17	0.05	0.08	2.07	1.21	-0.85	31	4.19	28.00	7.00	2.00	1.00	0.50	6.00	5/3/04	8/7/12

Trends (Unclassified Segments):

See Table MS-9 for details of the significant trends analysis summary presented in Table MS-7. There are decreasing trends for dissolved oxygen in 0806E_01 with R^2 values less than 0.18. However, there are no associated chlorophyll-a data available to determine if these trends are related to algal blooms. As discussed above in Trends (Classified Segments), TDS trends for 0806D_01 and 0806E_01 are essentially duplicative of specific conductivity trends. Similarly, the specific conductivity trends are related to dry weather conditions seen during the summer months.

Table MS-9: 0806D, 0806E Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0806D_01	17370	Sp Cond	Summer	0.12	22.21	0.01	7.69	2.89	1.81	1.04	61	432.11	1020.00	540.00	427.00	310.00	120.00	230.00	5/11/04	10/8/13
0806D_01	17370	Flow Severity	Winter	0.12	0.03	0.01	0.01	2.81	1.33	1.28	58	3.07	5.00	3.00	3.00	3.00	2.00	0.00	12/9/03	11/12/13
0806D_01	17370	TDS	Summer	0.12	14.44	0.01	5.00	2.89	1.81	1.04	61	280.87	663.00	351.00	277.55	201.50	78.00	149.50	5/11/04	10/8/13
0806D_01	17370	Days Since Precip	Summer	0.20	0.19	0.00	0.05	3.87	-0.59	-1.10	61	7.18	49.00	7.00	5.00	2.00	0.50	5.00	5/11/04	10/8/13
0806E_01	17369	Sp Cond	POR	0.15	24.20	0.00	5.26	4.60	1.97	0.22	123	444.00	1090.00	590.00	470.00	280.00	140.00	310.00	12/9/03	11/12/13
0806E_01	17369	Sp Cond	Summer	0.28	0.09	0.00	0.02	4.93	-0.88	-1.31	63	434.27	1090.00	550.00	450.00	250.00	140.00	300.00	5/11/04	10/8/13
0806E_01	17369	DO	POR	0.11	-0.25	0.00	0.07	-3.78	0.80	-1.70	121	8.69	13.20	10.40	8.70	7.10	4.40	3.30	12/9/03	11/12/13
0806E_01	17369	DO	Winter	0.18	-0.28	0.00	0.08	-3.52	-0.46	-0.97	59	9.85	13.20	11.10	9.90	8.50	5.70	2.60	12/9/03	11/12/13
0806E_01	17369	TDS	POR	0.15	15.73	0.00	3.42	4.60	1.97	0.22	123	288.60	708.50	383.50	305.50	182.00	91.00	201.50	12/9/03	11/12/13
0806E_01	17369	TDS	Summer	0.28	0.09	0.00	0.02	4.93	-0.88	-1.31	63	282.28	708.50	357.50	292.50	162.50	91.00	195.00	5/11/04	10/8/13
0806E_01	17369	Days Since Precip	Summer	0.21	0.20	0.00	0.05	3.98	-0.60	-1.19	63	7.07	49.00	7.00	5.00	1.00	0.50	6.00	5/11/04	10/8/13

Segment 0841 – Lower West Fork Trinity River

Overview

This 26 mile segment starts from a point immediately upstream of the confluence of the Elm Fork Trinity River in Dallas County to a point immediately upstream of the confluence of Village Creek in Tarrant County. The upper half of this highly urbanized watershed is in the Eastern Cross Timbers and the lower half is in the Blackland Prairie ecoregion.

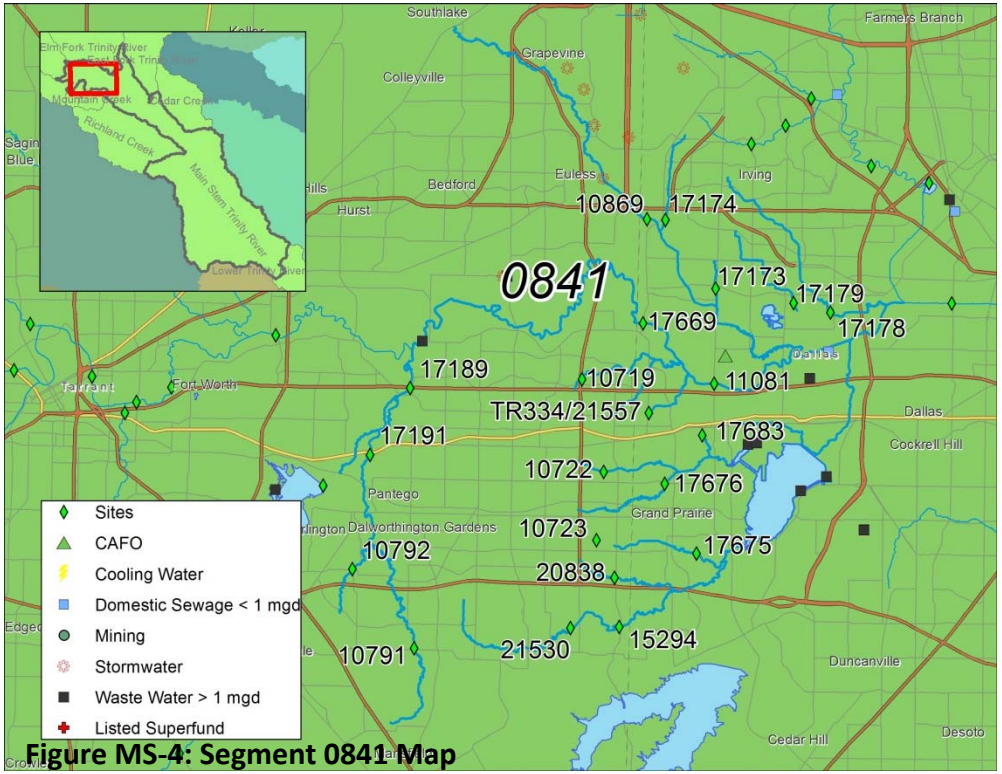


Figure MS-4: Segment 0841 Map

Assessments (Classified Segments):

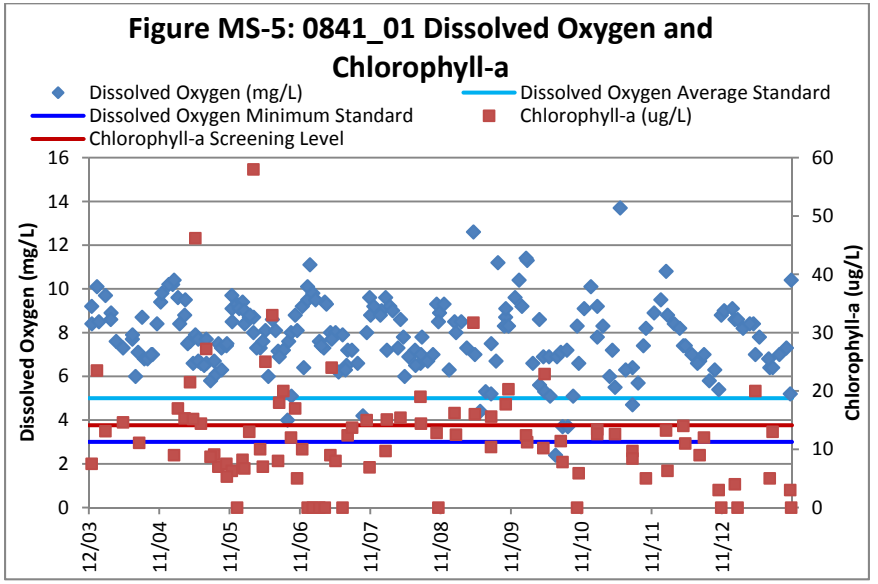
Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0841_01 - From confluence of the Elm Fork Trinity River to the confluence with Johnson Creek	Fully Supporting	Fully Supporting
0841_02 - From the confluence with Johnson Creek upstream to the confluence of Village Creek	Fully Supporting	Not Assessed (No Data)

General Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0841_01	Concern	Concern
0841_02	Concern	Fully Supporting

Both portions of this segment were found to have concerns for nitrate and TP by the TCEQ Draft 2014 Integrated Report. Chlorophyll-a was also found to be a concern in 0841_01 by the Integrated Report. The in-house 5 year assessment found concerns for nitrate, OP, and TP in 0841_01. As shown in Table MS-10, these nutrients are negatively correlated to flow and rainfall. This indicates that increased inflows are diluting nutrients that are coming from constant sources such as upstream wastewater treatment facilities. Additionally, chlorophyll-a is positively correlated to flow but negatively correlated to nutrients. Based on this information, algal populations are coming from upstream rather than multiplying and utilizing the nutrients in 0841_01. Chlorophyll-a and the associated algal populations do not appear to be influencing dissolved oxygen as illustrated in Figure MS-5.

Table MS-10: 0841_01 Correlation Coefficients

	NWS Grid Site 427541 7 Day Total Rainfall (inches)	USGS 08049500 Flow (cfs)	Dissolved Oxygen	Nitrate	TP	OP
Chlorophyll-a	-0.01199	0.262729	0.018039	-0.21405	-0.2084	-0.22032
Nitrate	-0.45931	-0.67712				
TP	-0.36666	-0.50561				
OP	-0.52765	-0.71148				



Contact Recreation Use:

	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0841_01	Not Supporting	Fully Supporting
0841_02	Not Supporting	Not Assessed (No Data)

Both portions of this segment were found to be not supporting due to elevated levels of *E. coli* by the TCEQ Draft 2014 Integrated Report. As expected, *E. coli* levels are strongly correlated to 7 day total rainfall amounts and flow. Figure MS-6 demonstrates this relationship for 0841_01. As the upstream watershed is extremely large and diverse at this point on the river, major contributors to the *E. coli* impairments are most likely runoff related such as pets, livestock, and wildlife.

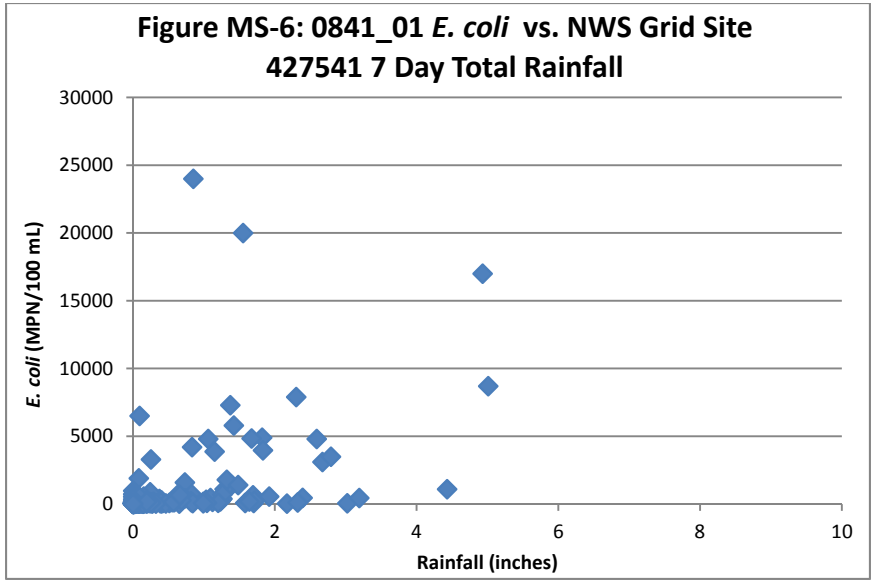




Image MS- 2: 0841 at Bowman Springs Park in Arlington

Public Water Supply Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0841_01	Not Assessed (No Data)	Fully Supporting
0841_02	Not Assessed (No Data)	No Concern

Fish Consumption Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0841_01	Not Supporting	Not Assessed (No Data)
0841_02	Not Supporting	Not Assessed (No Data)

Both portions of this segment were found to be not supporting due to elevated levels of dioxins and PCBs in fish tissue by the TCEQ Draft 2014 Integrated Report. There is a TMDL currently underway to address this issue.

Assessments (Unclassified Segments):

Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0841A_01 - Entire reservoir	Not Assessed (No Data)	Not Assessed (No Data)
0841B_01 - Entire segment	Fully Supporting	Fully Supporting
0841C_01 - Entire segment	Fully Supporting	Not Assessed (Inadequate Data)
0841D_01 - From the confluence with Little	Fully Supporting	No Concern

Bear Creek to SH 26,Tarrant County		
0841E_01 - Entire segment	Fully Supporting	Fully Supporting
0841F_01 - Entire segment	Concern	Not Supporting
0841G_01 - Entire segment	Concern	Concern
0841H_01 - Entire segment	Fully Supporting	Fully Supporting
0841I_01 - Entire segment	Not Assessed (No Data)	Not Assessed (Inadequate Data)
0841J_01 - Entire segment	Not Assessed (Inadequate Data)	Not Supporting
0841K_01 - From South Belt Line Road (FM 1382) upstream to the upper end of the creek south of West Bardin Road (NHD RC 12030102000107) in Arlington, Tarrant County	Concern	Not Supporting
0841L_01 - From the confluence with the Lower West Fork Trinity River, upstream to just south of Mayfield Road in Arlington, Tarrant, County	Concern	Not Supporting
0841M_01 - Entire segment	Fully Supporting	Concern
0841N_01 - Entire segment	Concern	Not Supporting
0841O_01 - Entire segment	Concern	Not Supporting
0841P_01 - Entire segment	Concern	Not Supporting
0841Q_01 - Entire segment	Concern	Not Supporting
0841R_01 - Entire segment	Fully Supporting	Fully Supporting
0841S_01 - A 5 acre area in NW corner of Vilbig Lakes, near confluence with unnamed creek, approx. 100 m south of intersection of Rusdell Rd./Marvel Dr. in Irving, Dallas, Co.	Fully Supporting	Fully Supporting
0841T_01 - A 7 mile stretch of Village Creek running upstream from confluence with West Fork Trinity River to SH 303 approx. 0.75 mi. downstream of Lake Arlington	Fully Supporting	No Concern
0841U_01 - A 4 mile stretch of West Irving Branch running upstream from approx.	Not Assessed (Inadequate Data)	Not Supporting

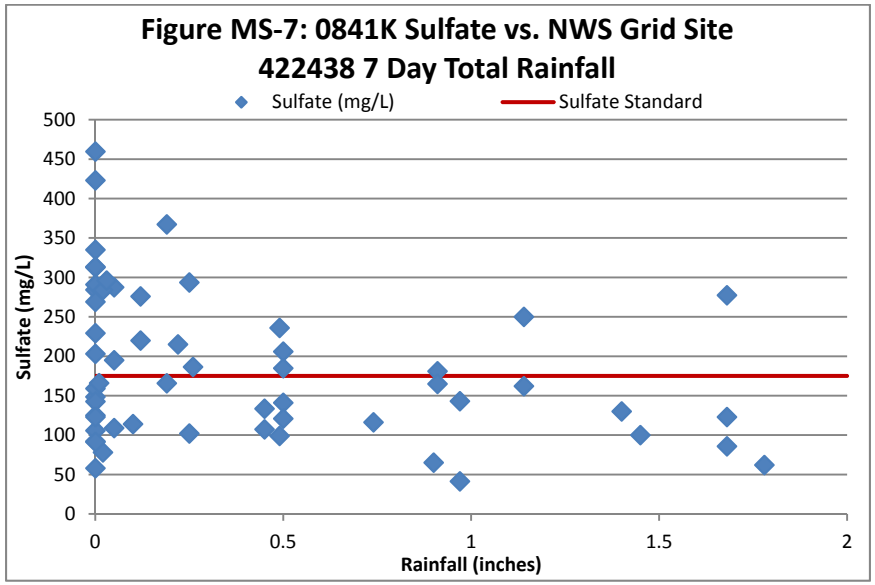
0.4 mi. downstream of Oakdale Rd. to just south of Sowers Road in Irving, Dallas County		
0841V_01 - Entire segment	Concern	Concern

Concerns for depressed dissolved oxygen were identified by the TCEQ Draft 2014 Integrated Report in 0841F, 0841G, 0841K, 0841L, 0841N, 0841O, 0841P, 0841Q, and 0841V. The in-house 5 year assessment found 0841G and 0841M to have concerns while 0841F, 0841J, 0841K, 0841L, 0841N, 0841O, 0841P, 0841Q, 0841U, and 0841V were found to be not supporting due to depressed dissolved oxygen. As discussed in the 2010 TRA CRP Basin Summary Report, many of these assessment units are small, shallow tributaries. Some have intermittent or perennial pools and go completely dry for months at time during the summer. With the exception of an increasing trend at one site in 0841B_01, there were no trends identified for dissolved oxygen indicating that this parameter is stable and influenced by typical seasonal conditions.

General Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0841A_01	Not Assessed (No Data)	Not Assessed (No Data)
0841B_01	No Concern	Fully Supporting
0841C_01	No Concern	Not Assessed (Inadequate Data)
0841D_01	No Concern	Fully Supporting
0841E_01	No Concern	Fully Supporting
0841F_01	No Concern	Fully Supporting
0841G_01	No Concern	Not Supporting
0841H_01	No Concern	Fully Supporting
0841I_01	Not Assessed (No Data)	Not Assessed (Inadequate Data)
0841J_01	Not Assessed (No Data)	No Concern
0841K_01	No Concern	Not Supporting
0841L_01	No Concern	Fully Supporting
0841M_01	Not Assessed (No Data)	No Concern
0841N_01	Not Assessed (No Data)	Fully Supporting
0841O_01	No Concern	Fully Supporting
0841P_01	No Concern	Fully Supporting
0841Q_01	No Concern	Fully Supporting
0841R_01	Concern	Concern
0841S_01	Not Assessed (No Data)	Fully Supporting
0841T_01	Not Assessed (No Data)	No Concern

0841U_01	Not Assessed (No Data)	No Concern
0841V_01	No Concern	Not Supporting

0841R was found to have concerns for chlorophyll-a by both the TCEQ Draft 2014 Integrated Report and the in-house 5 year assessment. 0841G, 0841K, 0841V were found to be not supporting due to elevated levels of sulfate by the in-house 5 year assessment. Chlorophyll-a levels in 0841R are not well correlated to nutrients. Although there are no flow or Secchi depth data available, it is probable that light penetration and slow flows leading to long residence times allows for high algal populations. Sulfate impairments in 841G, 841K, and 841V appear to be related to stream flows. As there is no flow data for these streams, 7 day total rainfall is used as a surrogate as shown in Figure MS-7. During dry weather conditions, sulfate values are typically higher than during wet weather.

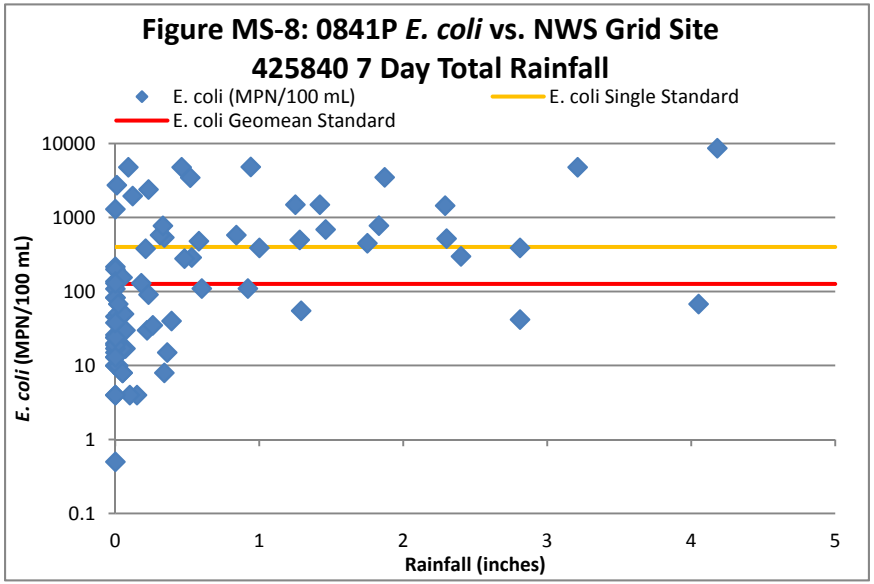


Contact Recreation Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0841A_01	Not Assessed (No Data)	Not Assessed (No Data)
0841B_01	Fully Supporting	Fully Supporting
0841C_01	Fully Supporting	Not Assessed (No Data)
0841D_01	No Concern	No Concern
0841E_01	Fully Supporting	Fully Supporting

0841F_01	Not Supporting	Not Supporting
0841G_01	Not Supporting	Not Supporting
0841H_01	Not Supporting	Not Supporting
0841I_01	Not Assessed (No Data)	Not Assessed (Inadequate Data)
0841J_01	Not Supporting	No Concern
0841K_01	Not Supporting	Not Supporting
0841L_01	Not Supporting	Not Supporting
0841M_01	Not Supporting	Not Supporting
0841N_01	Not Supporting	Not Supporting
0841O_01	Fully Supporting	Fully Supporting
0841P_01	Concern	Not Supporting
0841Q_01	Concern	Not Supporting
0841R_01	Not Supporting	Not Supporting
0841S_01	Fully Supporting	Fully Supporting
0841T_01	Not Supporting	No Concern
0841U_01	Not Supporting	Not Supporting
0841V_01	Not Supporting	Not Supporting

Many streams in this segment were found to have concerns or be not supporting the contact recreation use due to elevated levels of *E. coli* by both the TCEQ Draft 2014 Integrated Report and the in-house 5 year assessment. In these assessment units, as with many other, *E. coli* tends to increase during wet weather as shown in Figure MS-8. An Implementation Plan has been developed by the North Central Texas Council of Governments in coordination with TCEQ and local entities and includes many of these assessment units. This document details various strategies and best management practices (BMPs) for reducing bacteria loading as well as measures for regular evaluation of water quality conditions and efficacy of the implemented strategies and BMPs.

Figure MS-8: 0841P *E. coli* vs. NWS Grid Site 425840 7 Day Total Rainfall



Public Water Supply Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0841A_01	Not Assessed (No Data)	Not Assessed (No Data)
0841B_01	Not Assessed (No Data)	Fully Supporting
0841C_01	Not Assessed (No Data)	Not Assessed (No Data)
0841D_01	Not Assessed (No Data)	No Concern
0841E_01	Not Assessed (No Data)	Fully Supporting
0841F_01	Not Assessed (No Data)	Fully Supporting
0841G_01	Not Assessed (No Data)	Concern
0841H_01	Not Assessed (No Data)	Fully Supporting
0841I_01	Not Assessed (No Data)	Not Assessed (Inadequate Data)
0841J_01	Not Assessed (No Data)	No Concern
0841K_01	Not Assessed (No Data)	Fully Supporting
0841L_01	Not Assessed (No Data)	Fully Supporting
0841M_01	Not Assessed (No Data)	No Concern
0841N_01	Not Assessed (No Data)	Fully Supporting
0841O_01	Not Assessed (No Data)	Fully Supporting
0841P_01	Not Assessed (No Data)	Fully Supporting
0841Q_01	Not Assessed (No Data)	Fully Supporting
0841R_01	Not Assessed (No Data)	Fully Supporting
0841S_01	Not Assessed (No Data)	No Concern
0841T_01	Not Assessed (No Data)	No Concern
0841U_01	Not Assessed (No Data)	No Concern
0841V_01	Not Assessed (No Data)	Fully Supporting

0841G was found to have concerns for elevated levels of sulfate by the in-house 5 year assessment. As discussed in the General Use section, sulfates in the streams are most likely influenced by stream flow with higher values being reported during dry weather.

Fish Consumption Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0841A_01	Not Supporting	Not Assessed (No Data)
0841B_01	Fully Supporting	Not Assessed (No Data)
0841C_01	No Concern	Not Assessed (No Data)
0841D_01	Not Assessed (No Data)	Not Assessed (No Data)
0841E_01	Fully Supporting	Not Assessed (No Data)

0841F_01	Fully Supporting	Not Assessed (No Data)
0841G_01	No Concern	Not Assessed (No Data)
0841H_01	Fully Supporting	Not Assessed (No Data)
0841I_01	Not Assessed (No Data)	Not Assessed (No Data)
0841J_01	Not Assessed (No Data)	Not Assessed (No Data)
0841K_01	Fully Supporting	Not Assessed (No Data)
0841L_01	Fully Supporting	Not Assessed (No Data)
0841M_01	Fully Supporting	Not Assessed (No Data)
0841N_01	Not Assessed (No Data)	Not Assessed (No Data)
0841O_01	Fully Supporting	Not Assessed (No Data)
0841P_01	Fully Supporting	Not Assessed (No Data)
0841Q_01	No Concern	Not Assessed (No Data)
0841R_01	Fully Supporting	Not Assessed (No Data)
0841S_01	Not Assessed (No Data)	Not Assessed (No Data)
0841T_01	Fully Supporting	Not Assessed (No Data)
0841U_01	Not Assessed (No Data)	Not Assessed (No Data)
0841V_01	No Concern	Not Assessed (No Data)

0841A_01 was found to be not supporting due to elevated levels of PCBs in fish tissue by the TCEQ Draft 2014 Integrated Report. A TMDL to address this issue has been completed.

Trend Analysis Overview

Table MS-11: Trend Analysis Result Summary

Main Stem		Air Temp			Days Since Precip			Flow Severity			Secchi Depth			DO			pH			Sp Cond			*E. coli*			Fecal C		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0841_01	11081					UP																						
0841_01	17669																											
0841B_01	10865														UP													
0841B_01	10867																								DN			
0841B_01	10869																											
0841B_01	17663		DN															DN										
0841C_01	17666					DN																						
0841D_01	17089																								UP			
0841E_01	17672																											
0841F_01	10723																		DN									
0841F_01	17674										UP		UP														UP	
0841F_01	17676																											
0841H_01	17178																											
0841K_01	10724																DN	DN	DN					DN				
0841K_01	10725		UP														DN				DN							
0841K_01	17677																DN	DN		DN	DN	DN						
0841K_01	17679																											
0841K_01	15294																UP	UP				UP						
0841L_01	10718																	DN										
0841L_01	10719																DN	DN	DN		DN							
0841L_01	10721									UP									DN									
0841L_01	17664																											
0841L_01	18311																	DN	DN					UP			UP	
0841M_01	10792									UP									DN									
0841N_01	17675																			DN	DN							
0841O_01	10815																						UP	UP	UP	UP	UP	UP
0841O_01	17681																			UP	UP	UP					UP	
0841O_01	17682											DN													DN			
0841P_01	10722																DN	DN	DN									
0841P_01	17673					DN							DN									DN						
0841Q_01	17678							DN	DN	DN							DN	DN										
0841R_01	17190																DN	DN										
0841R_01	17191																	DN										
0841T_01	17189							UP	UP	UP									DN									
0841V_01	17683																											

Table MS-11 Continued: Trend Analysis Result Summary

Main Stem		Chlorophyll-a			Field Turb			TDS			Chloride			SO4			BOD5			NH3			NO3			TKN		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0841_01	11081																									DN		DN
0841_01	17669														DN						UP							
0841B_01	10865						DN																					
0841B_01	10867																									DN		DN
0841B_01	10869																							DN				DN
0841B_01	17663																											
0841C_01	17666					UP																						
0841D_01	17089	UP	UP																						UP			
0841E_01	17672												UP													DN		DN
0841F_01	10723																											
0841F_01	17674			DN																								
0841F_01	17676			DN																						DN		DN
0841H_01	17178			DN																								
0841K_01	10724																											
0841K_01	10725	DN		DN					DN																			
0841K_01	17677							DN	DN	DN																		
0841K_01	17679									DN	DN	DN	DN	DN	DN	DN												
0841K_01	15294						DN			UP			UP															
0841L_01	10718						DN																					
0841L_01	10719								DN																			DN
0841L_01	10721																											
0841L_01	17664														DN											DN	DN	DN
0841L_01	18311				UP	UP																						
0841M_01	10792																											
0841N_01	17675							DN	DN		DN	DN		DN	DN								DN	DN	DN	DN	DN	
0841O_01	10815																	UP		UP	UP	UP		UP				
0841O_01	17681									UP			UP															
0841O_01	17682														DN											DN	DN	
0841P_01	10722																											DN
0841P_01	17673							DN	DN	DN																		
0841Q_01	17678																											
0841R_01	17190																											
0841R_01	17191																											
0841T_01	17189																											
0841V_01	17683	DN		DN																								

Table MS-11 Continued: Trend Analysis Result Summary

Main Stem		OP			TP			Hardness			D. Cu		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W
0841_01	11081												
0841_01	17669		DN			DN		DN	DN				
0841B_01	10865						UP						
0841B_01	10867												
0841B_01	10869					DN	UP						
0841B_01	17663												
0841C_01	17666												
0841D_01	17089				UP		UP						
0841E_01	17672				UP		UP						
0841F_01	10723											DN	
0841F_01	17674		UP	UP	UP	UP	UP						
0841F_01	17676				UP	UP	UP		DN				
0841H_01	17178				UP		UP					DN	UP
0841K_01	10724												
0841K_01	10725				UP								
0841K_01	17677												
0841K_01	17679				UP			DN	DN	DN			
0841K_01	15294												
0841L_01	10718												
0841L_01	10719				UP								
0841L_01	10721												
0841L_01	17664				UP				DN				
0841L_01	18311												
0841M_01	10792												UP
0841N_01	17675				UP		UP	DN	DN				
0841O_01	10815				UP		UP			DN			
0841O_01	17681				UP	UP							
0841O_01	17682						UP		DN				
0841P_01	10722												
0841P_01	17673												
0841Q_01	17678												
0841R_01	17190												
0841R_01	17191	UP											
0841T_01	17189												
0841V_01	17683												

Trends Key

A-All Months

S-Summer/Growing Season (May-October)

W-Winter/Dormant Sesaon (November-April)

UP Increasing Trends

DN Decreasing Trends

There were 190 significant trends identified for this segment as summarized in Table MS-11. For additional detail on trend methods, see the Data Review Methodology section.

Trends (Classified Segments):

See Table MS-12 for details of the significant trends analysis summary presented in Table MS-11. The increasing summer ammonia trend at station 17669 is weighted by a high value at the end of the data set (Figure MS-9). However, this trend exists even without the high data point. With the exception of this high value, the other high ammonia values occur during rainfall events.

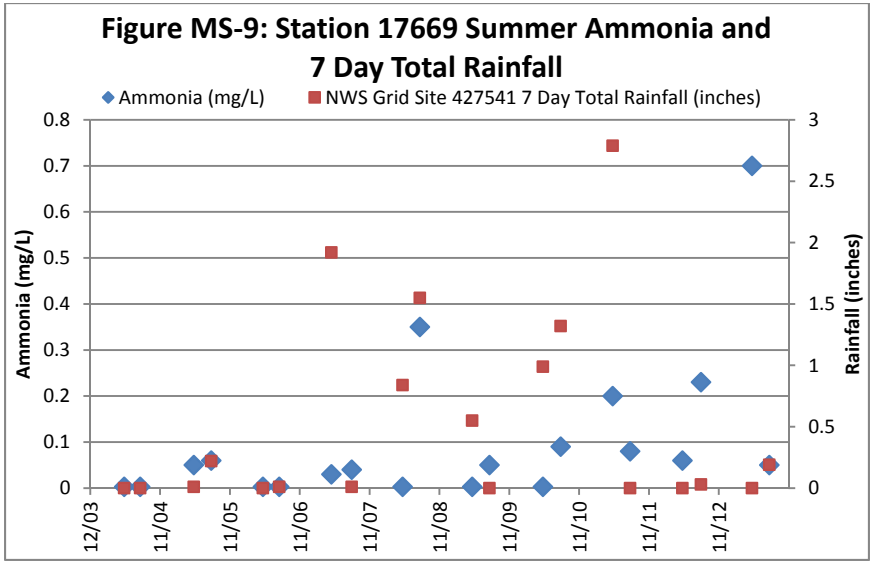


Table MS-12: 0841 Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0841_01	11081	TKN	POR	0.12	-0.05	0.01	0.02	-2.61	1.60	1.37	52	1.10	2.80	1.20	1.00	0.80	0.48	0.40	12/15/03	11/25/13
0841_01	11081	TKN	Winter	0.39	-0.11	0.00	0.03	-3.96	1.05	-0.07	27	1.15	2.80	1.40	1.00	0.70	0.48	0.70	12/15/03	11/25/13
0841_01	11081	Days Since Precip	Summer	0.17	0.17	0.03	0.08	2.25	0.69	-1.09	27	4.06	20.00	7.00	2.00	1.00	0.50	6.00	5/9/05	8/6/13
0841_01	17669	NH3	Summer	0.33	0.36	0.01	0.12	2.96	-0.14	-1.18	20	0.10	0.70	0.09	0.05	0.00	0.00	0.08	5/26/04	8/21/13
0841_01	17669	TP	Summer	0.37	-0.13	0.01	0.04	-2.89	-0.31	-1.23	16	1.21	2.07	1.73	1.25	0.65	0.16	1.09	5/26/04	8/21/13
0841_01	17669	OP	Summer	0.30	-0.11	0.03	0.04	-2.47	-0.19	-1.27	16	1.04	1.96	1.60	1.07	0.40	0.09	1.20	5/26/04	8/21/13
0841_01	17669	Hardness	POR	0.13	-0.02	0.03	0.01	-2.31	1.50	-0.12	38	182.42	244.00	196.00	178.00	164.00	147.00	32.00	2/25/04	11/20/13
0841_01	17669	Hardness	Summer	0.23	-3.08	0.04	1.35	-2.27	0.48	-1.30	19	174.11	204.00	196.00	168.00	159.00	147.00	37.00	5/26/04	8/21/13
0841_01	17669	SO4	Summer	0.21	-1.87	0.05	0.87	-2.15	0.66	1.22	19	53.33	83.00	58.00	53.00	48.00	28.00	10.00	5/26/04	8/21/13

Trends (Unclassified Segments):
See Table MS-13 for details of the significant trends analysis summary presented in Table MS-11. As discussed in the 2010 TRA CRP Basin Summary Report, the number of trends identified in these streams suggests that the water quality is unstable and should continue to be monitored.

Specific conductivity, TDS, and chloride trends in 0841K and 0841O are related to dry weather conditions as shown in Figure MS-10. During dry weather, evaporation concentrates salts and dissolved solids in the water.

It should be noted that site 17681 is located downstream of Joe Pool Lake while the other two sites in 0841O are downstream of Mountain Creek Lake and should be considered a different assessment unit. There are a series of trends located at one of these stations, 10815, which is located just upstream of the confluence with the Trinity River that indicate water quality conditions at this location are truly changing. There are increasing trends for *E. coli*, BOD5, ammonia, nitrate, and TP. Of these five parameters, *E. coli* , BOD5, and ammonia show an interesting spike in values occurring in the spring of 2011 (Figure MS-11). A field investigation of the creek upstream of station 10815 was conducted and a broken sewer line was found.

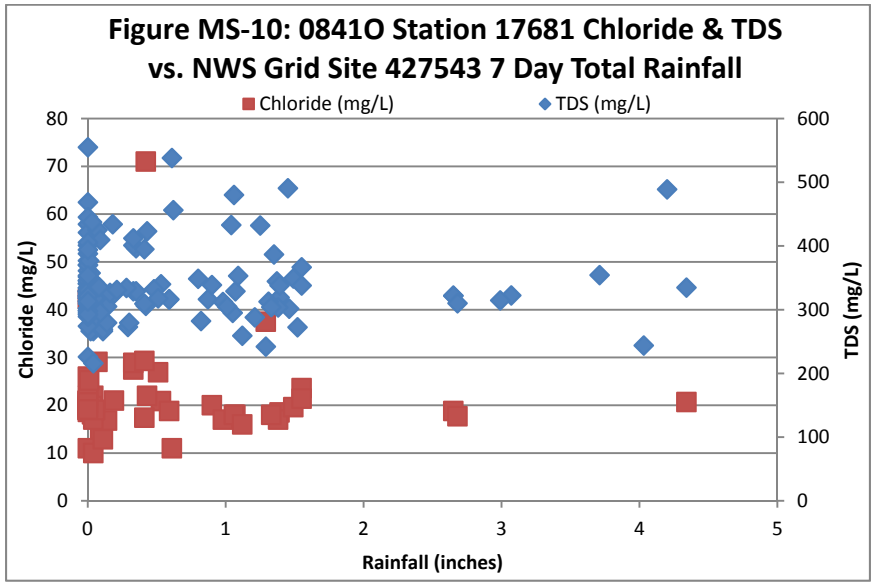


Figure MS-10: 0841O Station 17681 Chloride & TDS vs. NWS Grid Site 427543 7 Day Total Rainfall

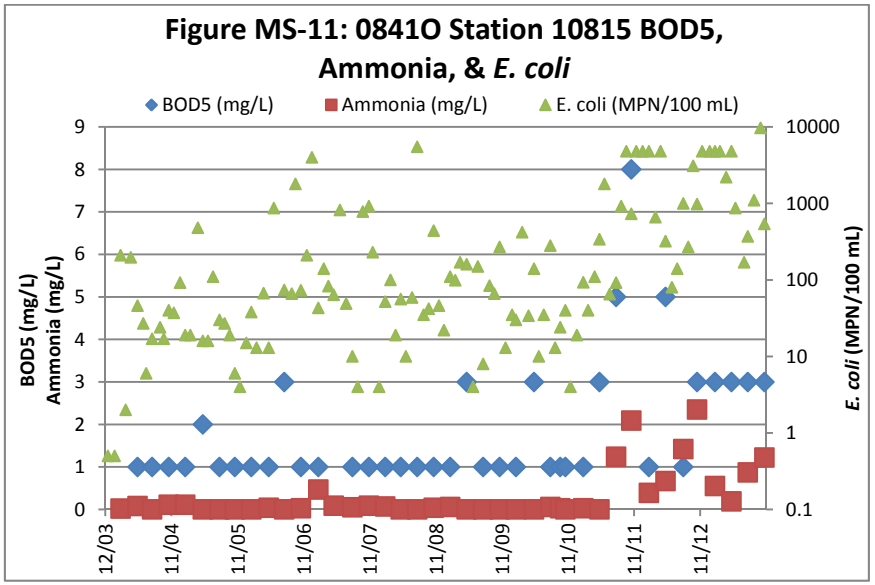
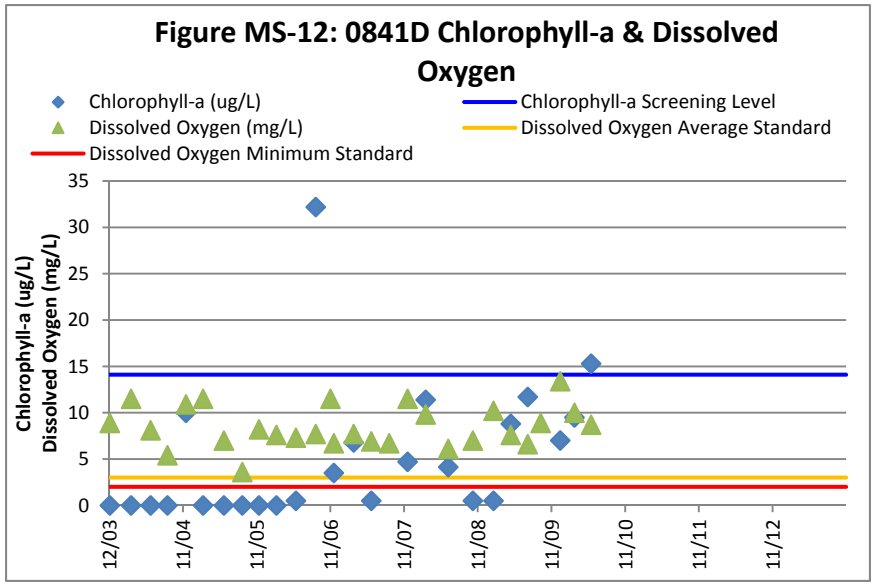
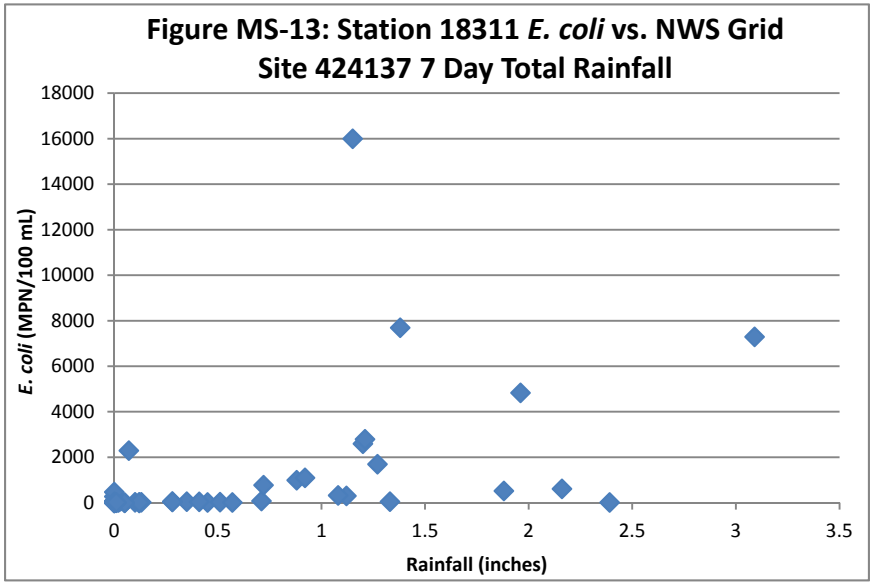


Figure MS-11: 0841O Station 10815 BOD5, Ammonia, & *E. coli*



0841D has increasing trends for *E. coli*, chlorophyll-a, nitrate, and TP. The trends for *E. coli* and nitrate occur only during the winter season. For *E. coli*, the maximum reported value was 120 MPN/100 mL which is below both the single grab sample standard of 399 MPN/100 mL and the geomean standard of 126 MPN/100 mL. The nitrate trend is weighted by a high value at the end of the data set. In the absence of this single value, the highest value in the entire data set is 0.51 mg/L which is well below the screening level of 1.95 mg/L. Similarly, the TP trend is weighted by a single high value. When this value is removed, all remaining data are at or below 0.2 mg/L; the screening level for TP is 0.69 mg/L. Therefore, these trends do not present a concern. Additionally, the chlorophyll-a trend approaches the screening level but algal populations do not appear to be negatively impacting dissolved oxygen levels as shown in Figure MS-12.

At station 18311 in 0841L there is an increasing summer trend for *E. coli*. This trend appears to be an artifact of sample timing as there is an increasing trend in the summer rainfall as well. When all the period of record data are plotted against 7 day total rainfall, all the values that exceed 399 MPN/100 mL occurred when there had been rainfall in the preceding 7 days as shown in Figure MS-13. Decreasing trends for pH were also identified at this site, however, there is no chlorophyll-a data available to determine if algal growth is contributing to this trend.



The remaining trends do not approach screening levels or standards and do not present concerns at this time. There are increasing trends for OP in 0841F and 0841R. The screening level for OP is 0.37 mg/L and the maximum values seen in these assessment units are 0.13 and 0.11, respectively. Increasing trends for dissolved copper were identified in 841H and 841M. Maximum values in these

assessment units were well below both the acute and chronic standards. Increasing trends were found for TP in 0841B, 0841E, 0841F, 0841H, and 0841O where the maximum values were less than half of the screening level of 0.69 mg/L. pH has minimum and maximum standards of 6.5 and 9 SU. Decreasing trends were found in 0841F, 0841K, 0841L, 0841M, 0841P, and 0841R where the minimum values seen were above 6.5 SU. There was also an increasing pH trend found at a site in 0841K but the maximum value was less than 9 SU.

Table MS-13: 0841B, 0841C, 0841D, 0841E, 0841F, 0841H, 0841K, 0841L, 0841M, 0841N, 0841O, 0841P, 0841Q, 0841R, 0841T, 0841V Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0841B_01	10865	DO	Summer	0.13	0.08	0.01	0.03	2.56	-0.10	1.41	44	5.91	15.60	7.30	5.40	4.10	1.80	3.20	5/10/06	10/31/13
0841B_01	10865	TP	Winter	0.66	0.40	0.00	0.06	6.58	-1.46	-0.84	24	0.05	0.16	0.07	0.04	0.02	0.01	0.05	11/9/05	11/20/13
0841B_01	10865	Field Turb	Winter	0.13	-2.09	0.06	1.08	-1.94	1.63	-0.83	28	13.90	31.00	20.70	10.90	7.47	3.59	13.24	1/13/09	11/20/13
0841B_01	10867	TKN	POR	0.15	-0.03	0.02	0.01	-2.38	1.90	0.53	34	0.60	1.20	0.70	0.52	0.40	0.10	0.30	2/26/04	11/20/13
0841B_01	10867	TKN	Winter	0.61	-0.07	0.00	0.02	-4.71	1.16	0.54	16	0.60	1.20	0.70	0.57	0.40	0.10	0.30	2/26/04	11/20/13
0841B_01	10867	*E. coli*	Winter	0.14	-0.25	0.00	0.08	-3.01	0.60	2.55	59	716.14	24000.00	170.00	70.00	26.00	0.50	144.00	12/16/03	11/20/13
0841B_01	10869	NO3	Summer	0.25	-0.05	0.05	0.02	-2.15	1.93	0.13	16	0.20	0.68	0.29	0.09	0.03	0.00	0.26	8/9/06	9/9/13
0841B_01	10869	TKN	Winter	0.26	-0.13	0.05	0.06	-2.13	-1.17	1.72	15	0.60	1.40	0.70	0.50	0.40	0.10	0.30	11/9/05	11/11/13
0841B_01	10869	TP	Summer	0.16	0.00	0.10	0.00	-1.77	1.10	-0.25	18	0.04	0.10	0.06	0.04	0.02	0.01	0.04	5/10/06	9/9/13
0841B_01	10869	TP	Winter	0.17	0.24	0.08	0.13	1.87	0.54	-0.20	19	0.09	0.74	0.06	0.04	0.01	0.01	0.06	11/9/05	11/11/13
0841B_01	17663	Air Temp	Summer	0.14	-1.29	0.04	0.61	-2.11	1.03	0.65	29	26.28	39.00	29.00	26.00	23.50	17.00	5.50	5/26/04	10/22/08
0841B_01	17663	pH	Summer	0.14	-0.10	0.05	0.05	-2.10	-0.85	-0.52	29	7.50	8.20	7.80	7.60	7.20	6.60	0.60	5/26/04	10/22/08
0841C_01	17666	Days Since Precip	Summer	0.37	-1.19	0.00	0.35	-3.37	0.20	-1.24	21	4.17	7.00	6.00	3.00	3.00	0.50	3.00	5/27/04	10/24/07
0841C_01	17666	Field Turb	Summer	0.56	0.50	0.00	0.10	4.90	0.56	-0.14	21	7.07	23.30	7.02	4.97	3.80	1.40	3.22	5/27/04	10/24/07
0841D_01	17089	NO3	Winter	0.22	0.61	0.09	0.33	1.84	-1.00	-0.42	14	0.55	5.08	0.44	0.23	0.01	0.00	0.43	12/4/03	3/24/10
0841D_01	17089	TP	POR	0.23	0.40	0.01	0.15	2.70	0.98	-1.25	27	0.09	1.00	0.09	0.01	0.01	0.01	0.09	12/4/03	6/15/10
0841D_01	17089	TP	Winter	0.38	0.53	0.02	0.20	2.70	1.36	-0.27	14	0.11	1.00	0.07	0.01	0.01	0.01	0.07	12/4/03	3/24/10
0841D_01	17089	*E. coli*	Winter	0.29	9.66	0.07	4.83	2.00	-0.12	-1.12	12	67.25	120.00	100.00	67.00	35.00	12.00	65.00	12/4/03	3/24/10
0841D_01	17089	Chlorophyll-a	POR	0.58	2.00	0.00	0.36	5.62	-1.00	-1.79	25	5.08	32.20	8.81	0.50	0.00	0.00	8.81	12/4/03	6/15/10
0841D_01	17089	Chlorophyll-a	Summer	0.71	2.28	0.00	0.48	4.73	-0.65	-1.31	11	6.65	32.20	11.70	0.50	0.00	0.00	11.70	6/23/04	6/15/10
0841E_01	17672	TKN	POR	0.35	-0.06	0.00	0.01	-4.13	1.48	2.21	33	0.59	1.40	0.63	0.60	0.50	0.30	0.13	2/25/04	11/19/13
0841E_01	17672	TKN	Winter	0.43	-0.03	0.01	0.01	-3.13	1.78	2.30	15	0.63	1.00	0.70	0.60	0.52	0.40	0.18	2/25/04	11/19/13
0841E_01	17672	TP	POR	0.21	0.21	0.00	0.07	3.07	-0.92	-1.73	38	0.06	0.33	0.10	0.04	0.01	0.01	0.10	2/25/04	11/19/13
0841E_01	17672	TP	Winter	0.33	0.01	0.01	0.00	2.91	1.16	-1.12	19	0.05	0.14	0.11	0.04	0.01	0.01	0.11	2/25/04	11/19/13
0841E_01	17672	Chloride	Winter	0.19	1.34	0.07	0.70	1.93	-0.34	-0.88	18	31.24	45.60	39.10	32.00	25.00	16.00	14.10	11/16/04	11/19/13
0841F_01	10723	pH	Winter	0.51	-0.10	0.01	0.03	-3.41	-1.46	0.30	13	7.64	8.00	7.80	7.70	7.50	7.00	0.30	1/22/04	3/22/11
0841F_01	10723	D. Cu	Summer	0.44	-0.30	0.01	0.10	-3.10	1.54	-0.41	14	2.14	12.30	2.80	0.40	0.40	0.40	2.40	7/20/04	7/23/13
0841F_01	17674	Secchi Depth	POR	0.10	0.02	0.00	0.01	3.51	-1.25	-2.32	108	0.40	0.60	0.60	0.42	0.27	0.04	0.33	5/25/04	11/19/13
0841F_01	17674	Secchi Depth	Winter	0.14	0.02	0.01	0.01	2.86	-0.51	-1.28	52	0.41	0.60	0.60	0.36	0.29	0.04	0.32	11/16/04	11/19/13
0841F_01	17674	TP	POR	0.40	0.27	0.00	0.06	4.88	-1.39	-1.61	38	0.05	0.18	0.08	0.05	0.01	0.01	0.08	2/26/04	11/19/13
0841F_01	17674	TP	Summer	0.33	0.01	0.01	0.00	2.81	0.70	-0.88	18	0.06	0.13	0.08	0.06	0.02	0.01	0.06	5/25/04	8/20/13
0841F_01	17674	TP	Winter	0.37	0.27	0.00	0.08	3.24	-0.63	-1.46	20	0.05	0.18	0.08	0.04	0.01	0.01	0.07	2/26/04	11/19/13
0841F_01	17674	OP	Summer	0.45	0.39	0.00	0.11	3.52	1.76	-0.79	17	0.01	0.09	0.03	0.00	0.00	0.00	0.03	5/25/04	8/20/13
0841F_01	17674	OP	Winter	0.19	0.25	0.08	0.13	1.90	1.90	-0.50	17	0.02	0.13	0.02	0.00	0.00	0.00	0.02	2/26/04	11/19/13
0841F_01	17674	Fecal C	Summer	0.14	0.23	0.03	0.10	2.29	1.79	0.55	33	2714.52	32000.00	2200.00	870.00	410.00	160.00	1790.00	5/25/04	5/25/11
0841F_01	17674	Chlorophyll-a	Winter	0.16	-0.67	0.09	0.37	-1.80	1.58	-1.19	19	1.63	12.10	2.90	0.00	0.00	0.00	2.90	2/26/04	11/19/13
0841F_01	17676	TKN	POR	0.10	-0.03	0.06	0.01	-1.96	1.42	-0.12	36	0.57	1.20	0.74	0.50	0.40	0.10	0.34	2/24/04	11/19/13

Table MS-13 Continued: 0841B, 0841C, 0841D, 0841E, 0841F, 0841H, 0841K, 0841L, 0841M, 0841N, 0841O, 0841P, 0841Q, 0841R, 0841T, 0841V Trend Analysis Result Detail

0841F_01	17676	TKN	Winter	0.23	-0.04	0.05	0.02	-2.16	1.40	0.74	18	0.54	1.20	0.70	0.50	0.40	0.10	0.30	2/24/04	11/19/13
0841F_01	17676	TP	POR	0.34	0.21	0.00	0.05	4.23	-0.20	-1.83	37	0.03	0.15	0.04	0.03	0.01	0.01	0.04	2/24/04	11/19/13
0841F_01	17676	TP	Summer	0.67	0.29	0.00	0.05	5.57	0.36	-1.44	17	0.02	0.09	0.03	0.02	0.01	0.01	0.03	5/25/04	8/20/13
0841F_01	17676	TP	Winter	0.17	0.15	0.07	0.08	1.93	-0.63	-1.04	20	0.04	0.15	0.05	0.03	0.01	0.01	0.04	2/24/04	11/19/13
0841F_01	17676	Hardness	Summer	0.31	-8.78	0.02	3.27	-2.69	1.47	0.06	18	167.78	272.00	194.00	159.00	125.00	107.00	69.00	5/25/04	8/20/13
0841F_01	17676	Chlorophyll-a	Winter	0.20	-0.78	0.06	0.39	-2.02	1.36	-1.35	18	2.11	12.00	3.30	0.00	0.00	0.00	3.30	2/24/04	11/19/13
0841H_01	17178	TP	POR	0.13	0.15	0.01	0.06	2.55	-1.34	-1.07	44	0.07	0.33	0.10	0.05	0.03	0.01	0.07	12/4/03	11/11/13
0841H_01	17178	TP	Winter	0.31	0.25	0.01	0.08	3.03	-0.76	-1.11	22	0.08	0.33	0.10	0.06	0.01	0.01	0.10	12/4/03	11/11/13
0841H_01	17178	D. Cu	Summer	0.31	-0.10	0.01	0.03	-2.87	1.96	0.82	20	1.95	3.20	2.00	1.92	1.58	1.10	0.43	5/6/04	5/20/13
0841H_01	17178	D. Cu	Winter	0.21	0.11	0.04	0.05	2.22	-0.77	0.01	21	1.85	3.06	2.28	1.84	1.60	0.40	0.68	12/4/03	11/11/13
0841H_01	17178	Chlorophyll-a	Winter	0.26	-0.86	0.02	0.34	-2.56	-1.78	-1.01	21	13.78	106.60	13.10	7.00	0.00	0.00	13.10	12/4/03	3/21/13
0841K_01	10724	pH	POR	0.37	-0.16	0.00	0.04	-3.68	-0.33	0.00	25	8.19	9.60	8.50	8.40	7.70	6.90	0.80	1/20/04	7/24/13
0841K_01	10724	pH	Summer	0.27	-0.13	0.08	0.07	-1.92	0.86	-0.22	12	8.33	9.60	8.70	8.30	7.75	7.40	0.95	7/20/04	7/24/13
0841K_01	10724	pH	Winter	0.59	-0.21	0.00	0.05	-3.94	-1.35	-0.56	13	8.06	8.80	8.50	8.40	7.70	6.90	0.80	1/20/04	3/22/11
0841K_01	10724	*E. coli*	Summer	0.29	-0.24	0.06	0.11	-2.12	0.30	-0.25	13	1031.62	4800.00	1030.00	430.00	220.00	61.00	810.00	7/20/04	7/24/13
0841K_01	10725	Air Temp	Summer	0.25	0.82	0.08	0.42	1.93	0.21	0.56	13	26.70	35.60	28.00	26.00	25.00	18.00	3.00	7/20/04	7/23/13
0841K_01	10725	Sp Cond	Summer	0.41	-89.63	0.02	32.10	-2.79	1.67	-0.16	13	951.08	1710.00	1090.00	781.00	668.00	596.00	422.00	7/20/04	7/23/13
0841K_01	10725	pH	POR	0.13	-0.08	0.08	0.05	-1.84	1.47	1.37	25	7.98	9.70	8.40	7.90	7.60	7.00	0.80	1/20/04	7/23/13
0841K_01	10725	TP	POR	0.16	0.21	0.05	0.10	2.04	0.62	-1.23	24	0.04	0.27	0.06	0.03	0.01	0.01	0.05	1/20/04	9/20/11
0841K_01	10725	TDS	Summer	0.41	-58.26	0.02	20.86	-2.79	1.67	-0.16	13	618.20	1111.50	708.50	507.65	434.20	387.40	274.30	7/20/04	7/23/13
0841K_01	10725	Chlorophyll-a	POR	0.15	-0.89	0.08	0.49	-1.82	1.03	-1.74	21	2.10	9.30	4.20	0.00	0.00	0.00	4.20	1/20/04	12/14/10
0841K_01	10725	Chlorophyll-a	Winter	0.28	-1.15	0.09	0.61	-1.88	0.93	-1.26	11	1.41	7.00	2.00	0.00	0.00	0.00	2.00	1/20/04	12/14/10
0841K_01	15294	Sp Cond	Winter	0.25	98.42	0.01	33.83	2.91	-0.94	-0.85	28	1023.64	1470.00	1285.00	1040.00	846.00	458.00	439.00	1/13/09	11/19/13
0841K_01	15294	pH	POR	0.36	0.15	0.00	0.03	5.67	-1.87	0.11	59	7.49	8.20	7.80	7.50	7.30	6.60	0.50	1/13/09	11/19/13
0841K_01	15294	pH	Summer	0.49	0.17	0.00	0.03	5.22	-0.44	-0.21	30	7.48	8.20	7.70	7.50	7.30	6.80	0.40	5/19/09	10/30/13
0841K_01	15294	Chloride	Winter	0.41	7.42	0.04	3.12	2.38	0.82	-0.67	10	43.98	74.10	63.30	38.85	30.00	22.00	33.30	2/17/09	11/19/13
0841K_01	15294	TDS	Winter	0.24	62.71	0.01	22.07	2.84	-1.02	-0.62	28	681.18	964.00	835.25	692.50	570.50	297.70	264.75	1/13/09	11/19/13
0841K_01	15294	Field Turb	Winter	0.28	-1.46	0.00	0.45	-3.27	1.86	0.93	29	6.68	18.10	8.77	6.90	3.50	0.88	5.27	1/13/09	11/19/13
0841K_01	17677	Sp Cond	POR	0.26	-114.95	0.00	26.14	-4.40	0.78	-1.20	58	819.84	1550.00	1070.00	815.00	530.00	170.00	540.00	12/15/03	11/18/08
0841K_01	17677	Sp Cond	Summer	0.17	-88.14	0.03	37.21	-2.37	0.49	-0.83	29	738.24	1390.00	1040.00	713.00	518.00	170.00	522.00	5/25/04	10/21/08
0841K_01	17677	Sp Cond	Winter	0.33	-131.17	0.00	36.21	-3.62	0.43	-1.08	29	901.43	1550.00	1220.00	883.00	562.00	387.00	658.00	12/15/03	11/18/08
0841K_01	17677	pH	POR	0.11	-0.06	0.01	0.02	-2.56	-1.38	1.82	57	7.59	8.30	7.80	7.60	7.50	6.70	0.30	12/15/03	11/18/08
0841K_01	17677	pH	Summer	0.20	-0.10	0.02	0.04	-2.58	-0.87	0.87	29	7.55	8.30	7.70	7.60	7.40	6.70	0.30	5/25/04	10/21/08
0841K_01	17677	TDS	POR	0.31	-84.68	0.00	16.96	-4.99	0.56	-1.46	58	562.66	1007.50	734.00	565.99	354.00	110.50	380.00	12/15/03	11/18/08
0841K_01	17677	TDS	Summer	0.29	-82.05	0.00	24.41	-3.36	0.80	-0.71	29	516.40	947.00	676.00	505.05	342.55	110.50	333.45	5/25/04	10/21/08
0841K_01	17677	TDS	Winter	0.30	-82.29	0.00	23.99	-3.43	0.06	-1.16	29	608.92	1007.50	799.50	599.30	366.00	251.55	433.50	12/15/03	11/18/08
0841K_01	17679	TP	POR	0.10	0.01	0.05	0.00	2.07	1.40	-1.01	40	0.07	0.17	0.11	0.06	0.03	0.01	0.08	1/30/04	11/19/13
0841K_01	17679	Hardness	POR	0.31	-15.89	0.00	3.98	-3.99	1.65	-0.40	37	242.11	432.00	296.00	216.00	188.00	121.00	108.00	2/23/04	11/19/13
0841K_01	17679	Hardness	Summer	0.52	-18.46	0.00	4.57	-4.04	1.32	0.16	17	223.24	398.00	264.00	208.00	170.00	121.00	94.00	5/24/04	8/20/13
0841K_01	17679	Hardness	Winter	0.21	-13.66	0.04	6.23	-2.19	1.09	-0.48	20	258.15	432.00	318.00	238.00	190.00	132.00	128.00	2/23/04	11/19/13
0841K_01	17679	Chloride	POR	0.27	-2.51	0.00	0.66	-3.78	0.77	-1.29	40	32.34	61.00	44.65	29.45	20.75	6.90	23.90	1/30/04	11/19/13
0841K_01	17679	Chloride	Summer	0.38	-2.94	0.00	0.91	-3.24	0.23	-0.56	19	31.69	61.00	42.00	32.00	18.60	6.90	23.40	5/20/04	8/20/13
0841K_01	17679	Chloride	Winter	0.19	-2.09	0.05	1.00	-2.10	0.91	-1.27	21	32.91	59.40	46.20	26.00	21.50	14.00	24.70	1/30/04	11/19/13
0841K_01	17679	SO4	POR	0.44	-14.95	0.00	2.86	-5.23	1.81	-0.46	37	149.41	296.00	195.00	125.00	102.00	41.30	93.00	1/30/04	11/19/13
0841K_01	17679	SO4	Summer	0.57	-15.59	0.00	3.28	-4.75	1.24	0.22	19	141.62	284.00	166.00	130.00	105.70	41.30	60.30	5/20/04	8/20/13
0841K_01	17679	SO4	Winter	0.37	-14.67	0.01	4.84	-3.03	1.27	-0.70	18	157.62	296.00	220.00	122.95	99.00	65.00	121.00	1/30/04	11/19/13
0841K_01	17679	TDS	Winter	0.12	-20.24	0.01	7.32	-2.77	0.71	-1.35	60	511.51	877.50	644.15	486.75	366.93	210.60	277.23	12/15/03	11/19/13
0841L_01	10718	pH	Summer	0.12	-0.07	0.06	0.03	-1.94	-1.63	0.20	30	7.44	7.90	7.60	7.50	7.30	6.80	0.30	5/20/09	10/31/13

Table MS-13 Continued: 0841B, 0841C, 0841D, 0841E, 0841F, 0841H, 0841K, 0841L, 0841M, 0841N, 0841O, 0841P, 0841Q, 0841R, 0841T, 0841V Trend Analysis Result Detail

0841L_01	10718	Field Turb	Winter	0.29	-0.28	0.00	0.08	-3.29	-0.42	-0.73	28	10.92	31.80	14.40	9.45	5.02	2.05	9.38	1/14/09	11/20/13
0841L_01	10719	Sp Cond	Summer	0.22	-31.00	0.09	16.81	-1.84	-0.35	-0.71	14	698.21	948.00	856.00	649.00	570.00	350.00	286.00	7/22/04	7/23/13
0841L_01	10719	pH	POR	0.30	-0.07	0.00	0.02	-3.25	-0.37	-0.13	27	7.60	8.30	7.80	7.60	7.40	7.00	0.40	1/20/04	7/23/13
0841L_01	10719	pH	Summer	0.25	-0.06	0.07	0.03	-2.01	-0.75	-0.67	14	7.55	8.00	7.80	7.65	7.30	7.00	0.50	7/22/04	7/23/13
0841L_01	10719	pH	Winter	0.34	-0.08	0.04	0.03	-2.39	0.12	0.48	13	7.65	8.30	7.80	7.60	7.50	7.00	0.30	1/20/04	3/22/11
0841L_01	10719	TKN	Winter	0.31	-0.08	0.07	0.04	-2.03	1.90	1.27	11	0.57	1.20	0.60	0.50	0.40	0.40	0.20	4/20/04	3/22/11
0841L_01	10719	TP	POR	0.16	0.20	0.04	0.09	2.19	-0.48	-1.59	27	0.05	0.25	0.06	0.04	0.01	0.01	0.06	1/20/04	7/23/13
0841L_01	10719	TDS	Summer	0.22	-20.15	0.09	10.93	-1.84	-0.35	-0.71	14	453.84	616.20	556.40	421.85	370.50	227.50	185.90	7/22/04	7/23/13
0841L_01	10721	pH	Winter	0.44	-0.10	0.02	0.04	-2.81	0.00	0.41	12	7.68	8.30	7.85	7.65	7.55	7.00	0.30	1/22/04	3/22/11
0841L_01	10721	Flow Severity	Winter	0.50	0.09	0.01	0.03	3.31	1.63	2.09	13	2.92	6.00	3.00	3.00	2.00	2.00	1.00	1/22/04	3/22/11
0841L_01	17664	TKN	POR	0.23	-0.03	0.00	0.01	-3.08	0.26	-0.55	33	0.48	0.80	0.60	0.43	0.40	0.10	0.20	2/24/04	11/20/13
0841L_01	17664	TKN	Summer	0.27	-0.03	0.03	0.01	-2.33	0.29	-1.28	17	0.56	0.80	0.70	0.60	0.40	0.35	0.30	5/27/04	8/21/13
0841L_01	17664	TKN	Winter	0.42	-0.03	0.01	0.01	-3.19	0.19	0.19	16	0.39	0.70	0.50	0.40	0.31	0.10	0.20	2/24/04	11/20/13
0841L_01	17664	TP	POR	0.12	0.13	0.04	0.06	2.12	-0.96	-1.48	36	0.04	0.14	0.06	0.03	0.01	0.01	0.06	2/24/04	11/20/13
0841L_01	17664	Hardness	Summer	0.39	-8.00	0.01	2.52	-3.18	0.04	-0.58	18	158.00	232.00	192.00	160.00	132.00	87.00	60.00	5/27/04	8/21/13
0841L_01	17664	SO4	Summer	0.26	-7.07	0.03	2.98	-2.38	-0.28	-1.23	18	96.09	159.00	136.00	97.60	67.40	30.50	68.60	5/27/04	8/21/13
0841L_01	18311	pH	Summer	0.18	-0.17	0.03	0.07	-2.30	-0.93	1.04	26	7.83	9.10	8.10	7.85	7.50	6.30	0.60	5/26/04	10/22/08
0841L_01	18311	pH	Winter	0.28	-0.09	0.00	0.03	-3.26	0.09	0.87	29	7.69	8.30	7.80	7.60	7.60	7.10	0.20	12/16/03	12/18/08
0841L_01	18311	Fecal C	Summer	0.13	0.64	0.08	0.35	1.86	0.06	-0.52	25	2627.62	34000.00	950.00	110.00	20.00	0.50	930.00	5/26/04	10/22/08
0841L_01	18311	*E. coli*	Summer	0.23	0.73	0.01	0.27	2.70	0.98	-0.56	26	849.19	7700.00	523.00	43.50	19.00	2.00	504.00	5/26/04	10/22/08
0841L_01	18311	Field Turb	POR	0.14	0.33	0.01	0.11	2.92	1.15	-0.21	56	18.11	270.00	17.20	5.93	2.60	0.00	14.60	12/16/03	12/18/08
0841L_01	18311	Field Turb	Summer	0.21	0.43	0.02	0.17	2.53	0.33	-0.65	27	16.11	99.30	19.00	4.95	2.50	0.00	16.50	5/26/04	10/22/08
0841M_01	10792	pH	Winter	0.29	-0.05	0.06	0.03	-2.14	-0.48	2.36	13	7.58	8.10	7.70	7.60	7.50	7.00	0.20	1/21/04	3/21/11
0841M_01	10792	D. Cu	Winter	0.35	0.24	0.06	0.11	2.18	1.74	-0.20	11	0.97	2.80	2.10	0.40	0.40	0.40	1.70	1/21/04	3/21/11
0841M_01	10792	Flow Severity	Winter	0.29	0.13	0.07	0.06	2.01	-0.09	0.46	12	2.83	4.00	3.00	3.00	2.50	2.00	0.50	1/21/04	3/21/11
0841N_01	17675	Sp Cond	POR	0.15	-33.64	0.00	7.77	-4.33	-0.84	-1.33	112	806.19	1300.00	1004.00	813.00	613.00	156.00	391.00	12/15/03	11/19/13
0841N_01	17675	Sp Cond	Summer	0.22	-42.15	0.00	11.05	-3.82	-0.71	-1.03	55	771.13	1230.00	998.00	767.00	593.00	156.00	405.00	5/24/04	10/30/13
0841N_01	17675	NO3	POR	0.28	-0.07	0.00	0.02	-3.66	0.33	-1.14	36	0.77	1.59	1.13	0.77	0.41	0.10	0.72	2/24/04	11/19/13
0841N_01	17675	NO3	Summer	0.48	-0.08	0.00	0.02	-3.84	0.15	-0.67	18	0.68	1.31	0.88	0.73	0.42	0.15	0.46	5/24/04	8/20/13
0841N_01	17675	NO3	Winter	0.18	-0.07	0.08	0.03	-1.87	-0.19	-1.02	18	0.85	1.59	1.29	0.83	0.39	0.10	0.90	2/24/04	11/19/13
0841N_01	17675	TKN	POR	0.15	-0.07	0.02	0.03	-2.37	-1.98	1.91	34	0.48	1.20	0.60	0.40	0.30	0.10	0.30	2/24/04	11/19/13
0841N_01	17675	TKN	Summer	0.28	-0.04	0.03	0.02	-2.40	0.34	0.19	17	0.51	1.00	0.60	0.50	0.40	0.10	0.20	5/24/04	8/20/13
0841N_01	17675	TP	POR	0.13	0.15	0.03	0.07	2.28	-1.54	-1.02	37	0.06	0.26	0.08	0.05	0.03	0.01	0.05	2/24/04	11/19/13
0841N_01	17675	TP	Winter	0.21	0.19	0.05	0.09	2.10	-0.87	-0.76	19	0.06	0.26	0.08	0.04	0.01	0.01	0.08	2/24/04	11/19/13
0841N_01	17675	Hardness	POR	0.19	-10.03	0.01	3.50	-2.86	-0.16	-1.02	36	236.19	384.00	298.00	238.00	179.50	120.00	118.50	2/24/04	11/19/13
0841N_01	17675	Hardness	Summer	0.39	-16.06	0.01	5.17	-3.11	0.24	-0.76	17	231.47	384.00	300.00	219.00	176.00	120.00	124.00	5/24/04	8/20/13
0841N_01	17675	Chloride	POR	0.19	-1.62	0.01	0.57	-2.85	-1.67	0.04	36	41.93	58.00	51.50	43.25	35.00	15.70	16.50	5/24/04	11/19/13
0841N_01	17675	Chloride	Summer	0.26	-2.23	0.03	0.94	-2.36	-1.20	-0.63	18	41.07	57.00	52.10	45.65	33.00	15.70	19.10	5/24/04	8/20/13
0841N_01	17675	SO4	POR	0.27	-11.71	0.00	3.39	-3.46	0.59	-0.16	35	158.39	329.00	216.00	154.00	100.60	30.00	115.40	5/24/04	11/19/13
0841N_01	17675	SO4	Summer	0.48	-15.48	0.00	4.03	-3.84	0.34	-1.16	18	151.24	250.00	220.00	148.15	96.10	60.00	123.90	5/24/04	8/20/13
0841N_01	17675	TDS	POR	0.16	-24.72	0.00	5.31	-4.66	0.55	0.20	112	531.22	1130.00	651.35	533.33	398.45	101.40	252.90	12/15/03	11/19/13
0841N_01	17675	TDS	Summer	0.23	-28.80	0.00	7.16	-4.02	-0.47	-1.00	55	496.84	828.00	639.60	491.40	385.45	101.40	254.15	5/24/04	10/30/13
0841O_01	10815	BOD5	Summer	0.25	0.23	0.02	0.09	2.47	1.87	0.08	20	2.05	5.00	3.00	1.00	1.00	1.00	2.00	5/27/04	8/20/13
0841O_01	10815	NH3	POR	0.24	0.39	0.00	0.11	3.49	0.66	-1.65	41	0.30	2.35	0.19	0.04	0.00	0.00	0.19	2/24/04	11/20/13
0841O_01	10815	NH3	Summer	0.30	0.44	0.01	0.15	2.88	0.98	-1.15	21	0.23	1.42	0.09	0.03	0.00	0.00	0.09	5/27/04	8/20/13
0841O_01	10815	NH3	Winter	0.20	0.34	0.05	0.16	2.11	0.07	-0.95	20	0.38	2.35	0.43	0.07	0.01	0.00	0.42	2/24/04	11/20/13
0841O_01	10815	NO3	Summer	0.21	0.43	0.04	0.19	2.21	-1.60	0.20	20	0.71	9.52	0.44	0.16	0.10	0.00	0.34	8/16/04	8/20/13
0841O_01	10815	TP	POR	0.26	0.24	0.00	0.07	3.61	-0.36	-0.58	40	0.10	1.21	0.11	0.05	0.01	0.01	0.10	2/24/04	11/20/13

Table MS-13 Continued: 0841B, 0841C, 0841D, 0841E, 0841F, 0841H, 0841K, 0841L, 0841M, 0841N, 0841O, 0841P, 0841Q, 0841R, 0841T, 0841V Trend Analysis Result Detail

0841O_01	10815	TP	Winter	0.52	0.34	0.00	0.08	4.41	-0.66	-1.13	20	0.07	0.32	0.10	0.06	0.01	0.01	0.10	2/24/04	11/20/13
0841O_01	10815	Hardness	Winter	0.18	-5.12	0.06	2.55	-2.01	1.55	0.44	20	214.45	304.00	234.50	213.00	184.00	168.00	50.50	2/24/04	11/20/13
0841O_01	10815	Fecal C	POR	0.15	0.49	0.00	0.14	3.49	-0.81	0.56	72	1369.70	57000.00	390.00	100.00	20.00	0.50	370.00	12/16/03	9/21/11
0841O_01	10815	Fecal C	Summer	0.12	0.40	0.05	0.19	2.08	0.56	0.35	35	2479.73	57000.00	730.00	150.00	30.00	0.50	700.00	5/27/04	9/21/11
0841O_01	10815	Fecal C	Winter	0.17	0.54	0.01	0.20	2.69	-1.54	-0.33	37	319.68	5000.00	280.00	65.00	20.00	0.50	260.00	12/16/03	4/27/11
0841O_01	10815	*E. coli*	POR	0.33	0.43	0.00	0.06	7.67	0.80	-0.81	119	791.07	9700.00	480.00	80.00	24.00	0.50	456.00	12/16/03	11/20/13
0841O_01	10815	*E. coli*	Summer	0.29	0.37	0.00	0.08	4.86	1.57	-0.89	59	703.69	9700.00	370.00	66.00	24.00	4.00	346.00	5/27/04	10/30/13
0841O_01	10815	*E. coli*	Winter	0.38	0.49	0.00	0.08	5.96	-0.06	-0.48	60	876.98	4800.00	510.00	92.50	26.00	0.50	484.00	12/16/03	11/20/13
0841O_01	17681	Sp Cond	POR	0.19	0.02	0.00	0.00	5.57	1.13	0.82	131	521.32	775.00	548.00	505.00	476.00	334.00	72.00	12/15/03	11/19/13
0841O_01	17681	Sp Cond	Summer	0.12	0.02	0.01	0.01	2.91	1.02	0.80	66	530.88	775.00	562.00	506.50	481.00	340.00	81.00	5/24/04	10/30/13
0841O_01	17681	Sp Cond	Winter	0.31	15.70	0.00	2.92	5.38	1.86	0.10	65	511.60	702.00	533.00	497.00	467.00	334.00	66.00	12/15/03	11/19/13
0841O_01	17681	TP	POR	0.17	0.00	0.01	0.00	2.95	1.00	-1.51	44	0.03	0.08	0.05	0.03	0.01	0.01	0.05	2/23/04	11/19/13
0841O_01	17681	TP	Summer	0.39	0.01	0.00	0.00	3.57	0.67	-1.44	22	0.03	0.07	0.06	0.02	0.01	0.01	0.06	5/24/04	8/20/13
0841O_01	17681	Chloride	Winter	0.31	0.73	0.00	0.22	3.32	1.88	1.08	27	20.22	29.30	21.40	19.10	18.00	12.90	3.40	1/22/04	11/19/13
0841O_01	17681	Fecal C	Summer	0.17	0.52	0.02	0.21	2.50	-1.21	-0.08	33	295.98	4100.00	290.00	50.00	20.00	0.50	270.00	5/24/04	9/21/11
0841O_01	17681	TDS	Winter	0.27	0.03	0.00	0.01	4.85	1.37	-0.39	65	335.91	456.30	352.95	325.00	305.18	243.75	47.78	12/15/03	11/19/13
0841O_01	17682	Secchi Depth	Summer	0.14	-0.06	0.00	0.02	-3.02	-0.55	-1.19	56	0.13	0.28	0.17	0.13	0.08	0.05	0.09	5/27/04	10/30/13
0841O_01	17682	TKN	POR	0.22	-0.03	0.01	0.01	-2.98	1.49	0.14	33	0.67	1.20	0.80	0.60	0.50	0.30	0.30	2/25/04	11/19/13
0841O_01	17682	TKN	Summer	0.34	-0.04	0.02	0.02	-2.66	1.25	0.23	16	0.72	1.20	0.80	0.70	0.55	0.40	0.25	5/27/04	8/20/13
0841O_01	17682	TP	Winter	0.16	0.16	0.08	0.09	1.83	-0.95	-0.65	20	0.05	0.21	0.07	0.04	0.02	0.01	0.05	2/25/04	11/19/13
0841O_01	17682	Hardness	Summer	0.21	-5.19	0.06	2.57	-2.02	0.49	-1.56	17	175.94	220.00	212.00	160.00	150.00	136.00	62.00	5/27/04	8/20/13
0841O_01	17682	SO4	Summer	0.16	-4.92	0.10	2.77	-1.77	0.13	-1.08	18	107.63	167.00	141.00	105.15	76.00	54.40	65.00	5/27/04	8/20/13
0841O_01	17682	*E. coli*	Winter	0.12	-0.18	0.01	0.07	-2.76	1.18	1.37	56	178.29	4840.00	115.00	34.50	17.00	2.00	98.00	12/16/03	11/19/13
0841P_01	10722	pH	POR	0.42	-0.09	0.00	0.02	-4.16	-0.88	0.32	26	7.93	8.60	8.20	7.95	7.70	7.00	0.50	1/22/04	7/24/13
0841P_01	10722	pH	Summer	0.35	-0.07	0.03	0.03	-2.45	-0.21	-0.68	13	7.99	8.50	8.30	8.00	7.70	7.40	0.60	7/22/04	7/24/13
0841P_01	10722	pH	Winter	0.56	-0.12	0.00	0.03	-3.76	-0.71	0.66	13	7.88	8.60	8.20	7.90	7.70	7.00	0.50	1/22/04	3/22/11
0841P_01	10722	TKN	Winter	0.44	-0.13	0.03	0.05	-2.64	0.57	0.21	11	0.75	1.80	0.90	0.60	0.50	0.30	0.40	4/22/04	3/22/11
0841P_01	17673	Secchi Depth	Winter	0.18	-0.05	0.04	0.02	-2.18	-0.77	-0.66	23	0.42	0.60	0.60	0.43	0.34	0.11	0.26	11/16/04	4/22/08
0841P_01	17673	Sp Cond	Winter	0.17	-46.67	0.03	20.05	-2.33	1.85	1.18	29	387.09	861.00	492.40	354.00	262.00	131.00	230.40	12/15/03	4/22/08
0841P_01	17673	TDS	POR	0.16	-0.12	0.00	0.04	-3.10	-0.41	-0.09	51	244.85	559.65	299.00	221.00	170.95	85.15	128.05	12/15/03	5/20/08
0841P_01	17673	TDS	Summer	0.18	-24.22	0.05	11.62	-2.08	0.85	-0.30	22	230.56	378.00	273.00	217.75	180.70	122.00	92.30	5/25/04	5/20/08
0841P_01	17673	TDS	Winter	0.16	-30.38	0.03	13.43	-2.26	1.86	1.07	29	255.69	559.65	320.06	245.00	170.30	85.15	149.76	12/15/03	4/22/08
0841P_01	17673	Days Since Precip	Summer	0.39	-1.41	0.00	0.40	-3.50	0.28	-1.40	21	3.79	7.00	7.00	3.00	2.00	0.50	5.00	5/25/04	10/22/07
0841Q_01	17678	pH	POR	0.17	-0.12	0.00	0.04	-3.10	0.72	2.34	50	7.65	9.00	7.90	7.60	7.40	6.60	0.50	12/15/03	11/18/08
0841Q_01	17678	pH	Summer	0.17	-0.13	0.05	0.06	-2.07	-0.77	0.84	23	7.58	8.70	7.90	7.70	7.30	6.60	0.60	5/25/04	10/21/08
0841Q_01	17678	Flow Severity	POR	0.27	-0.34	0.00	0.08	-4.32	0.47	1.65	52	3.06	5.00	3.00	3.00	3.00	1.00	0.00	12/15/03	11/18/08
0841Q_01	17678	Flow Severity	Summer	0.18	-0.27	0.04	0.12	-2.14	-0.32	1.11	23	2.61	5.00	3.00	3.00	2.00	1.00	1.00	5/25/04	10/21/08
0841Q_01	17678	Flow Severity	Winter	0.45	-0.10	0.00	0.02	-4.70	1.51	0.38	29	3.41	5.00	4.00	3.00	3.00	2.00	1.00	12/15/03	11/18/08
0841R_01	17190	pH	POR	0.16	-0.04	0.05	0.02	-2.08	-1.08	0.73	24	7.62	8.10	7.80	7.60	7.55	7.00	0.25	1/21/04	3/21/11
0841R_01	17190	pH	Summer	0.61	-0.04	0.00	0.01	-3.76	1.91	1.21	11	7.65	7.90	7.70	7.60	7.60	7.50	0.10	7/21/04	9/16/10
0841R_01	17191	pH	Summer	0.44	-0.08	0.02	0.03	-2.81	-1.21	0.65	12	7.48	7.90	7.75	7.45	7.30	6.70	0.45	7/20/04	7/23/13
0841R_01	17191	OP	POR	0.32	0.43	0.00	0.13	3.34	0.91	-1.90	26	0.02	0.11	0.03	0.00	0.00	0.00	0.03	1/22/04	7/23/13
0841T_01	17189	pH	Winter	0.28	-0.06	0.06	0.03	-2.08	-1.95	2.09	13	7.73	8.10	7.90	7.70	7.60	7.00	0.30	1/21/04	3/21/11
0841T_01	17189	Flow Severity	POR	0.31	0.17	0.00	0.05	3.25	1.72	0.86	26	2.85	5.00	3.00	3.00	2.00	2.00	1.00	1/21/04	7/23/13
0841T_01	17189	Flow Severity	Summer	0.22	0.15	0.08	0.08	1.91	1.78	1.55	15	2.87	5.00	3.00	3.00	2.00	2.00	1.00	7/22/04	7/23/13
0841T_01	17189	Flow Severity	Winter	0.48	0.21	0.02	0.07	2.90	0.45	-0.59	11	2.82	4.00	3.00	3.00	2.00	2.00	1.00	1/21/04	3/21/11
0841V_01	17683	Chlorophyll-a	POR	0.11	-0.65	0.04	0.31	-2.11	0.83	-2.40	37	4.92	43.60	6.00	0.00	0.00	0.00	6.00	2/24/04	11/19/13
0841V_01	17683	Chlorophyll-a	Winter	0.21	-0.84	0.05	0.40	-2.11	1.24	-1.39	19	5.74	43.60	5.30	0.00	0.00	0.00	5.30	2/24/04	11/19/13

Segment 0805 – Upper Trinity River

Overview

This 97 mile segment starts immediately upstream of the confluence of the Cedar Creek Reservoir discharge canal in Henderson/Navarro County and runs upstream of the confluence of the Elm Fork Trinity River in Dallas County. The upper 15 miles of the watershed are highly urbanized and the lower 82 miles are mostly rural cropland and pasture. The flow in this section can be almost 100% wastewater effluent from the Dallas/Fort Worth Metroplex during the hot, dry summer months and periods of drought. Water here is generally very turbid as it flows through the Blackland Prairie and into Post Oak Savanna.

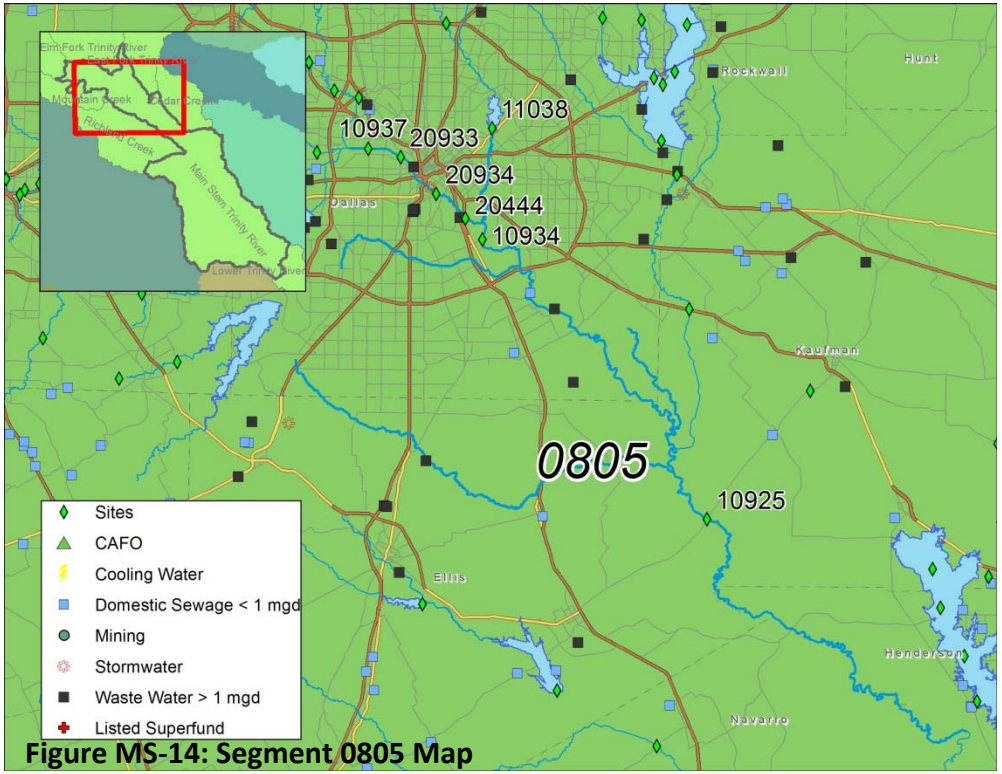


Figure MS-14: Segment 0805 Map

Assessments (Classified Segments):

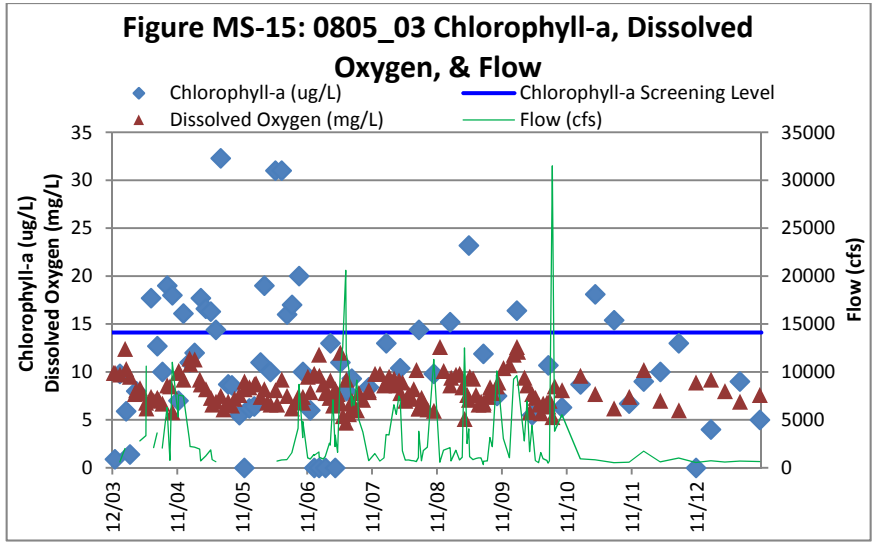
Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0805_01 - From confluence of the Cedar Creek Reservoir discharge canal upstream to confluence of Smith Creek	No Concern	Not Assessed (No Data)
0805_02 - From confluence of Smith Creek upstream to confluence of Tenmile Creek	Fully Supporting	Fully Supporting
0805_03 - From the confluence of Fivemile Creek upstream to the confluence of Cedar Creek	Fully Supporting	Fully Supporting

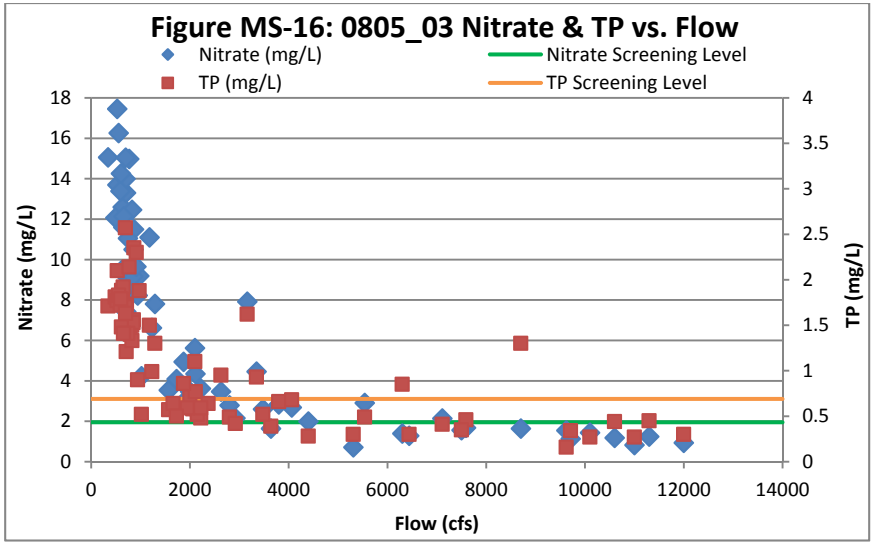
0805_04 - From confluence of Cedar Creek upstream to confluence of Elm Fork Trinity River	Fully Supporting	Fully Supporting
0805_06 - From confluence of Tenmile Creek upstream to confluence of Fivemile Creek	No Concern	Not Assessed (No Data)

General Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0805_01	Concern	Fully Supporting
0805_02	Concern	Concern
0805_03	Concern	Concern
0805_04	Concern	Concern
0805_06	Concern	Fully Supporting

0805_02 was found to have concerns for chlorophyll-a by both the TCEQ Draft 2014 Integrated Report and the in-house 5 year assessment. 0805_01 and 0805_03 were found to have concerns for chlorophyll-a by the Integrated Report. Nitrate and TP were found to be of concern in all portions of the segment by the Integrated Report and in 0805_02, 0805_03, and 0805_04 by the in-house 5 year assessment. Chlorophyll-a is not well correlated to nutrients in this segment. As discussed in the 2010 TRA CRP Basin Summary Report, light penetration, rather than nutrients, is the limiting factor for algal growth in much of the Trinity basin. As shown in Figure MS-15, chlorophyll-a is not impacting dissolved oxygen in this segment.

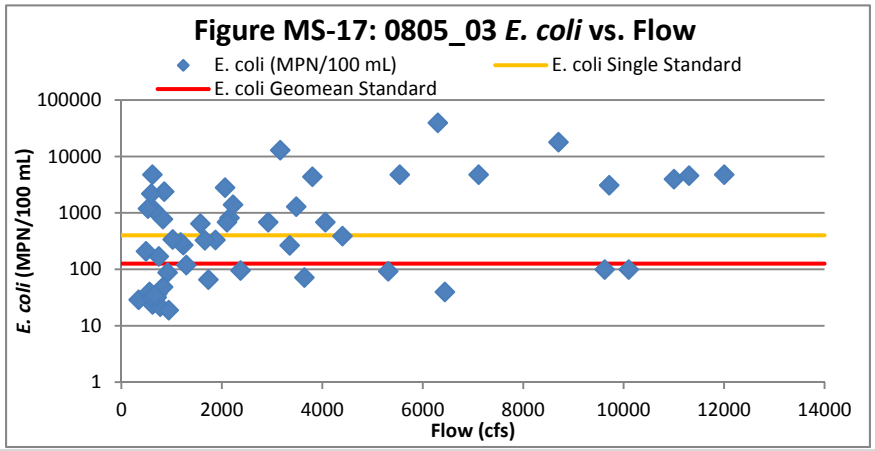
Nutrients in this segment are highly negatively correlated to flow as shown in Figure MS-16. Nutrient loadings most likely come from upstream wastewater treatment facilities. In the summer dry weather conditions, the flow in the river is effluent dominated. During rainfall events, concentrations are diluted thus resulting in lower values during high flow events.





Contact Recreation Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0805_01	Not Assessed (No Data)	Not Assessed (No Data)
0805_02	Fully Supporting	Fully Supporting
0805_03	Not Supporting	Not Supporting
0805_04	Not Supporting	Not Supporting
0805_06	No Concern	Not Assessed (No Data)

0805_03 and 0805_04 were found to be not supporting due to elevated levels of *E. coli* by both the TCEQ Draft 2014 Integrated Report and the in-house 5 year assessment. *E. coli* is correlated to flow (Figure MS-17), as expected, although the relationship is not as strong as that seen for nutrients above. As discussed in the Contact Recreation Use section of Assessments (Classified Segments) for 0841, the watershed above 0805 is vast. In general, specific sources of *E. coli* would be difficult to identify but major contributors to *E. coli* impairments are most likely runoff related, such as, pets, livestock, and wildlife.



Public Water Supply Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0805_01	Not Assessed (No Data)	No Concern
0805_02	Not Assessed (No Data)	Fully Supporting
0805_03	Not Assessed (No Data)	Fully Supporting
0805_04	Not Assessed (No Data)	Fully Supporting
0805_06	Not Assessed (No Data)	No Concern

Fish Consumption Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0805_01	Not Supporting	Not Assessed (No Data)
0805_02	Not Supporting	Not Assessed (No Data)
0805_03	Not Supporting	Not Assessed (No Data)
0805_04	Not Supporting	Not Assessed (No Data)
0805_06	Not Supporting	Not Assessed (No Data)

All portions of this segment were found to be not supporting due to elevated levels of dioxins and PCBs in fish tissue by the TCEQ Draft 2014 Integrated Report. There is a TMDL currently underway to address this issue.

Assessments (Unclassified Segments):

Aquatic Life Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0805A_01 - Entire segment	Not Assessed (No Data)	Not Assessed (No Data)
0805B_01 - Entire segment	Not Assessed (No Data)	Not Assessed (No Data)

General Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0805A_01	Not Assessed (No Data)	Not Assessed (No Data)
0805B_01	Not Assessed (No Data)	Not Assessed (No Data)

Contact Recreation Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0805A_01	No Concern	Not Assessed (No Data)
0805B_01	No Concern	Not Assessed (No Data)

Public Water Supply Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0805A_01	Not Assessed (No Data)	Not Assessed (No Data)
0805B_01	Not Assessed (No Data)	Not Assessed (No Data)

Fish Consumption Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0805A_01	Not Assessed (No Data)	Not Assessed (No Data)
0805B_01	Not Assessed (No Data)	Not Assessed (No Data)

Trend Analysis Overview

Table MS-14: Trend Analysis Result Summary

Main Stem		Air Temp			Flow Severity			Flow			Secchi Depth			Sp Cond			*E. coli*			TDS			NO3			TKN		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0805_02	10925																		DN				UP	UP	UP			DN
0805_03	10934		DN									UP			UP						UP		UP	UP				
0805_04	10937					DN			DN			UP			UP						UP		UP	UP				
0805B_01	10839				UP		UP																					

Main Stem		OP		
Seg_AU	Site	A	S	W
0805_02	10925			
0805_03	10934			
0805_04	10937		UP	
0805B_01	10839			

Trends Key
A-All Months
S-Summer/Growing Season (May-October)
W-Winter/Dormant Sesaon (November-April)
UP Increasing Trends
DN Decreasing Trends

There were 21 significant trends identified for this segment as summarized in Table MS-14. For additional detail on trend methods, see the Data Review Methodology section.

Trends (Classified Segments):
See Table MS-15 for details of the significant trends analysis summary presented in Table MS-14. Increasing trends have been identified for OP in 0805_04 and nitrate in 0805_02, 0805_03, and 0805_04. As discussed above, in the General Use section of Assessments (Classified Segments), nutrients are negatively correlated to flow resulting in higher nutrient values at lower flows. It appears that the increasing nutrient trends are related to a decreasing trend in rainfall which reduces inflows

that typically provide dilution for these parameters. This relationship is best illustrated by Nitrate as shown in Figure MS-18. Similarly, the increasing summer trend in specific conductivity and TDS in 0805_03 and 0805_04 appears to be related to decreasing flows in the river as shown for 0805_03 in Figure MS-19. The decreasing flows are likely due to reuse that is occurring. This, combined with evaporation and reduced rainfall, increases the concentration of salts and other dissolved solids in the river.

Figure MS-18: 0805_04 Nitrate & 7 Day Total Rainfall

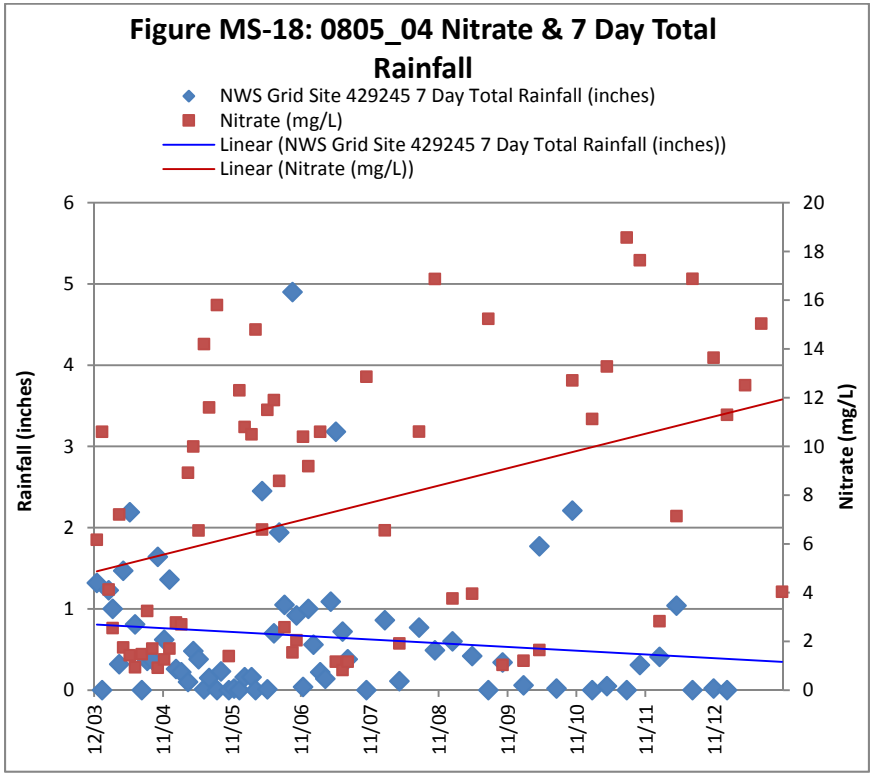


Figure MS-19: 0805_03 Specific Conductivity & Flow

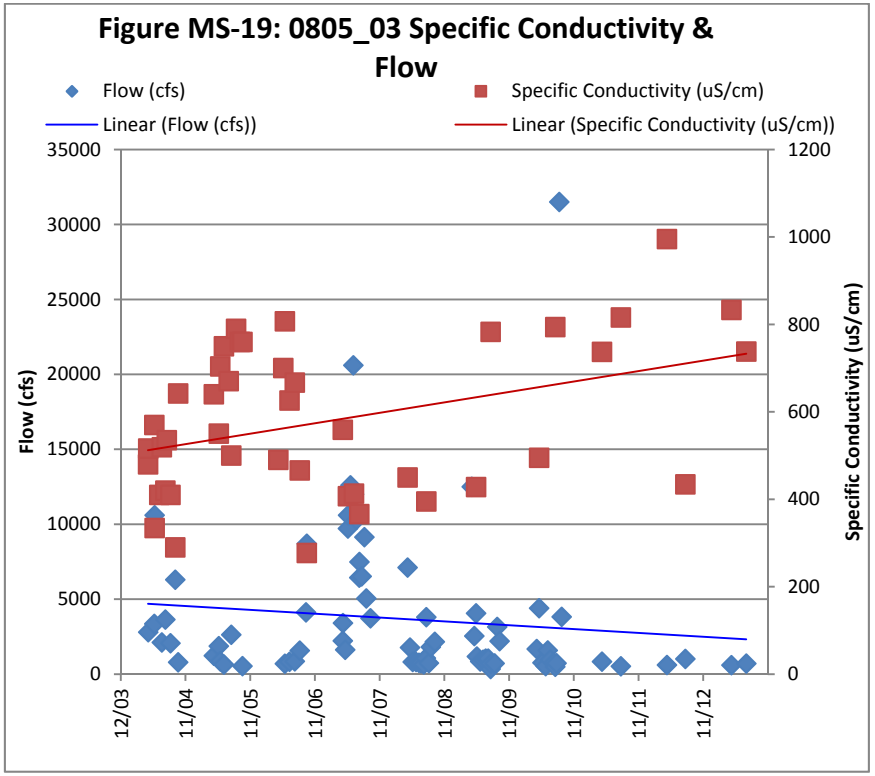


Table MS-15: 0805 Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0805_02	10925	NO3	POR	0.11	0.61	0.00	0.20	3.10	1.79	-1.08	80	7.02	22.47	11.67	6.22	2.37	0.31	9.30	12/16/03	11/19/13
0805_02	10925	NO3	Summer	0.12	0.66	0.03	0.28	2.32	1.90	0.04	42	6.89	22.47	11.64	5.78	2.31	0.78	9.33	5/4/04	7/30/13
0805_02	10925	NO3	Winter	0.10	0.56	0.05	0.28	2.01	0.54	-1.70	38	7.17	16.27	12.20	6.36	2.56	0.31	9.64	12/16/03	11/19/13
0805_02	10925	TKN	Winter	0.18	-0.06	0.01	0.02	-2.64	0.91	1.00	34	1.15	2.20	1.40	1.15	0.90	0.20	0.50	12/16/03	11/19/13
0805_02	10925	*E. coli*	Winter	0.11	-0.17	0.05	0.09	-2.04	1.35	0.13	35	208.40	3110.00	160.00	49.00	15.00	4.00	145.00	12/16/03	11/19/13
0805_03	10934	Air Temp	Summer	0.12	-0.55	0.04	0.26	-2.11	-0.37	-0.84	36	29.78	39.00	33.50	29.60	26.75	21.00	6.75	5/3/04	7/31/13
0805_03	10934	Secchi Depth	Summer	0.18	0.02	0.01	0.01	2.63	1.01	-1.12	33	0.19	0.40	0.27	0.16	0.10	0.03	0.17	5/3/04	7/31/13
0805_03	10934	Sp Cond	Summer	0.14	23.97	0.01	9.17	2.61	0.66	-1.06	43	579.67	995.00	738.00	550.00	428.00	277.00	310.00	5/3/04	7/31/13
0805_03	10934	NO3	Summer	0.15	0.78	0.01	0.30	2.63	1.39	-1.60	41	6.71	17.46	12.07	4.35	2.14	0.01	9.93	5/3/04	7/31/13
0805_03	10934	NO3	POR	0.10	0.57	0.00	0.19	3.06	1.42	-2.22	84	6.91	17.46	11.08	6.12	2.62	0.01	8.46	12/8/03	11/20/13
0805_03	10934	TDS	Summer	0.11	12.95	0.03	5.66	2.29	0.09	-1.55	43	373.45	551.00	458.00	357.50	280.00	180.05	178.00	5/3/04	7/31/13
0805_04	10937	Flow	Summer	0.11	-0.13	0.06	0.07	-1.96	1.22	-1.47	34	2603.53	12700.00	4160.00	816.50	449.00	352.00	3711.00	5/3/04	8/6/13
0805_04	10937	Secchi Depth	Summer	0.13	0.02	0.04	0.01	2.19	0.48	-1.14	33	0.21	0.46	0.30	0.20	0.12	0.03	0.18	5/3/04	8/6/13
0805_04	10937	Sp Cond	Summer	0.11	23.89	0.06	12.04	1.98	-0.55	-0.80	34	584.26	917.00	781.00	599.50	410.00	77.00	371.00	5/3/04	8/6/13
0805_04	10937	NO3	POR	0.14	0.71	0.00	0.22	3.23	0.96	-2.10	64	7.47	18.57	11.75	6.87	1.84	0.83	9.92	12/15/03	11/25/13
0805_04	10937	NO3	Summer	0.23	0.98	0.01	0.33	2.95	0.76	-1.60	31	7.46	18.57	12.51	6.59	1.65	0.83	10.86	5/3/04	8/6/13
0805_04	10937	OP	Summer	0.12	0.09	0.05	0.04	2.09	0.14	-2.02	33	0.94	1.99	1.63	1.02	0.17	0.08	1.46	5/3/04	8/6/13
0805_04	10937	Flow Severity	Summer	0.16	-0.15	0.02	0.06	-2.45	0.63	-2.05	33	3.79	5.00	5.00	3.00	3.00	2.00	2.00	5/3/04	8/6/13
0805_04	10937	TDS	Summer	0.17	16.76	0.01	6.48	2.59	-0.13	-2.05	34	389.24	545.00	499.00	402.03	267.15	227.50	231.85	5/3/04	8/6/13

Trends (Unclassified Segments):

See Table MS-16 for details of the significant trends analysis summary presented in Table MS-14. There are no trends of concern in this unclassified segment.

Table MS-16: 0805B Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0805B_01	10839	Flow Severity	POR	0.23	0.68	0.01	0.23	2.96	0.48	-1.91	31	4.10	6.00	6.00	3.00	3.00	2.00	3.00	12/10/03	5/7/07
0805B_01	10839	Flow Severity	Winter	0.24	0.62	0.04	0.28	2.19	1.06	-0.96	17	3.76	6.00	5.00	3.00	3.00	2.00	2.00	12/10/03	2/13/07

Segment 0835 – Richland Creek below Richland-Chambers Reservoir

Overview

This 5 mile segment runs from the confluence of the Trinity River to the Richland-Chambers dam in Freestone County. North of the segment is agriculture/pasture and south of the segment is forest. The entire segment is within the Post Oak Savannah ecoregion.

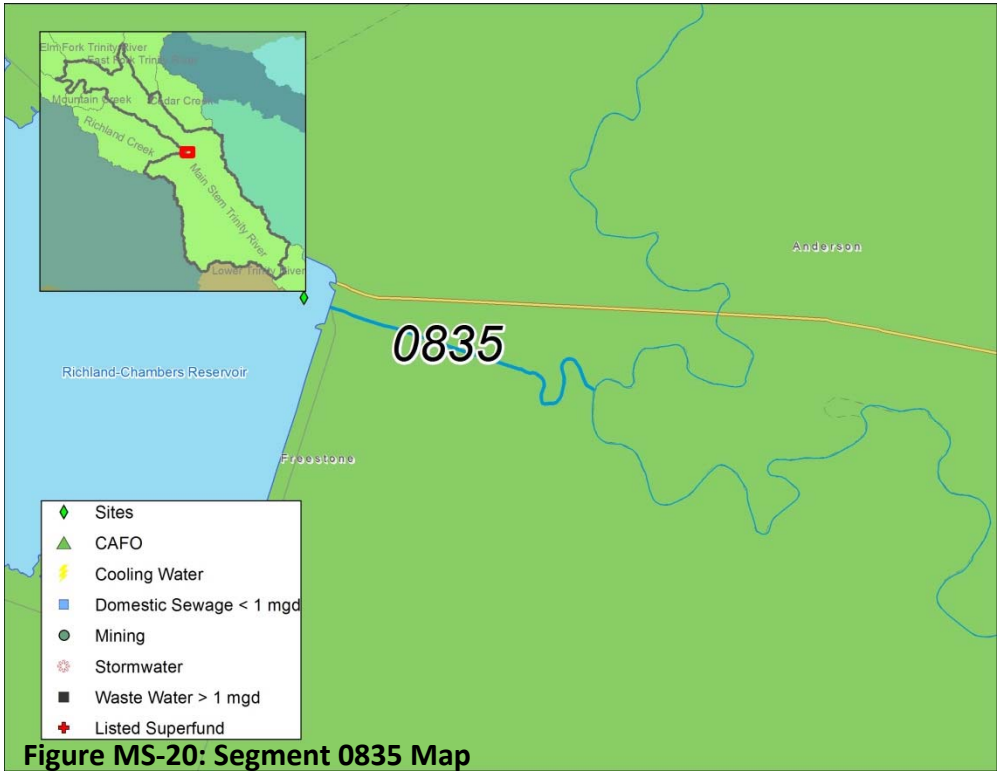


Figure MS-20: Segment 0835 Map

Assessments (Classified Segments):

Aquatic Life Use: 0835_01 - Entire Segment	**TCEQ Draft 2014 Integrated Report** Not Assessed (No Data)	**In-House 5 Year Assessment** Not Assessed (No Data)
General Use: 0835_01	**TCEQ Draft 2014 Integrated Report** Not Assessed (No Data)	**In-House 5 Year Assessment** Not Assessed (No Data)
Contact Recreation Use: 0835_01	**TCEQ Draft 2014 Integrated Report** Not Assessed (No Data)	**In-House 5 Year Assessment** Not Assessed (No Data)
Public Water Supply Use: 0835_01	**TCEQ Draft 2014 Integrated Report** Not Assessed (No Data)	**In-House 5 Year Assessment** Not Assessed (No Data)

Fish Consumption Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0835_01	Not Assessed (No Data)	Not Assessed (No Data)

Assessments (Unclassified Segments):

Aquatic Life Use: Not Assessed (No Data)

General Use: Not Assessed (No Data)

Contact Recreation Use: Not Assessed (No Data)

Public Water Supply Use: Not Assessed (No Data)

Fish Consumption Use: Not Assessed (No Data)

Trend Analysis Overview

Trends (Classified Segments):
None

Trends (Unclassified Segments):
None



Image MS- 3: Aquatic plants near 0835

Segment 0804 – Trinity River Above Lake Livingston

Overview

This rural 158 mile segment of the Trinity River travels southeast from approximately 20 miles above the confluence of Richland Creek to Lake Livingston. This segment is generally considered the “Middle Trinity” and runs entirely through the Post Oak Savannah. Land use in 0804 is generally split between forest and agriculture/pasture.

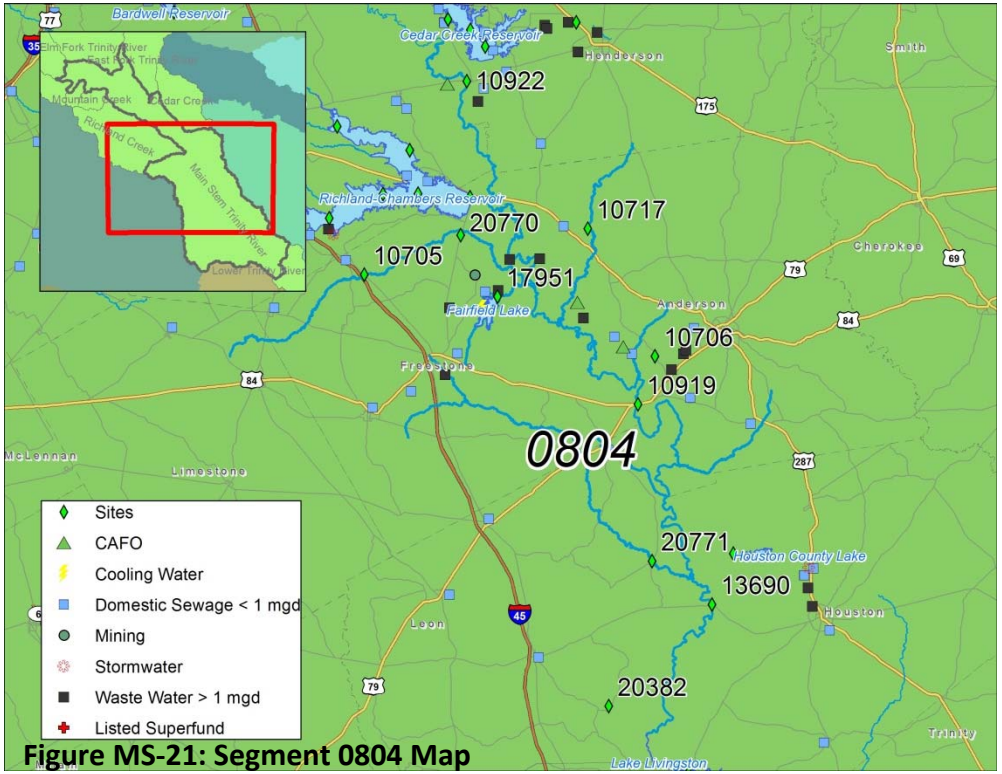


Figure MS-21: Segment 0804 Map

Assessments (Classified Segments):

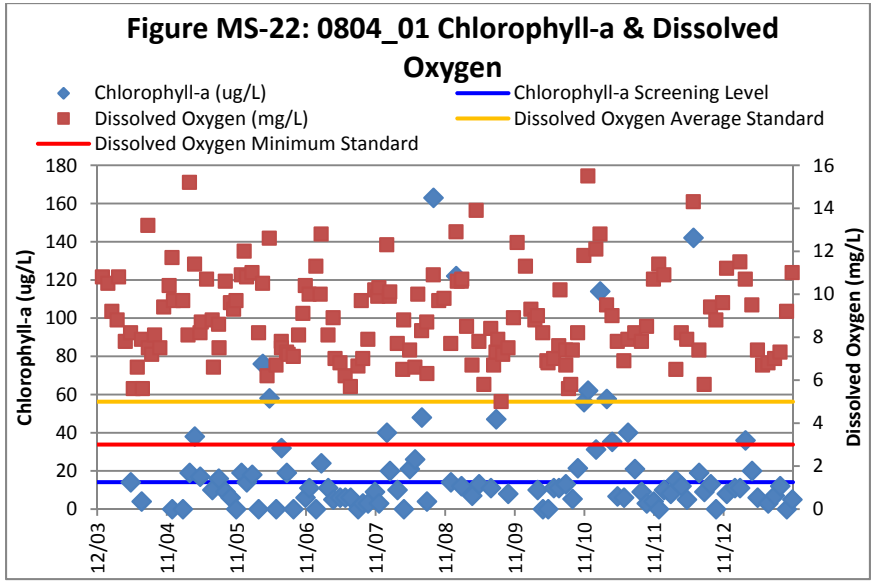
Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0804_01 - From the lower end of the segment up to just above the confluence with Hurricane Bayou in Houston County	Fully Supporting	Fully Supporting
0804_02 - From just upstream of the confluence with Hurricane Bayou up to just above the confluence with Boons Creek	Not Assessed (No Data)	Not Assessed (No Data)
0804_03 - From just upstream of the confluence with Boons Creek up to	Not Assessed (No Data)	Not Assessed (No Data)

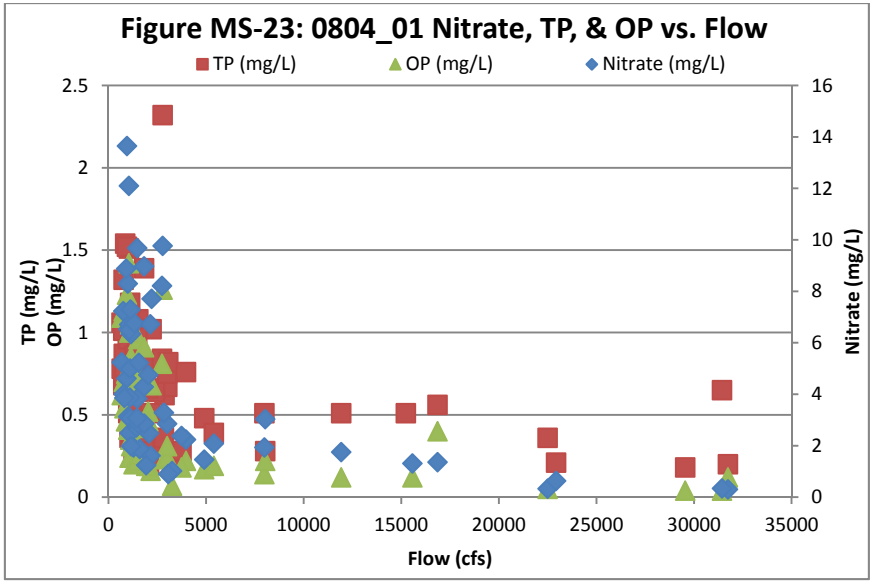
just above the confluence with Caney Creek		
0804_04 - From the confluence with Caney Creek up to just above the confluence with Indian Creek in Anderson County	Fully Supporting	Fully Supporting
0804_05 - From just above the confluence with Indian Creek in Anderson County up to just above the confluence with Tehuacana Creek	Not Assessed (No Data)	Not Assessed (No Data)
0804_06 - From just above the confluence with Tehuacana Creek to just above the confluence with Richland Creek	Not Assessed (No Data)	Not Assessed (No Data)
0804_07 - From just above the confluence with Richland Creek in Henderson County, up to the upper end of the segment	Fully Supporting	Fully Supporting

General Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0804_01	Concern	Concern
0804_02	Concern	Fully Supporting
0804_03	Concern	Fully Supporting
0804_04	Concern	Concern
0804_05	Fully Supporting	Fully Supporting
0804_06	Fully Supporting	Fully Supporting
0804_07	Concern	Concern

0804_01, 0804_04, and 0804_07 were found to have concerns for chlorophyll-a, nitrate, OP, and TP by the in-house 5 year assessment. 0804_01, 0804_02, 0804_04, and 0804_07 were found to have concerns for chlorophyll-a, nitrate, and TP by the TCEQ Draft 2014 Integrated Report which also identified concerns for nitrate in 0804_03. Overall, chlorophyll-a and nutrient relationships in this segment are similar to those discussed for segment 0805 in the General Use section of Assessments (Classified Segments). Chlorophyll-a is not well correlated to nutrients. Although there are concerns for this parameter, it does not appear to be impacting dissolved oxygen as shown in Figure MS-22.

Nitrate, TP, and OP are negatively correlated to flow as show in Figure MS-23. As discussed in segment 0805, nutrient loadings likely come from upstream wastewater treatment facilities and are high in during dry weather conditions when the river is effluent dominated. Concentrations decrease during high flow events due to dilution.





Contact Recreation Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0804_01	Fully Supporting	Fully Supporting
0804_02	Not Assessed (No Data)	Not Assessed (No Data)
0804_03	Not Assessed (No Data)	Not Assessed (No Data)
0804_04	Fully Supporting	Fully Supporting
0804_05	Not Assessed (No Data)	Not Assessed (No Data)
0804_06	Not Assessed (No Data)	Not Assessed (No Data)
0804_07	Fully Supporting	Fully Supporting

Public Water Supply Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0804_01	Not Assessed (No Data)	Fully Supporting
0804_02	Not Assessed (No Data)	No Concern
0804_03	Not Assessed (No Data)	No Concern

0804_04	Not Assessed (No Data)	Fully Supporting
0804_05	Not Assessed (No Data)	No Concern
0804_06	Not Assessed (No Data)	No Concern
0804_07	Not Assessed (No Data)	Fully Supporting

Fish Consumption Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0804_01	Fully Supporting	Not Assessed (No Data)
0804_02	Fully Supporting	Not Assessed (No Data)
0804_03	Fully Supporting	Not Assessed (No Data)
0804_04	Fully Supporting	Not Assessed (No Data)
0804_05	Fully Supporting	Not Assessed (No Data)
0804_06	Fully Supporting	Not Assessed (No Data)
0804_07	Not Supporting	Not Assessed (No Data)

0804_07 was found to be not supporting due to elevated levels of dioxin and PCBs in fish tissue by the TCEQ Draft 2014 Integrated Report. There is a TMDL currently underway to address this issue.

Assessments (Unclassified Segments):

Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0804B_01 - Entire segment	Not Assessed (No Data)	Not Assessed (Inadequate Data)
0804F_01 - A 27 mile stretch of Tehuacana Creek extending from the confluence with 0804 of the Trinity River up to the confluence with Caney Creek (NHD RC 120302010000226)	Fully Supporting	Concern
0804F_02 - A 28.4 mile (45.7 KM) stretch of Tehuacana Creek extending from the confluence with Caney Creek to the upper end (NHD RC 120302010000225) of Tehuacana Creek	Not Assessed (Inadequate Data)	Fully Supporting
0804G_01 - Entire segment	Not Supporting	Not Supporting
0804H_01 - From the confluence with segment 0804 Trinity River up to	Not Supporting	Fully Supporting

confluence with Twin Branch (NHD RC 12030201027099)		
0804J_01 - Entire segment	Concern	Fully Supporting
Lower Keechi Creek - Entire water body	Not Assessed (No Data)	Not Supporting

0804G, 0804H, and 0841J were found to have issues with depressed dissolved oxygen by the TCEQ Draft 2014 Integrated Report. 0804F_01, 0804G, and Lower Keechi Creek also had issues with depressed dissolved oxygen identified by the in-house 5 year assessment. Causes for low dissolved oxygen in these assessment units are unknown. However, it is likely due to low flows as a majority of the land use is agricultural and there is no evidence that algal populations are causing low dissolved oxygen.

General Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0804B_01	Not Assessed (No Data)	Not Assessed (Inadequate Data)
0804F_01	No Concern	Not Supporting
0804F_02	Not Assessed (Inadequate Data)	Not Supporting
0804G_01	No Concern	Not Supporting
0804H_01	Concern	Concern
0804J_01	Concern	Not Supporting
Lower Keechi Creek	Not Assessed (No Data)	Fully Supporting

0804F_01 and 0804F_02 were found to be not supporting due to elevated chloride and TDS and to have concerns for chlorophyll-a by the in-house 5 year assessment. 0804G was found to be not supporting due to low pH by the in-house 5 year assessment. 0804H was found to have concerns for chlorophyll-a by both the TCEQ Draft 2014 Integrated Report and the in-house 5 year assessment. 0804J was found to have concerns for chlorophyll-a and TP by the Integrated report, as well as, for OP by the in-house 5 year assessment. The in-house 5 year assessment also found 0804J to be not supporting due to elevated levels of chloride and TDS. Similar to dissolved oxygen, the chloride and TDS issues in these assessment units appear to be caused by low flows. Chlorophyll-a in the streams may be more influenced by light penetration than by nutrient concentrations. However, in Fairfield Lake (0804J), chlorophyll-a appears to be correlated to nutrients rather than Secchi depth. See Table MS-17 for a comparison of the correlation coefficients for 0804G and 0804J.

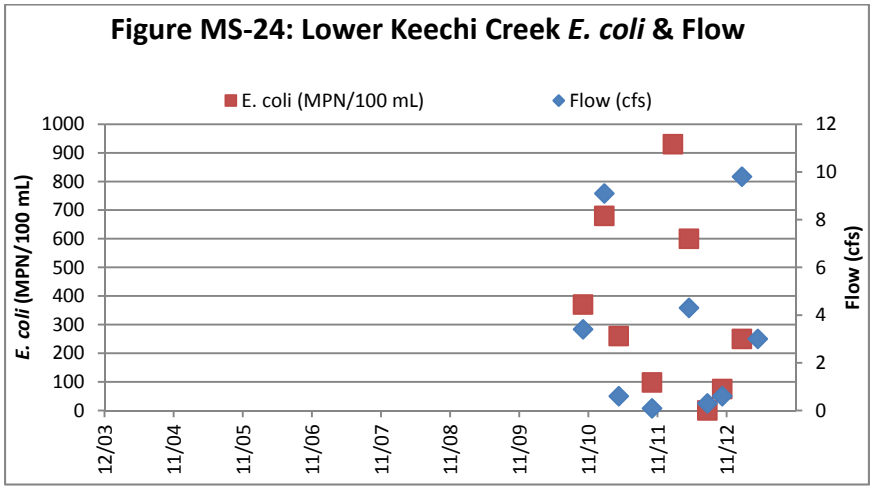
Table MS-17: Chlorophyll-a Correlation Coefficients

	Secchi Depth	Ammonia	Nitrate	TKN	TP	OP
0804G_01 Chlorophyll-a	0.369253	0.01101	0.179323	0.021019	-0.1369	-0.1738
0804J_01 Chlorophyll-a	-0.623821	0.227514	-0.170361	0.577677	0.304351	0.135984

Contact Recreation Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0804B_01	Not Assessed (No Data)	Not Assessed (Inadequate Data)
0804F_01	No Concern	Fully Supporting
0804F_02	Not Assessed (Inadequate Data)	Not Assessed (Inadequate Data)
0804G_01	Fully Supporting	Fully Supporting
0804H_01	No Concern	No Concern
0804J_01	Fully Supporting	Fully Supporting
Lower Keechi Creek	Not Assessed (No Data)	Not Supporting

Lower Keechi Creek was found to be not supporting due to elevated levels of *E. coli* by the in-house 5 year assessment. As expected, *E. coli* levels increase when flows increase (Figure MS-24). Sources are most likely livestock and wildlife.

Figure MS-24: Lower Keechi Creek *E. coli* & Flow



Public Water Supply Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0804B_01	Not Assessed (No Data)	Not Assessed (Inadequate Data)
0804F_01	Not Assessed (No Data)	Fully Supporting
0804F_02	Not Assessed (No Data)	No Concern
0804G_01	Not Assessed (No Data)	Fully Supporting
0804H_01	Not Assessed (No Data)	No Concern
0804J_01	Not Assessed (No Data)	Fully Supporting
Lower Keechi Creek	Not Assessed (No Data)	No Concern

Fish Consumption Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0804B_01	Not Assessed (No Data)	Not Assessed (No Data)
0804F_01	Fully Supporting	Not Assessed (No Data)
0804F_02	Fully Supporting	Not Assessed (No Data)
0804G_01	Not Assessed (No Data)	Not Assessed (No Data)
0804H_01	Not Assessed (No Data)	Not Assessed (No Data)
0804J_01	Fully Supporting	Not Assessed (No Data)
Lower Keechi Creek	Not Assessed (No Data)	Not Assessed (No Data)

Trend Analysis Overview

Table MS-18: Trend Analysis Result Summary

Main Stem		Flow Severity			Flow			Secchi Depth			DO			pH			Sp Cond			Sp Cond 24HR Min			Chlorophyll-a			VSS		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0804_01	13690																											DN
0804_04	10919	DN	DN							UP																		
0804_07	10922																											
0804F_01	10705					UP																						
0804G_01	10717																				DN		UP	UP	UP			
0804J_01	17951												DN			DN	UP	UP	UP				DN		DN			DN

Main Stem		TDS			Chloride			SO4			BOD5			Fluoride			NH3			TKN			Hardness		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0804_01	13690																		DN		DN			UP	
0804_04	10919																					DN		UP	
0804_07	10922																			DN		DN			
0804F_01	10705										UP	UP													
0804G_01	10717			DN		DN																			
0804J_01	17951	UP	UP	UP	UP	UP	UP	UP	UP	UP				UP	UP	UP						DN			

Trends Key

A-All Months

S-Summer/Growing Season (May-October)

W-Winter/Dormant Sesaon (November-April)

UP Increasing Trends

DN Decreasing Trends

There were 41 significant trends identified for this segment as summarized in Table MS-18. For additional detail on trend methods, see the Data Review Methodology section.

Trends (Classified Segments):

See Table MS-19 for details of the significant trends analysis summary presented in Table MS-18. Increasing summer trends for hardness in 0804_01 and 0804_04 have R^2 values less than 0.12. However, these trends appear to be related to a decreasing trend in summertime rainfall amounts as shown in Figure MS-25 for 0804_01.

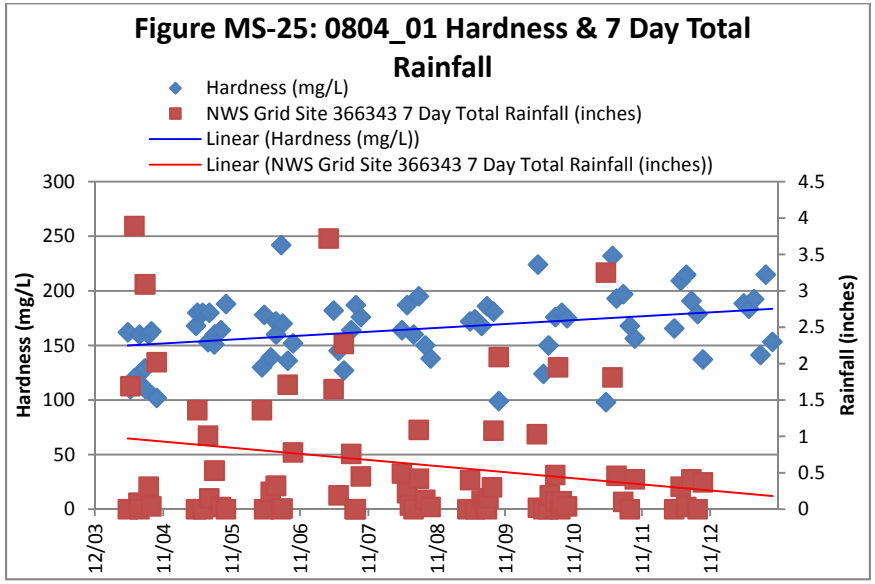




Image MS- 4: Driftwood along 0804

Table MS-19: 0804 Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0804_01	13690	VSS	Winter	0.26	-0.61	0.06	0.30	-2.03	-1.08	1.89	14	32.32	180.00	31.00	16.50	8.00	0.50	23.00	12/29/03	1/22/07
0804_01	13690	NH3	Winter	0.55	-0.35	0.00	0.04	-8.53	1.75	-2.40	61	0.03	0.16	0.05	0.00	0.00	0.00	0.05	12/29/03	11/26/13
0804_01	13690	TKN	Summer	0.14	-0.03	0.01	0.01	-2.71	1.24	0.40	49	0.89	1.60	1.00	0.90	0.70	0.26	0.30	5/25/04	10/28/13
0804_01	13690	Hardness	Summer	0.12	3.57	0.00	1.16	3.08	-0.24	0.35	70	164.86	242.00	182.00	166.80	150.00	98.00	32.00	5/25/04	10/28/13
0804_04	10919	Secchi Depth	Winter	0.11	0.07	0.05	0.04	1.99	-0.35	-0.65	35	0.12	0.34	0.16	0.10	0.06	0.03	0.10	12/16/03	2/5/13
0804_04	10919	TKN	Winter	0.22	-0.07	0.00	0.02	-3.03	-0.71	1.36	34	1.08	2.50	1.20	1.00	0.80	0.30	0.40	12/16/03	11/19/13
0804_04	10919	Hardness	Summer	0.10	4.25	0.07	2.24	1.90	1.44	0.75	34	182.24	284.00	204.00	176.50	160.00	116.00	44.00	5/4/04	7/30/13
0804_04	10919	Flow Severity	POR	0.11	-0.03	0.00	0.01	-2.94	0.70	-0.45	69	3.22	5.00	3.00	3.00	3.00	2.00	0.00	12/16/03	11/19/13
0804_04	10919	Flow Severity	Summer	0.16	-0.15	0.02	0.06	-2.43	1.30	-1.07	33	3.36	5.00	4.00	3.00	3.00	2.00	1.00	5/4/04	7/30/13
0804_07	10922	TKN	POR	0.19	-0.06	0.00	0.02	-3.74	-0.71	2.00	62	1.17	2.70	1.30	1.10	0.80	0.30	0.50	12/16/03	11/19/13
0804_07	10922	TKN	Winter	0.42	-0.10	0.00	0.02	-4.74	-1.09	1.02	33	1.17	2.50	1.40	1.10	0.80	0.30	0.60	12/16/03	11/19/13

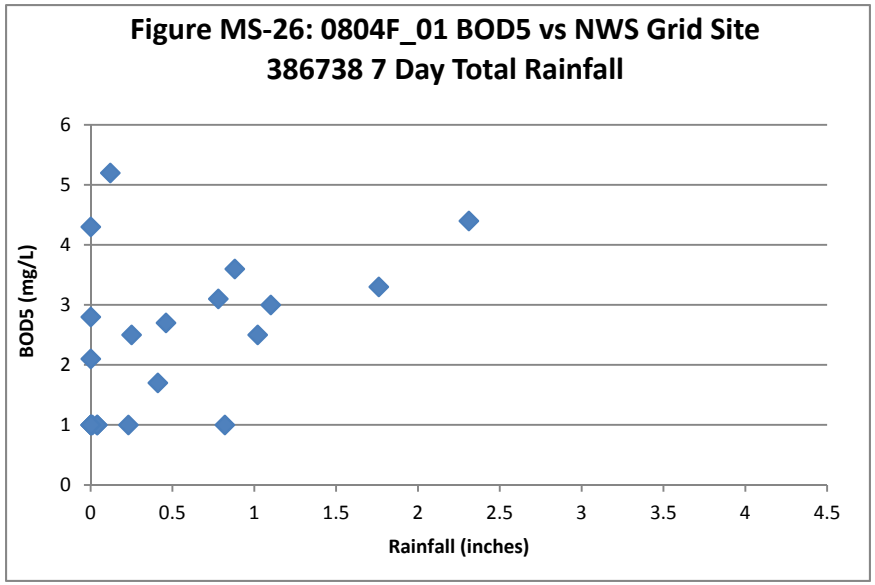


Figure MS-26: 0804F_01 BOD5 vs NWS Grid Site 386738 7 Day Total Rainfall

Trends (Unclassified Segments):
See Table MS-20 for details of the significant trends analysis summary presented in Table MS-18. Increasing chlorophyll-a trends in 0804G have R^2 values greater than 0.39. However, maximum values are approximately half of the screening level and thus do not present a concern at this time. BOD5 in 0804F is fairly well correlated to 7 day rainfall totals indicating that oxygen consuming material is washed into the stream during rainfall events (Figure MS-26).

There is a decreasing trend in winter DO in Fairfield Lake (0804J). The minimum reported value is 7.5 mg/L, so this trend does not present a concern at this time. However, there are significant trends in specific conductivity, TDS, chloride, sulfate, and fluoride in this reservoir. Figure MS-27 shows these trends for specific conductivity, chloride, and fluoride. According to a local expert, levels for this cooling lake are maintained by pumping water from the Trinity River during drought conditions. Elevated water temperatures seen in this lake, in conjunction with high evaporation rates and the source of water during the recent drought, has led to the increasing trends seen in Figure MS-27.

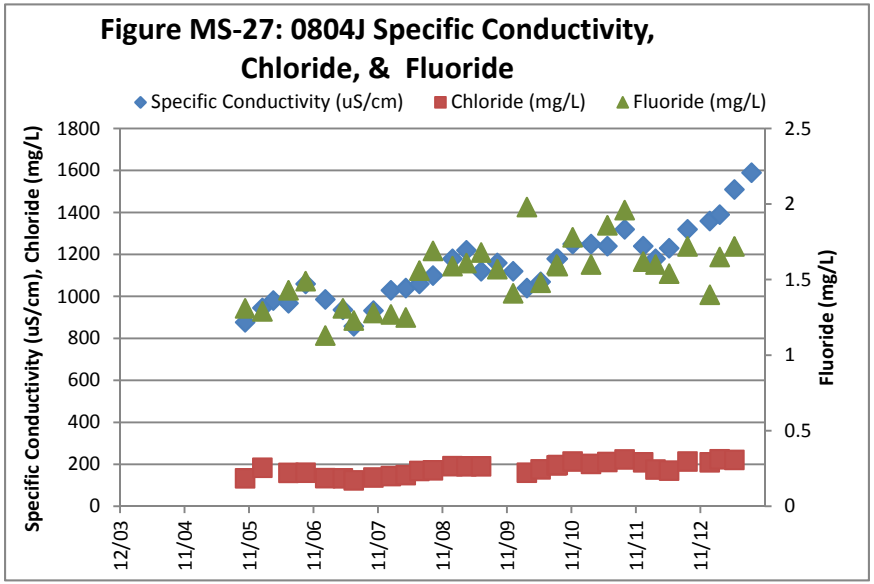


Figure MS-27: 0804J Specific Conductivity, Chloride, & Fluoride

Table MS-20: 0804F, 0804G, 0804J Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0804F_01	10705	Flow	Summer	0.20	0.54	0.08	0.29	1.89	1.75	0.83	16	77.28	1170.00	9.90	0.66	0.19	0.08	9.71	7/8/04	7/29/10
0804F_01	10705	BOD5	POR	0.33	0.67	0.01	0.22	3.08	1.05	-0.62	21	2.34	5.20	3.10	2.50	1.00	1.00	2.10	3/24/04	7/31/07
0804F_01	10705	BOD5	Summer	0.38	0.64	0.04	0.27	2.35	0.54	-0.69	11	2.13	4.30	3.00	2.50	1.00	1.00	2.00	7/8/04	7/31/07
0804G_01	10717	Sp Cond 24HR Min	Summer	0.13	-2.24	0.09	1.26	-1.78	-1.34	0.41	24	139.79	160.00	147.50	141.00	133.50	109.00	14.00	5/7/04	9/23/10
0804G_01	10717	Chloride	Summer	0.21	-0.03	0.05	0.01	-2.09	0.89	1.33	18	13.36	20.50	14.00	13.50	12.00	10.00	2.00	6/21/04	7/9/13
0804G_01	10717	TDS	Winter	0.17	-2.20	0.05	1.05	-2.10	-0.71	-0.41	24	112.11	134.00	122.30	111.25	105.18	83.85	17.13	12/4/03	4/2/13
0804G_01	10717	Chlorophyll-a	POR	0.40	0.48	0.00	0.11	4.51	1.68	-0.96	33	2.15	7.20	4.18	0.50	0.00	0.00	4.18	12/4/03	7/9/13
0804G_01	10717	Chlorophyll-a	Summer	0.41	0.48	0.01	0.15	3.09	0.92	-0.87	16	2.22	6.58	3.99	1.30	0.50	0.00	3.49	6/21/04	7/9/13
0804G_01	10717	Chlorophyll-a	Winter	0.39	0.49	0.01	0.16	3.12	1.51	-0.44	17	2.07	7.20	4.18	0.50	0.00	0.00	4.18	12/4/03	4/2/13
0804J_01	17951	Sp Cond	POR	0.81	66.46	0.00	5.66	11.74	1.33	0.26	34	1144.88	1590.00	1240.00	1140.00	1030.00	858.00	210.00	11/8/05	9/16/13
0804J_01	17951	Sp Cond	Summer	0.82	75.06	0.00	8.72	8.61	1.31	0.54	18	1163.50	1590.00	1240.00	1140.00	1060.00	858.00	180.00	7/12/06	9/16/13
0804J_01	17951	Sp Cond	Winter	0.82	57.96	0.00	7.17	8.09	0.13	-0.93	16	1123.94	1390.00	1245.00	1150.00	983.50	877.00	261.50	11/8/05	3/20/13
0804J_01	17951	DO	Winter	0.32	-0.40	0.03	0.16	-2.45	0.85	-0.10	15	9.93	13.80	11.30	10.10	8.30	7.50	3.00	11/8/05	3/20/13
0804J_01	17951	pH	Winter	0.22	-0.04	0.08	0.02	-1.90	-0.35	-0.77	15	8.47	8.80	8.70	8.50	8.30	8.10	0.40	11/8/05	3/20/13
0804J_01	17951	VSS	Winter	0.32	-0.06	0.03	0.02	-2.46	1.63	0.88	15	6.20	11.00	6.00	6.00	5.00	4.00	1.00	11/8/05	3/20/13
0804J_01	17951	TKN	Winter	0.46	-0.08	0.01	0.02	-3.18	0.38	-0.71	14	1.57	2.05	1.78	1.53	1.34	1.14	0.44	11/8/05	3/20/13
0804J_01	17951	Chloride	POR	0.62	10.49	0.00	1.55	6.75	-0.48	-1.26	30	179.70	225.00	210.00	180.50	160.00	124.00	50.00	11/8/05	6/11/13
0804J_01	17951	Chloride	Summer	0.67	11.24	0.00	2.13	5.29	-0.27	-0.64	16	179.56	224.00	204.50	174.50	160.50	124.00	44.00	7/12/06	6/11/13
0804J_01	17951	Chloride	Winter	0.58	9.81	0.00	2.42	4.05	-0.45	-1.09	14	179.86	225.00	210.00	187.50	145.00	134.00	65.00	11/8/05	3/20/13
0804J_01	17951	SO4	POR	0.60	5.76	0.00	0.88	6.55	-0.97	-0.81	31	101.19	127.00	118.00	101.00	89.00	68.00	29.00	11/8/05	6/11/13
0804J_01	17951	SO4	Summer	0.55	4.68	0.00	1.14	4.11	-0.08	-0.24	16	99.94	121.00	110.50	98.00	91.00	72.00	19.50	7/12/06	6/11/13
0804J_01	17951	SO4	Winter	0.66	6.73	0.00	1.35	5.01	-1.10	-0.69	15	102.53	127.00	118.00	108.00	88.00	68.00	30.00	11/8/05	3/20/13
0804J_01	17951	Fluoride	POR	0.39	0.06	0.00	0.01	4.38	0.25	-0.43	32	1.54	1.98	1.67	1.58	1.36	1.13	0.31	11/8/05	6/11/13
0804J_01	17951	Fluoride	Summer	0.45	0.06	0.00	0.02	3.49	0.02	-0.08	17	1.57	1.96	1.69	1.57	1.48	1.23	0.21	7/12/06	6/11/13
0804J_01	17951	Fluoride	Winter	0.36	0.06	0.02	0.02	2.68	0.53	-0.13	15	1.50	1.98	1.62	1.59	1.29	1.13	0.33	11/8/05	3/20/13
0804J_01	17951	TDS	POR	0.80	0.07	0.00	0.01	12.11	1.32	-0.71	38	683.17	1033.50	793.00	640.00	592.00	494.00	201.00	11/8/05	9/16/13
0804J_01	17951	TDS	Summer	0.84	60.73	0.00	6.15	9.87	1.98	0.23	20	686.94	1033.50	802.75	637.00	587.72	510.00	215.03	7/12/06	9/16/13
0804J_01	17951	TDS	Winter	0.78	42.93	0.00	5.75	7.46	0.61	-0.75	18	678.97	903.50	767.00	648.17	592.00	494.00	175.00	11/8/05	3/20/13
0804J_01	17951	Chlorophyll-a	POR	0.11	-0.09	0.07	0.05	-1.89	-0.83	-0.20	31	60.06	150.00	77.00	58.10	33.10	11.70	43.90	11/8/05	6/11/13
0804J_01	17951	Chlorophyll-a	Winter	0.51	-0.16	0.00	0.04	-3.67	0.54	-0.68	15	51.25	127.00	60.50	45.20	25.50	22.20	35.00	11/8/05	3/20/13

Segment 0803 – Lake Livingston

Overview

This 82,600 acre segment impounds 1,750,000 acre-feet of water from Trinity River. It stretches from the Livingston Dam in Polk/San Jacinto County to a point 1.1 miles upstream of Boggy Creek in Houston/Leon County, up to a normal pool elevation of 131 feet. This segment begins in the Post Oak Savannah where the land use is generally agriculture and transitions to the forested Piney Woods ecoregion.

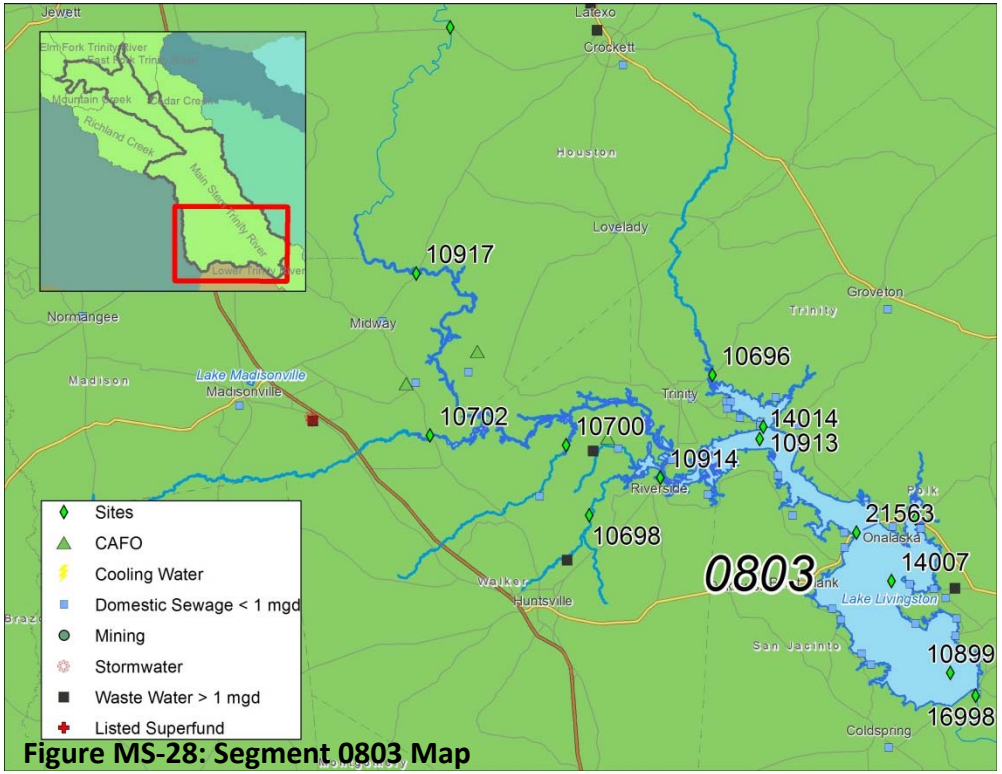


Figure MS-28: Segment 0803 Map

Assessments (Classified Segments):

Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0803_01 - Lowermost portion of reservoir, adjacent to dam	Fully Supporting	Fully Supporting
0803_02 - Lower portion of reservoir, East Wolf Creek	Not Assessed (Inadequate Data)	Not Assessed (No Data)
0803_03 - Lower portion of reservoir, East Willow Springs	Fully Supporting	Not Assessed (No Data)
0803_04 - Middle portion of reservoir, East Pointblank	Fully Supporting	Not Assessed (No Data)
0803_05 - Middle portion of reservoir, downstream of Kickapoo Creek	Fully Supporting	Fully Supporting
0803_06 - Middle portion of reservoir,	Fully Supporting	Fully Supporting

centering on US 190		
0803_07 - Upper portion of reservoir, west of Carlisle	Fully Supporting	Fully Supporting
0803_08 - Cove off upper portion of reservoir, East Trinity	No Concern	Not Assessed (No Data)
0803_09 - West Carolina Creek cove, off upper portion of reservoir	Concern	Not Assessed (No Data)
0803_10 - Upper portion of reservoir, centering on SH 19	Fully Supporting	Fully Supporting
0803_11 - Riverine portion of reservoir, centering on SH 21	Fully Supporting	Fully Supporting
0803_12 - Remainder of reservoir	Not Assessed (No Data)	Not Assessed (No Data)

0809_09 was found to have concerns for depressed dissolved oxygen by the TCEQ Draft 2014 Integrated Report. However, this finding was carried forward from previous Integrated Reports as there is no current data.

General Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0803_01	Not Supporting	Concern
0803_02	Not Supporting	Fully Supporting
0803_03	Not Supporting	Fully Supporting
0803_04	Not Supporting	Fully Supporting
0803_05	Not Supporting	Concern
0803_06	Not Supporting	Concern
0803_07	Not Supporting	Concern
0803_08	Not Supporting	Fully Supporting
0803_09	Not Supporting	Fully Supporting
0803_10	Not Supporting	Concern
0803_11	Not Supporting	Concern
0803_12	Not Supporting	Fully Supporting

The entire reservoir was found to be not supporting due to elevated sulfate levels by the TCEQ Draft 2014 Integrated Report. 0803_01, 0803_05, 0803_06, 0803_07, 0803_10, and 0803_11 were found to have concerns for chlorophyll-a by the Integrated Report. With the exception of 0803_11, these assessment units were also found to have concerns for chlorophyll-a by the in-house 5 year assessment. 0803_06, 0806_07, 0803_10, and 0803_11 were found to have concerns for nitrate

and TP by both the Integrated Report and the in-house 5 year assessment, as well as, for OP by the in-house 5 year assessment. 0803_08 was found to have concerns for nitrate by the Integrated Report.

The current standard for sulfate in Lake Livingston is 50 mg/L based on a whole segment average. The 2014 revision to the Texas Surface Water Quality Standards is proposing a change to 60 mg/L. For the purposes of the in-house 5 year assessment, 60 mg/L was used; resulting in the fully supporting finding. As shown in Figure MS-29, sulfate levels in the upstream riverine portions of the reservoir generally exceed the existing standard of 50 mg/L. Levels decrease moving into the main body of the reservoir.

Chlorophyll-a levels in the lake are generally above the screening level of 26.7 ug/L (Figure MS-30). Extremely high values are seen in the riverine portion with levels decreasing and stabilizing in the main body. However, with the exception of Secchi depth and TKN in the upper portions of the lake as shown in Figure MS-31, there are no consistent correlations between chlorophyll-a and either nutrients or light penetration in the main body. Lake Livingston has been noted as being hypereutrophic by the TCEQ report Trophic Classification of Texas Reservoirs. It is probable that the long residence time of algae in the river above the reservoir and within the reservoir itself allows populations to increase to values above the screening level.

Figure MS-29: 0803 Sulfate

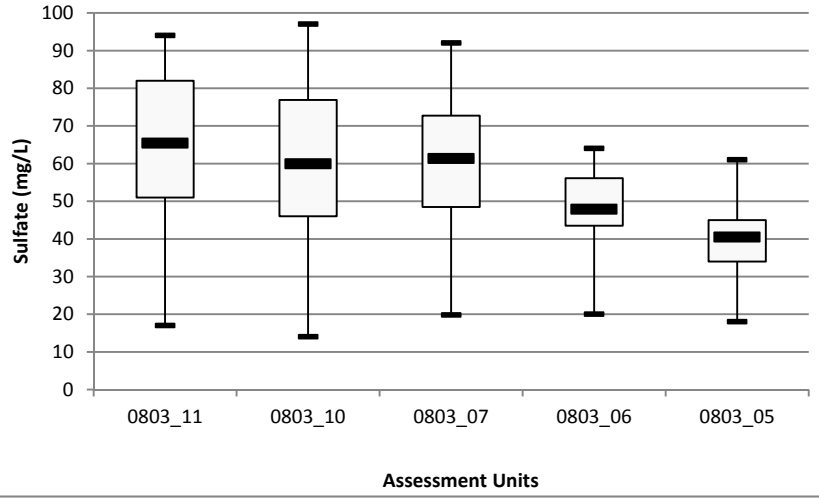
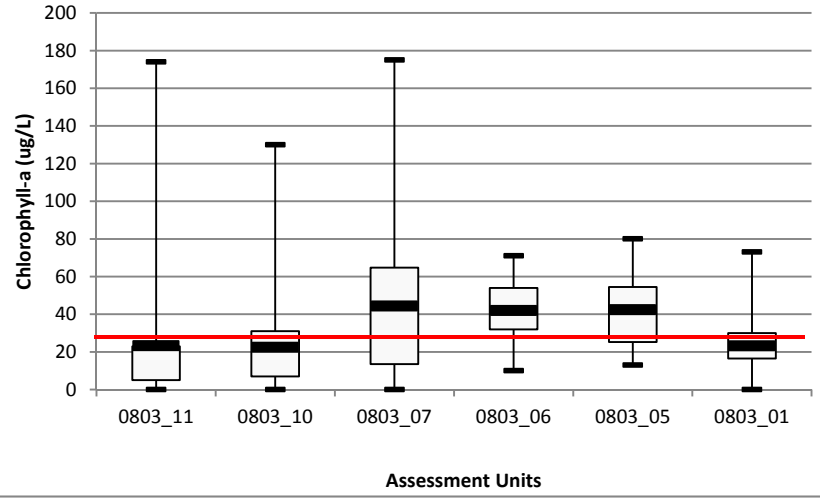
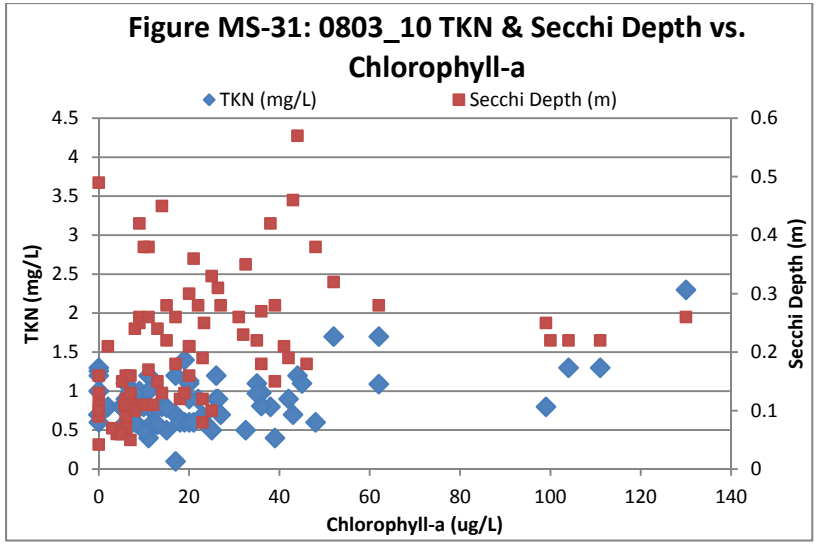
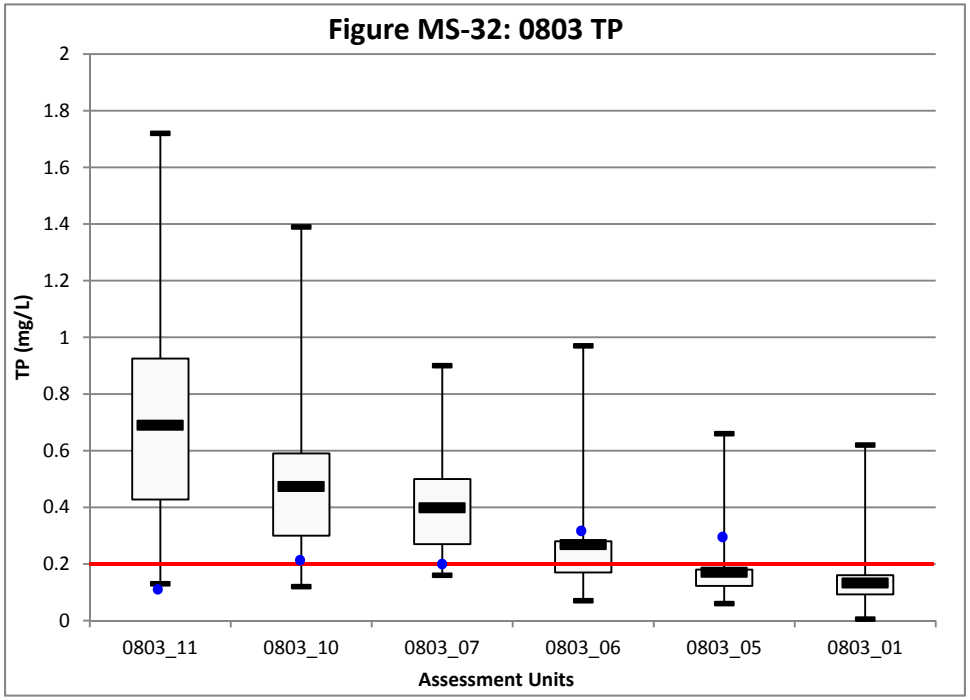


Figure MS-30: 0803 Chlorophyll-a





Nutrients in the lake are typically high in the upper riverine portion of the reservoir and decrease toward the dam. Figure MS-32 illustrates this pattern for TP. As shown, TP is above the screening level of 0.2 mg/L until the middle portion of the lake when most data are below the screening level. Nutrients could be consumed by algae in the upper and middle portions of the lake or are adsorbing onto suspended sediments and falling out of the water column. Both of these cases are plausible as chlorophyll-a levels decrease (Figure MS-30) and Secchi depth increases (blue dots in Figure MS-32) approaching the dam.



Contact Recreation Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0803_01	Fully Supporting	Fully Supporting
0803_02	Not Assessed (No Data)	Not Assessed (No Data)
0803_03	Not Assessed (No Data)	Not Assessed (No Data)
0803_04	Not Assessed (No Data)	Not Assessed (No Data)
0803_05	No Concern	Fully Supporting
0803_06	Fully Supporting	Fully Supporting
0803_07	No Concern	Fully Supporting
0803_08	Not Assessed (No Data)	Not Assessed (No Data)
0803_09	Not Assessed (No Data)	Not Assessed (No Data)
0803_10	Fully Supporting	Fully Supporting
0803_11	Fully Supporting	Fully Supporting
0803_12	Not Assessed (No Data)	Not Assessed (No Data)

Public Water Supply Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0803_01	Fully Supporting	Fully Supporting
0803_02	Fully Supporting	No Concern
0803_03	Fully Supporting	No Concern
0803_04	Fully Supporting	No Concern
0803_05	Fully Supporting	Fully Supporting
0803_06	Fully Supporting	Fully Supporting
0803_07	Fully Supporting	Fully Supporting
0803_08	Fully Supporting	No Concern
0803_09	Not Assessed (No Data)	No Concern
0803_10	Fully Supporting	Fully Supporting
0803_11	Fully Supporting	Fully Supporting
0803_12	Fully Supporting	No Concern

Fish Consumption Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0803_01	Fully Supporting	Not Assessed (No Data)
0803_02	Fully Supporting	Not Assessed (No Data)
0803_03	Fully Supporting	Not Assessed (No Data)
0803_04	Fully Supporting	Not Assessed (No Data)
0803_05	Fully Supporting	Not Assessed (No Data)

0803_06	Fully Supporting	Not Assessed (No Data)
0803_07	Fully Supporting	Not Assessed (No Data)
0803_08	Fully Supporting	Not Assessed (No Data)
0803_09	No Concern	Not Assessed (No Data)
0803_10	Fully Supporting	Not Assessed (No Data)
0803_11	Fully Supporting	Not Assessed (No Data)
0803_12	Fully Supporting	Not Assessed (No Data)

Assessments (Unclassified Segments):

Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0803A_01 - A 16 mile (25.7 KM) stretch of Harmon Creek extending from Lake Livingston (normal pool elevation of 131 feet) upstream to the confluence of East Fork Harmon Creek	Fully Supporting	No Concern
0803B_01 - Lower 25 miles of segment	Fully Supporting	No Concern
0803E_01 - Entire water body	Fully Supporting	No Concern
0803F_01 - From the confluence with segment 0803 Trinity River up to confluence with Poole Creek (NHD RC 12030202000572)	Fully Supporting	No Concern
0803F_02 - From the confluence with Poole Creek (NHD RC 12030202000572) to upper end of NHD RC Bedias Creek (NHD RC 12030202000350)	Concern	Not Assessed (No Data)
0803G_01 - Entire water body	No Concern	Fully Supporting

0804F_02 was found to have concerns for zinc by the TCEQ Draft 2014 Integrated Report. However, this finding was carried forward from previous Integrated Reports as there is no current data.

General Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0803A_01	Concern	Not Supporting
0803B_01	Concern	Not Supporting
0803E_01	No Concern	Fully Supporting

0803F_01	No Concern	Not Supporting
0803F_02	Not Assessed (No Data)	Not Supporting
0803G_01	Concern	Concern

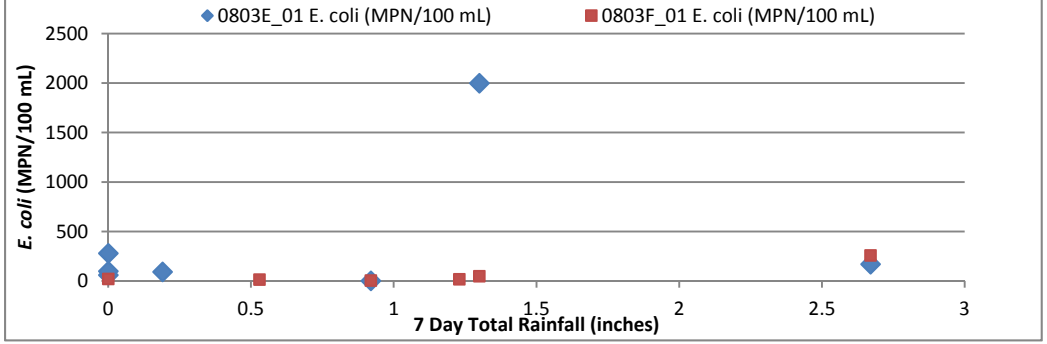
0803B and 0803G were found to have concerns for chlorophyll-a by both the TCEQ Draft 2014 Integrated Report and the in-house 5 year assessment. 0804F_01 was also found to have concerns for chlorophyll-a by the in-house 5 year assessment. 0803A was found to have concerns for nitrate and TP by both the Integrated Report and the in-house 5 year assessment, as well as, for OP by the in-house 5 year assessment. 0803A, 0803B, and 0803F were found to be not supporting due to elevated sulfate levels by the in-house 5 year assessment.

Data sets for these assessment units are small with between 7 and 12 samples so data analysis is fairly weak and any conclusions drawn from the data may be biased by single anomalous events. Sulfate in 0803A and 0803F decreases in response to rainfall; however, sulfate in 0803B increases in response to rainfall. Nutrients in 0803A are likely due to an upstream wastewater treatment facility as discussed in the 2010 TRA CRP Basin Summary Report. Chlorophyll-a in 0803B, 0803F, and 0803G may be related to TP levels; respectively, correlation coefficients are 0.18, 0.47, and 0.34.

Contact Recreation Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0803A_01	No Concern	No Concern
0803B_01	No Concern	No Concern
0803E_01	Concern	No Concern
0803F_01	Concern	No Concern
0803F_02	Not Assessed (No Data)	Not Assessed (No Data)
0803G_01	No Concern	Fully Supporting

0803E and 0803F_01 were found to have concerns for elevated levels of *E. coli* by the TCEQ Draft 2014 Integrated Report. As expected, *E. coli* for 0803E and 0803F increase during rainfall events (Figure MS-33). As discussed for nutrients, the data set is limited which could influence any conclusions drawn from the data. However, as the watersheds for these assessment units are rural, likely sources for *E. coli* are wildlife and livestock.

Figure MS-33: 0803E & 0803F *E. coli* vs. 7 Day Total Rainfall



Public Water Supply Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0803A_01	Not Assessed (No Data)	No Concern
0803B_01	Not Assessed (No Data)	No Concern
0803E_01	Not Assessed (No Data)	No Concern
0803F_01	Not Assessed (No Data)	No Concern
0803F_02	Not Assessed (No Data)	No Concern
0803G_01	Not Assessed (No Data)	Fully Supporting

Fish Consumption Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0803A_01	Not Assessed (No Data)	Not Assessed (No Data)
0803B_01	Not Assessed (No Data)	Not Assessed (No Data)
0803E_01	Not Assessed (Inadequate Data)	Not Assessed (No Data)
0803F_01	Not Assessed (No Data)	Not Assessed (No Data)
0803F_02	Not Assessed (No Data)	Not Assessed (No Data)
0803G_01	Not Supporting	Not Assessed (No Data)

0803G_01 was found to be not supporting due to elevated levels of mercury in fish tissue by the TCEQ Draft 2014 Integrated Report. Additional data and information need to be collected before a TMDL is scheduled.



Image MS- 5: Green water coloration in upper Livingston pool

Trend Analysis Overview

Table MS-21: Trend Analysis Result Summary

Main Stem		Secchi Depth			DO			pH			*E. coli*			Chlorophyll-a			TSS			TDS			Chloride			SO4		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0803_01	10899									UP						UP						UP						
0803_05	10909	DN	DN	DN							DN		DN		UP			UP		UP		UP	UP	UP	UP	UP		UP
0803_06	10911	DN	DN												UP			UP										
0803_07	10913	DN	DN		DN	DN					DN		DN															
0803_10	10914																											
0803_11	10917																											

Main Stem		NH3			OP			TP			Hardness			D. As			D. Ni			D. Zn		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0803_01	10899									DN		DN			DN	DN				DN		
0803_05	10909						DN	DN				DN	UP									
0803_06	10911											DN					DN			DN		DN
0803_07	10913																					DN
0803_10	10914			DN														DN				
0803_11	10917			DN								UP			DN			DN				

Trends Key

A-All Months

S-Summer/Growing Season (May-October)

W-Winter/Dormant Sesaon (November-April)

UP Increasing Trends

DN Decreasing Trends

There were 47 significant trends identified for this segment as summarized in Table MS-21. For additional detail on trend methods, see the Data Review Methodology section.

Trends (Classified Segments):

See Table MS-22 for details of the significant trends analysis summary presented in Table MS-21. As discussed previously, Lake Livingston has been classified as being hypereutrophic which is supported by the increasing trends for chlorophyll-a. In 0803_01, there are increasing trends in both pH and TDS that may be correlated to the increasing chlorophyll-a trend. Although these trends are significant only for winter months, the period of record data illustrated in Figure MS-34 show that as chlorophyll-a levels increase, both TDS and pH increase. Similarly, the increasing summer trends for TSS and chlorophyll-a in 0803_05 and 0803_06 appear to be related as shown in Figure MS-35. This is to be expected as algae can be a component of TSS.

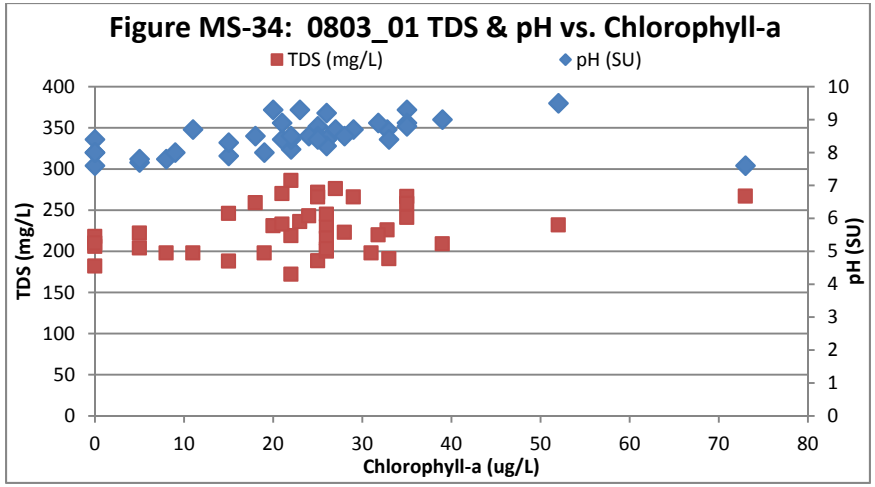


Figure MS-34: 0803_01 TDS & pH vs. Chlorophyll-a

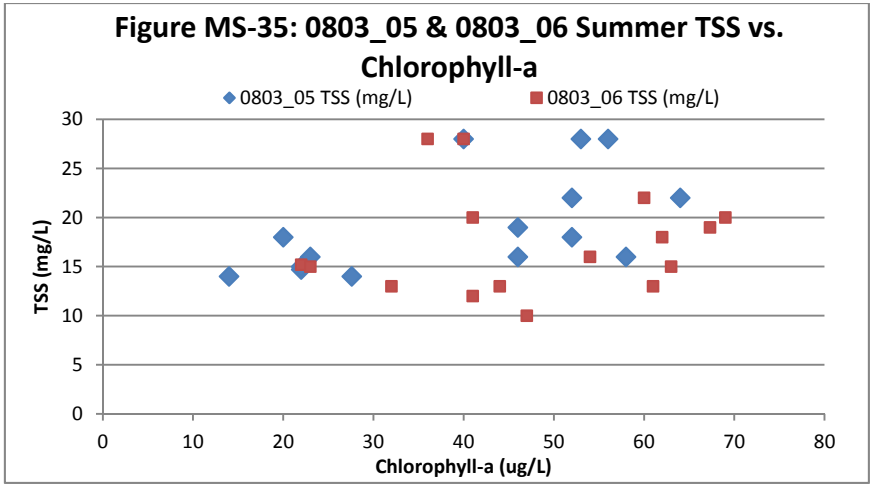


Figure MS-35: 0803_05 & 0803_06 Summer TSS vs. Chlorophyll-a

Increasing period of record trends for TDS, chloride, and sulfate were identified in 0803_05. Average values for the data in this assessment unit are well below the standards of 500 mg/L for TDS, 150 mg/L for chloride, and 50 mg/L for sulfate. These parameters are correlated to lake elevation as shown for chloride in Figure MS-36. During drought periods, TDS, chloride, and sulfate increase due to lower inflows to the reservoir and evaporation.

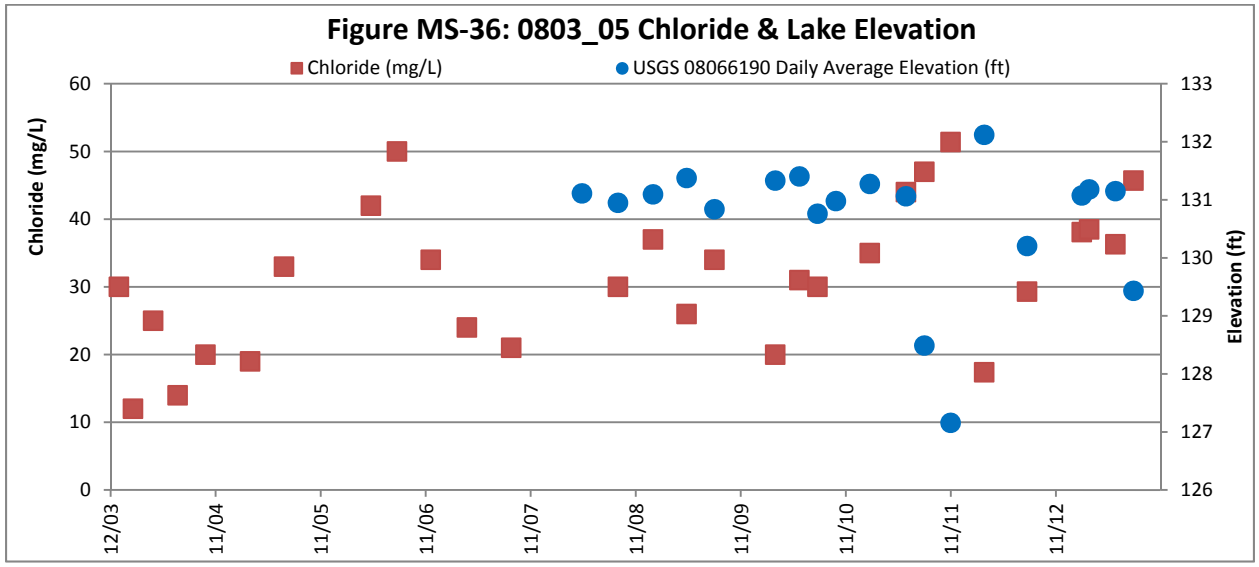


Figure MS-36: 0803_05 Chloride & Lake Elevation

Table MS-22: 0803 Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0803_01	10899	pH	Winter	0.36	0.08	0.00	0.02	3.36	1.93	1.79	22	8.23	9.50	8.40	8.35	7.80	7.60	0.60	12/30/03	3/26/13
0803_01	10899	TP	Winter	0.40	-0.01	0.00	0.00	-3.38	-1.39	0.19	19	0.12	0.20	0.16	0.14	0.08	0.01	0.08	12/30/03	3/26/13
0803_01	10899	Hardness	Summer	0.15	-1.67	0.03	0.75	-2.23	1.13	0.33	31	112.68	147.00	119.00	112.00	102.40	86.00	16.60	5/25/04	10/28/13
0803_01	10899	D. As	Summer	0.55	-0.29	0.00	0.07	-4.46	1.10	-1.39	18	1.28	5.00	2.40	0.25	0.25	0.25	2.15	5/25/04	6/25/13
0803_01	10899	D. As	Winter	0.30	-0.16	0.02	0.06	-2.68	1.92	-0.67	19	0.69	2.40	1.40	0.25	0.25	0.25	1.15	12/30/03	2/28/13
0803_01	10899	D. Zn	POR	0.15	-0.22	0.02	0.09	-2.44	-0.31	-2.33	37	5.67	25.00	9.00	5.00	0.30	0.30	8.70	12/30/03	6/25/13
0803_01	10899	TDS	Winter	0.26	4.05	0.02	1.58	2.57	1.18	-0.23	21	226.43	286.00	245.00	222.00	206.00	182.00	39.00	12/30/03	3/26/13
0803_01	10899	Chlorophyll-a	Winter	0.48	3.05	0.00	0.81	3.75	1.53	0.73	17	15.64	52.00	25.00	15.00	5.00	0.00	20.00	1/28/04	3/26/13
0803_05	10909	Secchi Depth	POR	0.59	-0.10	0.00	0.02	-6.11	1.60	-0.75	28	0.31	0.64	0.38	0.26	0.22	0.17	0.16	2/17/04	8/27/13
0803_05	10909	Secchi Depth	Summer	0.84	-0.05	0.00	0.01	-8.87	1.59	-0.46	17	0.32	0.64	0.41	0.26	0.20	0.17	0.21	7/21/04	8/27/13
0803_05	10909	Secchi Depth	Winter	0.31	-0.05	0.07	0.03	-2.03	1.83	0.52	11	0.29	0.53	0.30	0.24	0.22	0.21	0.08	2/17/04	3/26/13
0803_05	10909	TSS	Summer	0.27	0.89	0.04	0.39	2.26	1.15	-0.78	16	19.54	28.00	23.00	18.00	15.50	14.00	7.50	7/21/04	8/27/13
0803_05	10909	TP	POR	0.10	-0.05	0.08	0.03	-1.80	1.35	2.59	30	0.17	0.66	0.18	0.15	0.12	0.06	0.06	12/30/03	8/27/13
0803_05	10909	OP	Winter	0.35	-0.31	0.05	0.14	-2.22	1.66	-0.38	11	0.02	0.08	0.04	0.00	0.00	0.00	0.04	12/30/03	3/26/13
0803_05	10909	Hardness	Summer	0.21	-2.16	0.05	1.04	-2.09	1.36	-0.14	18	107.70	135.00	116.00	106.00	97.00	91.00	19.00	7/21/04	8/27/13
0803_05	10909	Hardness	Winter	0.38	4.41	0.02	1.64	2.69	-1.26	0.63	14	110.13	143.00	132.00	113.50	99.00	52.00	33.00	12/30/03	3/26/13
0803_05	10909	Chloride	POR	0.23	1.60	0.01	0.56	2.86	0.13	-0.77	29	31.54	51.40	38.10	31.00	24.00	12.00	14.10	12/30/03	8/27/13
0803_05	10909	Chloride	Summer	0.19	1.51	0.09	0.83	1.82	-0.12	-0.56	16	33.33	50.00	43.00	32.00	27.65	14.00	15.35	7/21/04	8/27/13
0803_05	10909	Chloride	Winter	0.27	1.60	0.07	0.80	2.00	0.42	-0.19	13	29.34	51.40	37.00	30.00	20.00	12.00	17.00	12/30/03	3/26/13
0803_05	10909	SO4	POR	0.21	1.53	0.01	0.57	2.66	0.02	-0.14	29	40.52	61.00	45.00	40.00	34.00	18.00	11.00	12/30/03	8/27/13
0803_05	10909	SO4	Winter	0.30	1.66	0.05	0.76	2.18	-0.06	0.45	13	38.90	59.80	45.00	40.00	35.00	18.00	10.00	12/30/03	3/26/13
0803_05	10909	*E. coli*	POR	0.30	-0.35	0.00	0.11	-3.26	1.96	-0.09	27	36.22	333.00	16.00	2.00	0.50	0.50	15.50	12/30/03	8/27/13
0803_05	10909	*E. coli*	Winter	0.66	-0.49	0.00	0.12	-4.21	0.91	-0.35	11	52.36	333.00	22.00	4.00	1.00	0.50	21.00	12/30/03	3/26/13
0803_05	10909	TDS	POR	0.15	4.69	0.04	2.12	2.21	-1.54	1.77	30	217.70	292.00	242.00	217.50	202.00	102.00	40.00	12/30/03	8/27/13
0803_05	10909	TDS	Winter	0.26	6.96	0.06	3.35	2.08	-1.23	0.70	14	212.64	278.00	242.00	218.00	188.00	102.00	54.00	12/30/03	3/26/13
0803_05	10909	Chlorophyll-a	Summer	0.22	2.81	0.06	1.38	2.04	-0.35	-1.22	17	40.86	64.00	53.00	46.00	23.00	14.00	30.00	7/21/04	8/27/13
0803_06	10911	Secchi Depth	POR	0.27	-0.03	0.00	0.01	-3.20	1.88	-0.06	30	0.32	0.76	0.44	0.27	0.21	0.06	0.23	2/17/04	8/27/13
0803_06	10911	Secchi Depth	Summer	0.44	-0.04	0.00	0.01	-3.57	1.21	-1.04	18	0.35	0.62	0.51	0.27	0.23	0.19	0.28	7/21/04	8/27/13
0803_06	10911	TSS	Summer	0.26	0.97	0.04	0.43	2.27	1.23	-0.41	17	17.95	28.00	20.00	16.00	13.00	10.00	7.00	7/21/04	8/27/13
0803_06	10911	Hardness	Summer	0.16	-2.44	0.09	1.35	-1.82	-1.59	-0.14	19	113.89	133.00	129.00	118.00	98.00	74.00	31.00	7/21/04	8/27/13
0803_06	10911	D. Ni	POR	0.13	-1.33	0.07	0.70	-1.91	1.87	-0.39	26	9.42	35.00	18.00	0.50	0.50	0.50	17.50	12/30/03	6/25/13
0803_06	10911	D. Zn	POR	0.15	-0.90	0.05	0.44	-2.03	1.09	-1.33	26	7.05	20.00	14.00	5.50	0.30	0.30	13.70	12/30/03	6/25/13
0803_06	10911	D. Zn	Winter	0.48	-1.72	0.01	0.57	-3.02	0.05	-1.35	12	9.43	20.00	17.50	8.50	0.30	0.30	17.20	12/30/03	2/25/13
0803_06	10911	Chlorophyll-a	Summer	0.26	2.81	0.03	1.18	2.38	-0.41	-0.84	18	48.96	71.00	62.00	47.50	40.00	22.00	22.00	7/21/04	8/27/13
0803_07	10913	Secchi Depth	POR	0.20	-0.08	0.01	0.03	-2.66	-0.35	-0.05	31	0.19	0.55	0.25	0.15	0.11	0.04	0.14	12/30/03	8/27/13
0803_07	10913	Secchi Depth	Summer	0.30	-0.01	0.02	0.01	-2.70	1.48	0.56	19	0.18	0.38	0.25	0.16	0.13	0.07	0.12	7/21/04	8/27/13
0803_07	10913	DO	POR	0.11	-0.03	0.07	0.02	-1.88	-0.24	0.10	32	9.87	21.00	11.60	10.40	7.55	4.60	4.05	12/30/03	8/27/13
0803_07	10913	DO	Summer	0.27	-0.50	0.03	0.21	-2.41	0.53	-0.77	18	8.99	14.60	11.40	8.30	6.70	4.60	4.70	7/21/04	8/27/13
0803_07	10913	D. Zn	Winter	0.28	-1.05	0.08	0.53	-1.98	0.61	-0.55	12	8.88	20.00	14.00	8.00	5.00	0.30	9.00	12/30/03	2/28/13
0803_07	10913	*E. coli*	POR	0.18	-0.30	0.02	0.12	-2.46	1.77	-0.45	29	77.12	705.00	23.00	4.00	2.00	0.50	21.00	12/30/03	8/27/13
0803_07	10913	*E. coli*	Winter	0.33	-0.40	0.04	0.17	-2.33	0.18	-1.04	13	130.88	705.00	130.00	23.00	2.00	0.50	128.00	12/30/03	3/26/13
0803_10	10914	NH3	Winter	0.30	-0.28	0.00	0.06	-4.71	0.27	-2.77	54	0.04	0.20	0.07	0.03	0.00	0.00	0.07	12/29/03	11/25/13
0803_10	10914	D. Ni	Summer	0.12	-0.20	0.09	0.11	-1.76	1.20	-1.72	24	8.06	33.00	17.00	0.50	0.50	0.50	16.50	5/25/04	9/23/13
0803_11	10917	NH3	Winter	0.59	-0.36	0.00	0.04	-8.69	1.98	-2.20	54	0.02	0.11	0.04	0.00	0.00	0.00	0.04	12/29/03	11/26/13
0803_11	10917	Hardness	Summer	0.14	3.90	0.00	1.27	3.07	-0.96	1.17	60	164.76	238.00	184.50	166.60	148.00	75.00	36.50	5/25/04	10/28/13
0803_11	10917	D. As	Summer	0.19	-0.16	0.03	0.07	-2.28	1.95	-0.81	24	1.14	5.60	1.65	0.25	0.25	0.25	1.40	5/25/04	9/23/13
0803_11	10917	D. Ni	Summer	0.21	-1.33	0.02	0.54	-2.45	1.78	-1.07	24	6.98	24.00	17.50	0.50	0.50	0.50	17.00	5/25/04	9/23/13

Trends (Unclassified Segments):

None

Segment 0827 – White Rock Lake

Overview

This 1,100 acre urban lake in Dallas County impounds White Rock Creek up to a normal pool elevation of 458 feet. Segment 0827 is located entirely within the Blackland Prairie ecoregion and watershed is nearly all developed.

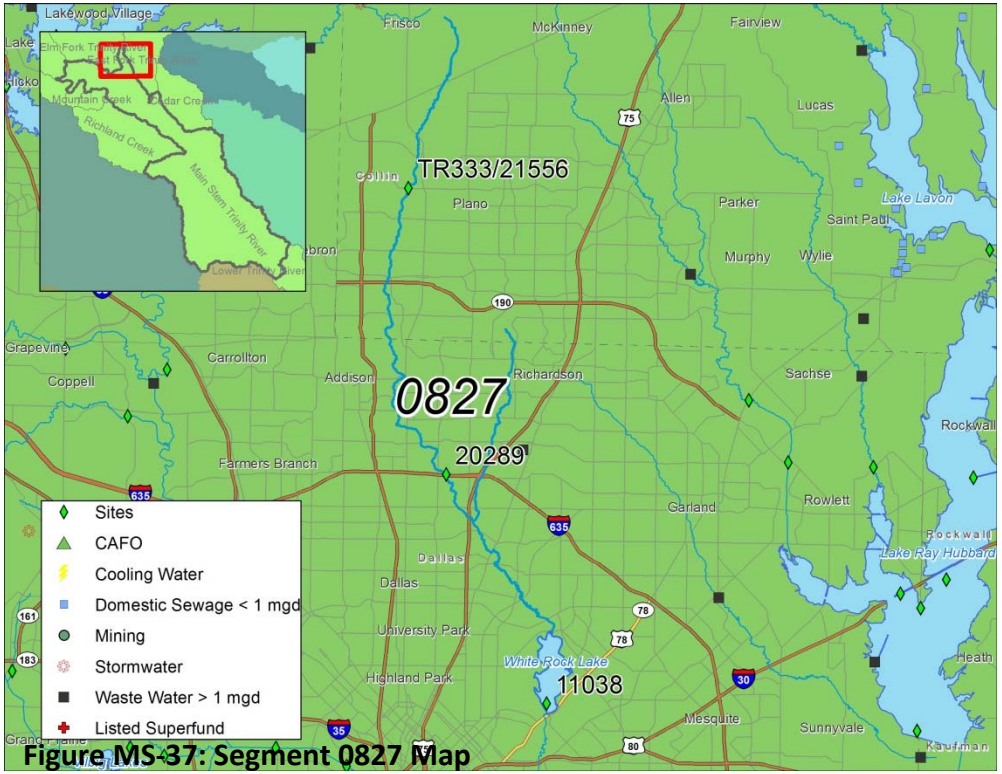


Figure MS-37: Segment 0827 Map

Assessments (Classified Segments):

Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0827_01 - Entire segment	Fully Supporting	Fully Supporting
General Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0827_01	Concern	Concern

This segment was found to have concerns for chlorophyll-a by both the TCEQ Draft 2014 Integrated Report and the in-house 5 year assessment. Chlorophyll-a is well correlated to TKN in this reservoir as shown in Figure MS-38. As with many other reservoirs, algal populations will increase due to a high residence time.

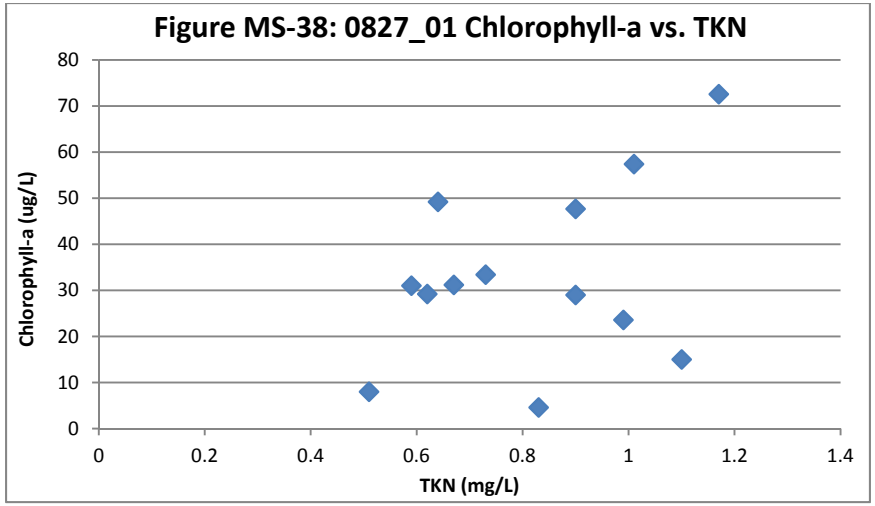


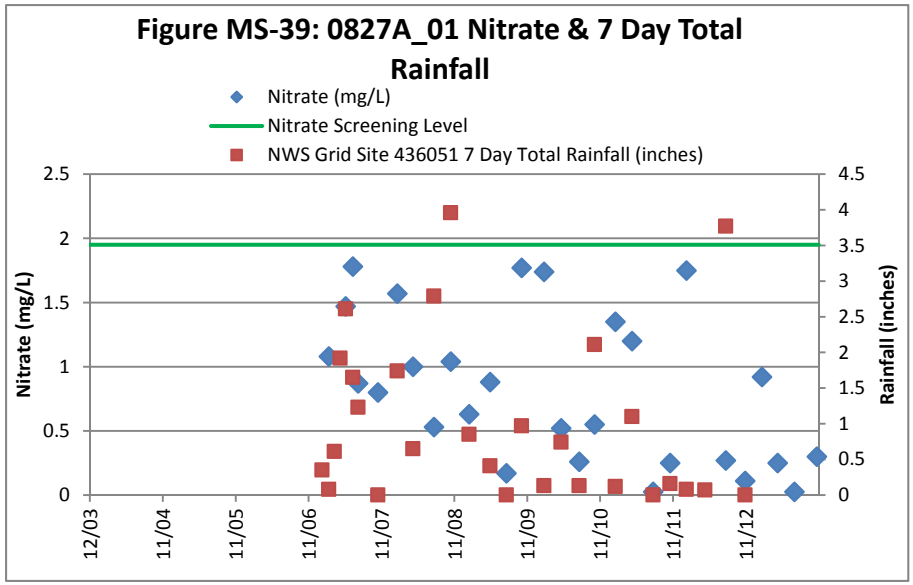


Image MS- 6: Clear water over bedrock in White Rock Creek at I635

Contact Recreation Use: 0827_01	**TCEQ Draft 2014 Integrated Report** No Concern	**In-House 5 Year Assessment** Fully Supporting
Public Water Supply Use: 0827_01	**TCEQ Draft 2014 Integrated Report** Not Assessed (No Data)	**In-House 5 Year Assessment** Fully Supporting
Fish Consumption Use: 0827_01	**TCEQ Draft 2014 Integrated Report** Not Assessed (No Data)	**In-House 5 Year Assessment** Not Assessed (No Data)

Assessments (Unclassified Segments):

Aquatic Life Use: 0827A_01 - From the headwaters of White Rock Lake upstream to the upper end of the water body at NHD RC 12030105001118	**TCEQ Draft 2014 Integrated Report** Not Assessed (No Data)	**In-House 5 Year Assessment** Fully Supporting
General Use: 0827A_01	**TCEQ Draft 2014 Integrated Report** Concern	**In-House 5 Year Assessment** Fully Supporting



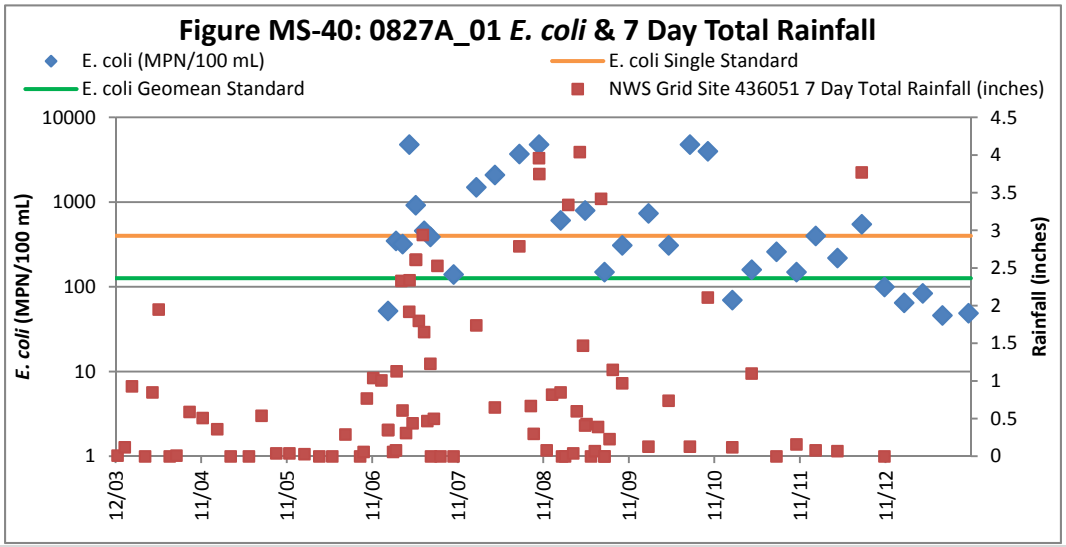
0827A_01 was found to have concerns for nitrate by the TCEQ Draft 2014 Integrated Report. As shown in Figure MS-39, recent data shows that all data are below the screening level. However, as this assessment unit is highly developed with large residential areas and golf courses, it is probable that nitrate concerns may be found by future Integrated Reports due to fertilizer usage.

Contact Recreation Use:
0827A_01

TCEQ Draft 2014 Integrated Report
Concern

In-House 5 Year Assessment
Not Supporting

0827A_01 was found to have concerns for elevated levels of *E. coli* by the TCEQ Draft 2014 Integrated Report but was found to be not supporting by the in-house 5 year assessment. As shown in Figure MS-40, *E. coli* is correlated to rainfall. As discussed above for General Use, 0827A_01 has large residential areas and several golf courses so the most likely sources of *E. coli* are wildlife and pet wastes. However, TRA CRP staff have begun monitoring a site further upstream in order to determine possible sources.



Public Water Supply Use:
0827A_01

TCEQ Draft 2014 Integrated Report
Not Assessed (No Data)

In-House 5 Year Assessment
Fully Supporting

Fish Consumption Use:
0827A_01

TCEQ Draft 2014 Integrated Report
Not Assessed (No Data)

In-House 5 Year Assessment
Not Assessed (No Data)

Trend Analysis Overview

Table MS-23: Trend Analysis Result Summary

Main Stem		Days Since Precip			Flow Severity			*E. coli*			TDS			NO3			TKN		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0827A_01	20289	UP		UP		DN		DN	DN					DN	DN		DN		DN

Trends Key
A-All Months
S-Summer/Growing Season (May-October)
W-Winter/Dormant Sesaon (November-April)
UP Increasing Trends
DN Decreasing Trends

There were 9 significant trends identified for this segment as summarized in Table MS-23. For additional detail on trend methods, see the Data Review Methodology section.

Trends (Classified Segments):
None

Trends (Unclassified Segments):
See Table MS-24 for details of the significant trends analysis summary presented in Table MS-23. Trends for *E. coli* and nutrients are decreasing in this assessment unit. Therefore, there are no trends of concern in this unclassified segment.

Table MS-24: 0827A Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0827A_01	20289	NO3	POR	0.24	-0.14	0.01	0.05	-2.85	0.68	-1.26	28	0.83	1.78	1.28	0.84	0.27	0.03	1.01	3/12/07	11/20/13
0827A_01	20289	NO3	Summer	0.51	-0.19	0.00	0.05	-3.52	1.07	-0.37	14	0.66	1.78	1.00	0.53	0.25	0.03	0.75	6/4/07	7/31/13
0827A_01	20289	TKN	POR	0.23	-0.05	0.01	0.02	-2.79	0.38	-0.23	28	0.54	1.00	0.60	0.58	0.35	0.10	0.25	2/6/07	11/20/13
0827A_01	20289	TKN	Winter	0.34	-0.07	0.03	0.03	-2.50	0.40	-0.42	14	0.52	1.00	0.60	0.55	0.30	0.10	0.30	2/6/07	11/20/13
0827A_01	20289	Flow Severity	Summer	0.23	-0.21	0.07	0.11	-1.94	0.78	1.36	15	3.00	5.00	3.00	3.00	3.00	1.00	0.00	5/8/07	7/31/13
0827A_01	20289	*E. coli*	POR	0.21	-0.30	0.01	0.11	-2.85	0.85	-0.90	32	1044	4800	861	335	145	46	716	2/6/07	11/20/13
0827A_01	20289	*E. coli*	Summer	0.40	-0.41	0.01	0.13	-3.06	0.40	-0.59	16	1234.5	4800	1511	425	190	46	1321	5/8/07	7/31/13
0827A_01	20289	Days Since Precip	POR	0.19	0.23	0.01	0.09	2.63	0.16	-1.34	31	4.08	20.00	7.00	2.00	1.00	0.50	6.00	2/6/07	11/20/13
0827A_01	20289	Days Since Precip	Winter	0.26	0.24	0.04	0.11	2.22	-0.22	-0.38	16	5.06	20.00	7.00	3.00	2.00	0.50	5.00	2/6/07	11/20/13

Segment 0813 – Houston County Lake

Overview

This 1,300 acre segment impounds Little Elkhart Creek in Houston County up to a normal pool elevation of 260 feet. Portions of the area on the southwest side of the segment are developed, but the vast majority of the watershed is rural and the land use classification is split between forest and agriculture/pasture. Houston County Lake is completely within the Post Oak Savannah ecoregion. Houston County Lake has been noted as being eutrophic by the TCEQ report Trophic Classification of Texas Reservoirs.

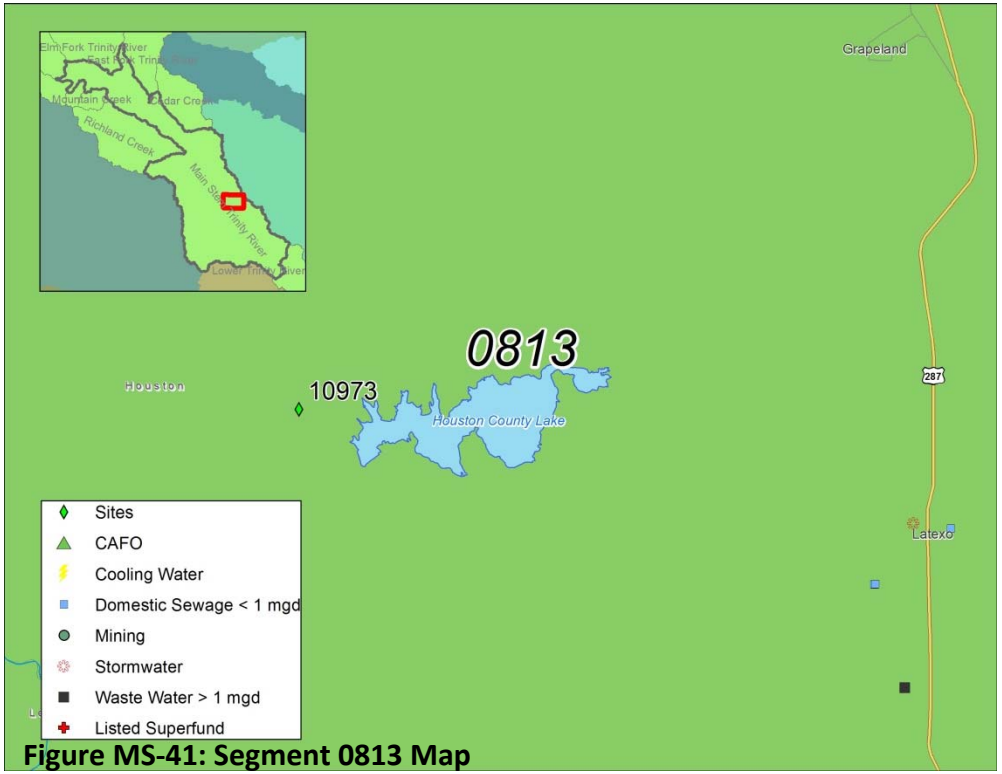


Figure MS-41: Segment 0813 Map

Assessments (Classified Segments):

Aquatic Life Use: 0813_01 - Entire reservoir	**TCEQ Draft 2014 Integrated Report** Fully Supporting	**In-House 5 Year Assessment** Fully Supporting
General Use: 0813_01	**TCEQ Draft 2014 Integrated Report** Fully Supporting	**In-House 5 Year Assessment** Fully Supporting
Contact Recreation Use: 0813_01	**TCEQ Draft 2014 Integrated Report** Fully Supporting	**In-House 5 Year Assessment** Fully Supporting
Public Water Supply Use: 0813_01	**TCEQ Draft 2014 Integrated Report** Fully Supporting	**In-House 5 Year Assessment** Fully Supporting

Fish Consumption Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0813_01	Not Assessed (No Data)	Not Assessed (No Data)

Assessments (Unclassified Segments):

Aquatic Life Use: Not Assessed (No Data)

General Use: Not Assessed (No Data)

Contact Recreation Use: Not Assessed (No Data)

Public Water Supply Use: Not Assessed (No Data)

Fish Consumption Use: Not Assessed (No Data)

Trend Analysis Overview

Table MS-25: Trend Analysis Result Summary

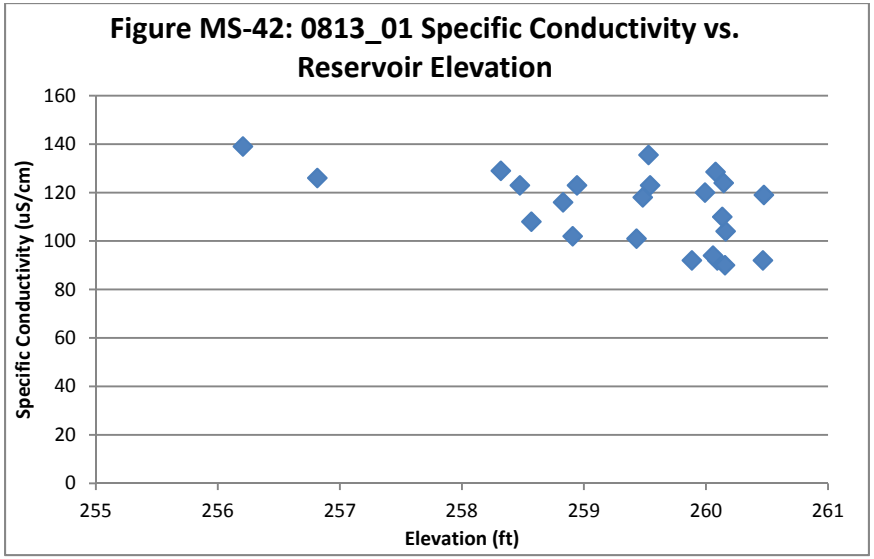
Main Stem		pH			Sp Cond			*E. coli*			TSS			TDS		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0813_01	10973			DN	UP	UP	UP		DN				DN		UP	

Trends Key
A-All Months
S-Summer/Growing Season (May-October)
W-Winter/Dormant Sesaon (November-April)
UP Increasing Trends
DN Decreasing Trends

There were 7 significant trends identified for this segment as summarized in Table MS-25. For additional detail on trend methods, see the Data Review Methodology section.

Trends (Classified Segments):
See Table MS-26 for details of the significant trends analysis summary presented in Table MS-25. There are increasing trends for specific conductivity and TDS in this segment with R^2 values greater than 0.33. As discussed previously in this chapter for segment 0806, TDS trends are redundant to specific conductivity trends. Although specific conductivity is fairly

low with a maximum value of 139 uS/cm, it is negatively correlated to reservoir elevation (correlation coefficient= -0.52) as shown in Figure MS-42. This indicates that salts and other dissolved solids in the reservoir are concentrating due to evaporation.



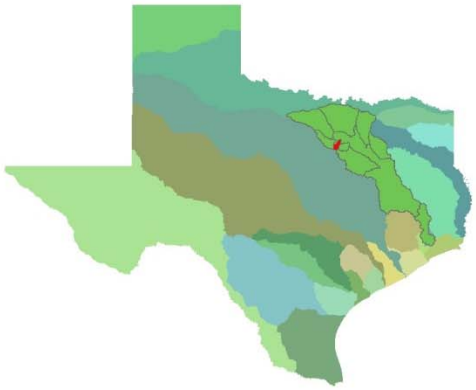
There is a decreasing winter trend for pH with an R^2 of 0.44. However, the slope is very shallow. The pH standards are 6.5 and 9 SU. Out of the entire data set, there are no values below 6.5 SU and only 3 below 7.0 SU. Therefore, this trend does not present an immediate concern.

Table MS-26: 0813 Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0813_01	10973	Sp Cond	POR	0.47	3.42	0.00	0.61	5.63	0.79	-1.38	38	108.79	139.00	120.00	106.75	95.00	88.50	25.00	2/26/04	7/16/13
0813_01	10973	Sp Cond	Summer	0.49	3.52	0.00	0.87	4.03	0.26	-1.01	19	112.05	139.00	123.00	112.00	97.00	90.00	26.00	6/10/04	7/16/13
0813_01	10973	Sp Cond	Winter	0.53	3.39	0.00	0.77	4.38	0.73	-1.13	19	105.53	128.50	119.00	103.00	94.00	88.50	25.00	2/26/04	4/16/13
0813_01	10973	pH	Winter	0.44	-0.09	0.00	0.03	-3.67	-0.50	-0.69	19	7.55	8.20	7.90	7.60	7.20	6.70	0.70	2/26/04	4/16/13
0813_01	10973	TSS	Winter	0.19	-0.15	0.06	0.08	-2.02	0.30	-1.14	19	4.47	19.00	6.00	4.00	1.00	1.00	5.00	2/26/04	4/16/13
0813_01	10973	*E. coli*	Summer	0.53	-0.43	0.00	0.10	-4.26	1.62	0.28	18	16.33	210.00	10.00	2.00	0.50	0.50	9.50	6/10/04	7/16/13
0813_01	10973	TDS	Summer	0.33	1.44	0.01	0.50	2.90	0.65	-0.78	19	77.73	91.00	83.85	77.00	73.00	67.00	10.85	6/10/04	7/16/13

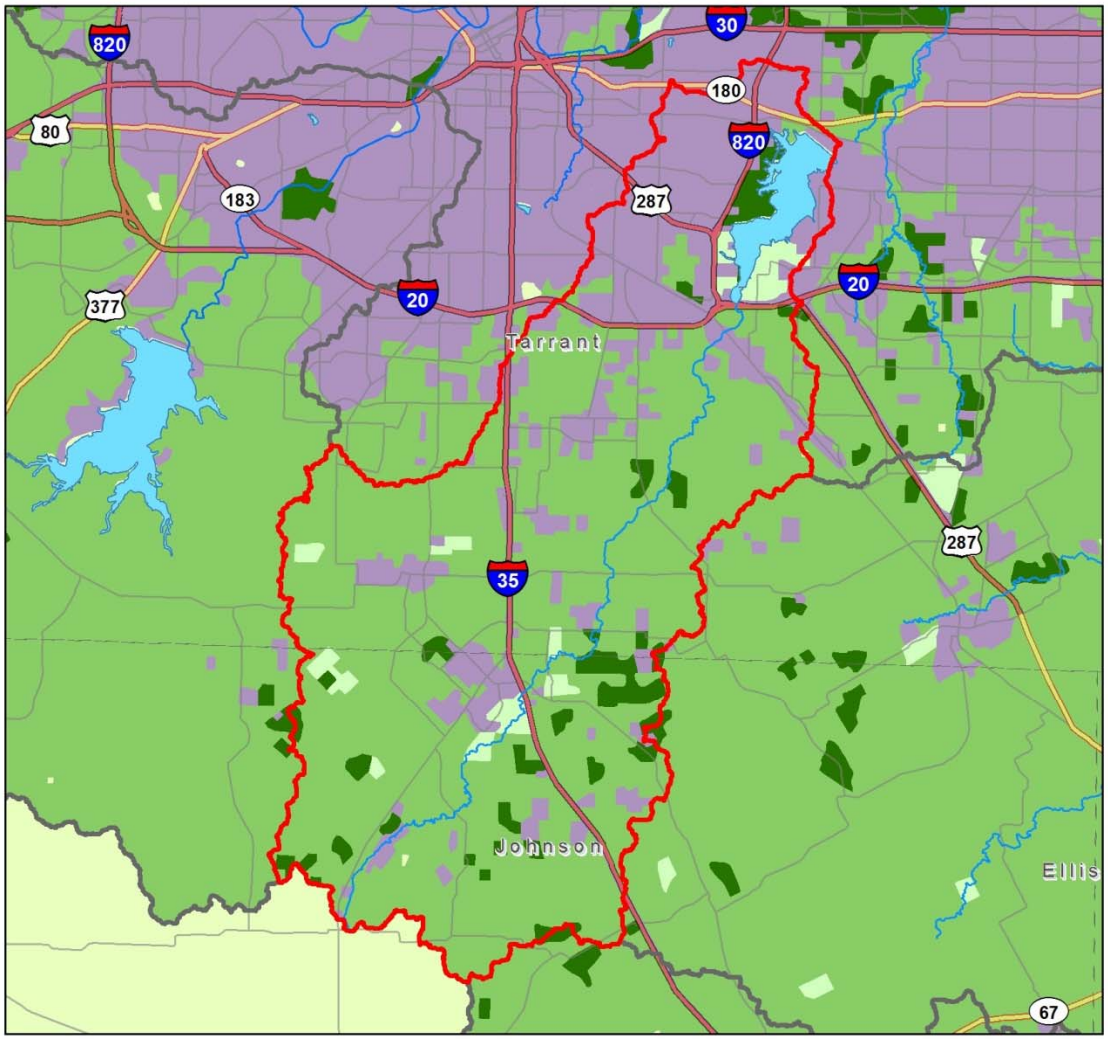
Trends (Unclassified Segments):
None

Village Creek



Land Use Type

- Rangeland
- Urban, Industrial and Residential
- Crop, Pasture and other Agriculture
- Forest



VILLAGE CREEK

Classified Segments Used in this Report – 1
Unclassified Segments Used in this Report – 1

0828 – Lake Arlington
0828A – Village Creek

Sites Used for Analysis:

2008 Integrated Report	8
2010 Integrated Report	11
2012 Integrated Report	11
Draft 2014 Integrated Report	12
5-Year Analysis	6
Valid Trends	6

Table VC-1: Village Creek Count of Dischargers by Type and County

County	Cooling Water	Domestic Sewage <1mgd	Mining	Stormwater	Wastewater >1mgd	CAFO	Total Dischargers
JOHNSON		5					5
TARRANT		1			1		2
Total		6			1		7

The Village Creek subwatershed extends approximately 28 river miles from Johnson County to the Lake Arlington dam in Tarrant County. The downstream portions of the subwatershed have undergone urbanization while the upstream portions of the subwatershed have remained rural with some pastureland and row-crop agriculture. Major population centers include the City of Burleson and the communities of the southwest DFW Metroplex. Lake Arlington supplies water to the City of Arlington, as well as, a portion of Tarrant County. Water rights permits for Lake Arlington are held by the City of Arlington and TXU Electric. Yields of the reservoir are supplemented by water imported from the Cedar Creek and Richland-Chambers reservoirs. This subwatershed receives between 32 and 36 inches of precipitation annually and is located within the iron-rich sandy soils of the Eastern Cross Timbers ecoregion.

There are four sites in this subwatershed that have been assessed under the EPA Brownfields Program. At three of these sites, it has not yet been determined if a cleanup is needed. However, lead and asbestos were found at the Kennedale Parkway site. A fourth has been determined to need asbestos removal. In addition, two releases were investigated by the EPA On-Scene Coordinator office; one for hydraulic oil spill and one for industrial organic chemicals. See Tables VC-2 and VC-3, for details and links to additional information.

Table VC-2: EPA Brownfield Sites

Segment	Site	Link to Additional EPA Information	Map Site	Assessment Complete Date	Cleanup Required	Cleanup Status	Redevelopment Status	Media Affected	Classes of Contaminants Found	Media Addressed	Classes of Contaminants Cleaned Up
0828	KENNEDALE PARKWAY	EPA Link	Map It	5/24/2010	Unknown	Not Started	Not Started	None	Asbestos, Lead	None	
0828	GRAPEVINE TRAIL SITE	EPA Link	Map It	8/28/2012	Unknown	Not Started	Not Started	None		None	
0828	MULTICULTURAL WESTERN HERITAGE MUSEUM	EPA Link	Map It	7/9/2013	Yes	Not Started	Not Started		Asbestos	None	
0828	5412 HIGH RIDGE ROAD	EPA Link		6/10/2014	Unknown	Not Started	Not Started	Ground Water		None	

Table VC-3: EPA On- Scene Coordinator Investigations

Segment	Site	Link to Additional EPA Information	Map Site	Date	Contaminants Found
0828	KENNEDALE MYSTERIOUS RELEASE	EPA Link	Map It	11/1/2009	Dimethylamine, Chloroacetaldehyde
0828	RENDON ROAD OIL SPILL	EPA Link	Map It	5/15/2007	Hydraulic Oil

Lake Arlington (drainage area 143 square miles) is located in the Village Creek subwatershed within Tarrant and Johnson counties. In 2011, Trinity River basin stakeholders created the 2011 Lake Arlington Master Plan which outlines a series of goals and objectives for Lake Arlington and the Village Creek subwatershed. These goals include protecting water quality, promoting recreation opportunities and enhancing wildlife preservation and fisheries.

Segment 0828 – Lake Arlington

Overview

This segment covers 2,275 acres and impounds Village Creek from the Arlington dam in Tarrant County up to a normal pool elevation of 550 feet. The land use around the lake and in the lower portion of the watershed is nearly all classified as urban and the upper reaches of the segment are agriculture/pasture. All of segment 0828 is located in the Eastern Cross Timbers ecoregion.

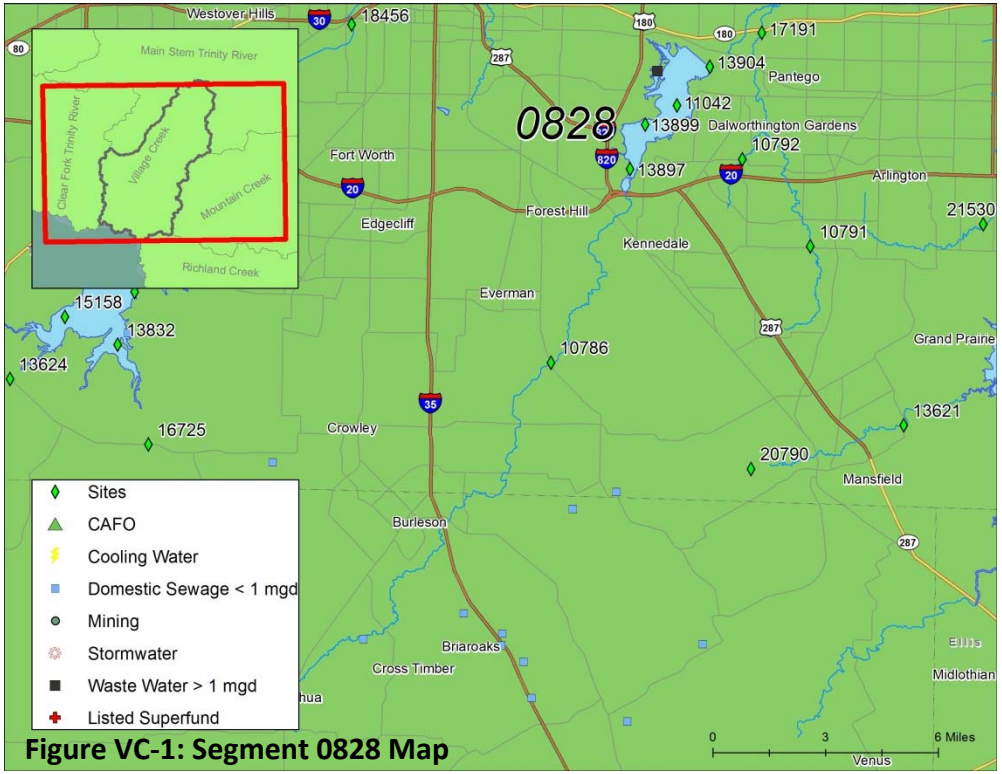


Figure VC-1: Segment 0828 Map

Assessments (Classified Segments):

Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0828_01 - Lowermost portion of lake along western half of dam	Not Assessed (No Data)	Not Assessed (No Data)
0828_02 - Lowermost portion of lake along eastern half of dam	Fully Supporting	Fully Supporting
0828_03 - Western half of lower portion of lake	Not Assessed (No Data)	Not Assessed (No Data)
0828_04 - Eastern half of lower portion of lake	Not Assessed (Inadequate Data)	Not Assessed (No Data)
0828_05 - Western half of upper portion of lake	Fully Supporting	Fully Supporting
0828_06 - Eastern half of upper portion of lake	Fully Supporting	Fully Supporting

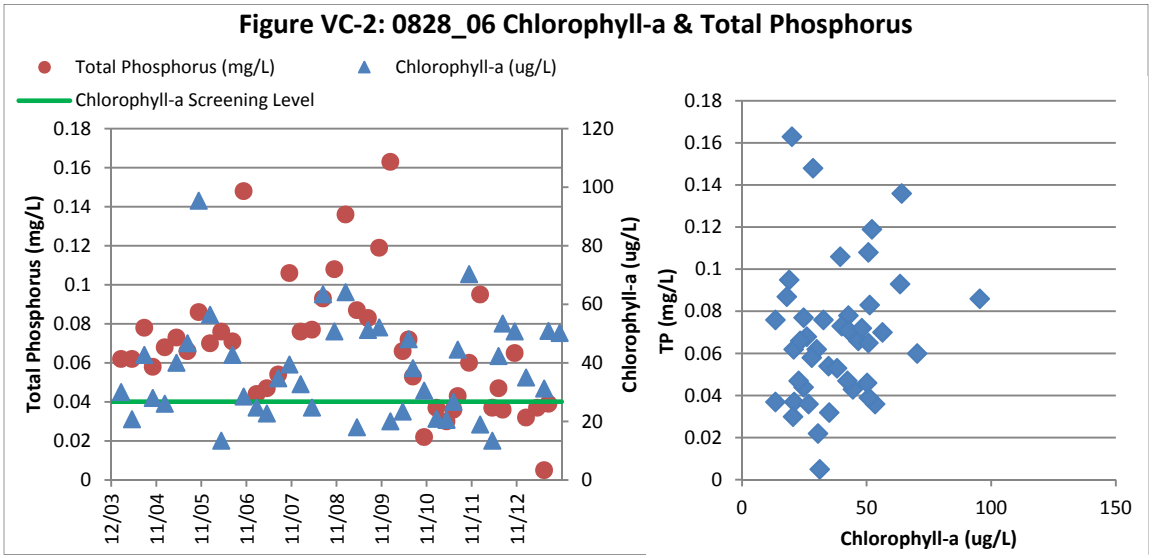
0828_07 - Uppermost portion of lake	Fully Supporting	Fully Supporting
0828_08 - Remainder of lake	Not Assessed (No Data)	Not Assessed (No Data)

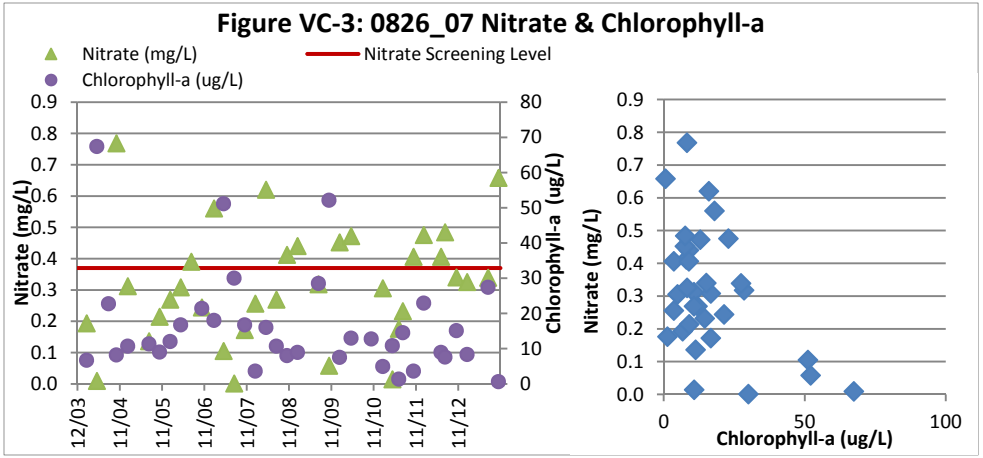
General Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0828_01	Fully Supporting	Fully Supporting
0828_02	Concern	Concern
0828_03	Fully Supporting	Fully Supporting
0828_04	Fully Supporting	Fully Supporting
0828_05	Concern	Concern
0828_06	Concern	Concern
0828_07	Concern	Concern
0828_08	Fully Supporting	Fully Supporting

Assessment units 0828_02, 0828_05, and 0828_06 were found to have concerns for chlorophyll-a based on the TCEQ Draft 2014 Integrated Report. In addition, 0828_07 was found to have concerns for nitrate. The in-house 5 year assessment also found these concerns in the same assessment units.

For chlorophyll-a, there does not appear to be any correlation between the measured values and either stream flow or lake elevation. Rather there is an observed relationship between chlorophyll-a and total phosphorus. This relationship is seen in all three assessment units (0828_02, 0828_06, and 0828_07) and is best seen in Figure VC-2 which shows that not only is there a relationship between the two parameters and the expected intra-year variation, there also appears to be a pattern in the fluctuation of the values across years. This pattern was also seen in the dataset used for the 2010 TRA Basin Summary Report. Based on that report and this dataset, the pattern appears to have a roughly four year cycle in which values peak and then drop again. This may be due to natural algal population growth and collapse as

Figure VC-2: 0828_06 Chlorophyll-a & Total Phosphorus



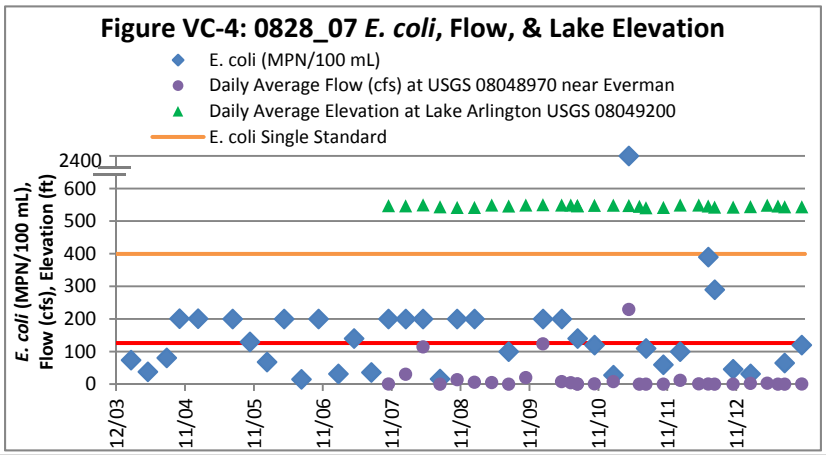


nutrients are consumed to a point that the algal population can no longer be sustained.

There is a similar pattern for nitrate and chlorophyll-a in 0828_07 as the one seen for chlorophyll-a and total phosphorus in 0828_06 (Figure VC-3). Again, this may be due to natural algal population growth and collapse. In order to determine a cyclical relationship between chlorophyll-a and nutrients in the lake, a special study would need to be undertaken with a sampling frequency adequate to see if there is a drop in nutrients just prior to the drop in chlorophyll-a.

Contact Recreation Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0828_01	Not Assessed (No Data)	Not Assessed (No Data)
0828_02	Fully Supporting	Fully Supporting
0828_03	Not Assessed (No Data)	Not Assessed (No Data)
0828_04	Not Assessed (No Data)	Not Assessed (No Data)
0828_05	Fully Supporting	Fully Supporting
0828_06	Fully Supporting	Fully Supporting
0828_07	Fully Supporting	Not Supporting
0828_08	Not Assessed (No Data)	Not Assessed (No Data)

This segment was found to be fully supporting based on the TCEQ Draft 2014 Integrated Report. However, the in-house 5 year assessment found that 0828_07 was not supporting based on an elevated *E. coli* geometric mean and appears to be due to a single elevated *E. coli* sample which occurred during an extremely high flow event (Figure VC-4). Elevated *E. coli* levels typically occur during periods of high flow due to runoff in the watershed which carry in bacteria loads from the surrounding land. Current standards for *E. coli* are 399 MPN/100 mL for a single grab sample and 126 MPN/100 mL for the geometric mean of samples over time.



Public Water Supply Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0828_01	Fully Supporting	No Concern
0828_02	Fully Supporting	Fully Supporting
0828_03	Fully Supporting	No Concern
0828_04	Fully Supporting	No Concern
0828_05	Fully Supporting	Fully Supporting
0828_06	Fully Supporting	Fully Supporting
0828_07	Fully Supporting	Fully Supporting
0828_08	Fully Supporting	No Concern

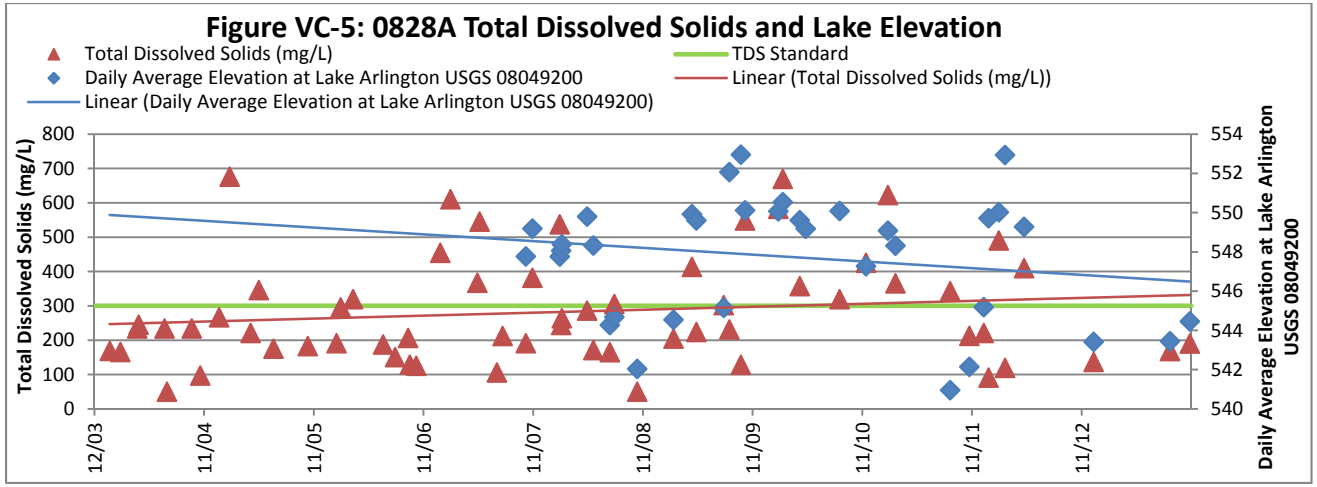
Fish Consumption Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0828_01	Not Assessed (Inadequate Data)	Not Assessed (No Data)
0828_02	Not Assessed (Inadequate Data)	Not Assessed (No Data)
0828_03	Not Assessed (Inadequate Data)	Not Assessed (No Data)
0828_04	Not Assessed (Inadequate Data)	Not Assessed (No Data)
0828_05	Not Assessed (Inadequate Data)	Not Assessed (No Data)
0828_06	Not Assessed (Inadequate Data)	Not Assessed (No Data)
0828_07	Not Assessed (Inadequate Data)	Not Assessed (No Data)
0828_08	Not Assessed (Inadequate Data)	Not Assessed (No Data)

Assessments (Unclassified Segments):

Aquatic Life Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0828A_01 - From Lake Arlington to the headwaters	Fully Supporting	Fully Supporting

General Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0828A_01	No Concern	Not Supporting

The in-house 5 year assessment found that this unclassified segment was not supporting due to total dissolved solids. This may be due to drought conditions in the area. As less rainfall occurs, more lawn and agricultural irrigation takes place. The runoff from irrigation is generally high in dissolved solids. In addition, as evaporation takes place in the streams and reservoirs, dissolved solids in the water become concentrated. This relationship is shown in Figure VC-5 for Village Creek and Lake Arlington.

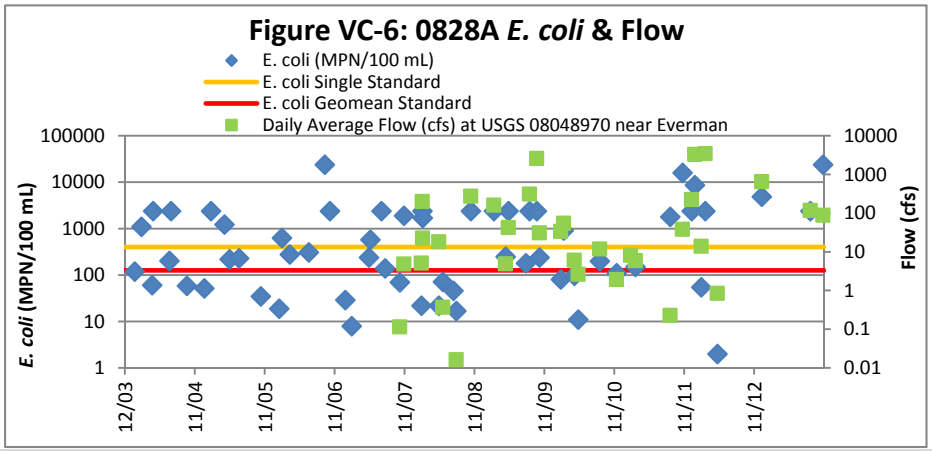


Contact Recreation Use:
0828A_01

TCEQ Draft 2014 Integrated Report
Not Supporting

In-House 5 Year Assessment
Not Supporting

This segment was found to be not supporting based on both the TCEQ Draft 2014 Integrated Report and the in-house 5 year assessment due to elevated *E. coli* geometric means. In addition, the in-house 5 year assessment found this segment to be not supporting based on the single grab sample standard. Current standards for *E. coli* are 399 MPN/100 mL for a single grab sample and 126 MPN/100 mL for the geometric mean of samples over time. As seen in Figure VC-6, there are several elevated *E. coli* values throughout the dataset. These values are associated with higher flow values in the stream. As discussed above, elevated *E. coli* and stream flow values are typically occur in tandem due to inputs from the surrounding watershed. There are two sites used in the dataset for this unclassified segment; one is at the headwaters of the lake in an urbanized area and the other is further upstream in a more rural area of the watershed. Although there are a few elevated *E. coli* values at the headwater site, a majority of the elevated values originate at the upstream rural site. This indicates that the source of the impairment in 0828A may be due to factors such as wildlife, livestock, or faulty septic tanks.



Public Water Supply Use:
0828A_01

TCEQ Draft 2014 Integrated Report
Not Assessed (No Data)

In-House 5 Year Assessment
Fully Supporting

Fish Consumption Use:
0828A_01

TCEQ Draft 2014 Integrated Report
Fully Supporting

In-House 5 Year Assessment
Not Assessed (No Data)

Trend Analysis Overview

Table VC-4: Trend Analysis Result Summary

Village Creek		Flow Severity			Secchi Depth			Water Temp			DO			pH			Sp Cond			Chlorophyll-a			TSS			VSS		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0828_02	13904						DN						DN												UP			
0828_05	13899																											
0828_06	11042																											
0828_07	13897																				DN							
0828A_01	10780	UP		UP										DN	DN	DN	UP		UP									
0828A_01	10786									DN																DN		

Village Creek		TDS			SO4			NH3			NO3			TKN			OP			TP			Hardness		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0828_02	13904	DN					DN								DN	DN				DN	DN			DN	
0828_05	13899													DN		DN									
0828_06	11042	DN						DN						DN	DN	DN		DN			DN				
0828_07	13897								UP							DN			DN			DN			
0828A_01	10780	UP		UP																					
0828A_01	10786							DN	DN	DN		DN		DN	DN	DN									

Trends Key
A-All Months
S-Summer/Grow ing Season (May-October)
W-Winter/Dormant Sesaon (November-April)
UP Increasing Trends
DN Decreasing Trends

There were 42 significant trends identified for this segment as summarized in Table VC-4. For additional detail on trend methods, see the Data Review Methodology section.

Trends (Classified Segments):
See Table VC-5 for details of the significant trends analysis summary presented in Table VC-4.

As opposed to the findings detailed in the 2010 TRA Basin Summary Report, chlorophyll-a and total phosphorus trends are now decreasing. As discussed above in the General Use section, this may be due to natural algal population cycles in the lake. Overall, trends in this segment have R^2 values less than 0.33. There are 5 trends with R^2's greater than 0.4. However, these are all decreasing trends with very shallow slopes.

Table VC-5: 0828 Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0828_02	13904	Secchi Depth	Winter	0.48	-0.04	0.00	0.01	-4.04	0.32	-0.57	20	0.70	1.00	0.79	0.70	0.61	0.46	0.18	2/18/04	11/13/13
0828_02	13904	DO	Winter	0.16	-0.22	0.08	0.12	-1.83	-0.56	-0.45	20	9.99	12.50	11.25	10.02	9.00	6.70	2.25	2/18/04	11/13/13
0828_02	13904	TSS	Winter	0.17	0.42	0.07	0.22	1.89	-0.14	-0.91	20	11.55	17.10	13.90	11.90	8.57	6.80	5.33	2/18/04	11/13/13
0828_02	13904	TKN	Summer	0.47	-0.06	0.00	0.01	-4.32	-1.00	2.46	23	0.89	1.53	1.06	0.85	0.78	0.10	0.28	5/17/04	8/14/13
0828_02	13904	TKN	Winter	0.19	-0.03	0.06	0.01	-1.99	-1.11	0.60	19	0.96	1.27	1.12	0.98	0.86	0.51	0.26	2/18/04	11/13/13
0828_02	13904	TP	POR	0.16	-0.07	0.01	0.02	-2.81	-0.97	0.71	43	0.07	0.19	0.08	0.06	0.05	0.02	0.03	2/18/04	11/13/13
0828_02	13904	TP	Summer	0.41	-0.01	0.00	0.00	-3.91	0.41	-0.56	24	0.06	0.11	0.07	0.06	0.04	0.02	0.04	5/17/04	8/14/13
0828_02	13904	Hardness	Summer	0.27	-2.50	0.01	0.87	-2.88	-1.55	-0.85	24	26.66	43.65	36.68	30.38	13.96	3.79	22.72	5/17/04	8/14/13
0828_02	13904	SO4	Winter	0.15	-0.58	0.10	0.33	-1.74	0.57	-0.22	19	30.53	39.30	33.50	29.70	27.30	21.90	6.20	2/18/04	11/13/13
0828_02	13904	TDS	POR	0.11	-0.02	0.03	0.01	-2.27	0.62	1.16	44	180.84	258.00	192.69	181.00	165.00	129.00	27.69	2/18/04	11/13/13
0828_05	13899	TKN	POR	0.33	-0.04	0.01	0.01	-3.09	-0.99	-0.29	21	0.92	1.26	1.05	0.98	0.82	0.51	0.23	2/18/04	11/13/13
0828_05	13899	TKN	Winter	0.33	-0.04	0.01	0.01	-2.96	-0.81	-0.38	20	0.92	1.26	1.08	0.95	0.80	0.51	0.28	2/18/04	11/13/13
0828_06	11042	NH3	POR	0.16	-0.18	0.01	0.07	-2.66	1.26	-2.01	39	0.02	0.10	0.04	0.00	0.00	0.00	0.04	2/18/04	11/13/13
0828_06	11042	TKN	POR	0.33	-0.05	0.00	0.01	-4.57	-0.59	1.87	44	0.89	1.64	1.06	0.94	0.72	0.10	0.35	2/18/04	11/13/13
0828_06	11042	TKN	Summer	0.47	-0.07	0.00	0.02	-4.44	-0.11	1.46	24	0.88	1.64	1.06	0.93	0.66	0.10	0.40	5/17/04	8/14/13
0828_06	11042	TKN	Winter	0.16	-0.03	0.08	0.02	-1.87	-1.06	-0.37	20	0.91	1.22	1.10	0.95	0.74	0.42	0.36	2/18/04	11/13/13
0828_06	11042	TP	Summer	0.44	0.00	0.00	0.00	-4.14	-0.73	-0.28	24	0.06	0.09	0.07	0.06	0.04	0.01	0.04	5/17/04	8/14/13
0828_06	11042	OP	Summer	0.25	-0.18	0.02	0.07	-2.57	0.64	-1.46	22	0.00	0.02	0.01	0.00	0.00	0.00	0.01	5/17/04	8/14/13
0828_06	11042	TDS	POR	0.11	-3.15	0.03	1.39	-2.27	0.75	2.93	44	182.52	258.00	196.71	182.00	161.50	98.00	35.21	2/18/04	11/13/13
0828_07	13897	NH3	Summer	0.24	0.01	0.06	0.00	2.02	1.01	-0.54	15	0.07	0.16	0.10	0.05	0.03	0.00	0.07	5/17/04	8/14/13
0828_07	13897	TKN	Winter	0.17	-0.04	0.07	0.02	-1.93	0.41	2.48	20	0.80	1.50	0.89	0.73	0.68	0.10	0.22	2/18/04	11/13/13
0828_07	13897	TP	Winter	0.22	-0.14	0.04	0.06	-2.27	0.22	-0.66	20	0.14	0.50	0.18	0.09	0.05	0.02	0.13	2/18/04	11/13/13
0828_07	13897	OP	Winter	0.24	-0.22	0.04	0.10	-2.20	-1.80	1.36	17	0.04	0.21	0.05	0.02	0.02	0.00	0.04	2/18/04	11/13/13
0828_07	13897	Chlorophyll-a	Summer	0.23	-0.15	0.06	0.07	-2.07	-1.72	2.50	16	21.12	67.40	27.95	15.25	10.75	1.30	17.20	5/17/04	8/14/13

Trends (Unclassified Segments):
See Table VC-6 for details of the significant trends analysis summary presented in Table VC-4.

There are increasing trends for both total dissolved solids and specific conductivity in the winter. As discussed in the General Use section above, this may be due to ongoing drought conditions in the area. The trends for the period of record have an R^2 of 0.32 with shallow slopes. The average of all the TDS data in this assessment unit is 283 mg/L which is close to the standard of 300 mg/L. For this reason, it is advisable to continue monitoring TDS in the stream and determine if the high TDS levels are natural or anthropogenic.

Of the remaining trends with R^2 values greater than 0.4, three are decreasing trends for nutrients (ammonia and TKN) and one is a decreasing trend for pH. The decreasing nutrient trends are of no concern as they are desirable. The decreasing pH trend has a shallow slope so it is not of immediate concern as shown in Figure VC-7.

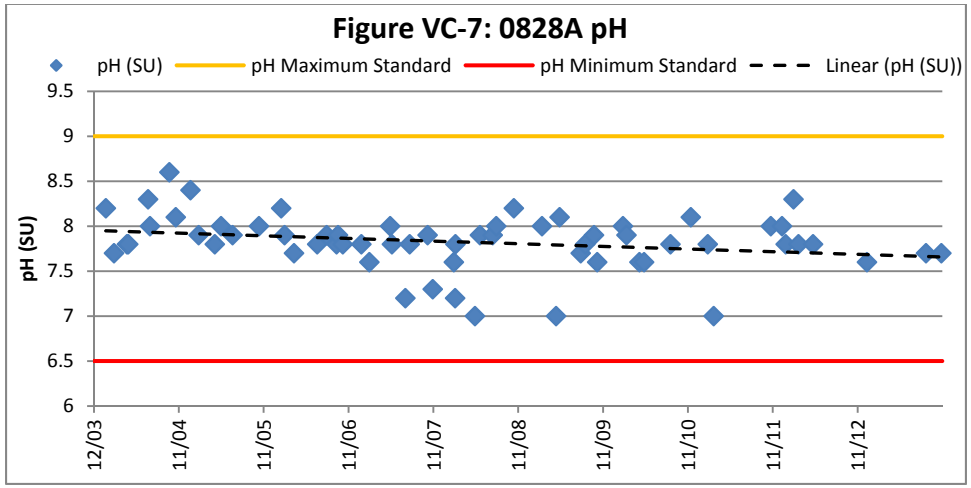


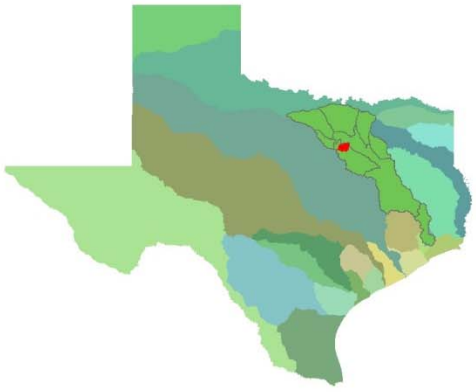


Image VC - 1: Docks on Lake Arlington

Table VC-6: 0828A Trend Analysis Result Detail

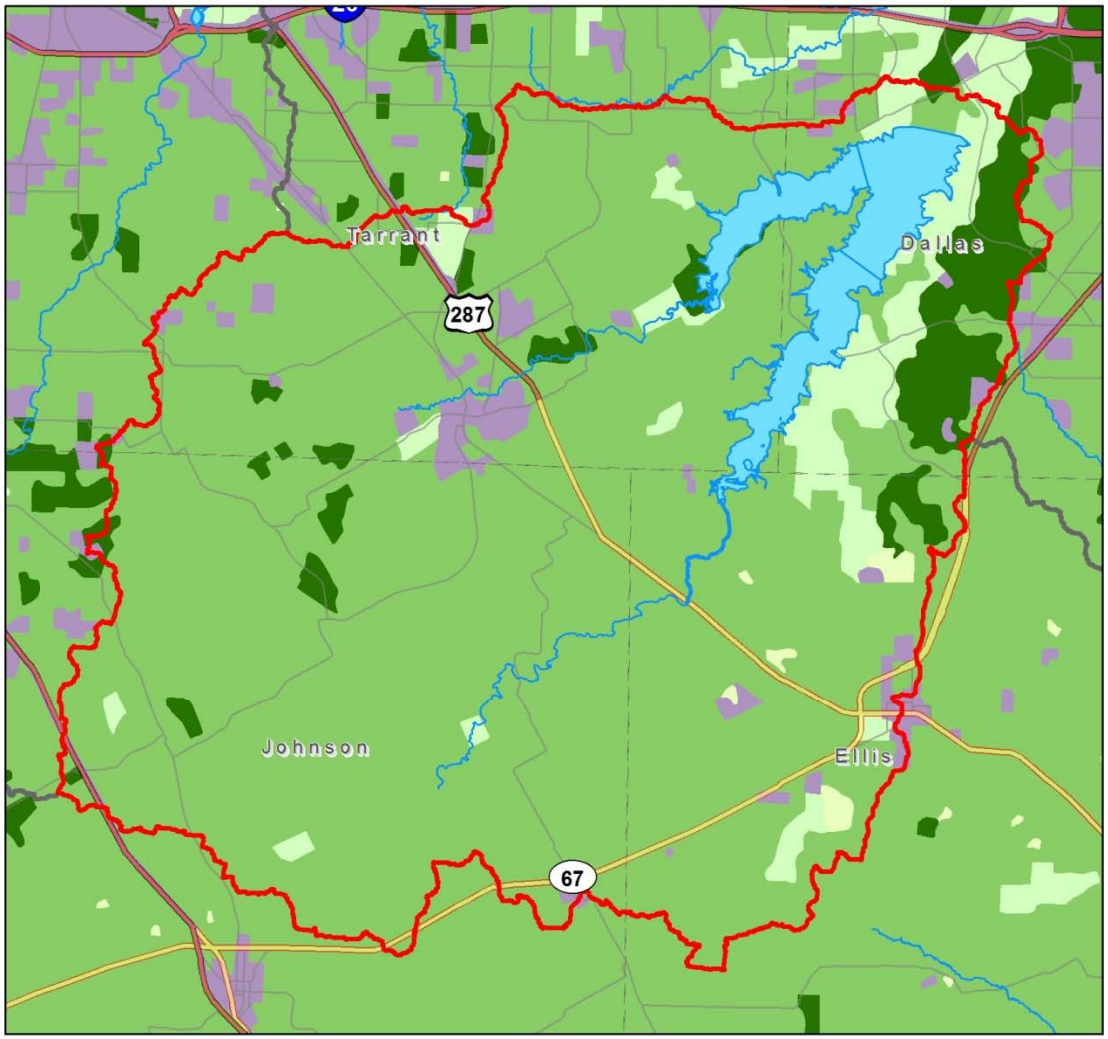
Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0828A_01	10780	Sp Cond	POR	0.32	0.10	0.00	0.03	3.46	1.28	-0.78	27	459.56	1030.00	562.00	360.00	294.00	254.00	268.00	1/21/04	9/19/11
0828A_01	10780	Sp Cond	Winter	0.48	66.88	0.01	21.14	3.16	1.48	0.18	13	506.62	1030.00	655.00	410.00	294.00	260.00	361.00	1/21/04	3/21/11
0828A_01	10780	pH	POR	0.34	-0.09	0.00	0.03	-3.53	-1.25	2.12	26	7.86	8.60	8.00	7.80	7.80	7.00	0.20	1/21/04	3/21/11
0828A_01	10780	pH	Summer	0.41	-0.11	0.02	0.04	-2.74	-0.30	2.32	13	7.85	8.60	7.90	7.80	7.80	7.00	0.10	7/21/04	9/16/10
0828A_01	10780	pH	Winter	0.30	-0.08	0.05	0.04	-2.18	-1.66	2.01	13	7.88	8.40	8.10	7.90	7.80	7.00	0.30	1/21/04	3/21/11
0828A_01	10780	Flow Severity	POR	0.15	0.03	0.05	0.02	2.04	-0.16	1.64	26	2.92	5.00	3.00	3.00	3.00	2.00	0.00	1/21/04	9/19/11
0828A_01	10780	Flow Severity	Winter	0.26	0.10	0.07	0.05	1.97	-0.39	1.89	13	2.92	4.00	3.00	3.00	3.00	2.00	0.00	1/21/04	3/21/11
0828A_01	10780	TDS	POR	0.32	0.10	0.00	0.03	3.46	1.28	-0.78	27	298.71	669.50	365.30	234.00	191.10	165.10	174.20	1/21/04	9/19/11
0828A_01	10780	TDS	Winter	0.48	43.47	0.01	13.74	3.16	1.48	0.18	13	329.30	669.50	425.75	266.50	191.10	169.00	234.65	1/21/04	3/21/11
0828A_01	10786	Water Temp	Winter	0.21	-0.61	0.04	0.28	-2.22	-0.10	-0.75	21	12.56	20.60	15.90	12.50	9.80	5.30	6.10	2/25/04	11/25/13
0828A_01	10786	VSS	POR	0.15	-0.37	0.05	0.18	-2.04	-0.69	-1.58	25	15.38	57.70	26.70	9.80	0.50	0.50	26.20	2/25/04	5/26/10
0828A_01	10786	NH3	POR	0.49	-0.40	0.00	0.07	-5.58	-0.40	-2.17	35	0.05	0.19	0.09	0.03	0.00	0.00	0.09	2/25/04	11/25/13
0828A_01	10786	NH3	Summer	0.56	-0.44	0.00	0.11	-4.08	-0.56	-1.23	15	0.04	0.14	0.06	0.03	0.00	0.00	0.06	7/29/04	9/20/13
0828A_01	10786	NH3	Winter	0.33	-0.01	0.01	0.00	-2.95	1.33	-0.33	20	0.06	0.19	0.10	0.05	0.00	0.00	0.10	2/25/04	11/25/13
0828A_01	10786	NO3	Summer	0.28	-0.08	0.04	0.03	-2.27	1.53	0.02	15	0.37	1.10	0.59	0.26	0.04	0.01	0.55	7/29/04	9/20/13
0828A_01	10786	TKN	POR	0.30	-0.14	0.00	0.04	-3.81	1.28	-1.03	36	1.19	2.85	1.75	0.94	0.58	0.10	1.17	2/25/04	11/25/13
0828A_01	10786	TKN	Summer	0.46	-0.20	0.01	0.06	-3.36	1.02	-0.71	15	1.11	2.38	1.95	0.81	0.53	0.10	1.42	7/29/04	9/20/13
0828A_01	10786	TKN	Winter	0.24	-0.12	0.02	0.05	-2.47	0.88	-0.70	21	1.24	2.85	1.60	1.27	0.67	0.10	0.93	2/25/04	11/25/13

Mountain Creek



Land Use Type

- Rangeland
- Urban, Industrial and Residential
- Crop, Pasture and other Agriculture
- Forest



MOUNTAIN CREEK

Classified Segments Used in this Report – 1
Unclassified Segments Used in this Report – 5

0838 – Joe Pool Lake
0838A – Mountain Creek
0838B – Sugar Creek
0838C – Walnut Creek
0838D – Hollings Branch
0838E – Soap Creek

Sites Used for Analysis:

2008 Integrated Report	11
2010 Integrated Report	13
2012 Integrated Report	13
Draft 2014 Integrated Report	16
5-Year Analysis	6
Valid Trends	4

Table MC-1: Mountain Creek Count of Dischargers by Type and County

County	Cooling Water	Domestic Sewage <1mgd	Mining	Stormwater	Wastewater >1mgd	CAFO	Total Dischargers
ELLIS		2			2		4
JOHNSON		5					5
TARRANT		1					1
Total		8			2		10

The Mountain Creek subwatershed extends approximately 28 river miles from Johnson County to the Joe Pool Lake dam in Dallas County. A majority of the subwatershed is rural with row-crop agriculture in the upstream portions. The downstream section around Joe Pool Lake has seen a significant increase in urbanization in recent years. Major population centers include the cities of Mansfield, Midlothian, and Cedar Hill as well as the communities of the southern DFW Metroplex. TRA holds some water rights permits for Joe Pool Lake. The remaining water rights are currently unused.

This subwatershed receives between 34 and 36 inches of precipitation annually and lies almost entirely within the Blackland Prairie ecoregion. A majority of this subwatershed is flat; however, the eastern edge is lifted by the Austin Chalk escarpment.

There are 23 Brownfield sites in this subwatershed; two of which may be affecting surface water. At this time, it is unknown if a cleanup is needed at these two sites. There were three hazmat events requiring action from the EPA OSC office. There are two sites being monitored for compliance with the EPA Resource Conservation and Recovery Act. Noncompliance events are reported on the Enforcement and Compliance History Online website. See Tables MC-2, MC-3, and MC-4 for details and links to additional information.

Table MC-2: EPA Brownfields

Segment	Site	Link to Additional EPA Information	Map Site	Assessment Complete Date	Cleanup Required	Cleanup Status	Redevelopment Status	Media Affected	Classes of Contaminants Found	Media Addressed	Classes of Contaminants Cleaned Up
0838	109 S MAIN STREET, MANSFIELD	EPA Link	Map It	2/14/2013	Yes	Not Started	Not Started	Soil, Ground Water	Petroleum Products, Lead	None	
0838	JACKRABBIT QUICK STOP	EPA Link	Map It	1/11/2013	Yes	Not Started	Not Started	Soil	Lead	None	
0838	CITY OF CRANDALL PWS	EPA Link	Map It	11/29/2011	No	Not Started	Not Started	None		None	
0838	CITY OF CRANDALL PWS	EPA Link	Map It	11/29/2011	No	Not Started	Not Started	None		None	
0838	EDEN CREEK TRACT	EPA Link	Map It	7/2/2009	No	Not Started	Not Started	None	None	None	
0838	JIM ONE HOUR CLEANER	EPA Link	Map It	4/19/2011	Unknown	Not Started	Not Started	Soil, Ground Water, Surface Water		None	
0838	ROBINSON PROPERTY	EPA Link	Map It	12/31/2010	No	Not Started	Not Started	None		None	
0838	1188 WEST BROAD BETHLEHEM BAPTIST CHURCH	EPA Link	Map It	11/3/2011	No	Not Started	Not Started	Soil	None		
0838	MANSFIELD MSD SITES	EPA Link	Map It	In Progress (Started 7/15/2011)	Unknown	Not Started	Not Started	Air, Soil, Ground Water, Surface Water		None	
0838	210 SMITH STREET, MANSFIELD	EPA Link	Map It	3/12/2013	Yes	Not Started	Not Started	Soil	Lead	None	
0838	110 ELM STREET, MANSFIELD	EPA Link	Map It	2/14/2013	Yes	Not Started	Not Started	Soil	Petroleum Products, Lead	None	
0838	150 E BROAD STREET, MANSFIELD	EPA Link	Map It	1/11/2013	Yes	Not Started	Not Started	Soil	Petroleum Products, Lead, VOCs, SVOCs	None	
0838	100 E KIMBALL STREET, MANSFIELD	EPA Link	Map It	11/29/2011	No	Not Started	Not Started	None		None	

0838	103 S 1ST AVENUE, MANSFIELD	EPA Link	Map It	11/29/2011	No	Not Started	Not Started	None		None	
0838	106 S 1ST AVENUE, MANSFIELD	EPA Link	Map It	11/29/2011	No	Not Started	Not Started	None		None	
0838	204 ALVARADO STREET, MANSFIELD	EPA Link	Map It	11/29/2011	No	Not Started	Not Started	None		None	
0838	105 WALNUT STREET, MANSFIELD	EPA Link	Map It	11/29/2011	No	Not Started	Not Started	None		None	
0838	139 N MAIN STREET, MANSFIELD	EPA Link	Map It	3/5/2013	Yes	Not Started	Not Started	Soil, Ground Water	Petroleum Products, Lead	None	
0838	MANSFIELD METAL & RUBBER INC	EPA Link	Map It	1/11/2013	Yes	Not Started	Not Started	Soil, Ground Water	Lead, Other Metals	None	
0838	115 DEPOT STREET, MANSFIELD	EPA Link	Map It	1/11/2013	Yes	Not Started	Not Started	Ground Water	Lead	None	
0838	117 DEPOT STREET, MANSFIELD	EPA Link	Map It	1/11/2013	Yes	Not Started	Not Started	Ground Water	Lead	None	
0838	119 DEPOT STREET, MANSFIELD	EPA Link	Map It	1/11/2013	Yes	Not Started	Not Started	Soil, Ground Water	Lead	None	
0838	FORMER TRANSPORTATION MAINTENANCE FACILITY	EPA Link	Map It	2/19/2009	No	Not Started	Not Started	Ground Water	Other Contaminants	None	

Table MC-3: EPA On- Scene Coordinator Investigations

Segment	Site	Link to Additional EPA Information	Map Site	Date	Contaminants Found
0838	HI-YIELD	EPA Link		8/28/2007	Arsenic
0838	BURLESON-RAD-CONTAINER	EPA Link	Map It	3/26/2010	Small Unknown Low Energy Cylinder
0838	UNKNOWN ODOR REDHEART ST	EPA Link	Map It	5/22/2007	Petroleum

Table MC-4: EPA Resource Conservation and Recovery Act (RCRA) and Enforcement and Compliance History Online (ECHO) Sites

Segment	Site	Link to Additional EPA RCRA Information	Link to Additional EPA ECHO Information	Map Site	Site Assessed	Solution for Cleanup Selected	Cleanup Implemented	Cleanup Complete	Media Affected	Contaminant
0838	TXI OPERATIONS LP	EPA Link	EPA Link	Map It	10/18/1990				Air, Soil	Solvents, Plastic/Chemical Precursors, Heavy Metals, Sulfuric Acid, Hydrochloric Acid, Dioxin, PAHs
0838	GERDAU STEEL MIDLOTHIAN	EPA Link	EPA Link	Map It	5/28/1986	8/31/2012	8/31/2012		Air, Surface Water	Heavy Metals, Dioxin

Segment 0838 – Joe Pool Lake

Overview

This segment covers 7,500 acres and impounds Mountain Creek from the Joe Pool dam in Dallas County up to the normal pool elevation of 522 feet. The majority of the watershed for Joe Pool Lake is classified as agriculture/pasture with some sections of urbanization and rangeland. The majority of the watershed is located in the Blackland Prairie ecoregion.

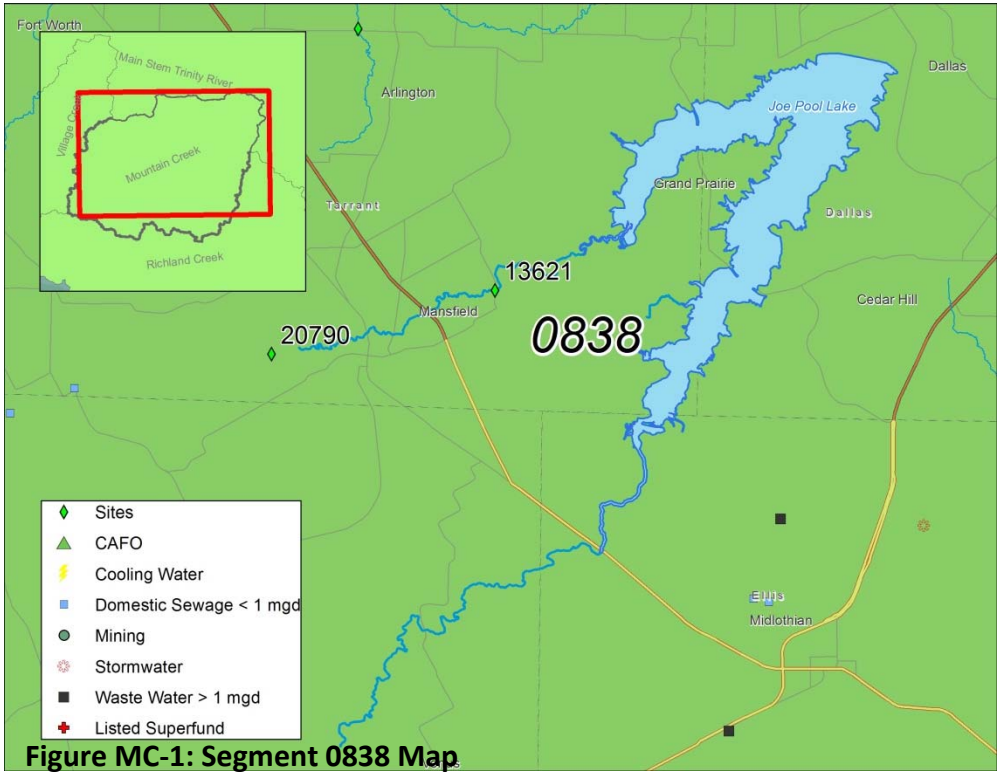
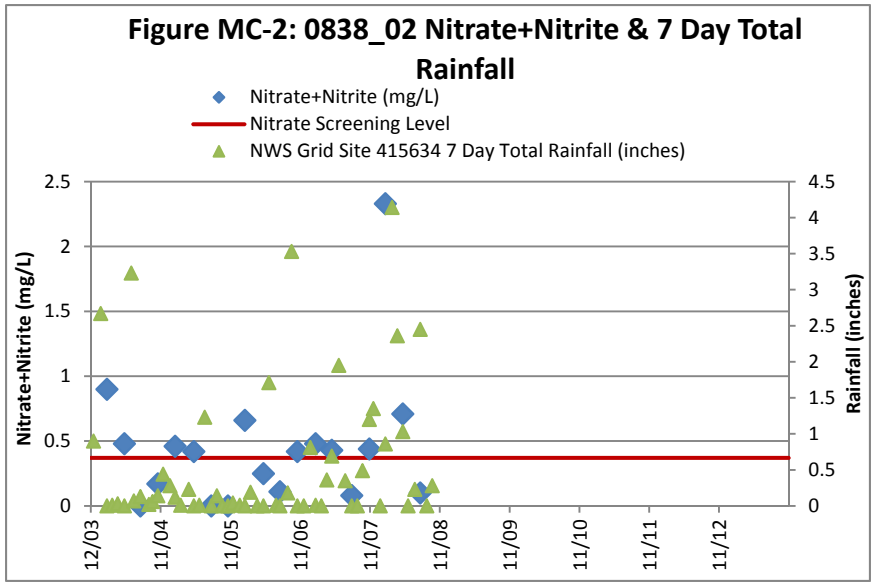


Figure MC-1: Segment 0838 Map

Assessments (Classified Segments):

Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0838_01 - Lowermost portion of reservoir adjacent to the dam	Fully Supporting	Not Assessed (No Data)
0838_02 - Mountain Creek arm	Fully Supporting	Not Assessed (No Data)
0838_03 - Walnut Creek arm	Fully Supporting	Not Assessed (No Data)

General Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0838_01	Fully Supporting	Not Assessed (No Data)
0838_02	Concern	Not Assessed (No Data)
0838_03	Fully Supporting	Not Assessed (No Data)



The Mountain Creek arm of the lake (0838_02) was found to have concerns for nitrate by the TCEQ Draft 2014 Integrated Report. There are no direct measurement results available for this parameter in this AU. Nitrate plus nitrite was used in place of nitrate in the Integrated Report. Nitrate plus nitrite levels are not well correlated with rainfall events as shown in Figure MC-2. Wastewater treatment plants can be a source of elevated nutrient levels. However, as there are elevated levels of nitrate plus nitrite reported prior to the Mountain Creek Regional Wastewater System completion in 2005, it is not believed that the plant is contributing to the levels seen in this assessment unit. Rather, it is believed that nitrate from agricultural fertilizers are washed into the reservoir during rain events. The long residence time of water in reservoirs may explain the lack of correlation between nitrogen and 7 day rainfall totals.

Contact Recreation Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0838_01	Not Assessed (No Data)	Not Assessed (No Data)
0838_02	Fully Supporting	Not Assessed (No Data)
0838_03	Not Assessed (No Data)	Not Assessed (No Data)

Public Water Supply Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0838_01	Fully Supporting	Not Assessed (No Data)
0838_02	Fully Supporting	Not Assessed (No Data)
0838_03	Fully Supporting	Not Assessed (No Data)

Fish Consumption Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0838_01	Fully Supporting	Not Assessed (No Data)
0838_02	Fully Supporting	Not Assessed (No Data)
0838_03	Fully Supporting	Not Assessed (No Data)

Assessments (Unclassified Segments):

Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0838A_01 - Entire segment	Fully Supporting	No Concern
0838B_01 - Entire segment	Fully Supporting	Fully Supporting
0838C_01 - From the confluence with Joe Pool Lake up to the headwaters at Spring Street in Burleson	Fully Supporting	Fully Supporting
0838D_01 - Hollings Branch from the confluence of the Mountain Creek arm of Joe Pool Lake upstream to the headwater 500 m downstream of US 67 in Midlothian	Fully Supporting	Fully Supporting
0838E_01 - Soap Creek from the confluence of the Mountain Creek arm of Joe Pool Lake upstream to the headwater 6.6 km (3.98 miles) upstream of US 67 in Midlothian	No Concern	Fully Supporting

General Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0838A_01	No Concern	Fully Supporting
0838B_01	No Concern	Fully Supporting
0838C_01	No Concern	Not Supporting
0838D_01	No Concern	Fully Supporting
0838E_01	No Concern	Not Supporting

Walnut Creek (0838C_01) was found to be not supporting due to elevated TDS levels by the in-house 5 year assessment. In addition, the in-house 5 year assessment found Soap Creek (0838E_01) to be not supporting due to elevated levels of sulfate. As shown in Figure MC-3, elevated levels of TDS are common in 0838C. There are instances where TDS decreases during rainfall events which would provide dilution for both natural and anthropogenic sources. It is suggested that additional sampling be undertaken to determine the source of TDS in this stream. Similarly, sulfate in 0838E is commonly above the standard of 250 mg/L and decreases when there are large rainfall events. Again, this may be natural but additional sampling would be needed to determine the source.

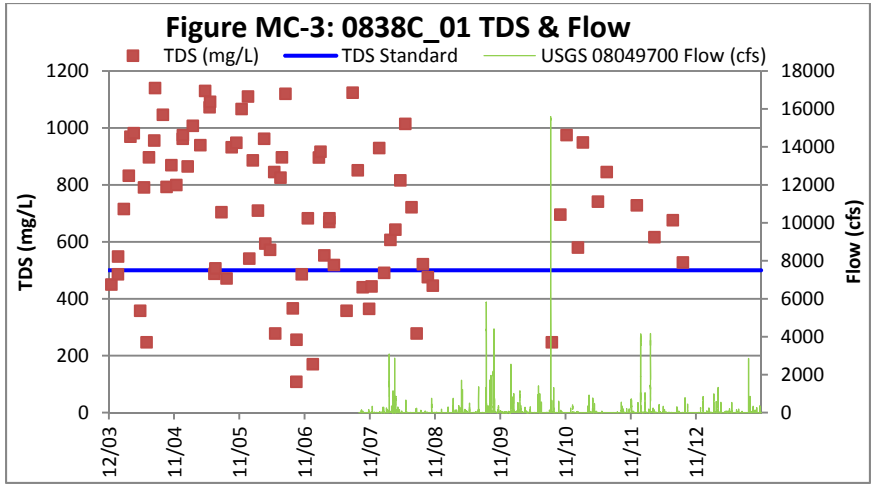
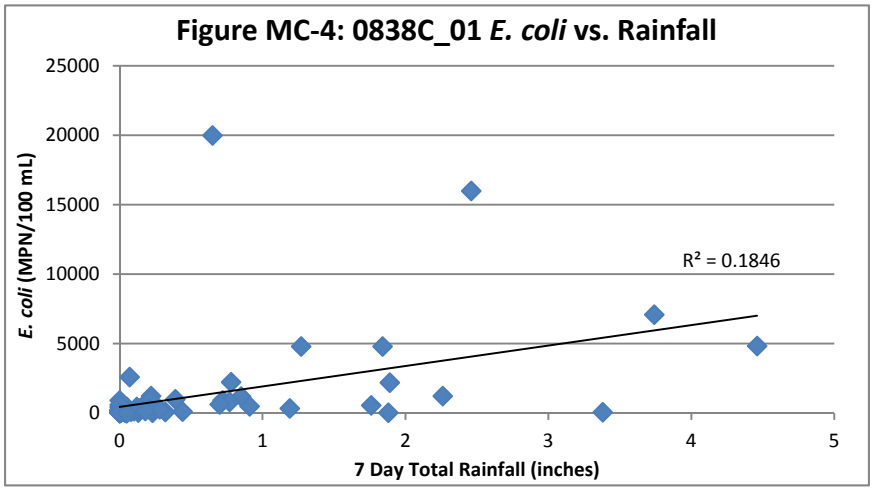




Image MC- 1: TRA staff survey Joe Pool Lake

Contact Recreation Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0838A_01	Not Assessed (No Data)	No Concern
0838B_01	Fully Supporting	Fully Supporting
0838C_01	Not Supporting	Fully Supporting
0838D_01	Fully Supporting	Fully Supporting
0838E_01	Fully Supporting	Fully Supporting

Walnut Creek (0838C_01) was found to be not supporting due to elevated levels of *E. coli* by the TCEQ Draft 2014 Integrated Report. However, the in-house 5 year assessment found this assessment unit to be fully supporting. As expected, *E. coli* levels generally increase during rainfall events (Figure MC-4). The watershed immediately upstream of the sampling location is residential with a golf course but wooded along the channel. Further upstream, it is rural and still wooded along the channel. Based on this information, it is believed that the *E. coli* impairment is due to either wildlife or pet waste. Another source may be failing septic systems from further upstream.



Public Water Supply Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0838A_01	Not Assessed (No Data)	No Concern
0838B_01	Not Assessed (No Data)	Fully Supporting
0838C_01	Not Assessed (No Data)	No Concern
0838D_01	Not Assessed (No Data)	Fully Supporting
0838E_01	Not Assessed (No Data)	Concern

Soap Creek (0838E_01) was found to have concerns for sulfate based on the in-house 5 year assessment. As discussed above for General Use, high sulfate levels in 0838E may be natural, but additional sampling may be needed to determine the source.

Fish Consumption Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0838A_01	Not Assessed (Inadequate Data)	Not Assessed (No Data)
0838B_01	Fully Supporting	Not Assessed (No Data)
0838C_01	Fully Supporting	Not Assessed (No Data)
0838D_01	Not Assessed (No Data)	Not Assessed (No Data)
0838E_01	Not Assessed (No Data)	Not Assessed (No Data)

Trend Analysis Overview

Table MC-5: Trend Analysis Result Summary

Mountain Creek		Air Temp			Flow			Secchi Depth			Water Temp			pH			Sp Cond			*E. coli*			TDS			Chloride		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0838_02	17684									UP						DN												
0838B_01	17680								UP	UP							DN		DN	DN	DN		DN		DN			
0838C_01	13621		DN			DN				DN																DN	DN	DN
0838E_01	16435												UP															

Mountain Creek		SO4			BOD5			NH3			NO3			TKN			TP			Hardness		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0838_02	17684																					
0838B_01	17680	DN		DN					UP			DN		DN	DN	DN				DN	DN	
0838C_01	13621					UP									UP		UP	UP	UP	DN	DN	DN
0838E_01	16435																					

Trends Key

A-All Months

S-Summer/Grow ing Season (May-October)

W-Winter/Dormant Sesaon (November-April)

UP Increasing Trends

DN Decreasing Trends

There were 34 significant trends identified for this segment as summarized in Table MC-5. For additional detail on trend methods, see the Data Review Methodology section.

Trends (Classified Segments):
See Table MC-6 for details of the significant trends analysis summary presented in Table MC-5. Trends in this segment are R^2 values less than 0.2. In addition, slopes are very shallow. Therefore, there are no trends of concern in this segment.

Table MC-6: 0838 Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0838_02	17684	Secchi Depth	Winter	0.20	0.20	0.04	0.09	2.23	0.94	0.30	22	0.13	0.34	0.15	0.10	0.08	0.04	0.07	11/15/04	4/22/08
0838_02	17684	pH	Winter	0.16	-0.09	0.04	0.04	-2.17	0.36	-0.47	27	8.03	8.60	8.20	8.00	7.90	7.50	0.30	12/15/03	4/22/08

Trends (Unclassified Segments):
See Table MC-7 for details of the significant trends analysis summary presented in Table MC-5. Most trends for the unclassified segments are decreasing and do not present a concern. There are increasing trends for ammonia in 0838B (R^2=0.33, Slope=0.01) and BOD5 and TKN in 0838C (R^2=0.21 and 0.27, respectively). These trends occur only in the summer months. However, as shown in Figure MC-5, trends across all time periods exist for TP in 0838C and have R^2 values greater than 0.42. The correlation coefficient for TP and stream flow is 0.88, indicating that TP is being washed into the stream during rain events. The sampling site in 0838C is immediately downstream of a golf course which is a likely source of phosphorus from fertilizers used on the turf. Additional sampling upstream of the golf course is recommended in order to determine if this is the source. Although there is no associated chlorophyll-a data, the dissolved oxygen data do not indicate a concern for algal blooms at this time. Of 56 data points, there are no DO values below the screening level of 3 mg/L or the minimum standard of 2 mg/L.

Figure MC-5: 0838C_01 TP & Flow

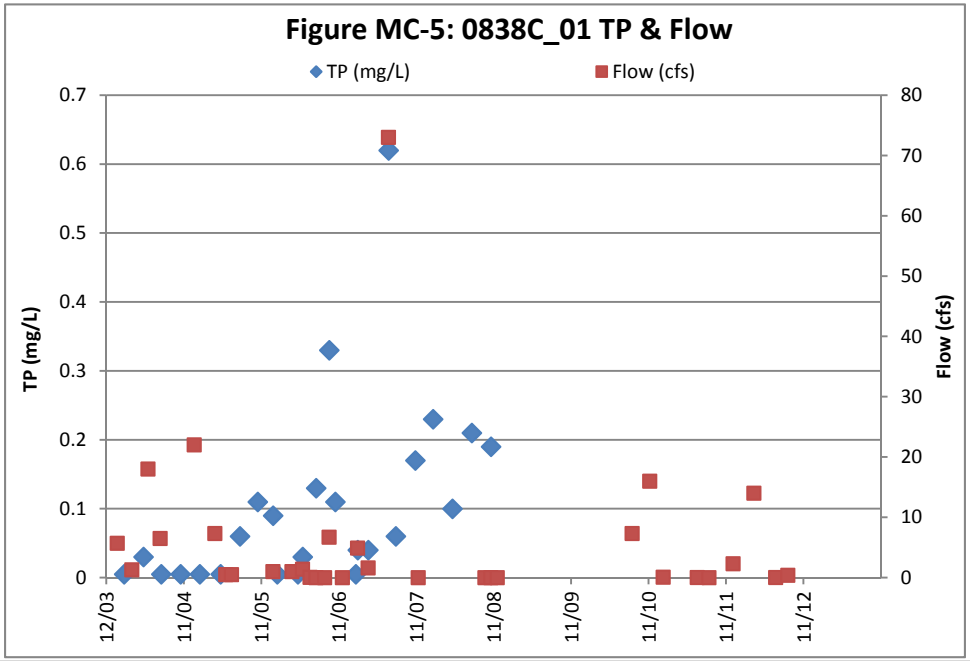
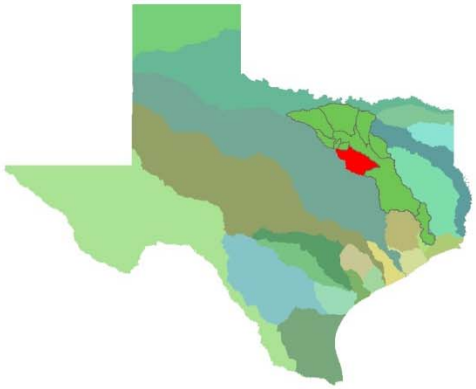


Table MC-7: 0838B, 0838C, 0838E Trend Analysis Result Detail

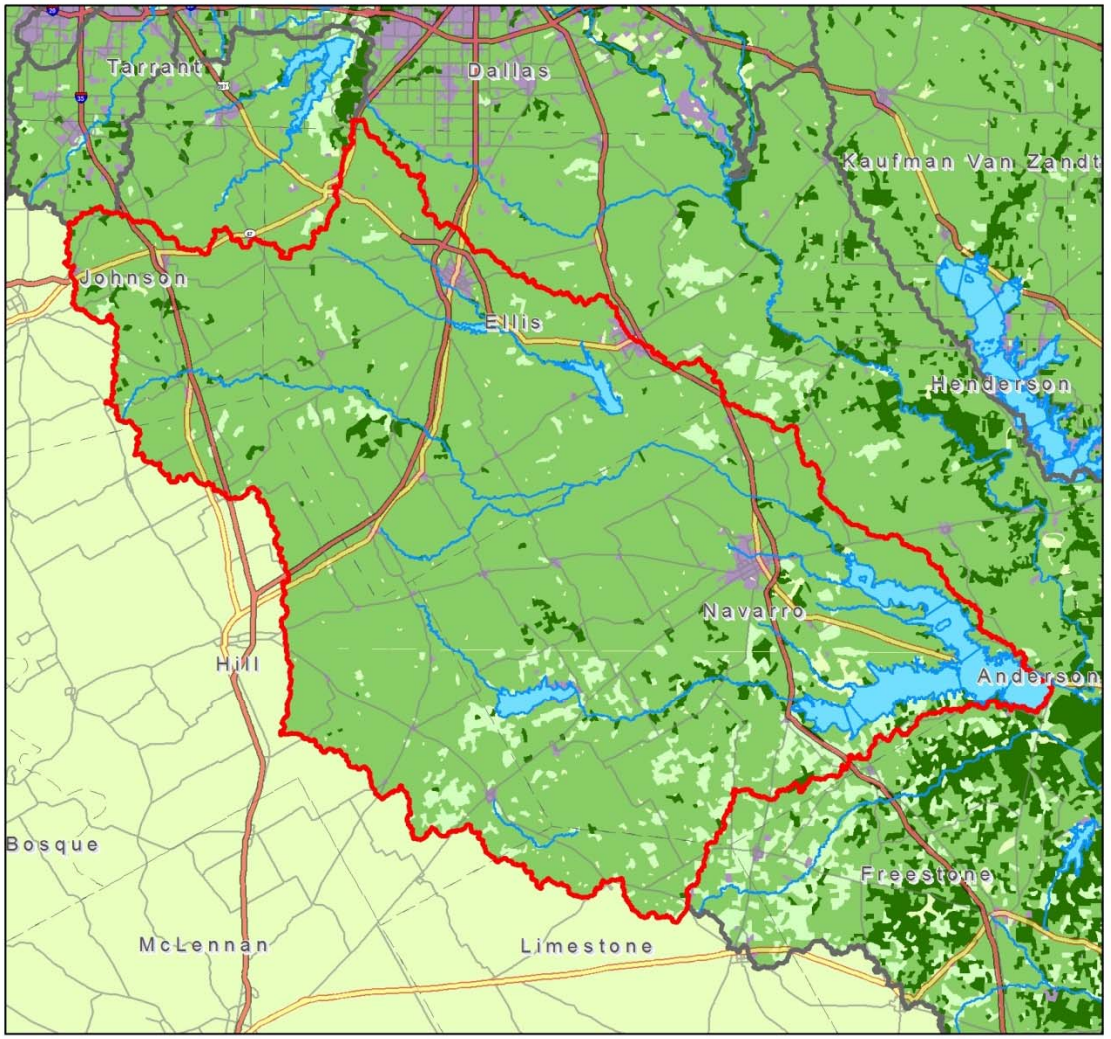
Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0838B_01	17680	Secchi Depth	Summer	0.31	0.04	0.00	0.01	5.02	-1.25	-2.32	58	0.41	0.60	0.60	0.46	0.21	0.02	0.39	5/24/04	10/30/13
0838B_01	17680	Secchi Depth	Winter	0.22	0.03	0.00	0.01	3.71	1.28	-1.33	51	0.34	0.76	0.52	0.34	0.19	0.08	0.33	11/15/04	11/19/13
0838B_01	17680	Sp Cond	POR	0.15	-0.05	0.00	0.01	-4.51	0.06	1.01	118	717.85	1590.00	790.00	659.00	536.00	214.00	254.00	12/15/03	11/19/13
0838B_01	17680	Sp Cond	Winter	0.22	-0.07	0.00	0.02	-4.06	-0.13	0.26	59	761.98	1590.00	990.00	678.00	537.00	214.00	453.00	12/15/03	11/19/13
0838B_01	17680	NH3	Summer	0.33	0.01	0.01	0.00	3.00	0.88	-0.45	20	0.08	0.17	0.11	0.07	0.04	0.00	0.07	5/24/04	8/20/13
0838B_01	17680	NO3	Summer	0.43	-0.26	0.00	0.07	-3.49	0.73	-0.28	18	0.22	1.45	0.23	0.10	0.03	0.03	0.21	5/24/04	8/20/13
0838B_01	17680	TKN	POR	0.20	-0.08	0.01	0.03	-2.93	1.10	0.77	36	0.73	2.30	0.90	0.60	0.49	0.22	0.41	2/23/04	11/19/13
0838B_01	17680	TKN	Summer	0.26	-0.08	0.03	0.03	-2.43	1.27	0.64	19	0.85	2.30	0.95	0.69	0.60	0.30	0.35	5/24/04	8/20/13
0838B_01	17680	TKN	Winter	0.19	-0.04	0.08	0.02	-1.88	1.87	0.88	17	0.60	1.30	0.60	0.60	0.40	0.22	0.20	2/23/04	11/19/13
0838B_01	17680	Hardness	POR	0.13	-0.03	0.03	0.01	-2.29	0.14	1.03	37	133.78	272.00	148.00	132.00	120.00	74.00	28.00	2/23/04	11/19/13
0838B_01	17680	Hardness	Summer	0.28	-5.29	0.03	2.18	-2.42	0.17	-1.15	17	116.76	164.00	140.00	120.00	88.00	74.00	52.00	5/24/04	8/20/13
0838B_01	17680	SO4	POR	0.14	-0.05	0.03	0.02	-2.34	0.31	1.38	37	166.68	420.00	191.00	146.10	124.00	54.00	67.00	2/23/04	11/19/13
0838B_01	17680	SO4	Winter	0.19	-8.48	0.07	4.32	-1.96	1.74	0.88	18	165.29	306.00	195.00	153.00	128.00	77.30	67.00	2/23/04	11/19/13
0838B_01	17680	*E. coli*	POR	0.12	-0.22	0.00	0.05	-3.99	0.88	-0.83	117	264.68	2800.00	160.00	52.00	17.00	0.50	143.00	12/15/03	11/19/13
0838B_01	17680	*E. coli*	Summer	0.27	-0.33	0.00	0.07	-4.58	1.30	-0.87	59	303.97	2600.00	160.00	46.00	17.00	2.00	143.00	5/24/04	10/30/13
0838B_01	17680	TDS	POR	0.15	-0.05	0.00	0.01	-4.58	-0.33	1.28	118	468.50	1033.50	514.00	422.58	355.55	139.10	158.45	12/15/03	11/19/13
0838B_01	17680	TDS	Winter	0.24	-0.07	0.00	0.02	-4.22	-0.30	0.78	59	502.42	1033.50	643.50	444.41	358.15	139.10	285.35	12/15/03	11/19/13
0838C_01	13621	Air Temp	Summer	0.11	-1.51	0.05	0.75	-2.00	-0.36	0.08	33	25.44	38.00	28.50	25.00	23.00	11.00	5.50	5/24/04	10/21/08
0838C_01	13621	Flow	Summer	0.26	-0.47	0.09	0.25	-1.87	-0.53	-0.67	16	7.15	73.00	6.60	0.45	0.01	0.00	6.60	6/15/04	9/18/12
0838C_01	13621	Secchi Depth	Winter	0.13	-0.06	0.08	0.03	-1.82	-0.93	-1.17	24	0.40	0.60	0.60	0.45	0.25	0.08	0.35	11/15/04	11/18/08
0838C_01	13621	BOD5	Summer	0.21	0.23	0.06	0.11	2.03	1.81	-0.22	17	2.02	7.00	3.00	1.00	1.00	1.00	2.00	5/24/04	8/19/08
0838C_01	13621	TKN	Summer	0.27	0.20	0.07	0.10	2.01	1.20	1.57	13	0.73	1.90	0.70	0.60	0.60	0.30	0.10	5/24/04	5/20/08
0838C_01	13621	TP	POR	0.45	0.80	0.00	0.19	4.31	-0.41	-1.40	25	0.10	0.62	0.13	0.06	0.01	0.01	0.13	2/23/04	11/18/08
0838C_01	13621	TP	Summer	0.42	0.78	0.02	0.29	2.67	-0.33	-0.70	12	0.13	0.62	0.17	0.06	0.02	0.01	0.15	5/24/04	8/19/08
0838C_01	13621	TP	Winter	0.52	0.04	0.01	0.01	3.48	1.12	-0.55	13	0.08	0.23	0.11	0.04	0.01	0.01	0.11	2/23/04	11/18/08
0838C_01	13621	Hardness	POR	0.30	-69.42	0.00	18.47	-3.76	-0.68	-0.95	35	432.46	730.00	564.00	458.00	290.00	112.00	274.00	1/22/04	11/18/08
0838C_01	13621	Hardness	Summer	0.34	-82.69	0.01	29.73	-2.78	-0.87	-0.79	17	440.94	700.00	576.00	470.00	308.00	120.00	268.00	5/24/04	8/19/08
0838C_01	13621	Hardness	Winter	0.27	-58.89	0.03	24.09	-2.44	-0.04	-0.27	18	424.44	730.00	516.00	449.00	290.00	112.00	226.00	1/22/04	11/18/08
0838C_01	13621	Chloride	POR	0.22	-8.53	0.00	2.81	-3.03	-0.94	-0.95	35	65.89	104.00	86.00	67.00	44.90	14.70	41.10	1/22/04	11/18/08
0838C_01	13621	Chloride	Summer	0.22	-9.05	0.06	4.45	-2.03	-1.36	-0.18	17	66.04	100.00	83.00	72.60	47.00	14.70	36.00	5/24/04	8/19/08
0838C_01	13621	Chloride	Winter	0.22	-8.12	0.05	3.80	-2.13	0.03	-1.08	18	65.74	104.00	86.00	63.00	43.00	23.00	43.00	1/22/04	11/18/08
0838E_01	16435	Water Temp	Winter	0.12	1.15	0.09	0.65	1.78	0.20	-0.93	25	13.41	21.10	16.60	12.80	11.00	6.00	5.60	1/13/09	4/23/13

Richland-Chambers



Land Use Type

- Rangeland
- Urban, Industrial and Residential
- Crop, Pasture and other Agriculture
- Forest



RICHLAND-CHAMBERS

Classified Segments Used in this Report – 6
Unclassified Segments Used in this Report – 9

0816 – Lake Waxahachie
0816A – South Prong Creek
0815 – Bardwell Reservoir
0815A – Waxahachie Creek
0814 – Chambers Creek Above Richland-Chambers Reservoir
0814A – Mill Creek
0814B – South Fork Chambers Creek
0817 – Navarro Mills Lake
0817A – Richland Creek
0837 – Richland Creek Above Richland-Chambers Reservoir
0836 – Richland-Chambers Reservoir
0836A – Pin Oak Creek
0836B – Cedar Creek
0836C – Grape Creek
0836D – Post Oak Creek

Sites Used for Analysis:

2008 Integrated Report	21
2010 Integrated Report	39
2012 Integrated Report	42
Draft 2014 Integrated Report	40
5-Year Analysis	14
Valid Trends	13

Table RC-1: Richland-Chambers Count of Dischargers by Type and County

County	Cooling Water	Domestic Sewage <1mgd	Mining	Stormwater	Wastewater >1mgd	CAFO	Total Dischargers
ELLIS		12		1	4		17
HILL		6					6
JOHNSON		4					4
LIMESTONE		1					1
NAVARRO		9		1	3		13
Total		32		2	7		41

The Richland-Chambers subwatershed extends approximately 100 river miles on the Chambers Creek branch and 79 miles on the Richland Creek branch. Chambers Creek begins in Johnson County and Richland Creek begins in Hill County. These two creeks come together to form Richland-Chambers Reservoir and the subwatershed ends at the dam in Freestone County. The subwatershed is predominately rural with row crop agriculture. The major population centers include Waxahachie and Corsicana.

This subwatershed receives between 32 and 40 inches of precipitation annually. The upper reaches of the main tributaries lie within the Blackland Prairie, while the reservoir itself lies within the Post Oak Savannah.

There are three Brownfield sites in this subwatershed. Two hazmat events required action by the EPA OSC office. There is one site being monitored for compliance with the EPA Resource Conservation and Recovery Act. Noncompliance events are reported on the Enforcement and Compliance History Online website. See Tables RC-2, RC-3, and RC-4, for details and links to additional information.

Table RC-2: EPA Brownfields

Segment	Site	Link to Additional EPA Information	Map Site	Assessment Complete Date	Cleanup Required	Cleanup Status	Redevelopment Status	Media Affected	Classes of Contaminants Found	Media Addressed	Classes of Contaminants Cleaned Up
0836	101 N BEATON ST	EPA Link	Map It	5/16/2011	Unknown	Not Started	Not Started	Soil, Ground Water		None	
0836	I.O.O.F. BUILDING	EPA Link	Map It	6/17/2011	Yes	Not Started	Not Started	None		None	
0836	K. WOLENS BUILDING	EPA Link	Map It	2/21/2012	Unknown	Not Started	Not Started	None		None	

Table RC-3: EPA On- Scene Coordinator Investigations

Segment	Site	Link to Additional EPA Information	Map Site	Date	Contaminants Found
0814	PSC CHEMICAL RECLAMATION SERVICES	EPA Link	Map It	3/29/2009	
0814	RICE I-45 DRUM DUMP	EPA Link	Map It	9/7/2004	Paint, Paint Related Substances

Table RC-4: EPA Resource Conservation and Recovery Act (RCRA) and Enforcement and Compliance History Online (ECHO) Sites

Segment	Site	Link to Additional EPA RCRA Information	Link to Additional EPA ECHO Information	Map Site	Site Assessed	Solution for Cleanup Selected	Cleanup Implemented	Cleanup Complete	Media Affected	Contaminant
0814	CHEMICAL RECLAMATION SERVICES AVALON FACILITY	EPA Link	EPA Link	Map It	6/25/1986	1/31/2014	1/31/2014			

The Richland Chambers Reservoir Transition Zones project is underway in this subwatershed. The goal of this project is to develop site specific standards for the transition zones within the reservoir. The project is currently in the planning phase and is managed by the Water Quality Standards team of the TCEQ.

Segment 0816 – Lake Waxahachie

Overview

This 690 acre segment impounds South Prong Creek in Ellis County up to a normal pool elevation of 531 feet. The watershed is entirely within the Blackland Prairie ecoregion and the land use is nearly all classified as agriculture/pasture.

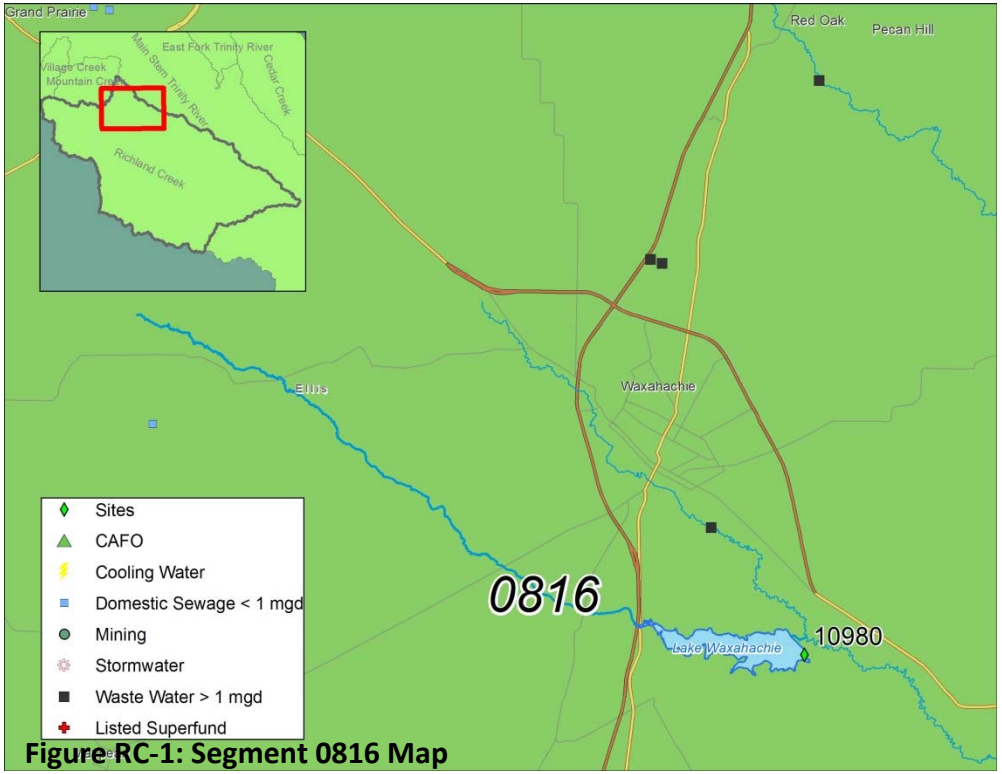
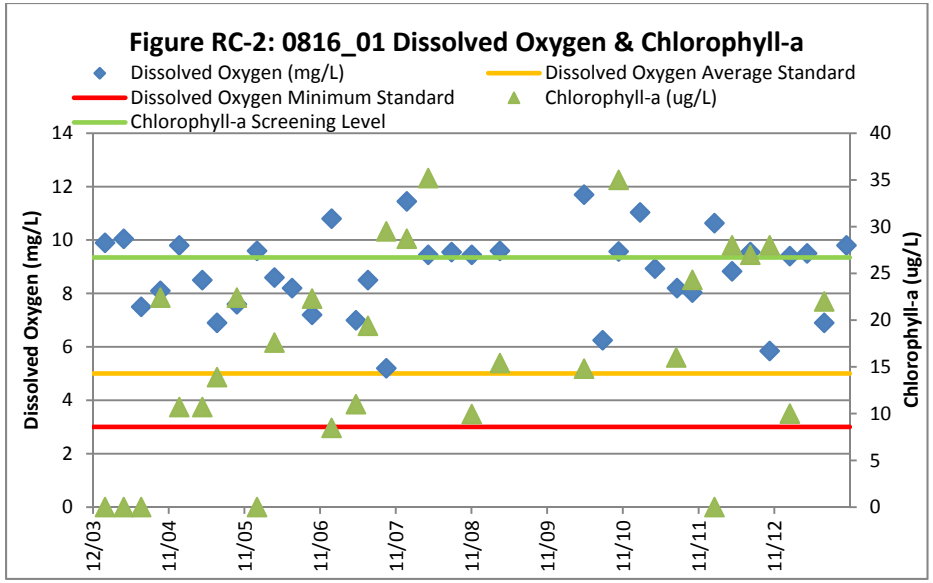


Figure RC-1: Segment 0816 Map

Assessments (Classified Segments):

Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0816_01 - Entire reservoir	Fully Supporting	Fully Supporting
General Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0816_01	Concern	Fully Supporting

This segment was found to have concerns for chlorophyll-a by the TCEQ Draft 2014 Integrated Report. Lake Waxahachie has been noted as being eutrophic by the TCEQ report Trophic Classification of Texas Reservoirs. As shown in Figure RC-2, algal populations do not appear to be negatively impacting dissolved oxygen levels in the lake.



Contact Recreation Use:
0816_01

TCEQ Draft 2014 Integrated Report
No Concern

In-House 5 Year Assessment
Fully Supporting

Public Water Supply Use:
0816_01

TCEQ Draft 2014 Integrated Report
Fully Supporting

In-House 5 Year Assessment
Fully Supporting

Fish Consumption Use:
0816_01

TCEQ Draft 2014 Integrated Report
Not Assessed (No Data)

In-House 5 Year Assessment
Not Assessed (No Data)

Assessments (Unclassified Segments):

Aquatic Life Use: Not Assessed (No Data)

General Use: Not Assessed (No Data)

Contact Recreation Use: Not Assessed (No Data)

Public Water Supply Use: Not Assessed (No Data)

Fish Consumption Use: Not Assessed (No Data)

Trend Analysis Overview

Table RC-5: Trend Analysis Result Summary

Richland Chambers		Secchi Depth			pH			Sp Cond			Chlorophyll-a			TDS			Chloride			SO4			Fluoride			NO3		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0816_01	10980	DN	DN			UP		UP	UP		UP		UP		UP		UP	UP	UP	UP	UP	UP	UP	UP	UP			DN

Richland Chambers		TP		
Seg_AU	Site	A	S	W
0816_01	10980	UP		UP

Trends Key
A-All Months
S-Summer/Growing Season (May-October)
W-Winter/Dormant Sesaon (November-April)
UP Increasing Trends
DN Decreasing Trends

There were 20 significant trends identified for this segment as summarized in Table RC-5. For additional detail on trend methods, see the Data Review Methodology section.

Trends (Classified Segments):
See Table RC-6 for details of the significant trends analysis summary presented in Table RC-5. There are many increasing trends in this segment, however, each of these trends track fairly well with the decreasing trend in lake elevation. This indicates that water quality degradation in this segment is drought related. As inflows from rainfall decrease and evaporation in the lake occurs, nutrients, salts, and other parameters become more concentrated. Figures RC-3, RC-4, and RC-5 illustrate these trends.

Figure RC-3: 816_01 Chloride, Chlorophyll-a, & Lake Elevation

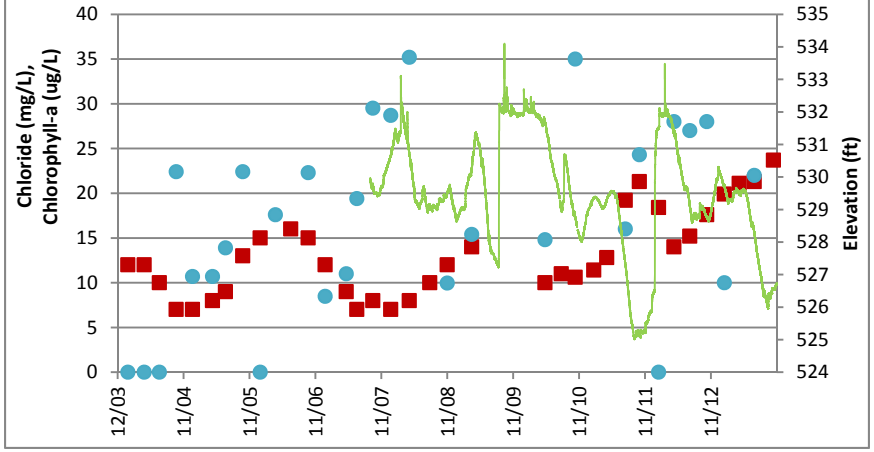


Figure RC-4: 816_01 TP, Fluoride, & Lake Elevation

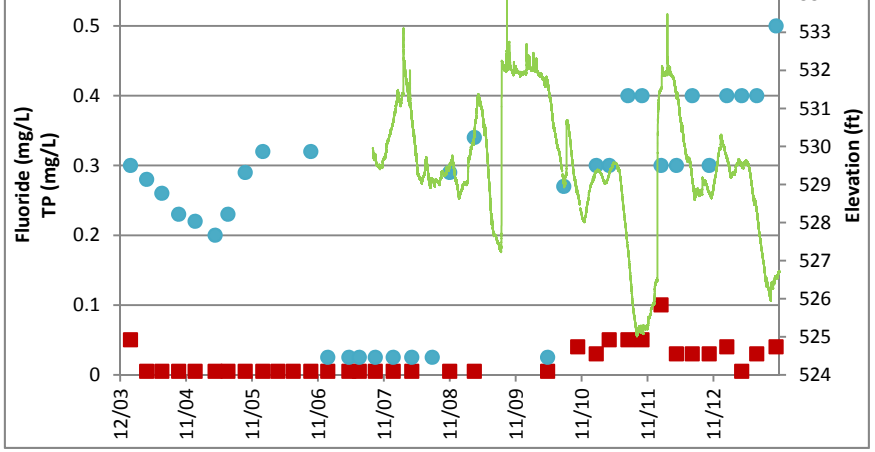


Figure RC-5: 816_01 Specific Conductivity & Lake Elevation

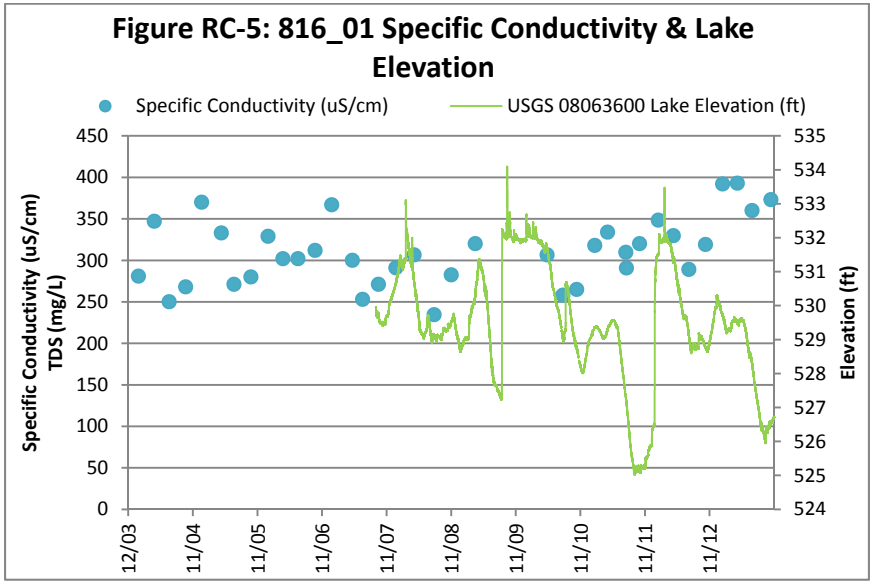




Image RC- 1: Wooded riparian and homes along 0816 bank

Table RC-6: 0816 Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0816_01	10980	Secchi Depth	POR	0.22	-0.04	0.01	0.01	-2.89	1.01	-1.12	31	0.61	1.00	0.81	0.60	0.40	0.30	0.41	1/28/04	11/13/13
0816_01	10980	Secchi Depth	Summer	0.37	-0.05	0.01	0.02	-3.08	0.27	-1.35	18	0.67	0.97	0.91	0.62	0.50	0.34	0.41	7/20/04	5/7/13
0816_01	10980	Sp Cond	POR	0.14	4.80	0.02	2.04	2.35	0.75	-0.59	37	310.17	393.00	333.00	306.50	281.00	234.50	52.00	1/28/04	11/13/13
0816_01	10980	Sp Cond	Summer	0.30	7.01	0.01	2.48	2.82	1.19	0.49	21	297.69	393.00	312.00	300.00	271.00	234.50	41.00	7/20/04	7/29/13
0816_01	10980	pH	Summer	0.21	0.04	0.04	0.02	2.27	-0.68	-0.11	21	8.25	8.65	8.40	8.30	8.10	7.70	0.30	7/20/04	7/29/13
0816_01	10980	NO3	Winter	0.23	-0.04	0.07	0.02	-1.97	1.09	-0.37	15	0.29	0.81	0.53	0.22	0.08	0.00	0.45	1/28/04	2/13/13
0816_01	10980	TP	POR	0.45	0.22	0.00	0.04	5.09	1.54	-1.71	34	0.02	0.10	0.03	0.01	0.01	0.01	0.03	1/28/04	11/13/13
0816_01	10980	TP	Winter	0.41	0.22	0.01	0.07	3.14	0.31	-1.56	16	0.03	0.10	0.04	0.02	0.01	0.01	0.04	1/28/04	11/13/13
0816_01	10980	Chloride	POR	0.47	1.04	0.00	0.19	5.36	1.44	-0.75	35	13.10	23.70	16.00	12.00	9.00	7.00	7.00	1/28/04	11/13/13
0816_01	10980	Chloride	Summer	0.45	1.02	0.00	0.26	3.85	1.46	-0.35	20	12.23	21.30	15.10	10.50	8.50	7.00	6.60	7/20/04	7/29/13
0816_01	10980	Chloride	Winter	0.48	1.03	0.00	0.30	3.49	0.63	-0.47	15	14.26	23.70	18.40	12.00	11.40	7.00	7.00	1/28/04	11/13/13
0816_01	10980	SO4	POR	0.37	2.14	0.00	0.48	4.43	1.49	-0.57	35	27.88	51.10	35.60	26.00	18.70	12.00	16.90	1/28/04	11/13/13
0816_01	10980	SO4	Summer	0.38	2.27	0.00	0.68	3.32	1.92	0.37	20	25.36	51.00	31.55	20.00	18.00	12.00	13.55	7/20/04	7/29/13
0816_01	10980	SO4	Winter	0.38	1.88	0.01	0.66	2.83	0.53	-0.31	15	31.25	51.10	38.00	32.90	24.00	15.00	14.00	1/28/04	11/13/13
0816_01	10980	Fluoride	POR	0.20	0.02	0.01	0.01	2.78	-1.29	-0.92	33	0.25	0.50	0.32	0.29	0.20	0.03	0.12	1/28/04	11/13/13
0816_01	10980	Fluoride	Summer	0.18	0.02	0.07	0.01	1.93	-0.58	-1.27	19	0.22	0.40	0.32	0.26	0.03	0.03	0.30	7/20/04	7/29/13
0816_01	10980	Fluoride	Winter	0.25	0.02	0.07	0.01	1.97	-1.44	0.99	14	0.29	0.50	0.34	0.30	0.28	0.03	0.06	1/28/04	11/13/13
0816_01	10980	TDS	Summer	0.21	0.03	0.04	0.01	2.22	1.63	1.04	21	188.85	291.00	207.00	182.00	166.00	141.00	41.00	7/20/04	7/29/13
0816_01	10980	Chlorophyll-a	POR	0.17	1.43	0.03	0.61	2.35	-0.22	-0.98	29	16.65	35.20	24.30	16.00	10.00	0.00	14.30	1/28/04	7/29/13
0816_01	10980	Chlorophyll-a	Winter	0.23	1.76	0.08	0.94	1.89	0.67	-0.75	14	13.44	35.00	24.30	10.35	0.00	0.00	24.30	1/28/04	2/13/13

Trends (Unclassified Segments):

None

Segment 0815 – Bardwell Reservoir

Overview

This segment covers 3,500 acres and impounds Waxahachie Creek from Bardwell Dam in Ellis County up to the normal pool elevation of 421 feet. The watershed is nearly all classified as agriculture/pasture and is entirely within the Blackland Prairie ecoregion.

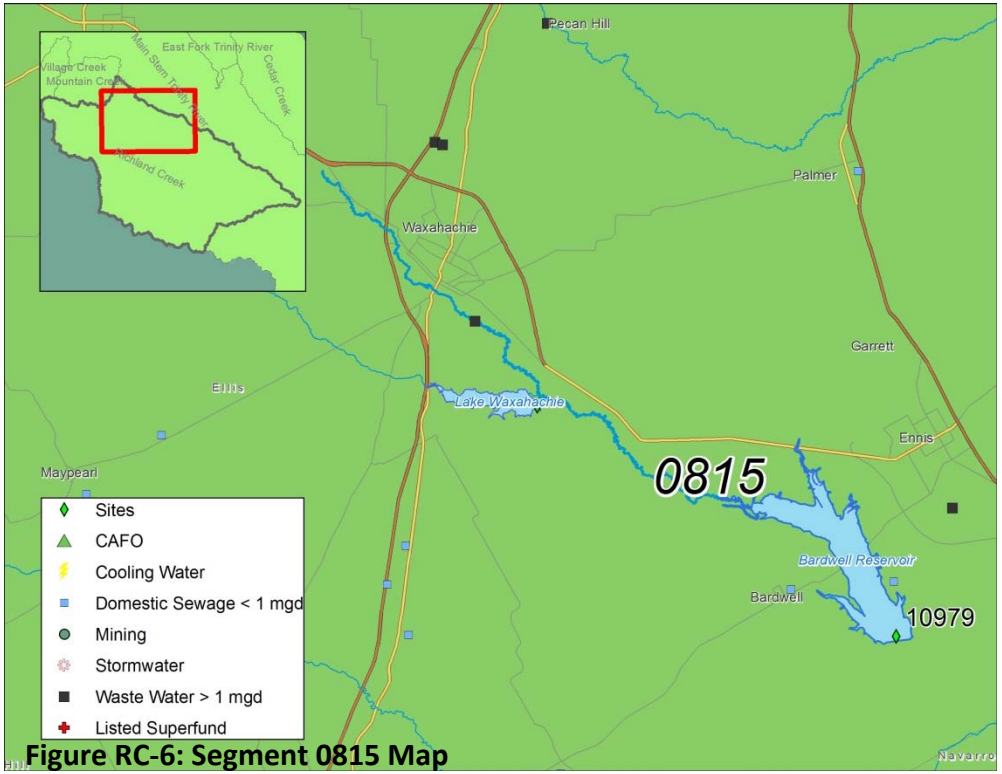


Figure RC-6: Segment 0815 Map

Assessments (Classified Segments):

Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0815_01 - Entire reservoir	Fully Supporting	Fully Supporting
General Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0815_01	Fully Supporting	Not Supporting

This segment was found to have concerns for chlorophyll-a and nitrate by the in-house 5 year assessment. This assessment also found the segment to be not supporting due to elevated sulfate levels. Lake Bardwell has been noted as being hypereutrophic by the TCEQ report Trophic Classification of Texas Reservoirs. As shown in Figure RC-7, algal populations do not appear to be negatively impacting dissolved oxygen levels in the lake. Nitrate levels in the reservoir are well correlated to rainfall (correlation coefficient=0.45). This indicates that sources may be fertilizers from the surrounding

agricultural watershed. Sulfate issues in this lake appear to be drought related as illustrated in Figure RC-8. Parameters such as sulfate and other dissolved constituents will concentrate due to lake evaporation and lack of rainfall inflows.

Figure RC-7: 0815_01 Dissolved Oxygen and Chlorophyll-a

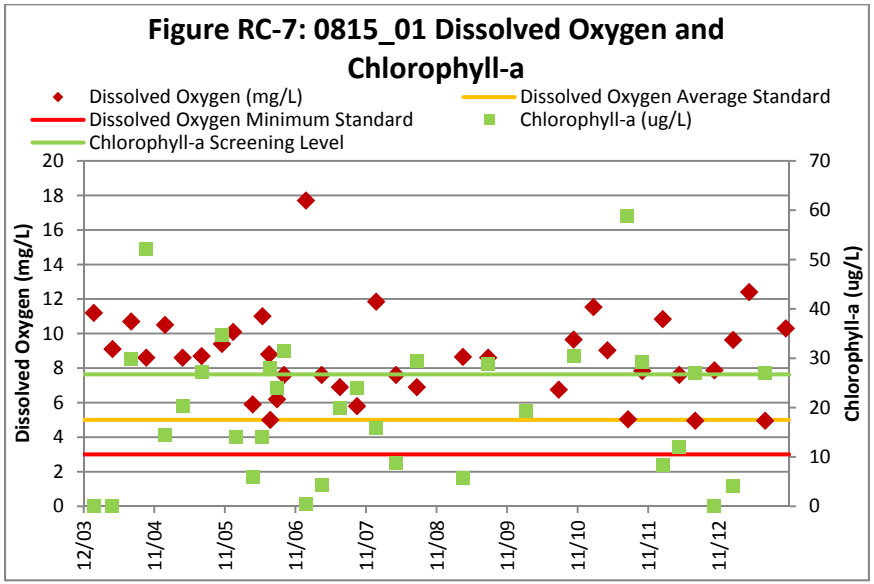
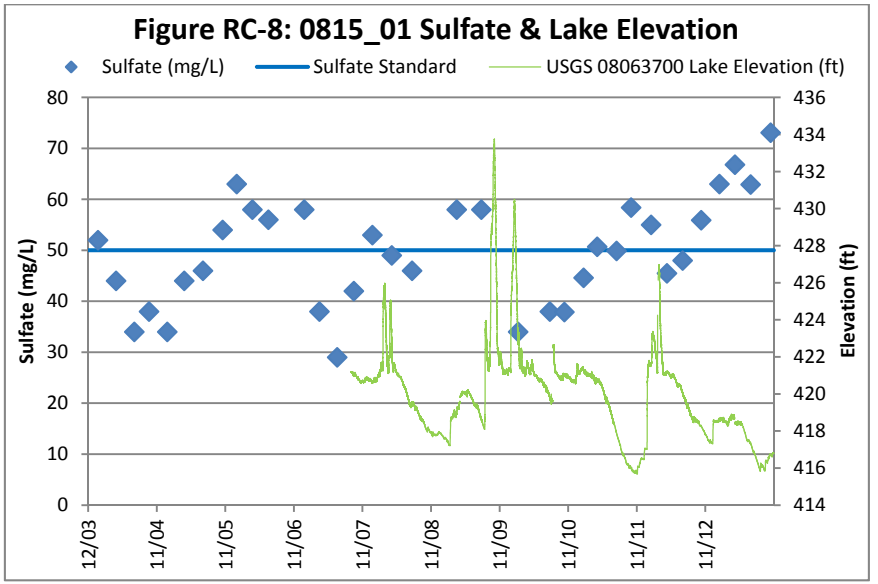


Figure RC-8: 0815_01 Sulfate & Lake Elevation



Contact Recreation Use: 0815_01	**TCEQ Draft 2014 Integrated Report** No Concern	**In-House 5 Year Assessment** Fully Supporting
Public Water Supply Use: 0815_01	**TCEQ Draft 2014 Integrated Report** Fully Supporting	**In-House 5 Year Assessment** Fully Supporting
Fish Consumption Use: 0815_01	**TCEQ Draft 2014 Integrated Report** Not Assessed (Inadequate Data)	**In-House 5 Year Assessment** Not Assessed (No Data)

Assessments (Unclassified Segments):

Aquatic Life Use: 0815A_01 - Entire creek	**TCEQ Draft 2014 Integrated Report** Not Assessed (No Data)	**In-House 5 Year Assessment** Not Assessed (No Data)

General Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0815A_01	Concern	Not Assessed (No Data)

This assessment unit was found to have concerns for nitrate by the TCEQ Draft 2014 Integrated Report. This finding was carried forward from previous Integrated Reports as there is no current data for this assessment unit.

Contact Recreation Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0815A_01	Not Assessed (No Data)	Not Assessed (No Data)

Public Water Supply Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0815A_01	Not Assessed (No Data)	Not Assessed (No Data)

Fish Consumption Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0815A_01	Not Assessed (No Data)	Not Assessed (No Data)

Trend Analysis Overview

Table RC-7: Trend Analysis Result Summary

Richland Chambers		Secchi Depth			pH			Sp Cond			TSS			Chloride			SO4			Fluoride			NH3			NO3		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0815_01	10979	DN	DN	DN			UP	UP	UP		UP	UP		UP	UP	UP	UP	UP		UP	UP	UP			DN		UP	

Trends Key
A-All Months
S-Summer/Growing Season (May-October)
W-Winter/Dormant Sesaon (November-April)
UP Increasing Trends
DN Decreasing Trends

There were 18 significant trends identified for this segment as summarized in Table RC-7. For additional detail on trend methods, see the Data Review Methodology section.

Trends (Classified Segments):
See Table RC-8 for details of the significant trends analysis summary presented in Table RC-7. Similar to the trends seen in 0816_01, the increasing trends identified in Table RC-8 for 0815_01 appear to be drought related. Figure RC-8 above shows this relationship for the increasing sulfate trend and the decreasing lake elevation.

Table RC-8: 0815 Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0815_01	10979	Secchi Depth	POR	0.38	-0.08	0.00	0.02	-4.10	-0.06	-0.53	30	0.50	1.10	0.61	0.47	0.34	0.22	0.27	1/22/04	11/13/13
0815_01	10979	Secchi Depth	Summer	0.65	-0.07	0.00	0.02	-4.50	1.50	0.27	13	0.54	1.10	0.76	0.48	0.34	0.30	0.42	8/3/04	5/7/13
0815_01	10979	Secchi Depth	Winter	0.27	-0.02	0.03	0.01	-2.33	-0.24	-0.94	17	0.47	0.71	0.61	0.46	0.35	0.22	0.26	1/22/04	11/13/13
0815_01	10979	Sp Cond	POR	0.12	0.01	0.03	0.01	2.25	0.26	2.28	39	370.26	534.00	398.00	367.75	341.50	265.00	56.50	1/22/04	11/13/13
0815_01	10979	Sp Cond	Summer	0.39	9.68	0.00	2.78	3.48	-0.16	-0.18	21	358.83	441.33	373.00	364.00	317.50	265.00	55.50	8/3/04	7/29/13
0815_01	10979	pH	Winter	0.22	0.03	0.05	0.01	2.14	0.88	0.74	18	8.09	8.60	8.20	8.08	8.00	7.70	0.20	1/22/04	11/13/13
0815_01	10979	TSS	POR	0.11	0.04	0.05	0.02	2.04	-0.01	-0.40	34	12.45	26.00	14.00	12.50	9.00	6.00	5.00	1/22/04	11/13/13
0815_01	10979	TSS	Summer	0.22	0.06	0.06	0.03	2.02	1.07	0.51	16	11.39	26.00	14.00	10.00	8.15	6.00	5.85	8/3/04	7/29/13
0815_01	10979	NH3	Winter	0.16	-0.01	0.10	0.01	-1.76	1.28	-0.64	18	0.07	0.23	0.12	0.03	0.00	0.00	0.12	1/22/04	11/13/13
0815_01	10979	NO3	Summer	0.24	0.41	0.05	0.19	2.18	0.54	-1.07	17	0.13	0.90	0.09	0.01	0.00	0.00	0.09	8/3/04	5/7/13
0815_01	10979	Chloride	POR	0.32	1.09	0.00	0.27	3.98	0.73	-0.92	35	18.78	30.90	23.00	19.00	13.00	10.00	10.00	1/22/04	11/13/13
0815_01	10979	Chloride	Summer	0.47	1.31	0.00	0.37	3.52	0.41	-0.91	16	18.28	27.80	23.00	17.45	13.00	10.00	10.00	8/3/04	7/29/13
0815_01	10979	Chloride	Winter	0.26	0.98	0.03	0.40	2.45	0.59	-0.47	19	19.20	30.90	23.50	19.00	14.00	10.00	9.50	1/22/04	11/13/13
0815_01	10979	SO4	POR	0.18	1.41	0.01	0.53	2.65	0.07	-0.68	35	49.65	73.10	58.00	49.90	42.00	29.00	16.00	1/22/04	11/13/13
0815_01	10979	SO4	Summer	0.35	1.98	0.02	0.73	2.72	0.24	-0.15	16	47.49	66.80	53.35	47.00	40.00	29.00	13.35	8/3/04	7/29/13
0815_01	10979	Fluoride	POR	0.36	0.03	0.00	0.01	4.16	-0.84	0.20	33	0.36	0.70	0.50	0.36	0.30	0.03	0.20	1/22/04	11/13/13
0815_01	10979	Fluoride	Summer	0.48	0.03	0.00	0.01	3.45	-0.65	0.85	15	0.37	0.60	0.50	0.38	0.30	0.03	0.20	8/3/04	7/29/13
0815_01	10979	Fluoride	Winter	0.29	0.03	0.02	0.01	2.56	-0.46	-0.07	18	0.35	0.70	0.50	0.35	0.26	0.03	0.24	1/22/04	11/13/13

Trends (Unclassified Segments):
None

Segment 0814 – Chambers Creek Above Richland-Chambers Reservoir

Overview

This 49 mile segment starts at Chambers Creek above Richland-Chambers Reservoir and runs from a point 2.5 miles downstream of Tupelo Branch in Navarro County to the confluence of the North and South forks of Chambers Creek. This rural segment is entirely within the Blackland Prairie ecoregion and is nearly all classified as agriculture/pasture land use.

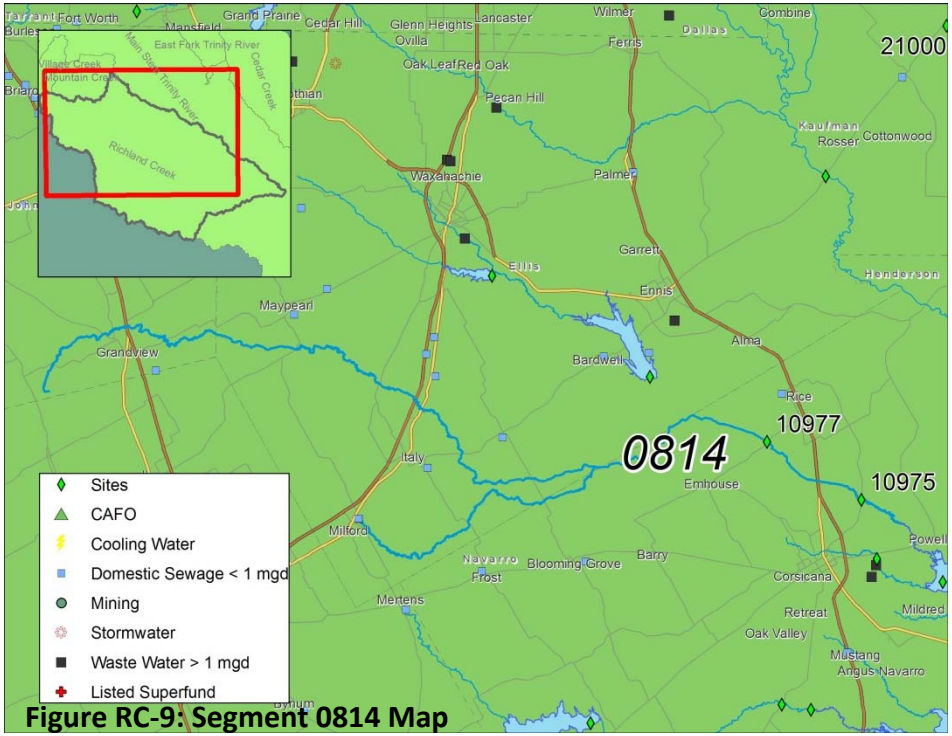


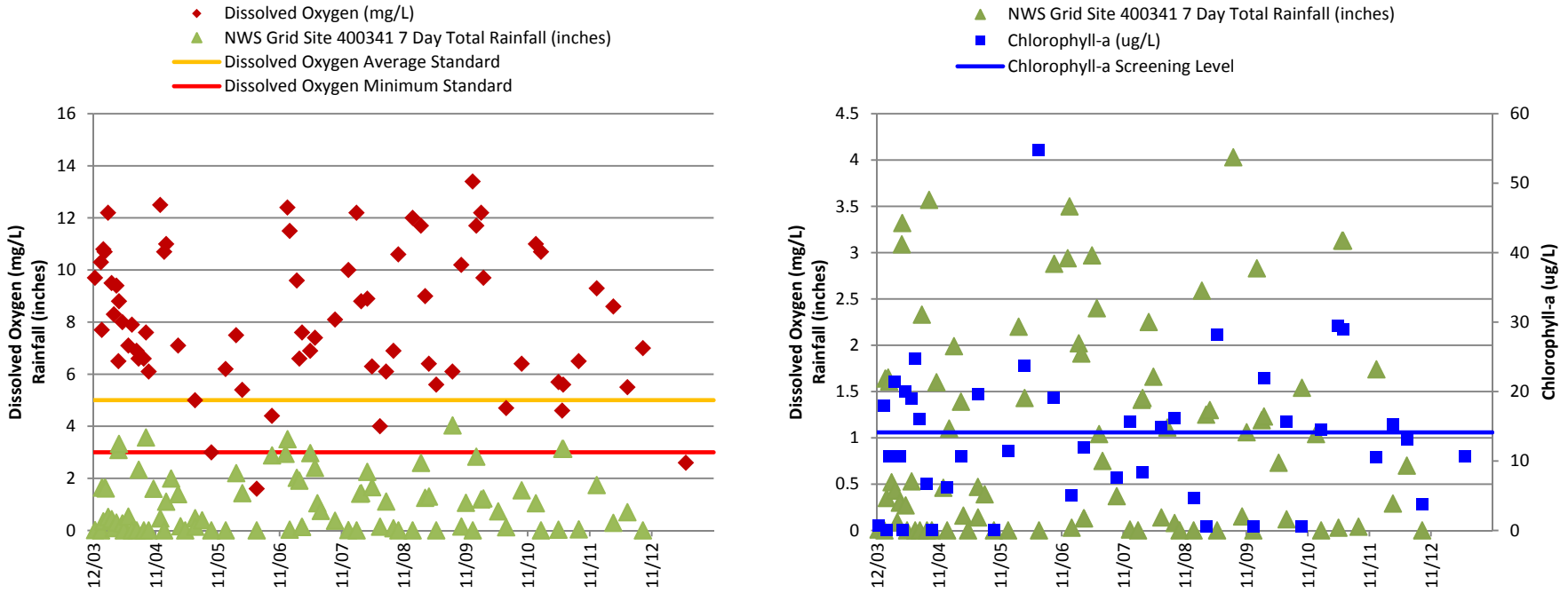
Figure RC-9: Segment 0814 Map

Assessments (Classified Segments):

Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0814_01 - From the lower end of the segment up to just above the confluence with Cummins Creek	Concern	Fully Supporting
0814_02 - From just above the confluence with Cummins Creek up to just above the confluence with Waxahachie Creek	Fully Supporting	Fully Supporting
0814_03 - From just above the confluence with Waxahachie Creek up to just above the confluence with Mill Branch	Concern	Not Assessed (No Data)
0814_04 - From just above the confluence with Mill Branch to the upper end of the segment	Not Assessed (No Data)	Not Assessed (No Data)

0814_01 and 0814_03 were found to have concerns for depressed dissolved oxygen by the TCEQ Draft 2014 Integrated Report. The concern for 0814_03 was carried forward from previous Integrated Reports as there is not current monitoring data. However, based on information for 0814_01, dissolved oxygen issues are likely related to both low flows and chlorophyll-a levels in the segment as shown in Figure RC-10.

Figure RC-10: 0814_01 Dissolved Oxygen, Chlorophyll-a, & Rainfall



General Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0814_01	Not Supporting	Concern
0814_02	Not Supporting	Fully Supporting
0814_03	Not Supporting	Fully Supporting
0814_04	Not Supporting	Fully Supporting

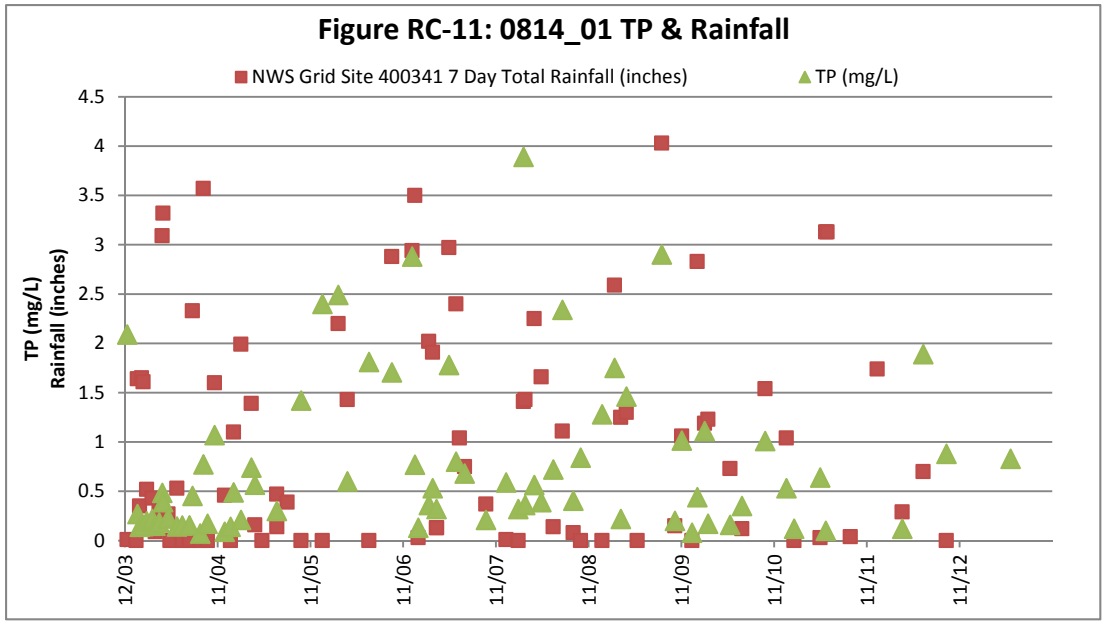


Figure RC-11: 0814_01 TP & Rainfall

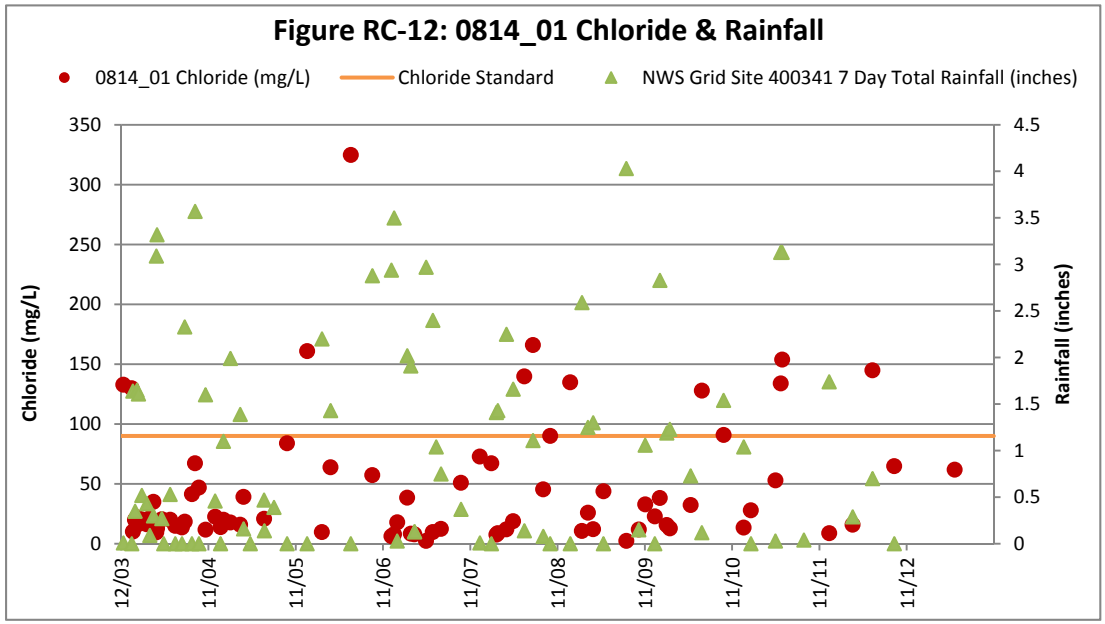


Figure RC-12: 0814_01 Chloride & Rainfall

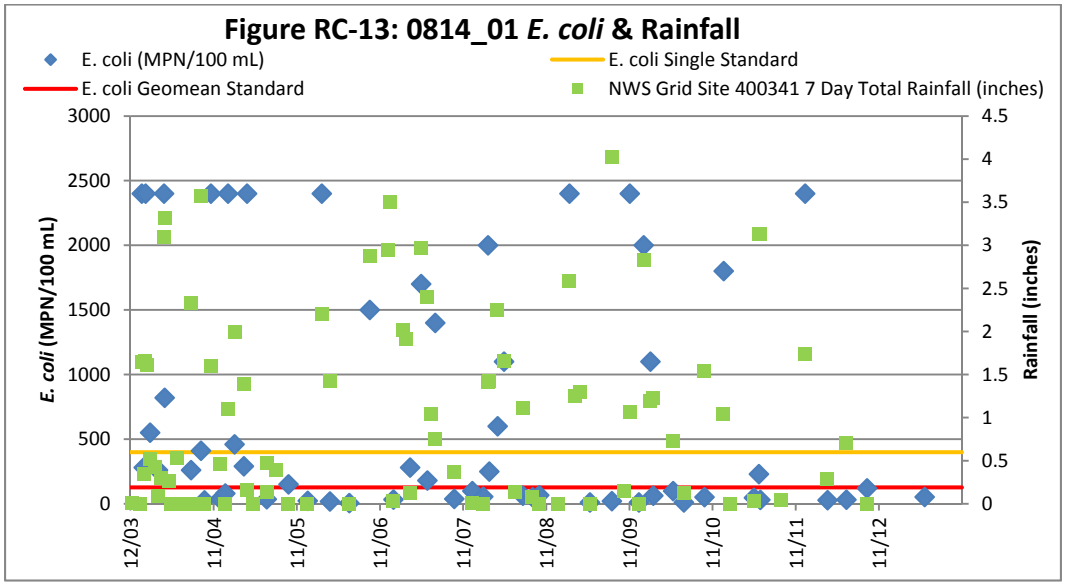
All portions of this segment were found to be not supporting due to elevated levels of chloride by the TCEQ Draft 2014 Integrated Report. 0814_01 was found to have concerns for chlorophyll-a and TP by the Integrated Report and the in-house 5 year assessment. The Integrated Report also found 0814_03 to have concerns for chlorophyll-a and TP. As shown in Figure RC-10, chlorophyll-a levels in 0814_01 frequently exceed the screening level. Both upstream lakes (Waxahachie and Bardwell) are eutrophic which are the likely sources for chlorophyll-a issues in this assessment unit. TP concerns were also identified in 0814_01. There are several upstream wastewater treatment facilities in this watershed which are likely sources of TP in this segment as TP is not well correlated to rainfall (Figure RC-11).

TP and chlorophyll-a concerns in 0814_03 were carried forward from previous Integrated Reports. However, TP issues are likely caused by the same factors as those discussed for 0814_01. Chloride issues throughout the segment appear to be drought related (Figure RC-12). As evaporation in the stream occurs with a lack of rainfall inflows, salts dissolved in the water will concentrate. In addition, irrigation runoff can introduce dissolved salts to water bodies.

Contact Recreation Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0814_01	Fully Supporting	Concern
0814_02	Not Assessed (No Data)	Not Assessed (Inadequate Data)
0814_03	Not Assessed (No Data)	Not Assessed (No Data)
0814_04	Not Assessed (No Data)	Not Assessed (No Data)

0814_01 was found to have concerns for elevated levels of *E. coli* by the in-house 5 year assessment. As expected, *E. coli* in this assessment unit is fairly well correlated to rainfall events (Figure RC-13). During these events, *E. coli* is introduced to the stream via runoff. As this segment is largely rural with agricultural and pasture land, livestock is the most likely source of *E. coli*. Wildlife are not thought to be major contributors to the *E. coli* issue as riparian areas along the stream channel are minimal.

Figure RC-13: 0814_01 *E. coli* & Rainfall



Public Water Supply Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0814_01	Fully Supporting	Fully Supporting
0814_02	Fully Supporting	No Concern
0814_03	Fully Supporting	No Concern
0814_04	Fully Supporting	No Concern

Fish Consumption Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0814_01	Fully Supporting	Not Assessed (No Data)
0814_02	Fully Supporting	Not Assessed (No Data)
0814_03	Fully Supporting	Not Assessed (No Data)
0814_04	Fully Supporting	Not Assessed (No Data)

Assessments (Unclassified Segments):

Aquatic Life Use: Not Assessed (No Data)

General Use: Not Assessed (No Data)

Contact Recreation Use: Not Assessed (No Data)

Public Water Supply Use: Not Assessed (No Data)

Fish Consumption Use: Not Assessed (No Data)



Image RC- 2: Woody debris near TX31

Trend Analysis Overview

Table RC-9: Trend Analysis Result Summary

Richland Chambers		Days Since Precip			Flow Severity			Flow			pH			Sp Cond			TDS			Chloride			NH3			NO3		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0814_01	10975		DN			DN		DN	DN			DN			UP			UP			UP			UP				
0814_02	10977																							DN			UP	

Richland Chambers		OP			TP			Hardness		
Seg_AU	Site	A	S	W	A	S	W	A	S	W
0814_01	10975					UP				
0814_02	10977	UP								DN

Trends Key

A-All Months

S-Summer/Grow ing Season (May-October)

W-Winter/Dormant Sesaon (November-April)

UP Increasing Trends

DN Decreasing Trends

There were 14 significant trends identified for this segment as summarized in Table RC-9. For additional detail on trend methods, see the Data Review Methodology section.

Trends (Classified Segments):
See Table RC-10 for details of the significant trends analysis summary presented in Table RC-9. Increasing trends for specific conductivity, TDS, chloride, ammonia, TP, and OP have R^2 values between 0.12 and 0.21. The increasing trend for ammonia has an R^2 of 0.33. However, as discussed in the Assessments (Classified Segments) section, these trends are likely drought related. Specific conductivity, TDS, and chloride levels would be expected to increase due to evaporation and lack of rainfall inflows. Nutrients from upstream wastewater treatment facilities would also increase during dry weather without dilution from rainfall and concentration due to evaporation.

Table RC-10: 0814 Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0814_01	10975	Flow	POR	0.26	-0.67	0.00	0.19	-3.51	-1.04	-1.70	37	2766.26	12173.00	5670.00	800.00	7.70	0.20	5662.30	1/19/04	6/19/13
0814_01	10975	Flow	Summer	0.29	-0.68	0.03	0.28	-2.40	1.38	-0.35	16	1569.60	11795.00	334.50	5.25	2.00	0.20	332.50	10/5/04	6/19/13
0814_01	10975	Sp Cond	Summer	0.21	62.22	0.01	22.95	2.71	0.99	0.00	30	743.05	1730.00	1100.00	687.00	445.00	4.00	655.00	5/19/04	6/19/13
0814_01	10975	pH	Summer	0.12	-0.02	0.06	0.01	-1.94	-1.07	-0.71	31	7.81	8.10	8.00	7.80	7.70	7.40	0.30	5/19/04	6/19/13
0814_01	10975	NH3	Summer	0.16	0.22	0.03	0.10	2.31	-0.65	-2.02	31	0.05	0.19	0.07	0.04	0.00	0.00	0.07	5/19/04	6/19/13
0814_01	10975	TP	Summer	0.12	0.12	0.07	0.06	1.91	-0.35	-1.12	30	0.81	2.90	1.01	0.66	0.21	0.07	0.80	5/19/04	6/19/13
0814_01	10975	Chloride	Summer	0.12	0.14	0.05	0.07	2.00	-1.65	0.65	32	68.10	325.00	90.61	49.00	19.60	2.50	71.01	5/19/04	6/19/13
0814_01	10975	Flow Severity	Summer	0.10	-0.12	0.07	0.06	-1.90	0.91	-0.63	34	3.18	5.00	4.00	3.00	2.00	1.00	2.00	5/19/04	6/19/13
0814_01	10975	TDS	Summer	0.16	35.38	0.02	14.76	2.40	0.99	-0.15	33	487.30	1124.50	712.00	454.00	299.00	2.60	413.00	5/19/04	6/19/13
0814_01	10975	Days Since Precip	Summer	0.14	-0.33	0.08	0.18	-1.86	-1.24	-1.18	24	4.90	9.00	7.00	6.00	1.50	0.50	5.50	5/19/04	6/19/13
0814_02	10977	NH3	Summer	0.33	0.00	0.01	0.00	-2.81	1.37	0.92	18	0.01	0.02	0.01	0.01	0.01	0.00	0.00	5/5/04	9/30/13
0814_02	10977	NO3	POR	0.11	0.31	0.05	0.16	1.99	-1.80	-1.04	35	0.91	5.78	1.25	0.54	0.05	0.01	1.20	12/8/03	9/30/13
0814_02	10977	OP	POR	0.17	0.35	0.01	0.13	2.60	1.56	-0.45	35	0.07	1.54	0.04	0.01	0.00	0.00	0.04	12/8/03	9/30/13
0814_02	10977	Hardness	Winter	0.34	-28.10	0.06	13.10	-2.14	1.24	0.29	11	181.82	290.00	220.00	170.00	140.00	120.00	80.00	4/6/04	4/17/07

Trends (Unclassified Segments):
None

Segment 0817 – Navarro Mills Lake

Overview

Navarro Mills Lake impounds Richland Creek and covers 5,070 acres when at its normal pool elevation of 242.5 feet. This rural segment's land use is classified mainly as agriculture/pasture, with some rangeland east of the lake. 0817 is located entirely within the Blackland Prairie ecoregion.

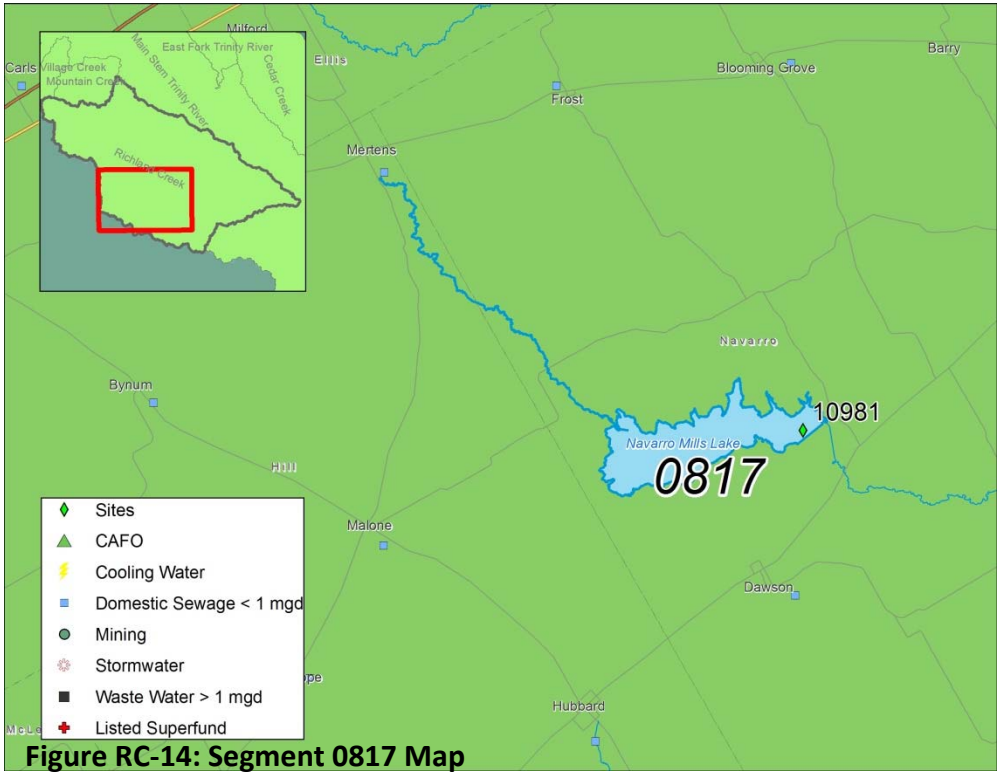
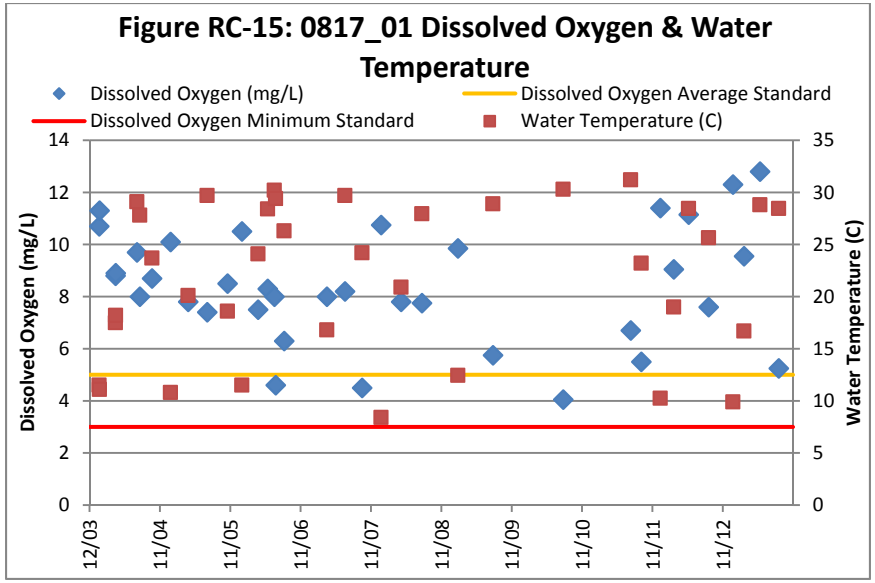


Figure RC-14: Segment 0817 Map

Assessments (Classified Segments):

Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0817_01 - Entire reservoir	Concern	Fully Supporting

This segment was found to have concerns for depressed dissolved oxygen by the TCEQ Draft 2014 Integrated Report. Dissolved oxygen is not well correlated to either chlorophyll-a (correlation coefficient=0.202) or lake elevation (CC=0.156). The strongest correlation exists for water temperature (CC= -0.596). Figure RC-15 illustrations this relationship. Other than seasonally high temperatures, causes for low dissolved oxygen in this lake are not known.



General Use:
0817_01

TCEQ Draft 2014 Integrated Report
Fully Supporting

In-House 5 Year Assessment
Fully Supporting

Contact Recreation Use:
0817_01

TCEQ Draft 2014 Integrated Report
No Concern

In-House 5 Year Assessment
Fully Supporting

Public Water Supply Use:
0817_01

TCEQ Draft 2014 Integrated Report
Fully Supporting

In-House 5 Year Assessment
Fully Supporting

Fish Consumption Use:
0817_01

TCEQ Draft 2014 Integrated Report
Not Assessed (No Data)

In-House 5 Year Assessment
Not Assessed (No Data)

Assessments (Unclassified Segments):

Aquatic Life Use: Not Assessed (No Data)

General Use: Not Assessed (No Data)

Contact Recreation Use: Not Assessed (No Data)

Public Water Supply Use: Not Assessed (No Data)

Fish Consumption Use: Not Assessed (No Data)

Trend Analysis Overview

Table RC-11: Trend Analysis Result Summary

Richland Chambers		Sp Cond			Chlorophyll-a			TDS			Chloride			SO4		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0817_01	10981	DN	DN	DN		UP		DN	DN	DN	DN		DN	DN		DN

Trends Key
A-All Months
S-Summer/Growing Season (May-October)
W-Winter/Dormant Sesaon (November-April)
UP Increasing Trends
DN Decreasing Trends

There were 11 significant trends identified for this segment as summarized in Table RC-11. For additional detail on trend methods, see the Data Review Methodology section.

Trends (Classified Segments):
See Table RC-12 for details of the significant trends analysis summary presented in Table RC-11. The summer increasing trend for chlorophyll-a is weighted by a single high value at the end of the data set that is almost twice as high as other summer values (Figure RC-16). An increasing trend still exists without this data point. However, it is much weaker. As summer chlorophyll-a levels are not correlated to nutrients, the cause of this trend is unknown.

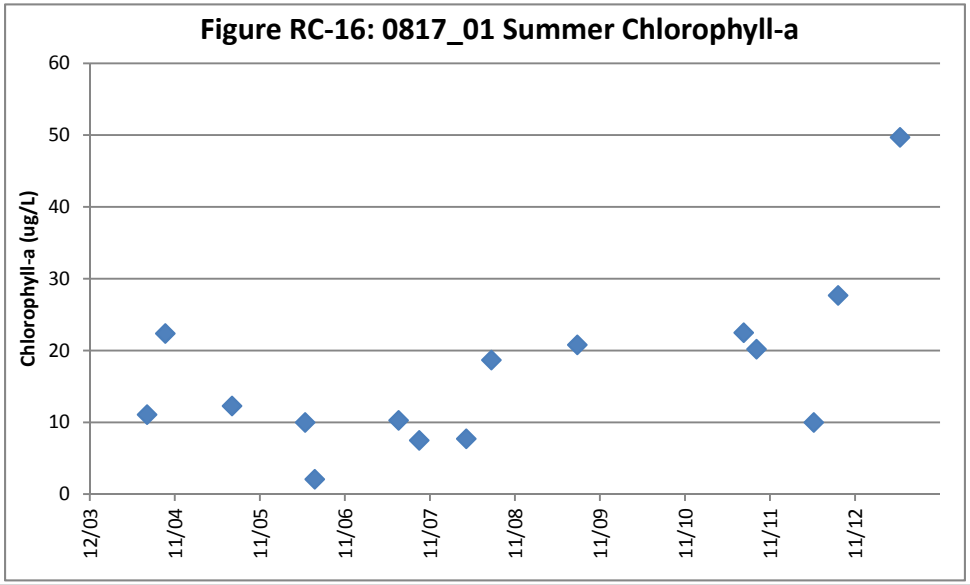


Table RC-12: 0817 Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0817_01	10981	Sp Cond	POR	0.32	-6.87	0.00	1.70	-4.03	1.11	-1.28	36	297.82	375.00	332.50	288.25	264.50	240.00	68.00	1/20/04	9/16/13
0817_01	10981	Sp Cond	Summer	0.21	-5.12	0.04	2.32	-2.21	1.47	-0.87	20	285.93	349.00	318.25	274.50	257.00	252.00	61.25	8/3/04	9/16/13
0817_01	10981	Sp Cond	Winter	0.40	-7.53	0.01	2.48	-3.03	0.02	-0.74	16	312.69	375.00	345.50	310.75	285.75	240.00	59.75	1/20/04	3/20/13
0817_01	10981	Chloride	POR	0.32	-0.11	0.00	0.03	-3.54	0.85	1.19	29	10.21	43.00	11.00	8.00	6.00	2.50	5.00	1/22/04	6/11/13
0817_01	10981	Chloride	Winter	0.46	-0.14	0.01	0.04	-3.31	0.64	0.68	15	11.77	43.00	15.00	9.00	6.00	2.50	9.00	1/22/04	3/20/13
0817_01	10981	SO4	POR	0.24	-0.05	0.01	0.02	-3.01	0.90	-0.12	30	25.20	47.00	31.00	23.00	20.00	13.00	11.00	1/22/04	6/11/13
0817_01	10981	SO4	Winter	0.39	-1.79	0.01	0.62	-2.89	1.39	-0.40	15	27.87	47.00	36.00	24.00	20.00	19.00	16.00	1/22/04	3/20/13
0817_01	10981	TDS	POR	0.35	-5.23	0.00	1.24	-4.24	1.22	-1.03	36	198.22	256.00	220.18	187.59	176.96	154.00	43.21	1/20/04	9/16/13
0817_01	10981	TDS	Summer	0.17	-3.05	0.07	1.59	-1.92	1.10	-0.98	20	186.29	226.85	211.50	179.54	167.05	154.00	44.45	8/3/04	9/16/13
0817_01	10981	TDS	Winter	0.53	-6.23	0.00	1.57	-3.98	0.21	-1.11	16	213.13	256.00	236.25	210.68	186.59	170.95	49.66	1/20/04	3/20/13
0817_01	10981	Chlorophyll-a	Summer	0.27	0.13	0.05	0.06	2.17	-1.28	1.62	15	16.87	49.70	22.40	12.30	10.00	2.10	12.40	8/3/04	6/11/13

Trends (Unclassified Segments):

None

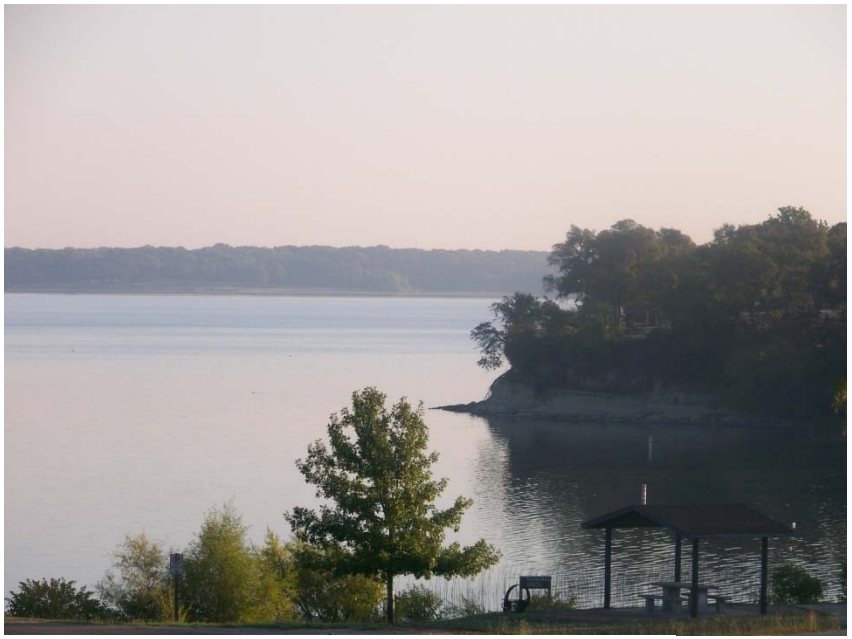


Image RC- 3: Navarro Mills Lake park overlook

Segment 0837 – Richland Creek Above Richland-Chambers Reservoir

Overview

This 19 mile segment starts at the confluence of Pin Oak Creek in Navarro County and ends at the Navarro Mills dam in Navarro County. Segment 0837 is entirely within the Blackland Prairie ecoregion and is classified mostly as agriculture/pasture with interspersed tracts of rangeland and forest.

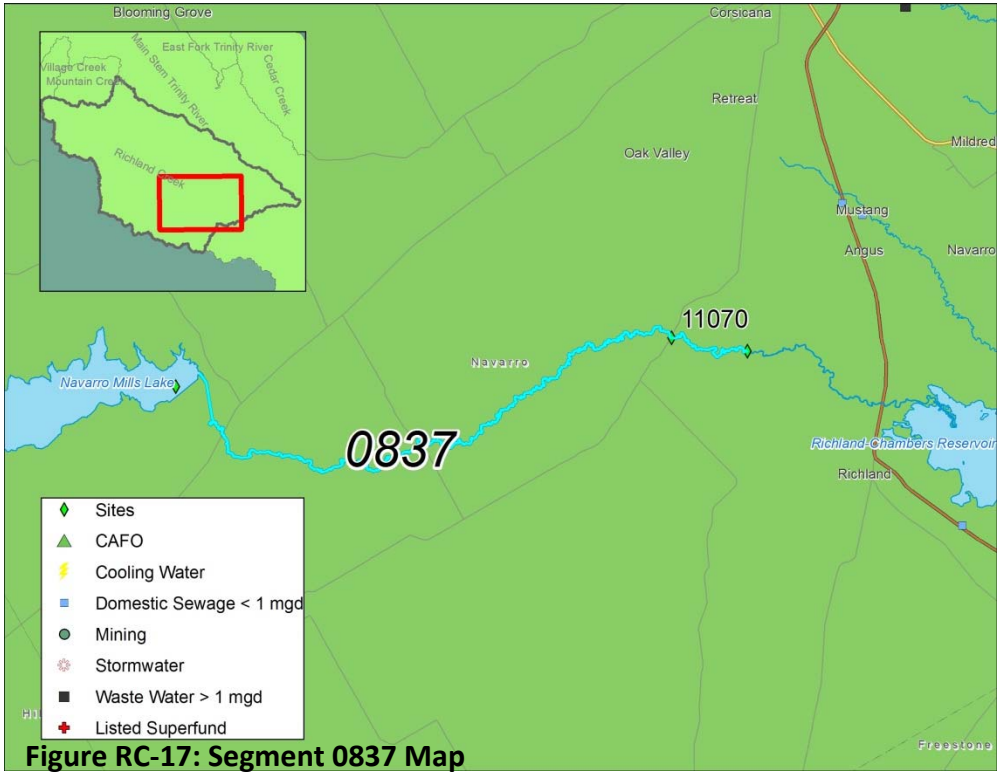
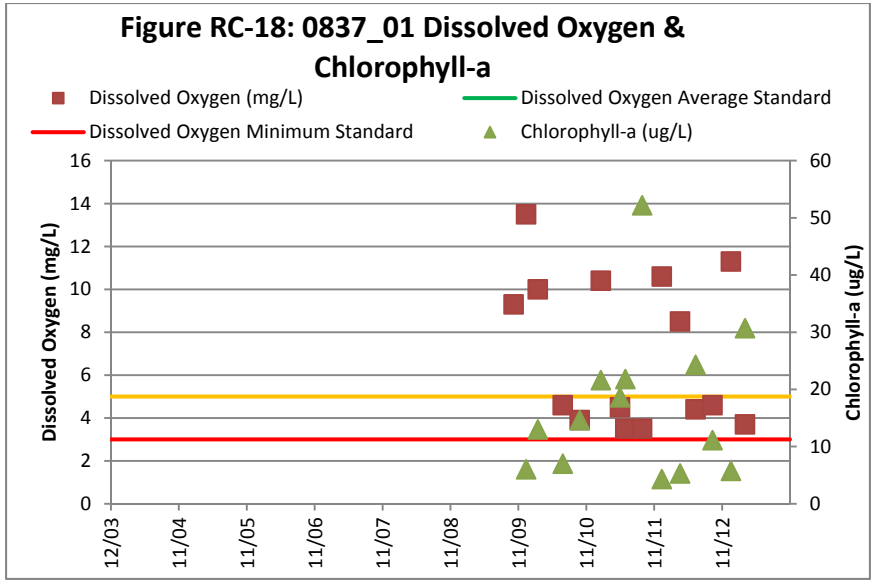


Figure RC-17: Segment 0837 Map

Assessments (Classified Segments):

Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0837_01 - Entire segment	Concern	Not Supporting

This segment was found to have concerns for depressed dissolved oxygen by the TCEQ Draft 2014 Integrated Report. However, the in-house 5 year assessment found this segment to be not supporting due to depressed dissolved oxygen. In this segment, dissolved oxygen is well correlated to chlorophyll-a (correlation coefficient= -0.563). Therefore it appears that algal populations are having a negative influence on dissolved oxygen levels (Figure RC-18). Additionally, there are a few stream flow measurements available which indicate that low flows may also be a factor in the low dissolved oxygen levels.

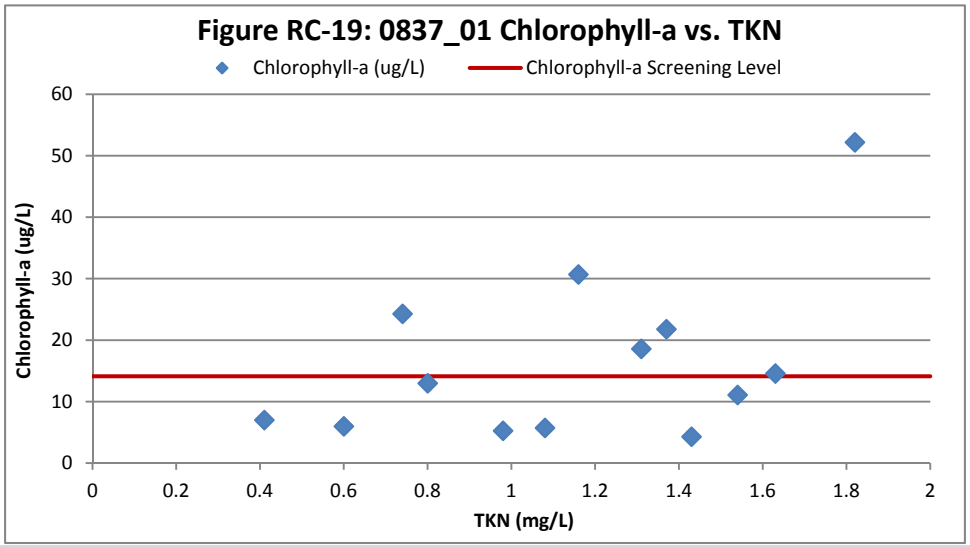


General Use:
0837_01

TCEQ Draft 2014 Integrated Report
Concern

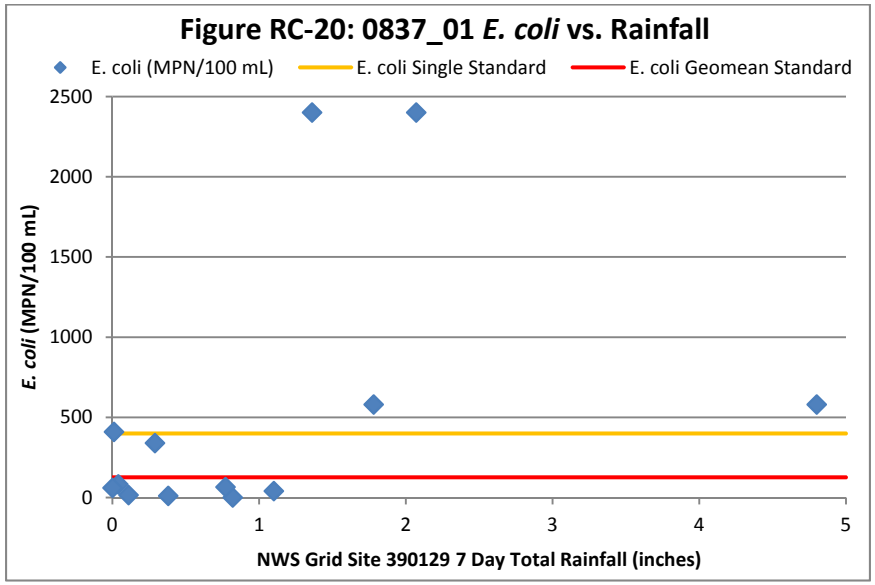
In-House 5 Year Assessment
Concern

This segment was found to have concerns for chlorophyll-a by both the TCEQ Draft 2014 Integrated Report and the in-house 5 year assessment. Chlorophyll-a appears to be somewhat correlated to TKN in this segment (Figure RC-19). As the watershed is largely agricultural and pasture land, livestock and fertilizers may be a major contributor to the nitrogen in the stream. Based on the rural nature of the watershed, failing septic systems may also be contributing nitrogen to the stream. The stream appears to be a low flow system much of the time as shown in Figure RC-18 above. This would allow for long residence times in which algal populations can utilize available nitrogen.



Contact Recreation Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0837_01	No Concern	Concern

This segment was found to have concerns due to elevated levels of *E. coli* by the in-house 5 year assessment. As expected, all values which exceeded the single grab sample standard of 399 MPN/100 mL occurred when there were measureable rainfall totals (Figure RC-20).



Public Water Supply Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0837_01	Fully Supporting	Fully Supporting

Fish Consumption Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0837_01	Not Assessed (No Data)	Not Assessed (No Data)

Assessments (Unclassified Segments):

Aquatic Life Use: Not Assessed (No Data)

General Use: Not Assessed (No Data)

Contact Recreation Use: Not Assessed (No Data)

Public Water Supply Use: Not Assessed (No Data)

Fish Consumption Use: Not Assessed (No Data)

Trend Analysis Overview

Trends (Classified Segments):
None

Trends (Unclassified Segments):
None



Image RC- 4: Leaf-off riparian conditions and iron bridge near 0837

Segment 0836 – Richland-Chambers Reservoir

Overview

This 44,700 acre segment runs from the Richland-Chambers Dam in Freestone County up to the confluence of Pin Oak Creek on the Richland Creek Arm in Navarro County, and up to a point 2.5 miles downstream of Tupelo Branch on the Chambers Creek Arm in Navarro County. It impounds both Chambers Creek and Richland Creek up to the normal pool elevation of 315 feet. The reservoir is entirely within the Post Oak Savannah ecoregion and most of the land use is classified as agriculture/pasture with some portions of rangeland and forest.

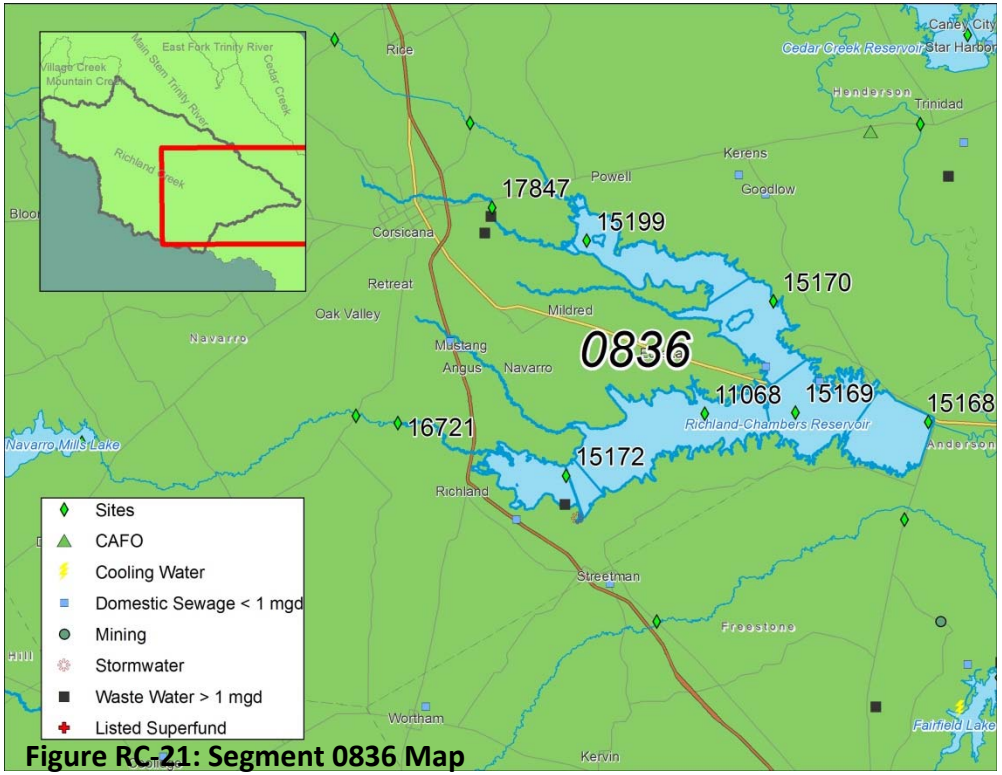


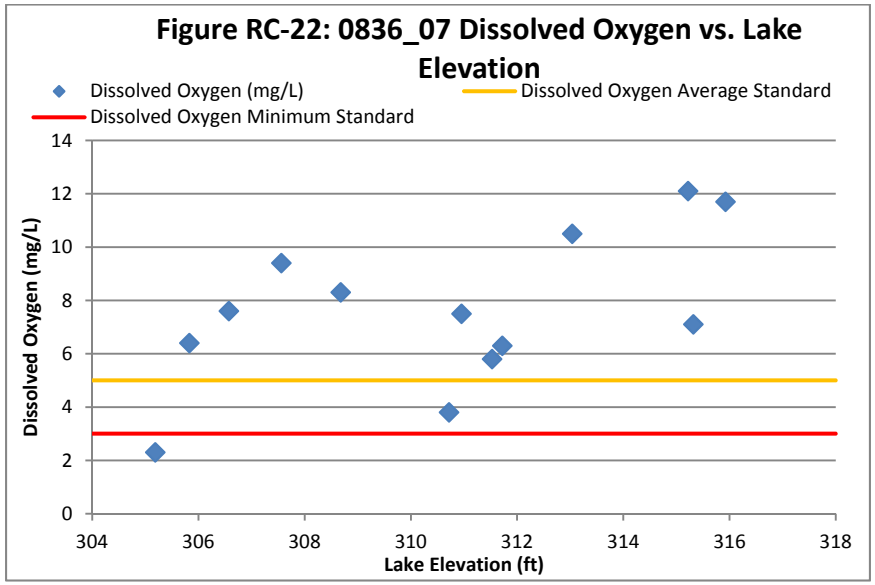
Figure RC-21: Segment 0836 Map

Assessments (Classified Segments):

Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0836_01 - Lowermost portion of reservoir, adjacent to dam	Fully Supporting	Fully Supporting
0836_02 - Confluence of Richland and Chambers Creek arms	Fully Supporting	Fully Supporting
0836_03 - Lower portion of Chambers Creek arm	Fully Supporting	Fully Supporting
0836_04 - Upper portion of Chambers Creek arm	Fully Supporting	Fully Supporting
0836_05 - Lower portion of Richland Creek arm	Fully Supporting	Fully Supporting

0836_06 - Upper portion of Richland Creek arm	Fully Supporting	Fully Supporting
0836_07 - Remainder of reservoir	Not Assessed (No Data)	Not Supporting
0836_08 - Post Oak Creek Arm off of Chambers Creek Arm of Richland Chambers Reservoir	Not Assessed (No Data)	Not Assessed (No Data)

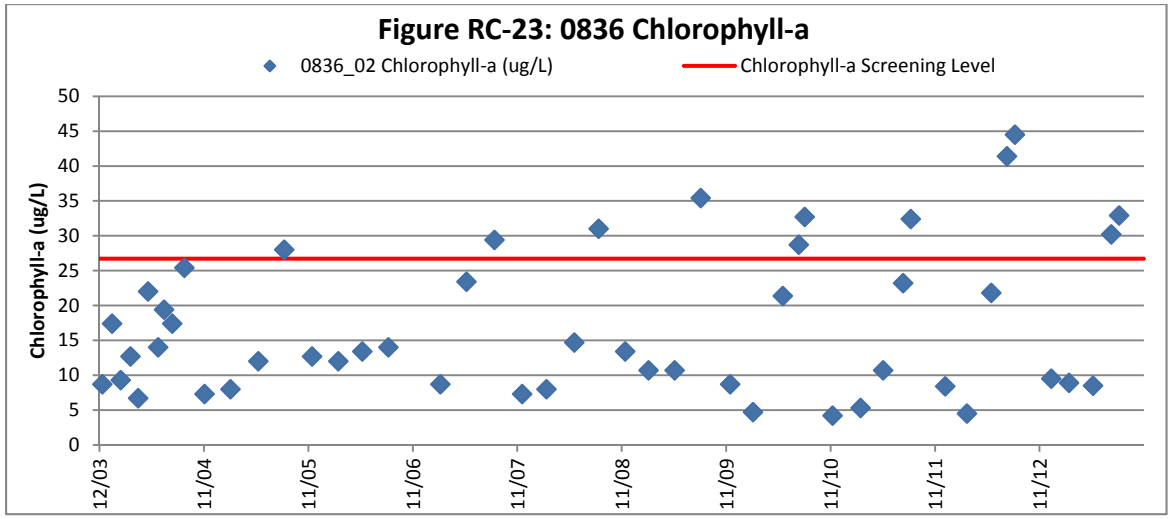
0836_07 was found to be not supporting due to depressed dissolved oxygen by the in-house 5 year assessment. The sampling location in 0836_07 is in the headwaters of the lake in the Richland Creek arm. It appears that low dissolved oxygen in this portion of the reservoir is related to low flows/lake levels. As shown in Figure RC-22, low dissolved oxygen levels are reported when the lake is below the normal pool elevation of 315 feet.



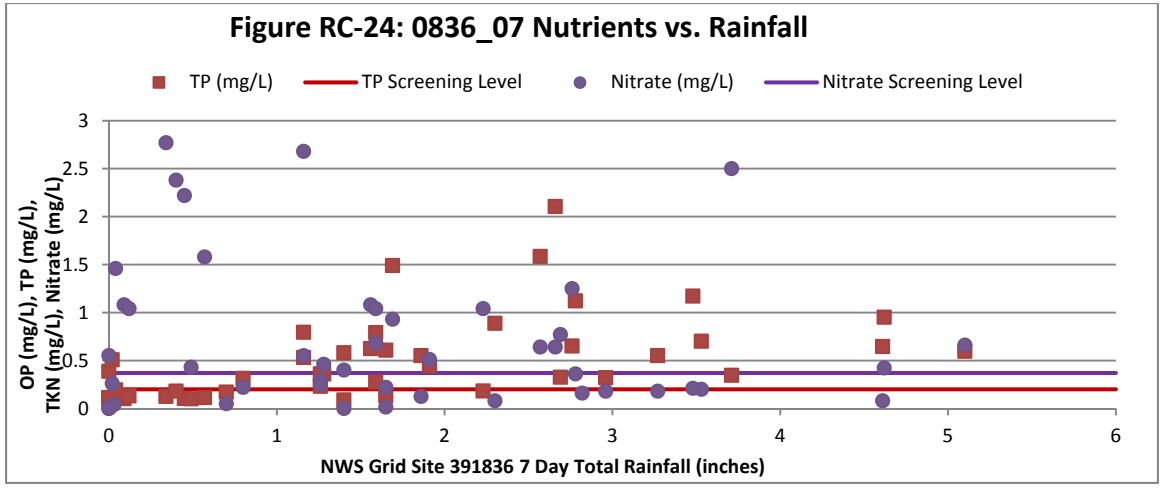
General Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0836_01	Fully Supporting	Concern
0836_02	Fully Supporting	Concern
0836_03	Fully Supporting	Concern
0836_04	Concern	Concern

0836_05	Concern	Concern
0836_06	Fully Supporting	Fully Supporting
0836_07	Fully Supporting	Concern
0836_08	Fully Supporting	Fully Supporting

0836_04 and 0836_05 were found to have concerns for chlorophyll-a by both the TCEQ Draft 2014 Integrated Report and the in-house 5 year assessment. 0836_02 and 0803_03 were also found to have concerns for chlorophyll-a by the in-house 5 year assessment. Concerns were identified in 0836_01 for nitrate and in 0836_04 for TP by the in-house 5 year assessment. 0836_07 was found to have concerns for nitrate, ammonia, OP, and TP by the in-house 5 year assessment. Chlorophyll-a levels (Figure RC-23) in the reservoir are only weakly correlated to nutrients. However, Richland-Chambers Reservoir has been noted as being eutrophic by the TCEQ report Trophic Classification of Texas Reservoirs. Nutrients, as well as residence time in the lake, are most likely contributing to the growth of algal populations and thus the elevated chlorophyll-a levels seen throughout.

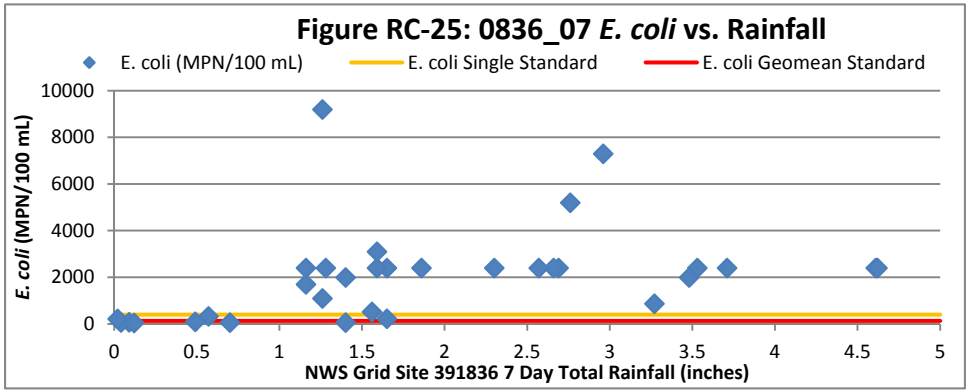


Overall, nutrients are fairly well correlated to both rainfall totals and lake levels indicating that these parameters are introduced to the lake via runoff from the surrounding land. This relationship is shown for TP and Nitrate in Figure RC-24. Agricultural fertilizers used on the fields and pastures in the watershed are the most likely sources of nutrients. In addition, there are several upstream wastewater treatment facilities that may be contributing nutrients to the reservoir during dry weather.



Contact Recreation Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0836_01	Fully Supporting	Fully Supporting
0836_02	Fully Supporting	Fully Supporting
0836_03	Fully Supporting	Fully Supporting
0836_04	Fully Supporting	Fully Supporting
0836_05	Fully Supporting	Fully Supporting
0836_06	Fully Supporting	Fully Supporting
0836_07	Not Assessed (No Data)	Not Supporting
0836_08	Not Assessed (No Data)	Not Assessed (No Data)

0836_07 was found to be not supporting due to elevated *E. coli* by the in-house 5 year assessment. Elevated *E. coli* levels in this portion of the reservoir are well correlated to recent rainfall events, as shown in Figure RC-25. Livestock are possible sources of *E. coli* as the watershed upstream of this location is largely agricultural and pasture land,



Public Water Supply Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0836_01	Fully Supporting	Fully Supporting
0836_02	Fully Supporting	Fully Supporting
0836_03	Fully Supporting	Fully Supporting
0836_04	Fully Supporting	Fully Supporting
0836_05	Fully Supporting	Fully Supporting
0836_06	Fully Supporting	Fully Supporting
0836_07	Fully Supporting	Fully Supporting
0836_08	Fully Supporting	No Concern

Fish Consumption Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0836_01	Not Assessed (Inadequate Data)	Not Assessed (No Data)
0836_02	Not Assessed (Inadequate Data)	Not Assessed (No Data)
0836_03	Not Assessed (Inadequate Data)	Not Assessed (No Data)
0836_04	Not Assessed (Inadequate Data)	Not Assessed (No Data)
0836_05	Not Assessed (Inadequate Data)	Not Assessed (No Data)
0836_06	Not Assessed (Inadequate Data)	Not Assessed (No Data)
0836_07	Not Assessed (Inadequate Data)	Not Assessed (No Data)
0836_08	Not Assessed (Inadequate Data)	Not Assessed (No Data)

Assessments (Unclassified Segments):

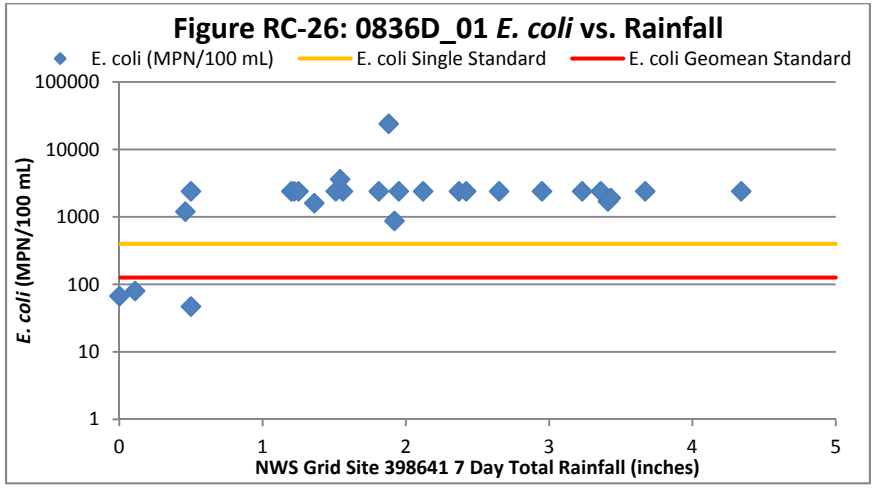
Aquatic Life Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0836B_01 - Entire segment	Not Supporting	Not Assessed (No Data)
0836C_01 - Entire segment	Concern	Not Assessed (No Data)
0836D_01 - Entire segment	Concern	No Concern

Depressed dissolved oxygen issues were identified in 0836B, 0836C, and 0836D by the TCEQ Draft 2014 Integrated Report. However, these findings were carried forward from previous Integrated Reports as there is not current data.

General Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0836B_01	Not Assessed (No Data)	Not Assessed (No Data)
0836C_01	Not Assessed (No Data)	Not Assessed (No Data)
0836D_01	Not Assessed (No Data)	Fully Supporting

Contact Recreation Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0836B_01	Not Assessed (No Data)	Not Assessed (No Data)
0836C_01	Not Assessed (No Data)	Not Assessed (No Data)
0836D_01	Not Assessed (No Data)	Not Supporting

0836D_01 was found to be not supporting due to elevated levels of *E. coli* by the in-house 5 year assessment. As discussed for many other *E. coli* issues, high E.coli levels typically occur during rainfall events. This pattern is seen in 0836D_01 as shown in Figure RC-26. The sample location in this assessment unit is just downstream of the city of Corsicana on the south side of the stream and a large area of agricultural and pasture land on the north side. Probable sources of *E. coli* include both pet and livestock wastes. It should be noted that the apparent flat line in the data at 2,400 MPN/100 mL is an artifact of the analytical method. For undiluted samples, the highest reportable value is 2,400 MPN/100 mL. For results above this value, dilutions must be made. For example, the single value reported at 24,000 MPN/100 mL was run with a 1:10 dilution.



Public Water Supply Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0836B_01	Not Assessed (No Data)	Not Assessed (No Data)
0836C_01	Not Assessed (No Data)	Not Assessed (No Data)
0836D_01	Not Assessed (No Data)	Fully Supporting

Fish Consumption Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0836B_01	Not Assessed (No Data)	Not Assessed (No Data)
0836C_01	Not Assessed (No Data)	Not Assessed (No Data)
0836D_01	Not Assessed (No Data)	Not Assessed (No Data)

Trend Analysis Overview

Table RC-13: Trend Analysis Result Summary

Richland Chambers		Flow Severity			Secchi Depth			Water Temp			DO			pH			Sp Cond			*E. coli*			Chlorophyll-a			TSS		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0836_01	15168								UP								DN	DN										
0836_02	15169																DN	DN						UP	DN			
0836_03	15170					DN													DN					UP				
0836_04	15199																DN	DN	DN									
0836_05	11068								UP								DN	DN										
0836_06	15172																											
0836_07	16721																			UP		UP				UP	UP	UP
0836D_01	17847	UP	UP	UP								UP				DN	DN	DN	DN								UP	UP

Richland Chambers		VSS			TDS			Chloride			SO4			NH3			NO3			TKN			OP			TP		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0836_01	15168																					DN						
0836_02	15169							DN	DN										UP			DN	DN	DN	DN			
0836_03	15170							DN	DN	DN	DN	DN		DN	DN						DN		DN	DN	DN			
0836_04	15199																	UP		DN	DN	DN						
0836_05	11068																		UP	DN	DN	DN						
0836_06	15172									DN										DN		DN						
0836_07	16721			UP																			UP	UP	UP	UP	UP	UP
0836D_01	17847				DN	DN	DN	DN	DN	DN																UP		UP

Trends Key

A-All Months

S-Summer/Growing Season (May-October)

W-Winter/Dormant Sesaon (November-April)

UP Increasing Trends

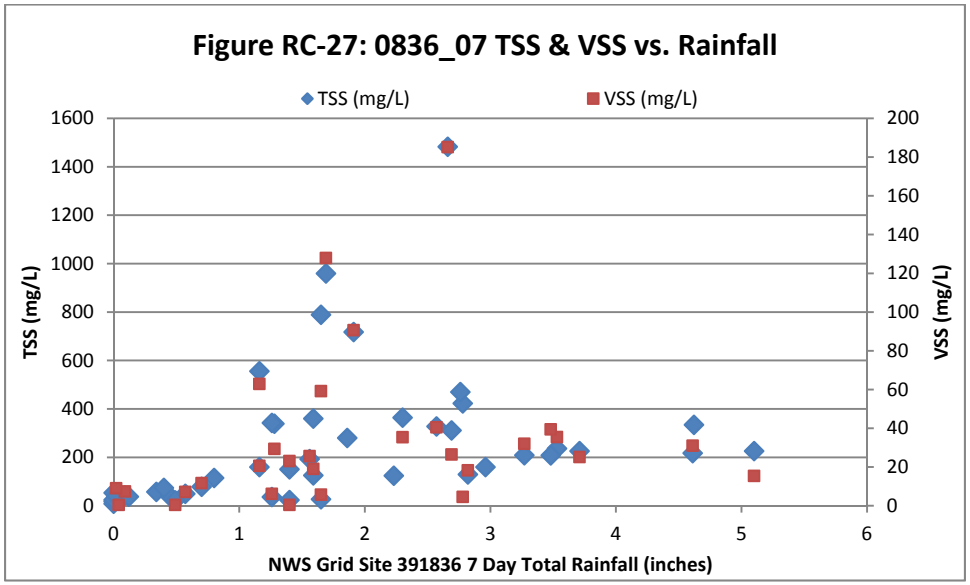
DN Decreasing Trends

There were 76 significant trends identified for this segment as summarized in Table RC-13. For additional detail on trend methods, see the Data Review Methodology section.

Trends (Classified Segments):
See Table RC-14 for details of the significant trends analysis summary presented in Table RC-13. As discussed in the General Use section of Assessments (Classified Segments), the lake has been classified as eutrophic. Nutrients as well as chlorophyll-a typically build up in reservoirs as they age. Contributions of nutrients may be coming from the surrounding watershed which is largely agricultural and pasture land. In addition, the increasing trends for *E. coli* in 0836_07 are likely due to sample timing in relation to rainfall events as discussed in the Contact Recreation Use section of Assessments (Classified Segments).

Similar to the *E. coli* trend, TSS and VSS trends in 0836_07 appear to be influenced by sample timing in relation to rainfall events (Figure RC-27). Suspended solids are generally introduced to water bodies during runoff events which seems to be the case in this assessment unit.

Figure RC-27: 0836_07 TSS & VSS vs. Rainfall



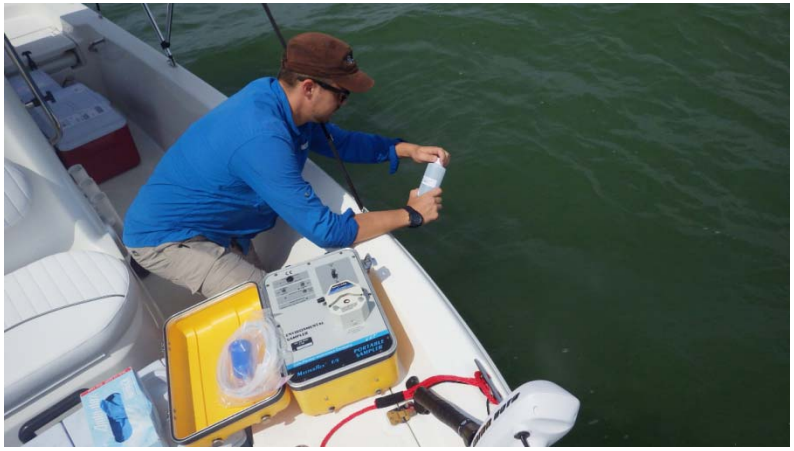


Image RC- 5: TRA staff perform reservoir water quality sampling

Table RC-14: 0836 Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0836_01	15168	Water Temp	Summer	0.11	0.20	0.06	0.10	1.95	-0.79	-0.58	33	28.60	31.70	30.10	29.30	27.10	23.73	3.00	5/19/04	9/4/13
0836_01	15168	Sp Cond	POR	0.27	-0.01	0.00	0.00	-4.35	0.84	2.35	53	271.53	352.67	283.33	270.00	260.00	231.00	23.33	12/11/03	9/4/13
0836_01	15168	Sp Cond	Summer	0.43	-3.98	0.00	0.83	-4.81	-0.21	-0.71	33	264.85	304.00	278.33	266.67	250.00	231.00	28.33	5/19/04	9/4/13
0836_01	15168	TKN	Winter	0.19	-0.03	0.05	0.02	-2.08	-0.68	1.44	21	0.72	1.17	0.84	0.72	0.56	0.10	0.28	12/11/03	3/13/13
0836_02	15169	Sp Cond	POR	0.21	-2.93	0.00	0.78	-3.78	0.72	0.06	57	269.22	327.00	280.67	269.00	255.00	233.67	25.67	12/11/03	9/4/13
0836_02	15169	Sp Cond	Summer	0.32	-3.49	0.00	0.87	-4.02	0.64	-1.18	36	261.85	297.00	276.50	260.00	245.00	233.67	31.50	5/19/04	9/4/13

Table RC-14 Continued: 0836 Trend Analysis Result Detail

0836_02	15169	NO3	Winter	0.37	0.01	0.00	0.00	3.43	0.04	-0.59	22	0.32	0.47	0.38	0.33	0.26	0.17	0.12	12/11/03	3/13/13
0836_02	15169	TKN	Winter	0.19	-0.04	0.05	0.02	-2.09	1.40	0.19	21	0.79	1.65	0.92	0.69	0.59	0.48	0.33	12/11/03	3/13/13
0836_02	15169	OP	POR	0.19	0.00	0.00	0.00	-3.18	2.00	-0.51	45	0.01	0.03	0.02	0.01	0.00	0.00	0.01	12/11/03	9/4/13
0836_02	15169	OP	Summer	0.38	-0.25	0.00	0.07	-3.71	0.47	-1.83	24	0.01	0.03	0.01	0.00	0.00	0.00	0.01	5/19/04	9/4/13
0836_02	15169	OP	Winter	0.16	0.00	0.08	0.00	-1.87	0.61	-0.69	21	0.01	0.03	0.02	0.01	0.01	0.00	0.02	12/11/03	3/13/13
0836_02	15169	Chloride	POR	0.10	-0.14	0.03	0.06	-2.30	-0.14	-0.40	49	10.11	13.25	11.00	10.40	9.00	6.62	2.00	12/11/03	9/4/13
0836_02	15169	Chloride	Summer	0.11	-0.15	0.10	0.09	-1.72	-0.23	-0.15	27	10.01	13.25	11.00	10.30	8.87	6.62	2.13	5/19/04	9/4/13
0836_02	15169	Chlorophyll-a	Summer	0.15	1.17	0.05	0.56	2.11	0.60	-0.70	27	23.65	44.50	31.00	23.20	14.00	8.50	17.00	5/19/04	9/4/13
0836_02	15169	Chlorophyll-a	Winter	0.18	-0.43	0.05	0.20	-2.11	1.44	0.82	22	8.96	17.40	10.70	8.70	7.30	4.20	3.40	12/11/03	3/13/13
0836_03	15170	Secchi Depth	Summer	0.14	-0.02	0.07	0.01	-1.89	1.14	-0.48	24	0.80	1.14	0.91	0.79	0.65	0.61	0.26	5/19/04	8/8/13
0836_03	15170	Sp Cond	Winter	0.22	-3.37	0.00	0.92	-3.68	1.03	-0.92	49	289.53	335.00	303.00	286.00	271.00	249.67	32.00	12/11/03	11/6/13
0836_03	15170	NH3	POR	0.25	-0.22	0.00	0.06	-3.82	-0.58	-2.34	46	0.03	0.15	0.05	0.03	0.00	0.00	0.05	12/11/03	9/4/13
0836_03	15170	NH3	Summer	0.20	-0.20	0.02	0.08	-2.48	0.45	-1.84	26	0.03	0.15	0.04	0.01	0.00	0.00	0.04	5/19/04	9/4/13
0836_03	15170	TKN	Summer	0.51	-0.07	0.00	0.01	-5.21	-1.69	0.37	28	0.76	1.24	0.98	0.80	0.61	0.10	0.37	5/19/04	9/4/13
0836_03	15170	OP	POR	0.39	-0.27	0.00	0.05	-5.41	-0.33	-1.97	47	0.01	0.06	0.02	0.01	0.00	0.00	0.02	12/11/03	9/4/13
0836_03	15170	OP	Summer	0.51	-0.32	0.00	0.07	-4.95	0.89	-1.52	26	0.01	0.05	0.01	0.00	0.00	0.00	0.01	5/19/04	9/4/13
0836_03	15170	OP	Winter	0.22	-0.17	0.03	0.07	-2.34	-1.39	0.24	21	0.01	0.06	0.02	0.01	0.01	0.00	0.02	12/11/03	3/13/13
0836_03	15170	Chloride	POR	0.16	-0.19	0.00	0.06	-3.04	-0.01	-0.85	50	10.35	13.24	11.20	10.60	9.26	6.91	1.94	12/11/03	9/4/13
0836_03	15170	Chloride	Summer	0.14	-0.18	0.05	0.09	-2.05	-0.35	-0.41	28	10.42	13.09	11.30	10.60	9.23	6.91	2.08	5/19/04	9/4/13
0836_03	15170	Chloride	Winter	0.22	-0.22	0.03	0.09	-2.37	0.39	-0.60	22	10.25	13.24	11.20	10.35	9.30	8.14	1.90	12/11/03	3/13/13
0836_03	15170	SO4	POR	0.13	-0.02	0.02	0.01	-2.36	1.33	-0.47	41	28.10	38.90	30.50	27.10	25.10	22.30	5.40	12/11/03	9/4/13
0836_03	15170	SO4	Summer	0.14	-0.47	0.08	0.26	-1.82	1.50	-0.18	23	27.65	36.20	30.50	26.62	24.70	22.30	5.80	6/23/04	9/4/13
0836_03	15170	Chlorophyll-a	Summer	0.13	1.29	0.06	0.66	1.96	0.65	-0.78	28	25.02	48.30	33.35	25.68	15.71	7.40	17.64	5/19/04	9/4/13
0836_04	15199	Sp Cond	POR	0.16	-7.08	0.00	2.19	-3.23	0.97	0.16	56	309.51	431.33	346.92	302.00	275.50	180.00	71.42	12/11/03	9/4/13
0836_04	15199	Sp Cond	Summer	0.16	-5.23	0.02	2.08	-2.52	0.88	-0.78	36	295.83	378.00	318.17	289.25	268.75	223.00	49.42	5/19/04	9/4/13
0836_04	15199	Sp Cond	Winter	0.17	-8.58	0.07	4.54	-1.89	-0.83	0.18	20	334.13	431.33	390.17	319.33	301.75	180.00	88.42	12/11/03	3/13/13
0836_04	15199	NO3	Summer	0.32	0.00	0.01	0.00	2.73	1.57	0.05	18	0.01	0.03	0.02	0.00	0.00	0.00	0.02	8/11/04	9/4/13
0836_04	15199	TKN	POR	0.40	-0.10	0.00	0.02	-4.89	-0.47	-0.13	38	1.02	2.13	1.40	1.05	0.68	0.10	0.72	12/11/03	9/4/13
0836_04	15199	TKN	Summer	0.44	-0.10	0.00	0.03	-3.41	-1.18	-0.18	17	1.00	1.77	1.30	1.10	0.87	0.10	0.43	8/11/04	9/4/13
0836_04	15199	TKN	Winter	0.38	-0.09	0.00	0.03	-3.41	0.62	0.14	21	1.03	2.13	1.40	1.02	0.68	0.10	0.72	12/11/03	3/13/13
0836_05	11068	Water Temp	Summer	0.11	0.18	0.04	0.09	2.08	-0.65	-0.18	36	29.09	32.33	30.20	29.30	27.75	24.90	2.45	5/19/04	9/4/13
0836_05	11068	Sp Cond	POR	0.16	-2.97	0.00	0.93	-3.18	0.08	-0.48	57	262.98	322.00	280.00	264.00	245.67	218.00	34.33	12/11/03	9/4/13
0836_05	11068	Sp Cond	Summer	0.25	-3.35	0.00	1.00	-3.36	-0.06	-1.30	36	252.94	286.00	269.00	257.50	236.00	218.00	33.00	5/19/04	9/4/13
0836_05	11068	NO3	Winter	0.32	0.02	0.01	0.01	3.06	1.96	0.43	22	0.24	0.48	0.29	0.21	0.18	0.10	0.11	12/11/03	3/13/13
0836_05	11068	TKN	POR	0.38	-0.05	0.00	0.01	-5.25	-1.40	0.92	47	0.75	1.32	0.94	0.76	0.58	0.10	0.36	12/11/03	9/4/13
0836_05	11068	TKN	Summer	0.27	-0.04	0.01	0.01	-2.95	-1.56	1.42	26	0.74	1.21	0.90	0.76	0.59	0.10	0.31	5/19/04	9/4/13
0836_05	11068	TKN	Winter	0.53	-0.07	0.00	0.02	-4.63	-0.73	0.35	21	0.76	1.32	0.94	0.80	0.58	0.10	0.36	12/11/03	3/13/13
0836_06	15172	TKN	POR	0.34	-0.08	0.00	0.02	-3.61	-1.22	-0.34	27	0.95	1.52	1.35	0.92	0.74	0.10	0.61	12/11/03	9/4/13
0836_06	15172	TKN	Winter	0.28	-0.07	0.01	0.02	-2.75	-0.79	0.03	21	0.92	1.52	1.20	0.88	0.75	0.10	0.45	12/11/03	3/13/13
0836_06	15172	Chloride	Winter	0.17	-0.32	0.07	0.16	-1.94	-1.10	0.59	21	9.24	14.10	10.69	9.83	8.00	3.30	2.69	12/11/03	3/13/13
0836_07	16721	TSS	POR	0.16	0.15	0.00	0.05	3.05	-0.47	-1.08	50	233.26	1482.60	327.70	155.15	42.00	8.50	285.70	12/10/03	10/31/13
0836_07	16721	TSS	Summer	0.20	0.15	0.07	0.08	1.95	0.54	0.52	17	216.62	1482.60	217.10	115.00	56.30	18.00	160.80	5/19/04	10/31/13
0836_07	16721	TSS	Winter	0.17	0.17	0.02	0.07	2.50	-0.80	-1.18	33	241.83	959.40	342.00	160.00	39.90	8.50	302.10	12/10/03	1/11/13
0836_07	16721	VSS	Winter	0.17	0.31	0.05	0.15	2.05	-1.98	0.52	22	28.75	127.90	35.40	19.85	7.20	0.50	28.20	1/19/04	3/2/10
0836_07	16721	TP	POR	0.31	0.15	0.00	0.03	4.56	-0.15	-1.46	49	0.50	2.11	0.62	0.39	0.17	0.09	0.45	12/10/03	10/31/13
0836_07	16721	TP	Summer	0.39	0.15	0.01	0.05	3.09	-0.26	-0.38	17	0.59	2.11	0.65	0.56	0.23	0.11	0.42	5/19/04	10/31/13
0836_07	16721	TP	Winter	0.25	0.14	0.00	0.05	3.13	0.08	-1.38	32	0.46	1.59	0.62	0.35	0.13	0.09	0.49	12/10/03	1/11/13
0836_07	16721	OP	POR	0.38	0.21	0.00	0.04	5.28	-0.84	-1.09	47	0.13	0.52	0.19	0.10	0.03	0.01	0.17	12/10/03	10/31/13
0836_07	16721	OP	Summer	0.57	0.03	0.00	0.01	4.28	1.88	0.72	16	0.15	0.52	0.23	0.11	0.02	0.01	0.21	5/19/04	10/31/13
0836_07	16721	OP	Winter	0.37	0.19	0.00	0.05	4.09	-0.12	-1.23	31	0.11	0.38	0.19	0.06	0.03	0.01	0.16	12/10/03	1/11/13
0836_07	16721	*E. coli*	POR	0.21	0.23	0.01	0.08	2.95	-1.66	-0.69	35	2446.60	16000.00	2400.00	2400.00	330.00	52.00	2070.00	1/19/04	10/31/13
0836_07	16721	*E. coli*	Winter	0.19	0.22	0.04	0.10	2.19	-1.07	-1.17	23	2163.91	9200.00	2400.00	2400.00	220.00	52.00	2180.00	1/19/04	1/11/13

Trends (Unclassified Segments):

See Table RC-15 for details of the significant trends analysis summary presented in Table RC-13. Trends for both TSS and TP appear to be influenced by sample timing in relation to rainfall events (Figure RC-28). Runoff containing suspended solids and TP from the surrounding agricultural and pasture land may be contributing to these trends.

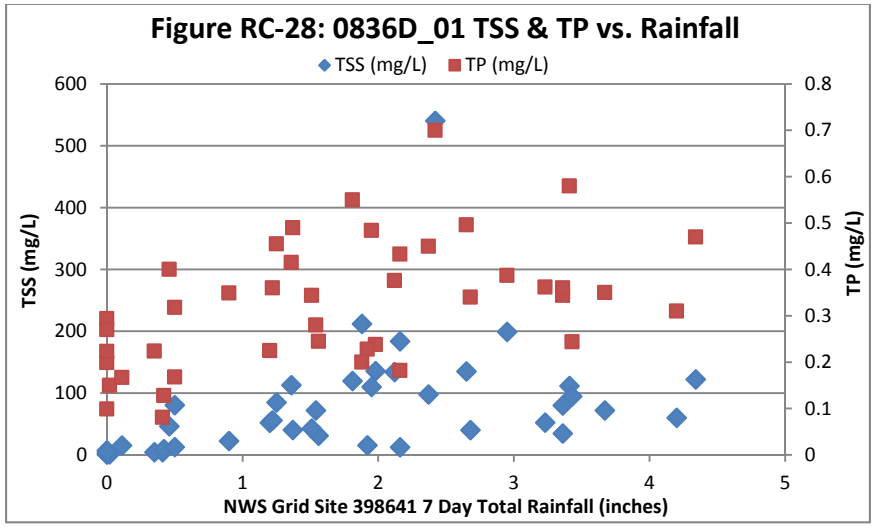
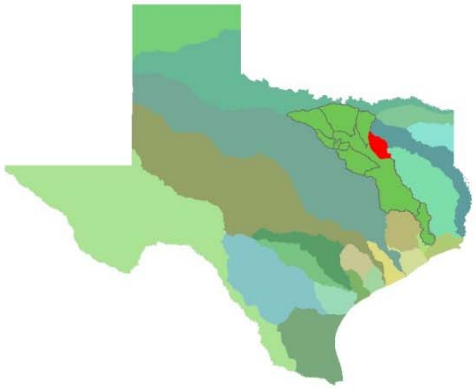


Table RC-15: 0836D Trend Analysis Result Detail

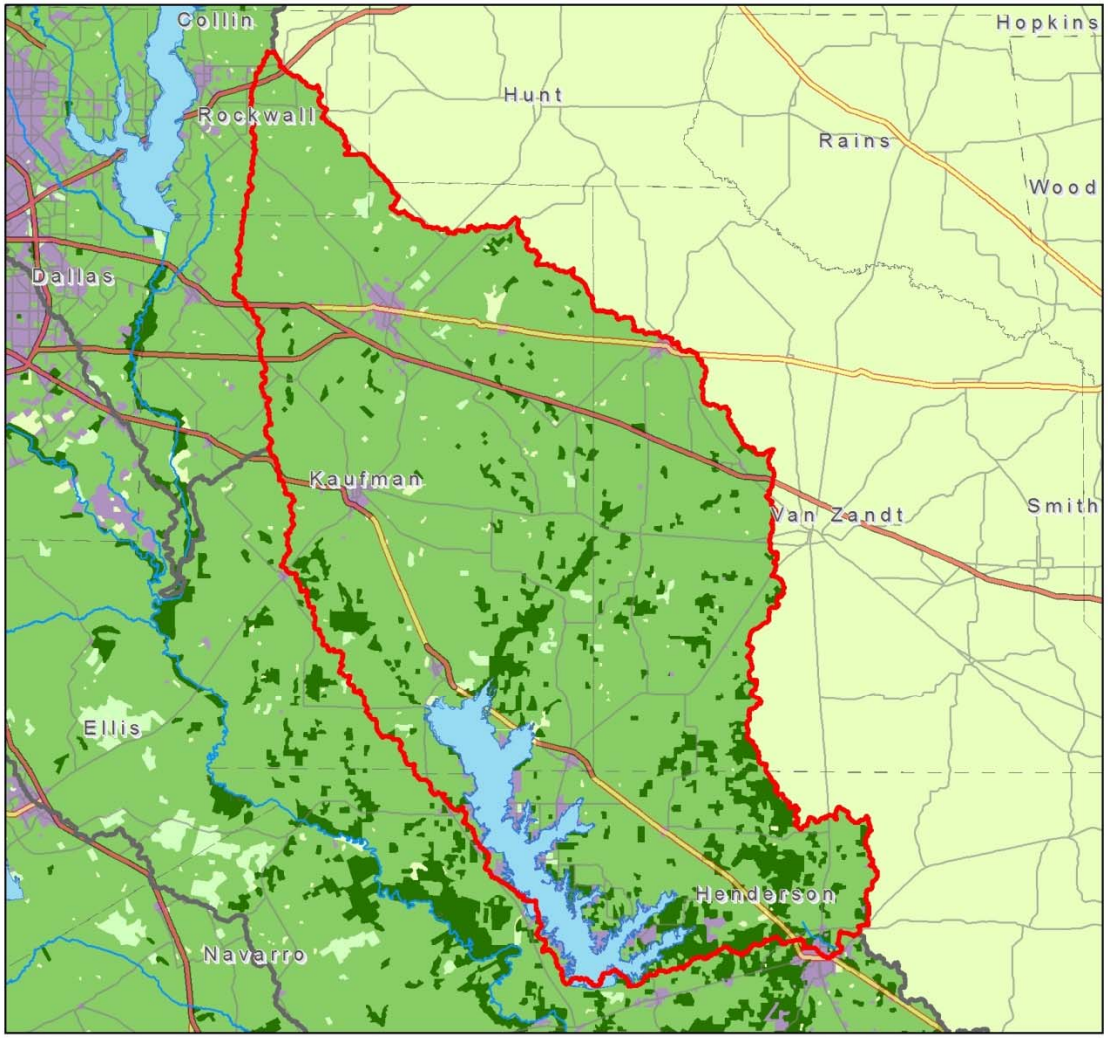
Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0836D_01	17847	Sp Cond	POR	0.24	-32.25	0.00	10.02	-3.22	1.22	-0.65	34	361.56	787.00	515.00	317.50	218.00	3.00	297.00	12/10/03	10/31/13
0836D_01	17847	Sp Cond	Summer	0.37	-39.47	0.04	16.44	-2.40	0.81	0.18	12	349.17	787.00	516.50	281.50	217.50	3.00	299.00	5/19/04	10/31/13
0836D_01	17847	Sp Cond	Winter	0.18	-27.53	0.05	13.18	-2.09	1.05	-0.80	22	368.32	750.00	515.00	345.50	218.00	126.00	297.00	12/10/03	1/11/13
0836D_01	17847	DO	Summer	0.25	0.21	0.08	0.11	1.89	-0.77	-0.64	13	6.14	7.80	7.30	6.30	5.40	3.70	1.90	5/19/04	10/31/13
0836D_01	17847	pH	Winter	0.24	-0.04	0.02	0.02	-2.52	0.63	0.13	22	7.64	8.20	7.80	7.60	7.50	7.20	0.30	12/10/03	1/11/13
0836D_01	17847	TSS	Summer	0.44	12.73	0.01	3.99	3.19	1.54	0.61	15	63.92	199.00	111.60	52.10	9.30	1.00	102.30	5/19/04	10/31/13
0836D_01	17847	TSS	Winter	0.23	0.28	0.01	0.10	2.87	-1.93	0.31	29	82.64	540.30	110.00	60.10	15.20	1.00	94.80	12/10/03	1/11/13
0836D_01	17847	TP	POR	0.13	0.02	0.02	0.01	2.49	1.27	0.22	44	0.32	0.70	0.41	0.33	0.22	0.08	0.18	12/10/03	10/31/13
0836D_01	17847	TP	Winter	0.11	0.02	0.08	0.01	1.85	1.48	0.58	29	0.31	0.70	0.42	0.28	0.22	0.08	0.19	12/10/03	1/11/13
0836D_01	17847	Chloride	POR	0.29	-0.16	0.00	0.04	-4.19	-0.55	-0.24	44	18.84	68.20	22.20	14.10	8.60	2.50	13.60	12/10/03	10/31/13
0836D_01	17847	Chloride	Summer	0.55	-0.23	0.00	0.06	-3.98	-0.59	0.13	15	18.35	59.90	23.70	14.00	8.40	2.50	15.30	5/19/04	10/31/13
0836D_01	17847	Chloride	Winter	0.18	-0.13	0.02	0.05	-2.45	-0.23	-0.22	29	19.09	68.20	21.90	15.60	8.80	2.50	13.10	12/10/03	1/11/13
0836D_01	17847	Flow Severity	POR	0.28	0.22	0.00	0.06	3.52	0.99	-1.74	34	3.35	5.00	5.00	3.00	2.00	2.00	3.00	12/10/03	10/31/13
0836D_01	17847	Flow Severity	Summer	0.51	0.29	0.01	0.08	3.39	0.28	-1.31	13	3.54	5.00	5.00	3.00	3.00	2.00	2.00	5/19/04	10/31/13
0836D_01	17847	Flow Severity	Winter	0.17	0.17	0.06	0.09	1.98	1.10	-1.17	21	3.24	5.00	5.00	3.00	2.00	2.00	3.00	12/10/03	1/11/13
0836D_01	17847	TDS	POR	0.23	-19.86	0.00	6.28	-3.16	1.28	-0.63	35	229.27	487.50	322.00	189.15	141.70	1.95	180.30	12/10/03	10/31/13
0836D_01	17847	TDS	Summer	0.35	-23.60	0.03	9.60	-2.46	0.79	0.15	13	214.57	469.00	322.00	176.80	159.10	1.95	162.90	5/19/04	10/31/13
0836D_01	17847	TDS	Winter	0.17	-17.40	0.05	8.52	-2.04	1.11	-0.70	22	237.95	487.50	316.00	224.58	141.70	81.90	174.30	12/10/03	1/11/13

Cedar Creek



Land Use Type

- Rangeland
- Urban, Industrial and Residential
- Crop, Pasture and other Agriculture
- Forest



CEDAR CREEK

Classified Segments Used in this Report – 1
Unclassified Tributaries Used in this Report – 8

0818 – Cedar Creek Reservoir
Caney Creek – An unclassified tributary
Cedar Creek – An unclassified tributary
Clear Creek – An unclassified tributary
Kings Creek – An unclassified tributary
Lacy Fork Creek – An unclassified tributary
North Twin Creek – An unclassified tributary
One Mile Creek – An unclassified tributary
Prairie Creek – An unclassified tributary
South Twin Creek – An unclassified tributary

Sites Used for Analysis:

2008 Integrated Report	22
2010 Integrated Report	27
2012 Integrated Report	27
Draft 2014 Integrated Report	27
5-Year Analysis	16
Valid Trends	8

Table CC-1: Cedar Creek Count of Dischargers by Type and County

County	Cooling Water	Domestic Sewage <1mgd	Mining	Stormwater	Wastewater >1mgd	CAFO	Total Dischargers
HENDERSON		8	1		5		14
KAUFMAN		7			4		11
VAN ZANDT		1	1				2
Total		16	2		9		27

The Cedar Creek subwatershed extends approximately 55 river miles from Kaufman County to the Cedar Creek Reservoir dam in Henderson County. The watershed is largely rural with row crop agriculture and grazing. However, a large portion of the land directly adjacent to the reservoir has been developed. Major population centers include the cities of Terrell, Kaufman, and Athens. Water rights permits for Cedar Creek Reservoir are held by TRWD.

This subwatershed receives between 38 and 44 inches of precipitation annually. The upper reaches of the subwatershed lie within the Blackland Prairie ecoregion while the reservoir and lower portions of the subwatershed lie within the Post Oak Savannah. A large portion of the terrain in this subwatershed consists of gently rolling hills.

There is one Brownfield and one Superfund site in this subwatershed. The Superfund designation is due to Chromium, PAHs, and Trichloroethene in ground water. Three hazmat events required action by the EPA OSC office. See Tables CC-2, CC-3, and CC-4, for details and links to additional information.

Table CC-2: EPA Brownfields

Segment	Site	Link to Additional EPA Information	Map Site	Assessment Complete Date	Cleanup Required	Cleanup Status	Redevelopment Status	Media Affected	Classes of Contaminants Found	Media Addressed	Classes of Contaminants Cleaned Up
0818B	NORTH TEXAS READY MIX, INC	EPA Link	Map It	10/23/2000	Unknown	Not Started	Not Started	None		None	

Table CC-3: EPA Superfund Sites

Segment	Site	Link to Additional EPA Information	Map Site	1st Cleanup Action Initiated	Proposed to National Priority List (NPL)	Listed as Final on the NPL	Final Remedy Selected	Construction Complete	Deleted From NPL	Media Affected	Contaminant
0818	VAN DER HORST USA CORP	EPA Link	Map It	5/29/2008	9/23/2009	3/4/2010				Ground Water	Chromium, PAHs, TCE

Table CC-4: EPA On- Scene Coordinator Investigations

Segment	Site	Link to Additional EPA Information	Map Site	Date	Contaminants Found
0818	GREENSLADE PHARMACY	EPA Link	Map It		Arsenic, Cyanide Compounds, Strychnine
0818A	UPRR-GEMINI TRANSPORT ACCIDENT	EPA Link	Map It	8/23/2012	Gasoline
0818B	PLATING SHOP	EPA Link	Map It	3/21/2002	Chromium

There is one ongoing project in this subwatershed that is being managed by the Texas State Soil and Water Conservation Board. The goal of the Agricultural Non-Point Source Remediation in the Cedar Creek Reservoir Watershed is to reduce nutrient and sediment loading into the reservoir through the use of Best Management Practices on surrounding agricultural lands. Currently, there are agreements in place with the Kaufman-Van Zandt Soil and Water Conservation District (SWCD) and Texas AgriLife Extension provide for matching funds. The SWCD will provide matching funds for Water Quality Management Plans while the Extension will provide public outreach and education assistance.

In addition, permit support flow monitoring was conducted on One Mile Creek in Henderson County between September 2011 and August 2013. This unclassified tributary is a receiving stream for the City of Athens wastewater treatment facility. During the sampling period, flows ranged from 0.005 to 1.8 cfs with an average of 0.5 cfs.



Image CC - 1: Precipitation on the Trinity River

Segment 0818 – Cedar Creek Reservoir

Overview

This 33,750 acre reservoir impounds Cedar Creek from the Joe B. Hoggsett Dam in Henderson County up to a normal pool elevation of 322 feet. Although a majority of the land use around the reservoir is classified as agriculture/pasture, development has caused much of the shoreline to be classified as urban. This reservoir is entirely within the Post Oak Savannah ecoregion.

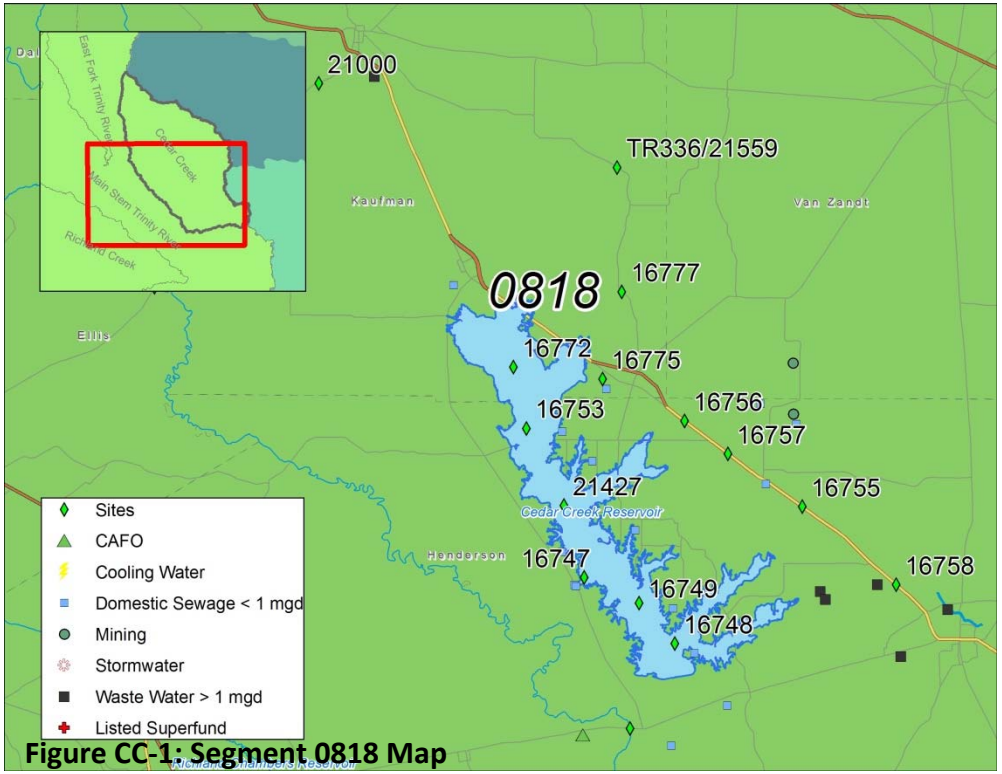


Figure CC-1: Segment 0818 Map

Assessments (Classified Segments):

Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0818_01 - Lowermost portion of the reservoir, adjacent to the dam	Fully Supporting	Fully Supporting
0818_02 - Caney Creek cove	Not Assessed (No Data)	Not Assessed (No Data)
0818_03 - Clear Creek cove	Not Assessed (No Data)	Not Assessed (No Data)
0818_04 - Lower portion of reservoir east of Key Ranch Estates	Fully Supporting	Fully Supporting
0818_05 - Cove off lower portion of reservoir adjacent to Clearview Estates	Not Assessed (No Data)	Not Assessed (No Data)
0818_06 - Middle portion of reservoir downstream of Twin Creeks cove	Fully Supporting	Fully Supporting
0818_07 - Twin Creeks cove	Not Assessed (No Data)	Not Assessed (No Data)

0818_08 - Prairie Creek cove	Not Assessed (No Data)	Not Assessed (No Data)
0818_09 - Upper portion of reservoir adjacent to Lacy Fork cove	Fully Supporting	Fully Supporting
0818_10 - Lacy Fork cove	Not Assessed (No Data)	Not Assessed (No Data)
0818_11 - Upper portion of reservoir east of Tolosa	Fully Supporting	Fully Supporting
0818_12 - Uppermost portion of reservoir downstream of Kings Creek	Not Assessed (Inadequate Data)	Not Assessed (No Data)
0818_13 - Cedar Creek cove	Concern	Not Assessed (No Data)
0818_14 - Remainder of reservoir	Not Assessed (No Data)	Not Assessed (No Data)

0818_13 was found to have concerns for depressed dissolved oxygen by the TCEQ Draft 2014 Integrated Report. However, this finding was carried forward from previous Integrated Reports as there is no current data.

General Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0818_01	Not Supporting	Concern
0818_02	Not Supporting	Fully Supporting
0818_03	Not Supporting	Fully Supporting
0818_04	Not Supporting	Concern
0818_05	Not Supporting	Fully Supporting
0818_06	Not Supporting	Concern
0818_07	Not Supporting	Fully Supporting
0818_08	Not Supporting	Fully Supporting
0818_09	Not Supporting	Concern
0818_10	Concern	Fully Supporting
0818_11	Not Supporting	Concern
0818_12	Not Supporting	Fully Supporting
0818_13	Concern	Fully Supporting
0818_14	Fully Supporting	Fully Supporting

0818_01 to 0818_09, 0818_11, and 0818_12 were found to be not supporting due to elevated pH by the TCEQ Draft 2014 Integrated Report. 0818_11 was also identified by the in-house 5 year assessment as having concerns for high pH. 0818_01, 0818_04, 0818_06, 0818_08 to 0818_11, and 0818_13 were found to have concerns for chlorophyll-a by the Integrated Report. Many of these assessment units were also found to have concerns for chlorophyll-a by the in-house 5

year assessment. 0818_02, 0818_05, 0818_08, and 0818_13 were found to have concerns for ammonia by the Integrated Report. However, the ammonia findings were carried forward from previous Integrated Reports as there is no current data. In addition, the Integrated Report found 0818_13 to have concerns for TP.

Cedar Creek Reservoir is not currently listed in the TCEQ report Trophic Classification of Texas Reservoirs. The report uses chlorophyll-a to classify the trophic status of lakes. Based on the data used in this Basin Summary Report, the average chlorophyll-a at the site nearest to the dam (16747) is 31.96 ug/L. This would result in a hypereutrophic classification for the lake. This agrees with the findings of the Integrated Report and the in-house 5 year assessment. Chlorophyll-a levels throughout the lake are uniformly high and frequently above the screening level. This is shown for 0818_04 in Figure CC-2. There is no correlation between lake level and chlorophyll-a values. Because the lake is hypereutrophic, the build-up of nutrients over time has created conditions that allow for high algal populations. As expected with high algal populations and chlorophyll-a levels, pH is elevated as shown in Figure CC-3. Generally, samples are taken during daylight hours when algae are photosynthesizing. Not only does this process increase dissolved oxygen, it also increases pH. It is important to note that the pH standards for this lake are lower than the standards in the rest of the basin. For Cedar Creek Reservoir, the standards are 6 to 8.5 SU while they are 6.5 to 9 SU for the rest of the basin.

Figure CC-2: 0818 Chlorophyll-a & Lake Elevation

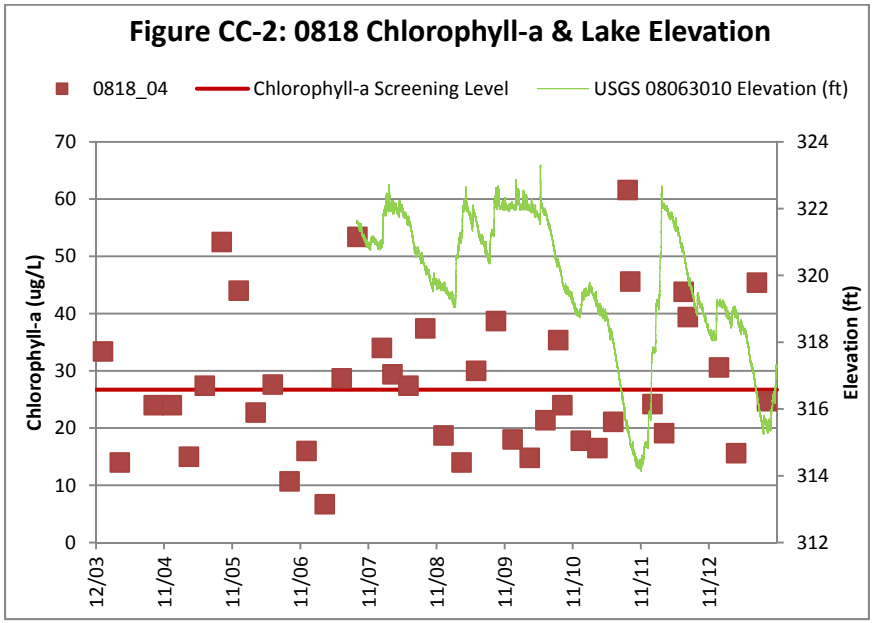
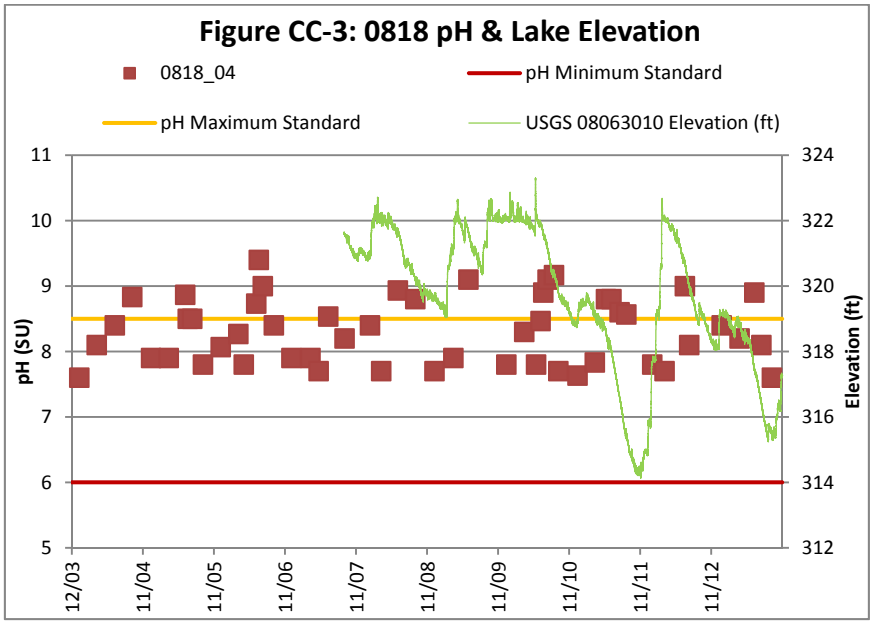


Figure CC-3: 0818 pH & Lake Elevation



Contact Recreation Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0818_01	Fully Supporting	Fully Supporting
0818_02	Not Assessed (No Data)	Not Assessed (No Data)
0818_03	Not Assessed (No Data)	Not Assessed (No Data)
0818_04	Fully Supporting	Fully Supporting
0818_05	Not Assessed (No Data)	Not Assessed (No Data)
0818_06	Fully Supporting	Fully Supporting
0818_07	Not Assessed (No Data)	Not Assessed (No Data)
0818_08	Not Assessed (No Data)	Not Assessed (No Data)
0818_09	Fully Supporting	Fully Supporting
0818_10	Not Assessed (No Data)	Not Assessed (No Data)
0818_11	Fully Supporting	Fully Supporting
0818_12	Not Assessed (No Data)	Not Assessed (No Data)
0818_13	Not Assessed (No Data)	Not Assessed (No Data)
0818_14	Not Assessed (No Data)	Not Assessed (No Data)

Public Water Supply Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0818_01	Fully Supporting	Fully Supporting
0818_02	Fully Supporting	No Concern
0818_03	Fully Supporting	No Concern
0818_04	Fully Supporting	Fully Supporting
0818_05	Fully Supporting	No Concern
0818_06	Fully Supporting	Fully Supporting
0818_07	Fully Supporting	No Concern
0818_08	Fully Supporting	No Concern
0818_09	Fully Supporting	Fully Supporting
0818_10	Fully Supporting	No Concern
0818_11	Fully Supporting	No Concern
0818_12	Fully Supporting	No Concern
0818_13	Fully Supporting	No Concern
0818_14	Fully Supporting	No Concern

Fish Consumption Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0818_01	Not Assessed (No Data)	Not Assessed (No Data)
0818_02	Not Assessed (No Data)	Not Assessed (No Data)
0818_03	Not Assessed (No Data)	Not Assessed (No Data)
0818_04	Not Assessed (No Data)	Not Assessed (No Data)
0818_05	Not Assessed (No Data)	Not Assessed (No Data)
0818_06	Not Assessed (No Data)	Not Assessed (No Data)
0818_07	Not Assessed (No Data)	Not Assessed (No Data)
0818_08	Not Assessed (No Data)	Not Assessed (No Data)
0818_09	Not Assessed (No Data)	Not Assessed (No Data)
0818_10	Not Assessed (No Data)	Not Assessed (No Data)
0818_11	Not Assessed (No Data)	Not Assessed (No Data)
0818_12	Not Assessed (No Data)	Not Assessed (No Data)
0818_13	Not Assessed (No Data)	Not Assessed (No Data)
0818_14	Not Assessed (No Data)	Not Assessed (No Data)

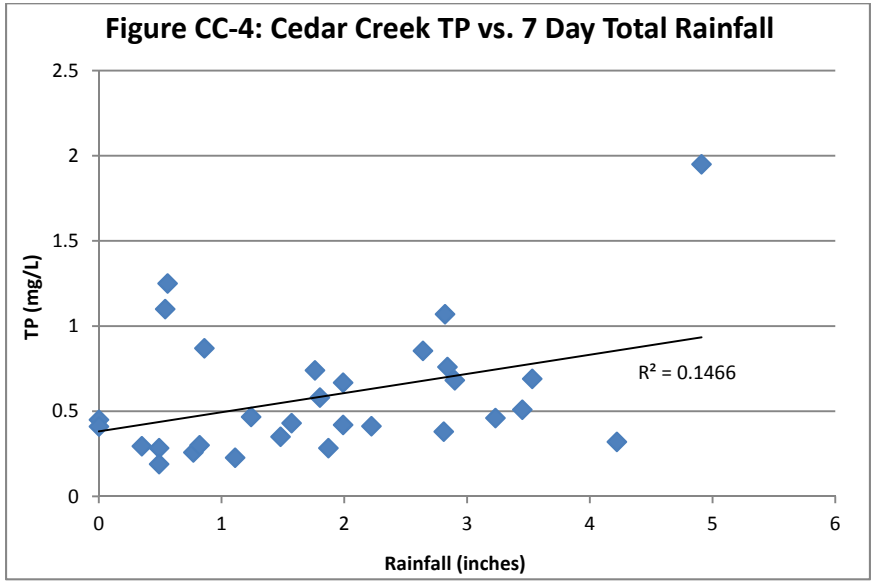
Assessments (Unclassified Segments):

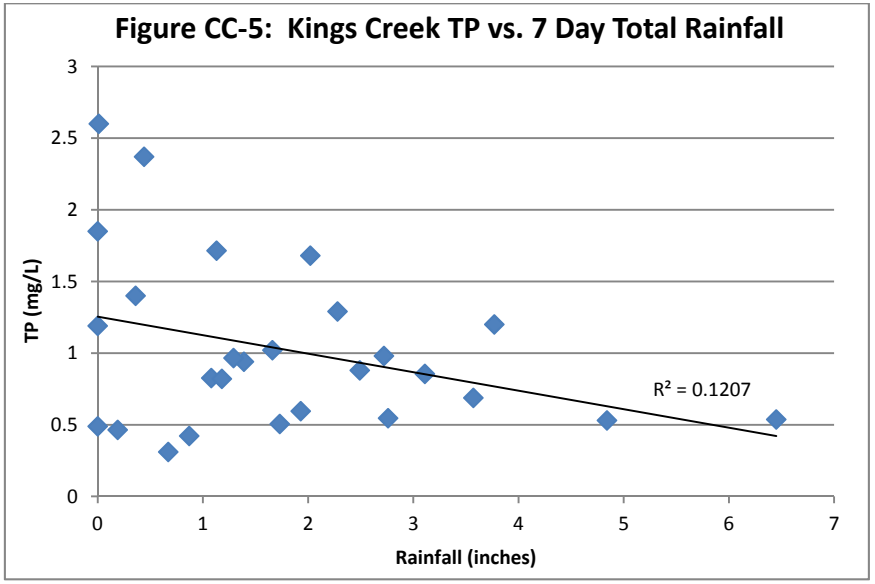
Aquatic Life Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
Caney Creek - Entire water body	Not Assessed (No Data)	Not Assessed (Inadequate Data)
Cedar Creek - Entire water body	Not Assessed (No Data)	Fully Supporting
Clear Creek - Entire water body	Not Assessed (No Data)	Not Assessed (Inadequate Data)
Kings Creek - Entire water body	Not Assessed (No Data)	Fully Supporting
Lacy Fork Creek - Entire water body	Not Assessed (No Data)	No Concern
North Twin Creek - Entire water body	Not Assessed (No Data)	No Concern
Prairie Creek - Entire water body	Not Assessed (No Data)	Not Assessed (Inadequate Data)
South Twin Creek - Entire water body	Not Assessed (No Data)	Not Assessed (Inadequate Data)

General Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
Caney Creek	Not Assessed (No Data)	Not Assessed (Inadequate Data)
Cedar Creek	Not Assessed (No Data)	Concern
Clear Creek	Not Assessed (No Data)	Not Assessed (Inadequate Data)
Kings Creek	Not Assessed (No Data)	Not Supporting
Lacy Fork Creek	Not Assessed (No Data)	Fully Supporting
North Twin Creek	Not Assessed (No Data)	Concern

Prairie Creek	Not Assessed (No Data)	Not Assessed (Inadequate Data)
South Twin Creek	Not Assessed (No Data)	Not Assessed (Inadequate Data)

Cedar Creek and Kings Creek were found to have concerns for TP by the in-house 5 year assessment. As shown in Figure CC-4, TP increases with rainfall in Cedar Creek. However, in Kings Creek, TP decreases with rainfall (Figure CC-5). The watershed for Cedar Creek appears to be more agricultural than the watershed for Kings Creek. Therefore, it is believed that agricultural fertilizer is the source of TP especially in the Cedar Creek watershed.





Kings Creek was found to be not supporting while North Twin Creek was found to have concerns for elevated TDS by the in-house 5 year assessment. Figure CC-6 shows that TDS decreases with increasing rainfall in Kings Creek. Heavy rainfall would introduce fresh water into the system to dilute TDS which would explain why lower TDS values are seen at higher rainfall totals. However, at lower rainfall totals, TDS levels are high which would be expected during the “first flush” where salts and other constituents of TDS are first washed into a stream during a rain event.

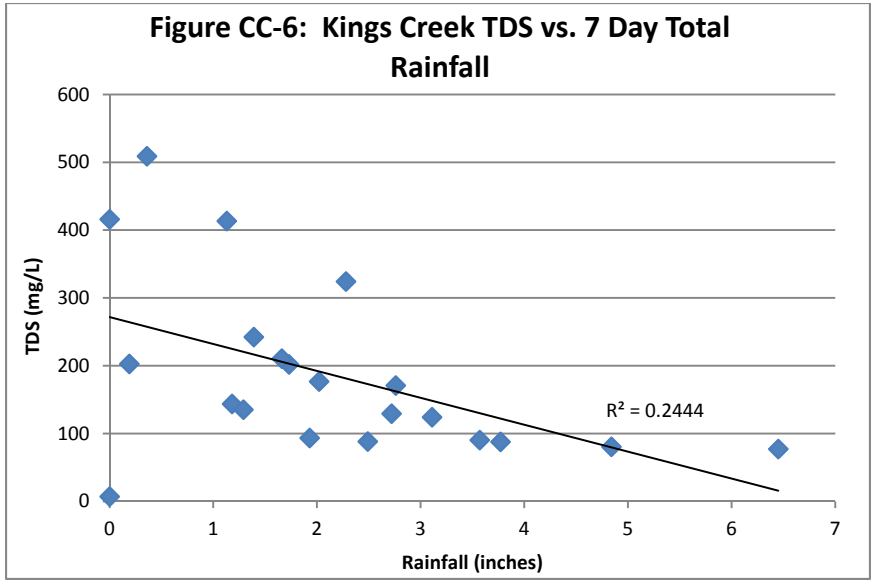




Image CC - 2: Cedar Creek Reservoir from park

Contact Recreation Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
Caney Creek	Not Assessed (No Data)	Not Assessed (Inadequate Data)
Cedar Creek	Not Assessed (No Data)	Not Supporting
Clear Creek	Not Assessed (No Data)	Not Assessed (Inadequate Data)
Kings Creek	Not Assessed (No Data)	Not Supporting
Lacy Fork Creek	Not Assessed (No Data)	Not Supporting
North Twin Creek	Not Assessed (No Data)	Not Supporting
Prairie Creek	Not Assessed (No Data)	Not Assessed (Inadequate Data)
South Twin Creek	Not Assessed (No Data)	Not Assessed (Inadequate Data)

Cedar, Kings, Lacy Fork, and North Twin creeks were found to be not supporting due to elevated levels of *E. coli* by the in-house 5 year assessment. As shown by the data collected in Kings Creek (Figure CC-7), *E. coli* levels generally increase during rainfall events. The flat line in the data is an artifact of the analytical method; without dilution, the test gives a maximum value of 2400 MPN/100 mL.

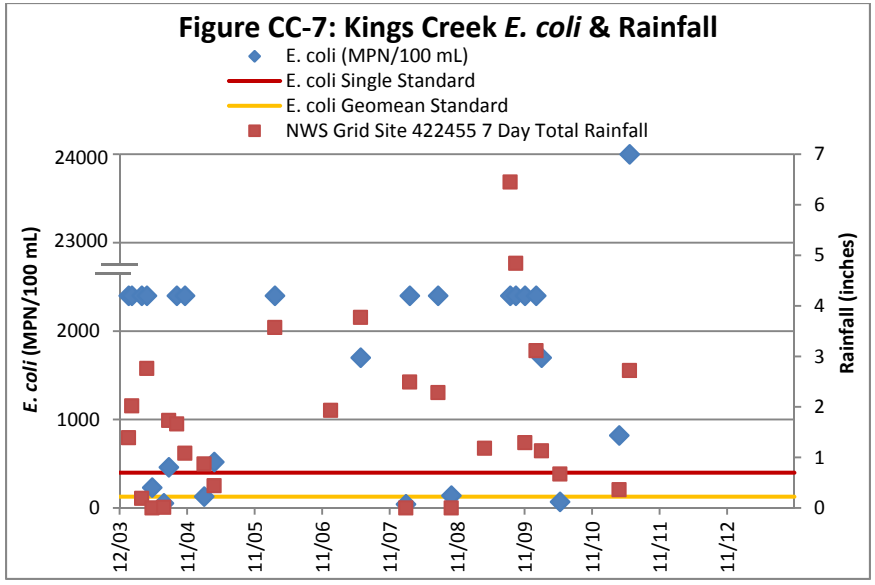




Image CC - 3: Upstream end of Cedar Creek pool

Public Water Supply Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
Caney Creek	Not Assessed (No Data)	Not Assessed (Inadequate Data)
Cedar Creek	Not Assessed (No Data)	Fully Supporting
Clear Creek	Not Assessed (No Data)	Not Assessed (Inadequate Data)
Kings Creek	Not Assessed (No Data)	Fully Supporting
Lacy Fork Creek	Not Assessed (No Data)	No Concern
North Twin Creek	Not Assessed (No Data)	No Concern
Prairie Creek	Not Assessed (No Data)	Not Assessed (Inadequate Data)
South Twin Creek	Not Assessed (No Data)	Not Assessed (Inadequate Data)

Fish Consumption Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
Caney Creek	Not Assessed (No Data)	Not Assessed (No Data)
Cedar Creek	Not Assessed (No Data)	Not Assessed (No Data)
Clear Creek	Not Assessed (No Data)	Not Assessed (No Data)
Kings Creek	Not Assessed (No Data)	Not Assessed (No Data)
Lacy Fork Creek	Not Assessed (No Data)	Not Assessed (No Data)
North Twin Creek	Not Assessed (No Data)	Not Assessed (No Data)

Prairie Creek	Not Assessed (No Data)	Not Assessed (No Data)
South Twin Creek	Not Assessed (No Data)	Not Assessed (No Data)

Trend Analysis Overview

Table CC-5: Trend Analysis Result Summary

Cedar Creek		Secchi Depth			Water Temp			DO			Sp Cond			Chlorophyll-a			TSS			VSS			TDS			SO4		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0818_01	16748	DN		DN					UP		DN	DN					UP	UP	UP					DN				
0818_04	16749								UP		DN	DN											DN	DN	DN			
0818_06	16750					UP					DN	DN				DN												
0818_06	16747										DN	DN	DN			DN		UP					DN		DN			DN
0818_09	16753												DN															
0818_11	16772		DN										DN															
Kings Cree)	16778																											
Cedar Creek	17842																			UP								

Cedar Creek		NH3			NO3			TKN			OP			TP		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0818_01	16748	DN	DN								DN			DN		
0818_04	16749	DN	DN						DN		DN	DN		DN	DN	
0818_06	16750	DN	DN				UP	DN	DN							
0818_06	16747	DN					UP	DN	DN			DN				
0818_09	16753	DN	DN	DN	UP	UP	UP	DN	DN							
0818_11	16772				UP		UP									
Kings Creek	16778			DN	DN			DN		DN						
Cedar Creek	17842	DN							DN							

Trends Key

A-All Months

S-Summer/Growing Season (May-October)

W-Winter/Dormant Sesaon (November-April)

UP Increasing Trends

DN Decreasing Trends

There were 68 significant trends identified for this segment as summarized in Table CC-5. For additional detail on trend methods, see the Data Review Methodology section.

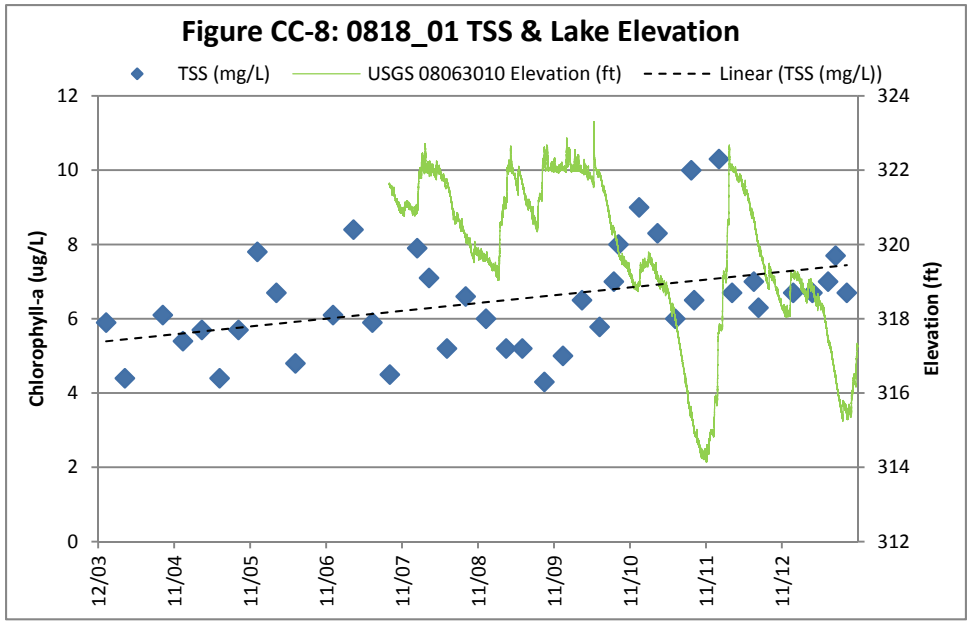


Figure CC-8: 0818_01 TSS & Lake Elevation

Trends (Classified Segments):
See Table CC-6 for details of the significant trends analysis summary presented in Table CC-5. Many of the identified trends are decreasing which is generally desirable. However, there are increasing trends for TSS and nitrate with R^2 values less than 0.32. In addition, the trends for station 16748 occur across all time periods. This site is at the confluence of two large coves and the main body of the lake. As shown in Figure CC-8, it appears that the increasing trend is very much related to lake elevation.

The increasing nitrate trends for station 16753 and 16772 have R^2 values between 0.16 and 0.58. Nitrate appears to increase as the lake level trend decreases (Figure CC-9), indicating that nutrients are concentrating with evaporation. A majority of the nitrate data are well below the screening level; however, the apparent trend may also be compounded with high values being reported when the lake refills during rain events.

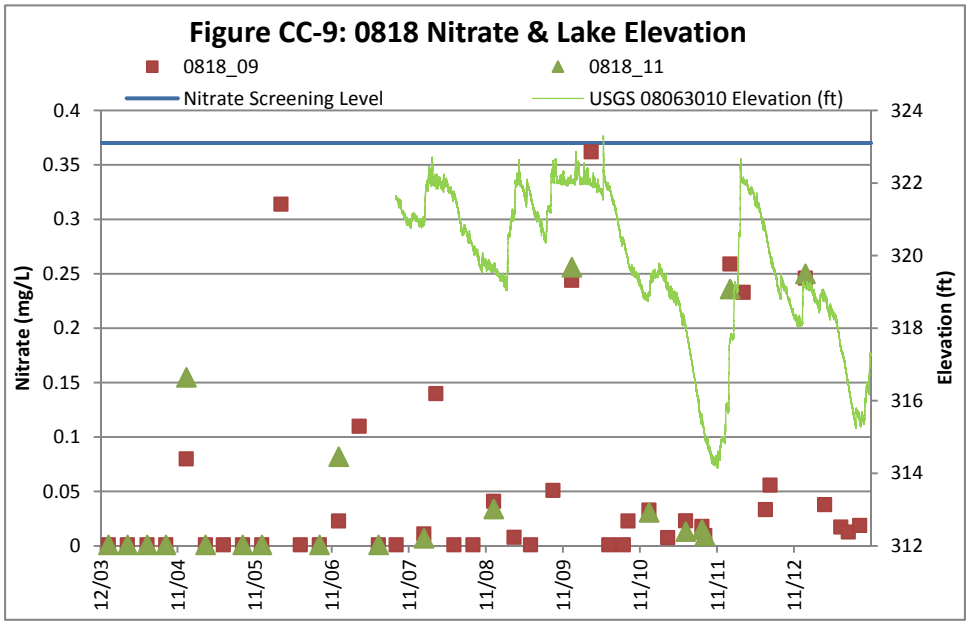


Figure CC-9: 0818 Nitrate & Lake Elevation

Table CC-6: 0818 Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0818_01	16748	Secchi Depth	POR	0.19	-0.02	0.01	0.01	-2.70	0.37	0.50	33	0.89	1.22	0.91	0.91	0.81	0.61	0.10	1/8/04	10/8/13
0818_01	16748	Secchi Depth	Winter	0.24	-0.02	0.03	0.01	-2.34	0.88	0.79	19	0.90	1.22	0.97	0.91	0.76	0.66	0.21	1/8/04	4/25/13
0818_01	16748	Sp Cond	POR	0.13	-3.26	0.01	1.20	-2.71	0.68	-0.89	51	216.85	270.00	235.00	217.00	197.00	173.00	38.00	1/8/04	10/8/13
0818_01	16748	Sp Cond	Summer	0.18	-3.97	0.02	1.60	-2.49	-0.20	-0.64	31	219.52	270.00	237.00	221.50	197.00	173.00	40.00	10/6/04	10/8/13
0818_01	16748	DO	Summer	0.10	0.20	0.08	0.11	1.84	-0.67	-0.72	31	8.22	11.37	9.80	8.30	7.10	4.40	2.70	10/6/04	10/8/13
0818_01	16748	TSS	POR	0.18	0.21	0.01	0.07	2.97	1.94	0.77	41	6.50	10.30	7.00	6.50	5.70	4.30	1.30	1/8/04	10/8/13
0818_01	16748	TSS	Summer	0.32	0.28	0.01	0.09	3.02	1.70	1.61	21	6.22	10.00	7.00	6.10	5.20	4.30	1.80	10/6/04	10/8/13
0818_01	16748	TSS	Winter	0.18	0.21	0.06	0.11	1.99	1.18	0.25	20	6.79	10.30	7.85	6.70	5.80	4.40	2.05	1/8/04	4/25/13
0818_01	16748	NH3	POR	0.29	0.00	0.00	0.00	-3.93	1.68	0.19	39	0.03	0.10	0.04	0.04	0.00	0.00	0.04	1/8/04	10/8/13
0818_01	16748	NH3	Summer	0.48	-0.01	0.00	0.00	-4.19	0.37	-1.54	21	0.03	0.06	0.04	0.03	0.00	0.00	0.04	10/6/04	10/8/13
0818_01	16748	TP	POR	0.11	-0.04	0.03	0.02	-2.24	-0.32	1.32	42	0.07	0.15	0.08	0.06	0.05	0.02	0.03	1/8/04	10/8/13
0818_01	16748	OP	POR	0.12	-0.17	0.04	0.08	-2.17	-0.38	-1.84	38	0.01	0.08	0.02	0.01	0.00	0.00	0.02	1/8/04	10/8/13
0818_01	16748	TDS	Summer	0.16	-2.97	0.02	1.20	-2.47	0.20	-1.00	33	135.19	171.60	149.50	135.00	118.00	97.00	31.50	10/6/04	10/8/13
0818_04	16749	Sp Cond	POR	0.11	-3.01	0.02	1.20	-2.51	0.84	-0.82	52	216.23	271.00	234.00	213.50	198.83	173.00	35.17	1/8/04	10/8/13
0818_04	16749	Sp Cond	Summer	0.13	-3.31	0.04	1.57	-2.12	0.02	-0.68	32	219.34	271.00	238.50	220.00	202.67	173.00	35.83	7/9/04	10/8/13
0818_04	16749	DO	Summer	0.10	0.18	0.08	0.10	1.83	-1.19	-0.83	32	7.99	10.60	9.17	8.48	6.85	4.90	2.32	7/9/04	10/8/13
0818_04	16749	NH3	POR	0.50	-0.32	0.00	0.05	-6.16	-0.55	-2.23	40	0.03	0.16	0.05	0.03	0.00	0.00	0.04	1/8/04	10/8/13
0818_04	16749	NH3	Summer	0.65	-0.39	0.00	0.06	-6.15	0.51	-1.60	22	0.03	0.16	0.04	0.01	0.00	0.00	0.04	7/9/04	10/8/13
0818_04	16749	TKN	Summer	0.29	-0.05	0.01	0.02	-2.91	-1.57	2.04	23	0.84	1.29	1.03	0.80	0.73	0.10	0.30	7/9/04	10/8/13
0818_04	16749	TP	POR	0.12	-0.04	0.02	0.01	-2.39	1.78	0.66	43	0.07	0.15	0.08	0.07	0.06	0.04	0.03	1/8/04	10/8/13
0818_04	16749	TP	Summer	0.15	-0.04	0.06	0.02	-1.96	0.77	0.40	23	0.07	0.15	0.09	0.07	0.05	0.04	0.04	7/9/04	10/8/13
0818_04	16749	OP	POR	0.25	-0.24	0.00	0.07	-3.47	-0.47	-2.14	39	0.01	0.05	0.02	0.01	0.00	0.00	0.02	1/8/04	10/8/13
0818_04	16749	OP	Summer	0.59	-0.36	0.00	0.07	-5.05	1.18	-1.31	20	0.01	0.04	0.01	0.00	0.00	0.00	0.01	10/6/04	10/8/13
0818_04	16749	TDS	POR	0.22	-2.89	0.00	0.75	-3.83	0.43	-0.61	54	130.66	173.55	143.00	130.50	115.70	97.00	27.30	1/8/04	10/8/13
0818_04	16749	TDS	Summer	0.20	-2.97	0.01	1.06	-2.81	0.32	-0.85	34	132.88	173.55	147.00	136.08	115.05	101.00	31.95	7/9/04	10/8/13
0818_04	16749	TDS	Winter	0.36	-3.05	0.00	0.95	-3.20	-0.54	-0.07	20	126.89	155.00	137.00	129.00	120.00	97.00	17.00	1/8/04	4/25/13
0818_06	16747	Sp Cond	POR	0.11	-2.94	0.00	0.86	-3.44	0.61	-1.14	95	216.83	275.00	239.00	217.67	198.00	169.00	41.00	12/4/03	11/6/13
0818_06	16747	Sp Cond	Summer	0.10	-2.51	0.02	1.08	-2.33	0.40	-0.48	50	219.09	275.00	238.00	221.00	200.67	172.00	37.33	5/6/04	10/8/13
0818_06	16747	Sp Cond	Winter	0.13	-3.46	0.02	1.39	-2.49	0.65	-0.97	45	214.33	274.00	239.00	213.00	191.00	169.00	48.00	12/4/03	11/6/13
0818_06	16747	TSS	Summer	0.23	0.44	0.03	0.18	2.40	1.45	0.11	21	8.24	13.50	8.80	8.10	6.90	4.80	1.90	10/6/04	10/8/13
0818_06	16747	NH3	POR	0.31	-0.26	0.00	0.06	-4.16	-1.26	-1.88	40	0.04	0.14	0.06	0.04	0.00	0.00	0.06	1/8/04	10/8/13
0818_06	16747	NO3	Winter	0.19	0.01	0.05	0.01	2.07	1.25	-0.41	20	0.11	0.30	0.17	0.09	0.02	0.00	0.15	1/8/04	4/25/13
0818_06	16747	TKN	POR	0.25	-0.05	0.00	0.01	-3.60	-2.00	1.05	42	0.81	1.35	0.98	0.83	0.69	0.10	0.29	1/8/04	10/8/13
0818_06	16747	TKN	Summer	0.43	-0.08	0.00	0.02	-3.97	-1.80	0.32	23	0.83	1.35	1.12	0.86	0.70	0.10	0.42	7/9/04	10/8/13
0818_06	16747	OP	Summer	0.29	0.00	0.01	0.00	-2.78	0.17	-1.01	21	0.02	0.04	0.03	0.02	0.00	0.00	0.02	10/6/04	10/8/13
0818_06	16747	SO4	Winter	0.18	-0.57	0.07	0.29	-1.93	0.51	-1.26	19	22.93	29.40	27.00	22.70	19.50	16.90	7.50	1/8/04	4/25/13
0818_06	16747	TDS	POR	0.10	-1.88	0.00	0.57	-3.29	0.87	-1.55	97	137.44	178.10	151.02	136.00	124.15	105.00	26.87	12/4/03	11/6/13
0818_06	16747	TDS	Winter	0.14	-2.36	0.01	0.90	-2.62	0.51	-1.36	45	136.97	178.10	154.00	136.00	122.20	105.00	31.80	12/4/03	11/6/13
0818_06	16747	Chlorophyll-a	Winter	0.20	-1.34	0.05	0.63	-2.12	1.86	1.26	20	19.14	40.90	22.50	17.35	14.30	4.70	8.20	1/8/04	4/25/13
0818_06	16750	Water Temp	Summer	0.10	0.29	0.08	0.16	1.82	-1.33	-0.90	31	28.30	32.30	30.40	28.80	26.60	23.37	3.80	7/9/04	8/15/13
0818_06	16750	Sp Cond	POR	0.12	-3.20	0.01	1.25	-2.55	0.85	-0.85	52	214.21	271.00	232.50	212.83	190.17	170.00	42.33	1/8/04	8/15/13
0818_06	16750	Sp Cond	Summer	0.13	-3.65	0.05	1.77	-2.06	-0.05	-0.89	31	217.76	271.00	240.00	221.00	191.33	170.00	48.67	7/9/04	8/15/13
0818_06	16750	NH3	POR	0.25	0.00	0.00	0.00	-3.49	1.36	-0.46	39	0.03	0.09	0.04	0.03	0.00	0.00	0.04	1/8/04	8/15/13
0818_06	16750	NH3	Summer	0.34	0.00	0.01	0.00	-3.13	0.94	-1.32	21	0.02	0.06	0.04	0.00	0.00	0.00	0.04	7/9/04	8/15/13
0818_06	16750	NO3	Winter	0.25	0.01	0.03	0.01	2.43	1.98	0.35	20	0.08	0.30	0.13	0.06	0.00	0.00	0.13	1/8/04	4/25/13
0818_06	16750	TKN	POR	0.19	-0.05	0.00	0.02	-3.05	0.92	2.87	41	0.93	1.91	1.11	0.92	0.73	0.10	0.38	1/8/04	8/15/13
0818_06	16750	TKN	Summer	0.36	-0.07	0.00	0.02	-3.38	0.95	1.46	22	1.02	1.91	1.20	1.03	0.80	0.36	0.40	7/9/04	8/15/13
0818_06	16750	Chlorophyll-a	Winter	0.16	-1.12	0.08	0.60	-1.86	0.86	0.26	20	21.00	40.90	27.70	19.55	14.70	7.60	13.00	1/8/04	4/25/13
0818_09	16753	Sp Cond	Winter	0.18	-4.47	0.06	2.26	-1.98	0.92	0.29	20	198.67	266.00	213.00	197.50	175.67	143.00	37.33	1/8/04	4/25/13
0818_09	16753	NH3	POR	0.27	0.00	0.00	0.00	-3.72	1.96	0.87	40	0.03	0.12	0.05	0.04	0.00	0.00	0.05	1/8/04	10/8/13
0818_09	16753	NH3	Summer	0.36	0.00	0.00	0.00	-3.36	0.57	-1.61	22	0.02	0.06	0.05	0.02	0.00	0.00	0.05	7/9/04	10/8/13
0818_09	16753	NH3	Winter	0.17	0.00	0.08	0.00	-1.84	1.05	0.45	18	0.04	0.12	0.06	0.05	0.00	0.00	0.05	1/8/04	4/25/13

Table CC-6 Continued: 0818 Trend Analysis Result Detail

0818_09	16753	NO3	POR	0.25	0.36	0.00	0.10	3.66	0.47	-1.89	43	0.06	0.36	0.05	0.01	0.00	0.00	0.05	1/8/04	10/8/13
0818_09	16753	NO3	Summer	0.58	0.42	0.00	0.08	5.42	0.87	-1.70	23	0.01	0.06	0.02	0.00	0.00	0.00	0.02	7/9/04	10/8/13
0818_09	16753	NO3	Winter	0.16	0.02	0.08	0.01	1.84	1.56	-0.72	20	0.11	0.36	0.24	0.04	0.01	0.00	0.23	1/8/04	4/25/13
0818_09	16753	TKN	POR	0.20	-0.06	0.00	0.02	-3.19	-1.01	1.44	42	1.03	2.00	1.27	0.99	0.83	0.10	0.45	1/8/04	10/8/13
0818_09	16753	TKN	Summer	0.36	-0.09	0.00	0.03	-3.47	-1.17	0.59	23	1.10	2.00	1.40	1.18	0.83	0.10	0.58	7/9/04	10/8/13
0818_11	16772	Secchi Depth	Summer	0.22	-0.01	0.09	0.01	-1.84	-0.94	-0.20	14	0.35	0.46	0.43	0.37	0.30	0.15	0.13	7/9/04	10/8/13
0818_11	16772	Sp Cond	Winter	0.21	-4.33	0.04	2.01	-2.16	0.77	0.03	20	197.56	260.00	212.17	195.50	175.75	147.00	36.42	1/8/04	4/25/13
0818_11	16772	NO3	POR	0.44	0.48	0.00	0.13	3.78	0.72	-1.35	20	0.05	0.26	0.06	0.01	0.00	0.00	0.06	1/8/04	1/23/13
0818_11	16772	NO3	Winter	0.44	0.02	0.02	0.01	2.79	1.17	-0.85	12	0.09	0.26	0.20	0.03	0.00	0.00	0.19	1/8/04	1/23/13

Trends (Unclassified Segments):

See Table CC-7 for details of the significant trends analysis summary presented in Table CC-5. Although the increasing trend for VSS in Cedar Creek (station 17842) has an R^2 of 0.16, the slope is relatively high and the trend is for the entire period of record (Figure CC-10). The cause of the increasing trend may be due to the timing of the samples. There is a fairly strong correlation between the VSS concentration and the month of the year (correlation coefficient=0.4) with values increasing later in the year (Figure CC-11); potentially due to dropped foliage in the fall and winter being washed into streams during rainfall events.

Figure CC-10: Cedar Creek VSS & Rainfall

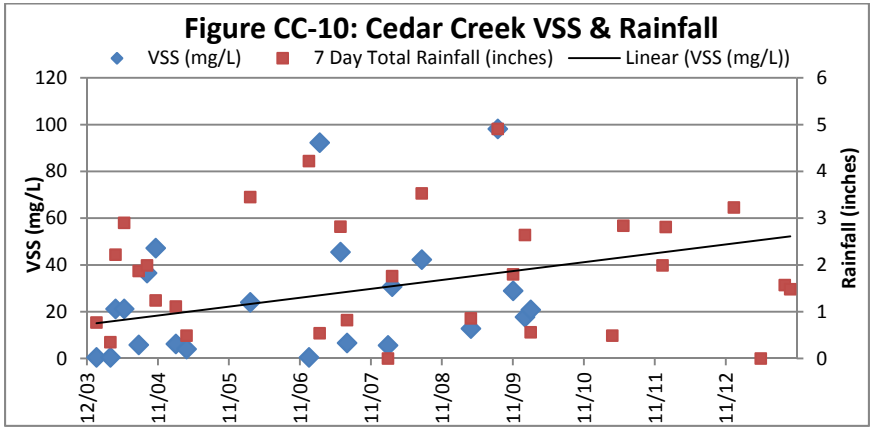


Figure CC-11: Cedar Creek VSS vs. Month

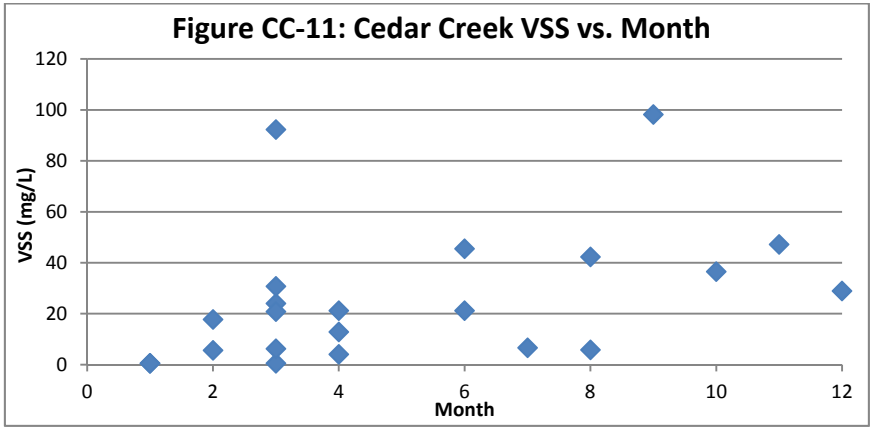
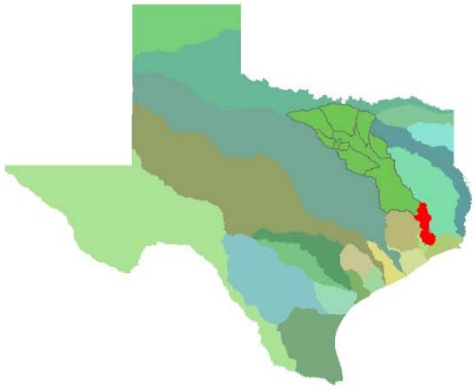


Table CC-7: 0818 Unclassified Tributaries Trend Analysis Result Detail

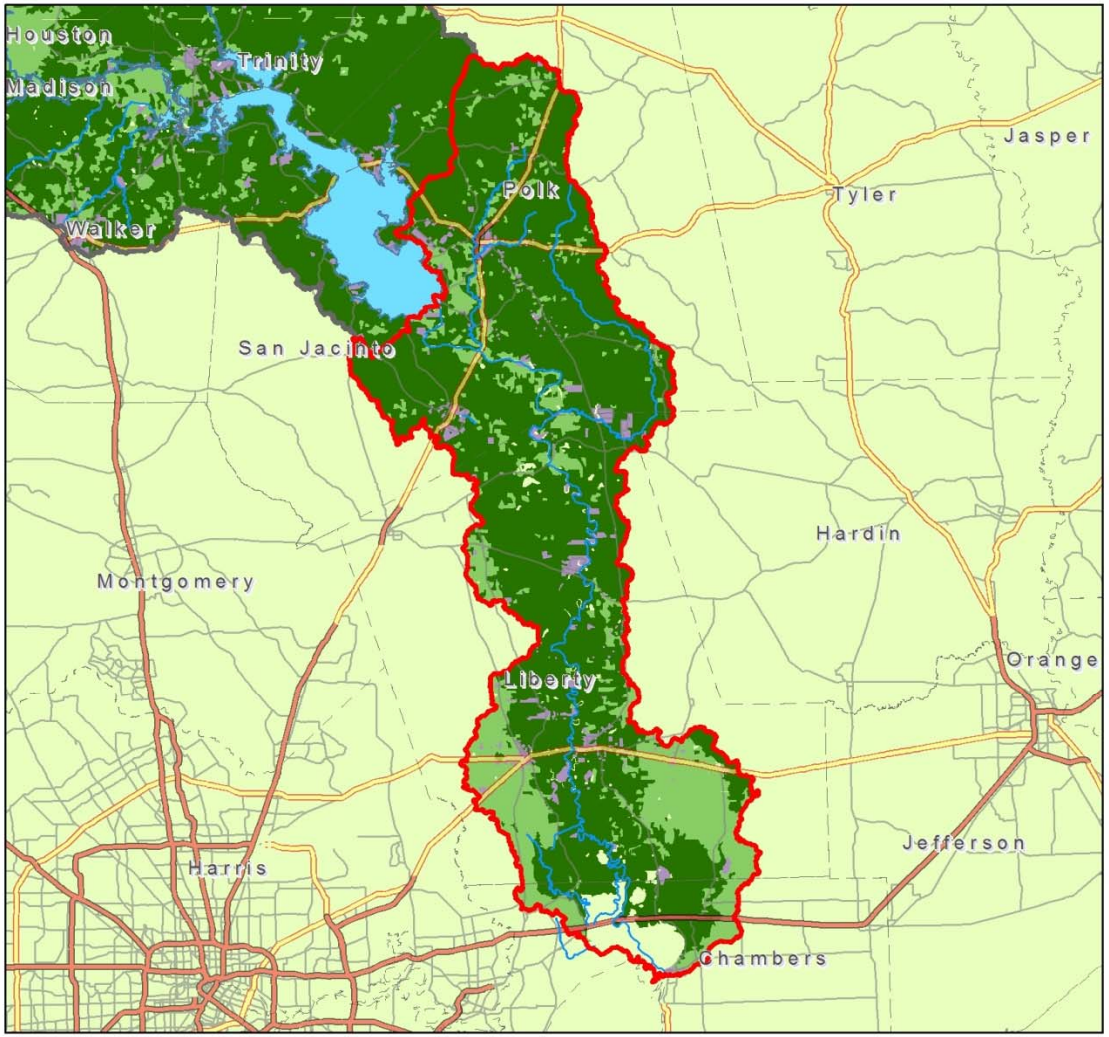
Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
Kings Creek	16778	NH3	Winter	0.21	-0.14	0.08	0.07	-1.90	0.64	0.09	16	0.15	0.50	0.16	0.11	0.07	0.03	0.09	1/19/04	4/26/11
Kings Creek	16778	NO3	POR	0.15	-0.19	0.05	0.09	-2.07	-0.66	-0.35	27	1.97	8.90	2.33	1.02	0.35	0.07	1.98	1/19/04	6/22/11
Kings Creek	16778	TKN	POR	0.34	-0.10	0.00	0.03	-3.51	1.32	-0.24	26	1.92	4.33	2.51	1.69	1.30	0.91	1.21	1/19/04	4/26/11
Kings Creek	16778	TKN	Winter	0.34	-0.19	0.02	0.07	-2.69	1.46	0.72	16	2.05	4.16	2.66	1.79	1.35	0.91	1.31	1/19/04	4/26/11
Cedar Creek	17842	VSS	POR	0.16	0.29	0.07	0.15	1.94	-1.92	0.32	22	25.86	98.20	36.50	21.00	5.80	0.50	30.70	1/19/04	3/2/10
Cedar Creek	17842	NH3	POR	0.23	-0.21	0.01	0.07	-2.83	-1.87	-0.56	29	0.06	0.21	0.08	0.04	0.02	0.00	0.06	1/19/04	10/28/13
Cedar Creek	17842	TKN	Summer	0.53	-0.21	0.02	0.07	-3.02	-0.01	-0.71	10	1.82	3.39	2.66	1.68	1.00	0.10	1.66	6/9/04	10/28/13

Lower Trinity River



Land Use Type

- Rangeland
- Urban, Industrial and Residential
- Crop, Pasture and other Agriculture
- Forest



LOWER TRINITY RIVER

Classified Segments Used in this Report – 2
Unclassified Segments & Tributaries Used in this Report – 9

0802 – Trinity River Below Lake Livingston
0802A – Choate's Creek
0802B – Long King Creek
0802C – Unnamed Tributary of Coley Creek
0802D – Menard Creek
Big Creek – An unclassified tributary
0801 – Trinity River Tidal
0801A – Lost River
0801B – Old River
0801C – Cotton Bayou
0801D – Coastal Water Authority Canal/Lynchburg Canal

Sites Used for Analysis:

2008 Integrated Report	6
2010 Integrated Report	20
2012 Integrated Report	21
Draft 2014 Integrated Report	18
5-Year Analysis	14
Valid Trends	10

Table LT-1: Lower Trinity River Count of Dischargers by Type and County

County	Cooling Water	Domestic Sewage <1mgd	Mining	Stormwater	Wastewater >1mgd	CAFO	Total Dischargers
CHAMBERS		4			1		5
LIBERTY		4			3		7
POLK		11			2		13
SAN JACINTO		2					2
Total		21			6		27

The Lower Trinity River subwatershed extends 119 river miles from the Lake Livingston Dam in San Jacinto and Polk counties to the mouth of the river in Chambers County. The subwatershed is largely rural and major population centers include the cities of Livingston and Liberty. The City of Houston, which lies outside of the basin, pulls water from the river in this area. This subwatershed receives between 46 and 54 inches of rain annually.

There is one Brownfield and one Superfund site in this subwatershed. The Superfund designation is due to polycyclic aromatic hydrocarbons (PAHs) and lead in the soil and ground water. Three hazmat events required action by the EPA OSC office; however, one of these events occurred outside of the period of record for this report. There is one site being monitored for compliance with the EPA Resource Conservation and Recovery Act. Noncompliance events are reported on the Enforcement and Compliance History Online website. See Tables LT-2 to LT-5, for details and links to additional information.

Table LT-2: EPA Brownfields

Segment	Site	Link to Additional EPA Information	Map Site	Assessment Complete Date	Cleanup Required	Cleanup Status	Redevelopment Status	Media Affected	Classes of Contaminants Found	Media Addressed	Classes of Contaminants Cleaned Up
0801	TURTLE BAYOU SITE	EPA Link	Map It	7/31/2011	Yes	Not Started	Not Started	None	Petroleum Products, Lead, PAHS, VOCs, SVOCs, Other Metals, Other Contaminants	None	

Table LT-3: EPA Superfund Sites

Segment	Site	Link to Additional EPA Information	Map Site	1st Cleanup Action Initiated	Proposed to National Priority List (NPL)	Listed as Final on the NPL	Final Remedy Selected	Construction Complete	Deleted From NPL	Media Affected	Contaminant
0801	PETRO-CHEMICAL SYSTEMS, INC.	EPA Link	Map It	05/12/1986	10/15/1984	06/10/1986	09/22/2006	09/30/2010		Soil, Ground Water	PAHs, Lead

Table LT-4: EPA On- Scene Coordinator Investigations

Segment	Site	Link to Additional EPA Information	Map Site	Date	Contaminants Found
0802B	GOODRICH MERCURY	EPA Link	Map It	11/1/2007	Mercury
0802B	ARGENT ENERGY - GRANDBURY 103 TB OIL SPILL	EPA Link	Map It	5/16/2014	Crude Oil, Salt Water
0801	AMERICAN COASTAL OIL SPILL	EPA Link	Map It	4/6/2004	Crude Oil

Table LT-5: EPA Resource Conservation and Recovery Act (RCRA) and Enforcement and Compliance History Online (ECHO) Sites

Segment	Site	Link to Additional EPA RCRA Information	Link to Additional EPA ECHO Information	Map Site	Site Assessed	Solution for Cleanup Selected	Cleanup Implemented	Cleanup Complete	Media Affected	Contaminant
0802A	WALKER WOOD PRESERVING INCORPORATED	EPA Link	EPA Link	Map It	6/24/1988					

Segment 0802 – Trinity River Below Lake Livingston

Overview

This 85 mile segment runs from a point 1.9 miles downstream of US 90 in Liberty County to the Livingston Dam on the border of Polk and San Jacinto counties. It begins in the Piney Woods and ends in the Coastal Prairie and Marsh ecoregion. The vast majority of the land use is classified as forest.

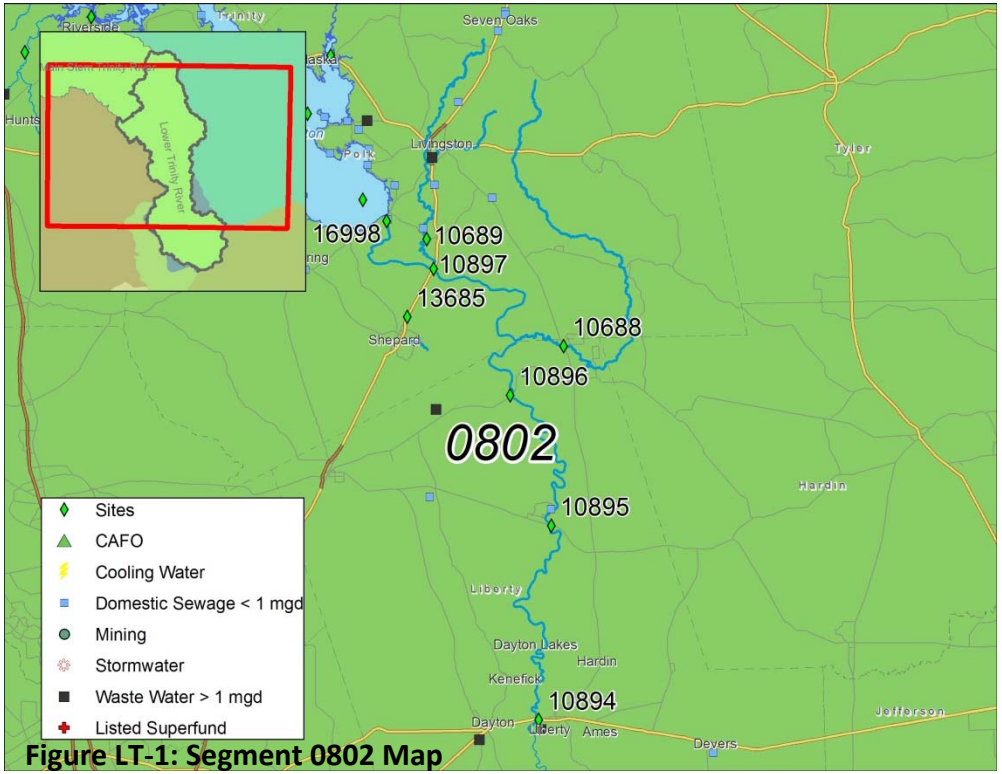


Figure LT-1: Segment 0802 Map

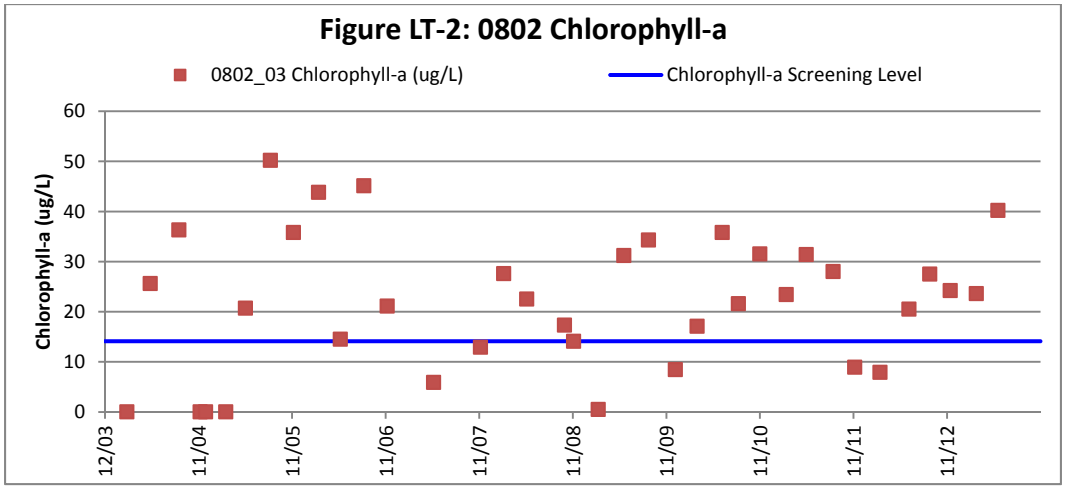
Assessments (Classified Segments):

Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0802_01 - Lower 17 miles of segment	Fully Supporting	Fully Supporting
0802_02 - Approx. 9 miles upstream to approx. 15 miles downstream of SH 105	Not Assessed (No Data)	Not Assessed (Inadequate Data)
0802_03 - 11 miles upstream to approx. 9 miles downstream of FM 787	Fully Supporting	Fully Supporting
0802_04 - 5 miles upstream to 11 miles downstream of US 59	Fully Supporting	Fully Supporting
0802_05 - Upper 6 miles of segment	Fully Supporting	Fully Supporting

General Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0802_01	Concern	Concern
0802_02	Concern	Not Assessed (Inadequate Data)
0802_03	Concern	Concern
0802_04	Concern	Concern
0802_05	Concern	Concern

0802_01, 0802_03, 0802_04, and 0805_05 were found to have concerns for chlorophyll-a by both the TCEQ Draft 2014 Integrated Report and the in-house 5 year assessment. 0802_02 was found to have concerns for high pH by the Integrated Report. However, this finding was carried forward from previous Integrated Reports as there is no current data. Chlorophyll-a in this segment is consistently high as shown for 0802_XX in Figure LT-2. However, this is to be expected as it is fed by releases from Lake Livingston which has been classified as being hypereutrophic and also has concerns for chlorophyll-a. In addition, as in Lake Livingston, chlorophyll-a levels in segment 0802 are not correlated to nutrients.

Figure LT-2: 0802 Chlorophyll-a



Contact Recreation Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0802_01	Fully Supporting	Fully Supporting
0802_02	Not Assessed (No Data)	Not Assessed (No Data)
0802_03	Fully Supporting	Fully Supporting
0802_04	No Concern	Fully Supporting
0802_05	Fully Supporting	Fully Supporting

Public Water Supply Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0802_01	Fully Supporting	Fully Supporting
0802_02	Fully Supporting	No Concern
0802_03	Fully Supporting	Fully Supporting
0802_04	Fully Supporting	Fully Supporting
0802_05	Fully Supporting	Fully Supporting

Fish Consumption Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0802_01	Fully Supporting	Not Assessed (No Data)
0802_02	Fully Supporting	Not Assessed (No Data)
0802_03	Fully Supporting	Not Assessed (No Data)
0802_04	Fully Supporting	Not Assessed (No Data)
0802_05	Fully Supporting	Not Assessed (No Data)

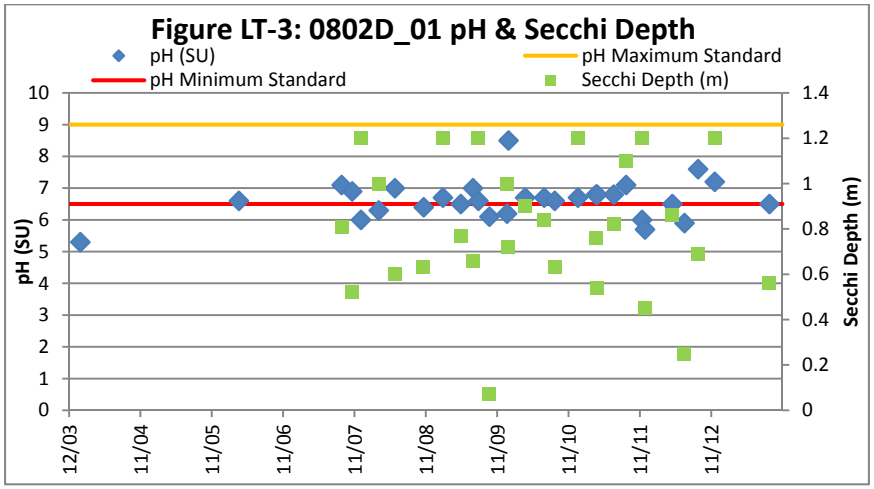
Assessments (Unclassified Segments):

Aquatic Life Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0802B_02 - From just upstream of the confluence with unnamed tributary (NHD RC 12030202001817) up to the confluence with Mud Creek, in Polk County	No Concern	No Concern
0802D_01 - Entire water body	Not Assessed (No Data)	Fully Supporting
Big Cree) - Entire water body	Not Assessed (No Data)	No Concern

General Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0802B_02	No Concern	Fully Supporting
0802D_01	No Concern	Not Supporting
Big Creek	Not Assessed (No Data)	Fully Supporting

0802D was found to be not supporting due to low pH by the in-house 5 year assessment. As discussed in the 2010 TRA CRP Basin Summary Report, this assessment unit drains an area of pine forest and appears to be tannin stained. The high levels of humic acid in runoff that create the staining result in low pH in the water bodies into which the runoff flows. As shown in Figure LT-3, the stream clarity is generally very high which indicates that algal populations are not likely to be

causing the low pH values seen in this stream. pH levels in this assessment unit appear to be very stable and due to natural causes. It is possible that the standards applied to this stream are not appropriate.

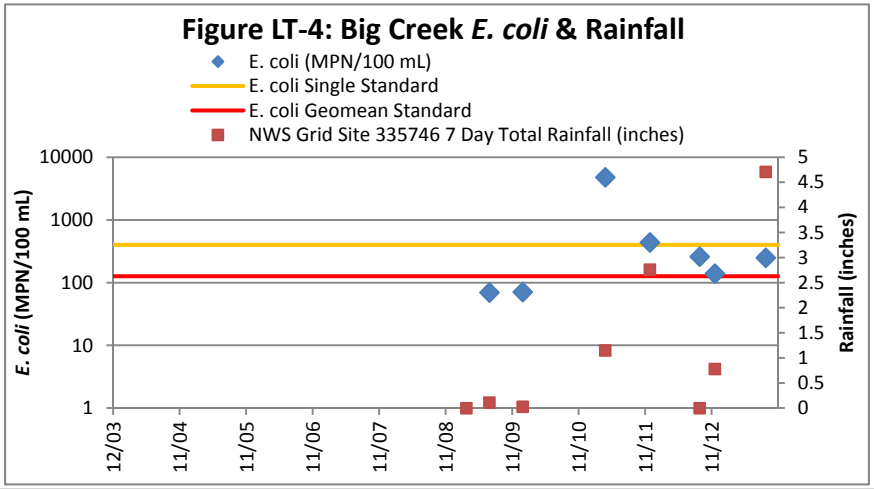


Contact Recreation Use:
0802B_02
0802D_01
Big Creek

TCEQ Draft 2014 Integrated Report
No Concern
Fully Supporting
Not Assessed (No Data)

In-House 5 Year Assessment
No Concern
Fully Supporting
Not Supporting

Big Creek was found to be not supporting due to elevated levels of *E. coli* by the in-house 5 year assessment. *E. coli* levels are not correlated to rainfall as would normally be expected (Figure LT-4). However, the data set is limited making it difficult to draw meaningful conclusions. The area upstream of the sample location is heavily wooded with some rural communities. It is recommended that additional sampling be conducted in order to determine the nature and extent of the impairment.



Public Water Supply Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0802B_02	Not Assessed (No Data)	No Concern
0802D_01	Not Assessed (No Data)	Fully Supporting
Big Cree)	Not Assessed (No Data)	No Concern

Fish Consumption Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0802B_02	Not Assessed (No Data)	Not Assessed (No Data)
0802D_01	Not Assessed (No Data)	Not Assessed (No Data)
Big Creek	Not Assessed (No Data)	Not Assessed (No Data)

Trend Analysis Overview

Table LT-6: Trend Analysis Result Summary

Trinity Below Livingston		Days Since Precip			Water Temp			DO			pH			*E. coli*			Chlorophyll-a			Lab Turb			VSS			TDS		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0802_01	10894	UP		UP							UP		UP															
0802_03	10896	UP		UP					UP		UP	UP													UP			
0802_04	10897				UP										UP		UP											
0802_05	16998												UP						UP							DN	DN	DN
0802D_01	10688	DN																				DN						UP

Trinity Below Livingston		Chloride			SO4			NH3			NO3			TKN			OP			TP			D. Zn		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0802_01	10894	UP	UP		UP		UP				DN	DN					DN	DN	DN	DN	DN	DN			
0802_03	10896											DN					DN	DN	DN	DN	DN	DN			
0802_04	10897		UP			UP				DN										DN			DN		
0802_05	16998														DN			DN	DN		DN	DN			
0802D_01	10688											DN													

Trends Key

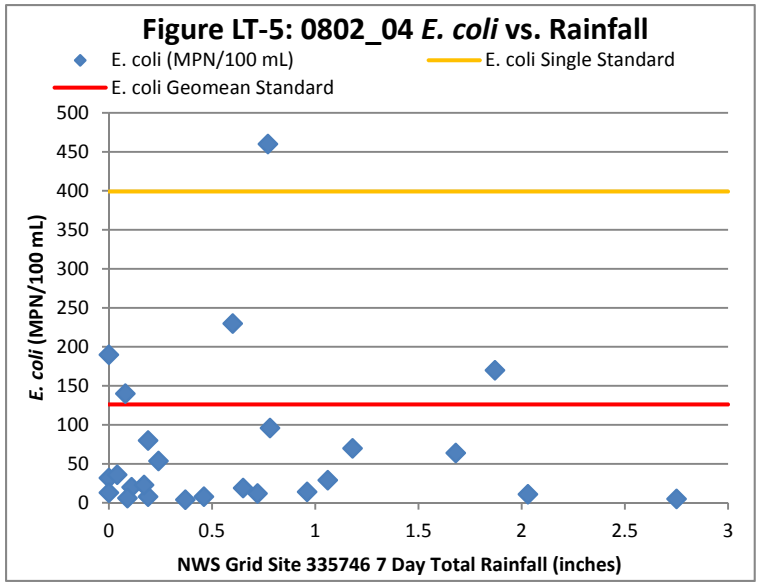
A-All Months

S-Summer/Grow ing Season (May-October)

W-Winter/Dormant Sesaon (November-April)

UP Increasing Trends

DN Decreasing Trends



There were 51 significant trends identified for this segment as summarized in Table LT-6. For additional detail on trend methods, see the Data Review Methodology section.

Trends (Classified Segments):
See Table LT-7 for details of the significant trends analysis summary presented in Table LT-6. Increasing trends for chloride and sulfate in 0802_01 and 0802_04 have R^2 values less than 0.26. These trends do not present a concern at this time as maximum values are well below the standards of 125 mg/L for chloride and 100 mg/L for sulfate.

There is an increasing summer trend for *E. coli* in 0802_04. Based on the assessments, this trend does not present a concern at this time. Additionally, as shown in Figure LT-5, *E. coli* in this assessment unit are generally well below the standards except during rainfall events.

As discussed in the General Use section of Assessments (Classified Segments), chlorophyll-a has been found to be a concern throughout the segment and is likely related to algal populations coming out of Lake Livingston. There are increasing trends for chlorophyll-a in 0802_04 and 0804_05, as well as, increasing trends for pH in 0802_01, 0802_03, 0802_04, and 0802_05. However, the maximum pH values are at or very near the maximum pH standard of 9 SU as shown by 0802_04 in Figure LT-6. Chlorophyll-a and pH are very well correlated as shown in Table LT-8. These trends do present concerns that pH impairments may be found in the next 5 to 10 years.

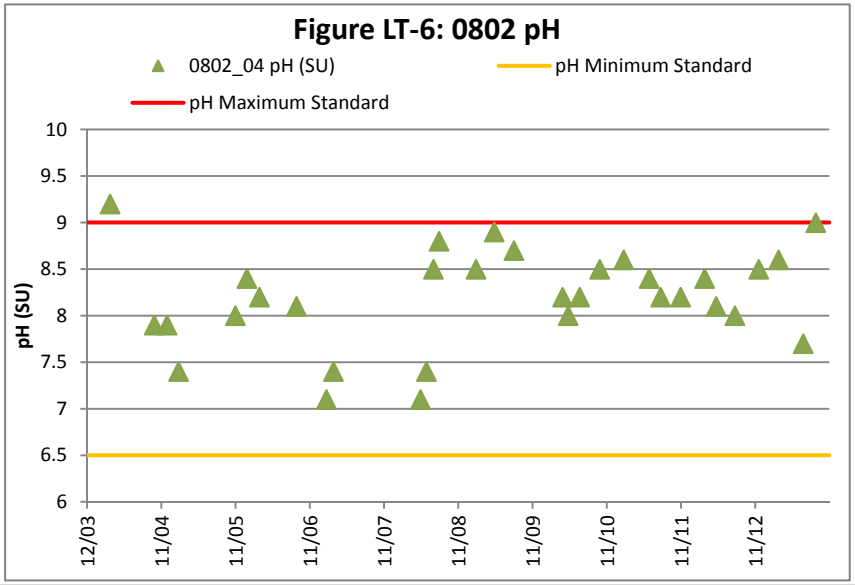


Table LT-8: 0802 Chlorophyll-a & pH Correlations

Assessment Unit	Correlation Coefficient
0802_01	0.635755
0802_03	0.544898
0802_04	0.519573
0802_05	0.519253

Table LT-7: 0802 Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0802_01	10894	pH	POR	0.13	0.05	0.02	0.02	2.36	-0.16	0.55	40	8.05	9.00	8.40	8.00	7.80	6.90	0.60	2/25/04	9/24/13
0802_01	10894	pH	Winter	0.18	0.07	0.06	0.03	2.02	-0.48	1.02	21	8.06	9.00	8.40	8.00	7.80	6.90	0.60	2/25/04	3/25/13
0802_01	10894	NO3	POR	0.12	-0.35	0.04	0.16	-2.17	0.15	-2.41	37	0.20	0.90	0.28	0.01	0.00	0.00	0.28	2/25/04	6/17/13
0802_01	10894	NO3	Summer	0.38	-0.55	0.01	0.17	-3.14	1.77	-0.76	18	0.09	0.61	0.10	0.00	0.00	0.00	0.10	5/26/04	6/17/13
0802_01	10894	TP	POR	0.48	-0.01	0.00	0.00	-5.64	1.55	-0.56	36	0.14	0.25	0.18	0.13	0.10	0.06	0.08	2/25/04	6/17/13
0802_01	10894	TP	Summer	0.43	-0.01	0.00	0.00	-3.49	1.28	-0.55	18	0.15	0.24	0.18	0.13	0.10	0.10	0.08	5/26/04	6/17/13
0802_01	10894	TP	Winter	0.58	-0.01	0.00	0.00	-4.68	1.41	-0.06	18	0.13	0.25	0.16	0.12	0.08	0.06	0.08	2/25/04	3/25/13
0802_01	10894	OP	POR	0.40	-0.02	0.00	0.00	-4.18	1.12	-0.78	28	0.05	0.16	0.08	0.05	0.00	0.00	0.08	2/25/04	3/14/11
0802_01	10894	OP	Summer	0.34	-0.02	0.04	0.01	-2.40	0.35	-0.60	13	0.06	0.16	0.09	0.07	0.00	0.00	0.09	5/26/04	7/7/10
0802_01	10894	OP	Winter	0.51	-0.02	0.00	0.00	-3.64	1.33	-0.06	15	0.04	0.15	0.08	0.04	0.00	0.00	0.08	2/25/04	3/14/11
0802_01	10894	Chloride	POR	0.12	1.01	0.03	0.45	2.26	0.17	-1.08	39	32.59	49.00	39.00	32.00	25.00	17.00	14.00	2/25/04	6/17/13
0802_01	10894	Chloride	Summer	0.18	1.23	0.07	0.64	1.92	0.54	-0.70	19	32.26	49.00	40.00	31.00	24.00	20.00	16.00	5/26/04	6/17/13
0802_01	10894	SO4	POR	0.13	1.10	0.02	0.46	2.38	0.68	-0.94	39	39.79	56.00	46.00	40.00	33.00	24.00	13.00	2/25/04	6/17/13
0802_01	10894	SO4	Winter	0.14	1.06	0.10	0.61	1.74	0.95	-0.52	20	40.40	56.00	45.50	40.00	33.50	28.00	12.00	2/25/04	3/25/13
0802_01	10894	Days Since Precip	POR	0.15	0.37	0.02	0.15	2.52	-0.04	-2.07	38	4.03	8.00	7.00	4.00	1.00	0.00	6.00	2/25/04	9/24/13
0802_01	10894	Days Since Precip	Winter	0.19	0.45	0.06	0.22	2.01	0.27	-1.60	19	3.82	8.00	7.00	3.00	1.00	0.00	6.00	2/25/04	3/25/13
0802_03	10896	DO	Summer	0.21	0.14	0.05	0.06	2.15	-0.27	-1.07	19	8.76	10.30	9.60	8.90	7.90	7.30	1.70	5/26/04	9/24/13
0802_03	10896	pH	POR	0.19	0.05	0.01	0.02	2.98	0.10	-1.33	40	8.25	8.80	8.50	8.20	8.00	7.70	0.50	2/25/04	9/24/13
0802_03	10896	pH	Summer	0.37	0.06	0.01	0.02	3.14	0.34	-1.15	19	8.33	8.80	8.70	8.30	8.10	7.90	0.60	5/26/04	9/24/13
0802_03	10896	VSS	Winter	0.19	0.30	0.07	0.16	1.92	-1.52	0.64	18	4.36	8.00	5.00	5.00	4.00	0.50	1.00	2/25/04	3/25/13
0802_03	10896	NO3	Summer	0.17	-0.39	0.09	0.22	-1.79	0.87	-1.52	18	0.13	0.58	0.23	0.00	0.00	0.00	0.23	5/26/04	6/17/13
0802_03	10896	TP	POR	0.46	-0.01	0.00	0.00	-5.31	1.72	-0.05	35	0.13	0.25	0.16	0.12	0.08	0.04	0.08	2/25/04	6/17/13
0802_03	10896	TP	Summer	0.49	-0.01	0.00	0.00	-3.82	1.41	0.88	17	0.13	0.25	0.14	0.12	0.10	0.04	0.04	5/26/04	6/17/13
0802_03	10896	TP	Winter	0.44	-0.01	0.00	0.00	-3.52	1.16	-0.51	18	0.13	0.24	0.16	0.11	0.08	0.06	0.08	2/25/04	3/25/13
0802_03	10896	OP	POR	0.41	-0.02	0.00	0.00	-4.28	1.07	-0.33	28	0.06	0.18	0.10	0.06	0.00	0.00	0.09	2/25/04	3/14/11
0802_03	10896	OP	Summer	0.40	-0.02	0.02	0.01	-2.69	0.81	0.17	13	0.07	0.18	0.09	0.06	0.05	0.00	0.04	5/26/04	7/7/10
0802_03	10896	OP	Winter	0.48	-0.01	0.00	0.00	-3.44	0.63	-0.83	15	0.05	0.14	0.10	0.05	0.00	0.00	0.10	2/25/04	3/14/11
0802_03	10896	Days Since Precip	POR	0.10	0.32	0.05	0.15	2.05	0.09	-2.14	38	3.93	8.00	7.00	4.00	1.00	0.00	6.00	2/25/04	9/24/13
0802_03	10896	Days Since Precip	Winter	0.19	0.45	0.06	0.22	2.01	0.27	-1.60	19	3.82	8.00	7.00	3.00	1.00	0.00	6.00	2/25/04	3/25/13
0802_04	10897	Water Temp	POR	0.13	0.89	0.04	0.42	2.10	-0.66	-1.73	32	22.19	31.70	28.60	25.40	15.55	9.60	13.05	3/23/04	9/24/13
0802_04	10897	NH3	Winter	0.65	0.00	0.00	0.00	-4.52	1.71	0.75	13	0.02	0.06	0.03	0.00	0.00	0.00	0.03	3/23/04	3/25/13
0802_04	10897	TP	POR	0.11	-0.05	0.07	0.03	-1.85	0.13	-0.47	31	0.16	0.34	0.20	0.14	0.11	0.06	0.09	3/23/04	9/24/13
0802_04	10897	Chloride	Summer	0.26	1.99	0.09	1.05	1.89	0.00	-1.12	12	31.83	44.80	40.80	31.00	23.75	18.00	17.05	10/26/04	9/24/13
0802_04	10897	SO4	Summer	0.26	1.49	0.09	0.80	1.85	0.35	-0.62	12	42.76	54.00	47.95	40.50	37.70	31.00	10.25	10/26/04	9/24/13
0802_04	10897	D. Zn	POR	0.15	-0.57	0.09	0.32	-1.79	1.55	0.14	20	4.54	15.00	7.00	5.00	0.30	0.30	6.70	3/23/04	9/24/13
0802_04	10897	*E. coli*	Summer	0.24	0.27	0.06	0.13	2.03	-0.08	-0.96	15	62.17	230.00	96.00	32.00	8.00	4.00	88.00	10/26/04	9/24/13
0802_04	10897	Chlorophyll-a	POR	0.17	1.98	0.02	0.82	2.42	1.36	0.78	31	20.37	55.00	26.00	20.00	12.00	0.00	14.00	10/26/04	9/24/13
0802_05	16998	TDS	POR	0.20	-6.89	0.00	1.37	-5.05	-1.94	2.99	106	253.13	339.30	273.65	251.45	234.00	127.00	39.65	12/21/04	11/26/13
0802_05	16998	Chlorophyll-a	POR	0.15	1.14	0.00	0.27	4.18	1.87	0.89	104	15.54	38.00	20.00	14.38	11.00	0.00	9.00	7/8/04	11/26/13
0802_05	16998	pH	Winter	0.12	0.06	0.01	0.02	2.72	-1.70	2.45	54	8.08	9.00	8.30	8.10	7.80	6.80	0.50	11/10/04	11/26/13
0802_05	16998	TKN	Summer	0.15	-0.03	0.01	0.01	-2.73	1.22	-0.25	45	0.67	1.20	0.80	0.60	0.50	0.30	0.30	8/4/04	10/29/13
0802_05	16998	TP	Summer	0.10	-0.05	0.01	0.02	-2.55	-0.10	-0.47	58	0.17	0.44	0.22	0.16	0.11	0.06	0.11	7/8/04	10/29/13
0802_05	16998	TP	Winter	0.27	-0.01	0.00	0.00	-4.23	1.76	0.46	51	0.14	0.34	0.19	0.12	0.09	0.01	0.10	11/10/04	11/26/13
0802_05	16998	OP	Summer	0.22	-0.01	0.00	0.00	-3.70	1.47	-0.56	51	0.07	0.20	0.10	0.07	0.00	0.00	0.10	7/8/04	10/29/13
0802_05	16998	OP	Winter	0.46	-0.54	0.00	0.08	-6.38	-0.33	-2.88	50	0.04	0.15	0.07	0.04	0.00	0.00	0.07	11/10/04	11/26/13
0802_05	16998	TDS	Summer	0.28	-8.77	0.00	1.94	-4.53	-1.75	2.06	54	248.53	339.30	267.15	248.33	230.00	127.00	37.15	5/25/05	10/29/13
0802_05	16998	TDS	Winter	0.11	-4.86	0.01	1.92	-2.54	-0.66	2.16	52	257.92	334.10	278.43	252.93	236.00	129.00	42.43	12/21/04	11/26/13
0802_05	16998	Chlorophyll-a	Winter	0.22	1.45	0.00	0.39	3.72	0.87	-0.06	51	14.21	34.00	19.70	14.00	9.00	0.00	10.70	12/21/04	11/26/13

Trends (Unclassified Segments):
See Table LT-9 for details of the significant trends analysis summary presented in Table LT-6. The increasing winter trend in TDS appears to be related to a corresponding decreasing trend in stream flow (Figure LT-7). This may indicate that evaporation is concentrating the dissolved solids in the stream. Another possible cause for increasing TDS during periods of low stream flow is irrigation runoff. Irrigation leaves behind salts and other constituents as it evaporates off the land. These compounds can build up over time and be washed into nearby water bodies via rainfall events or over-watering which leads to runoff.

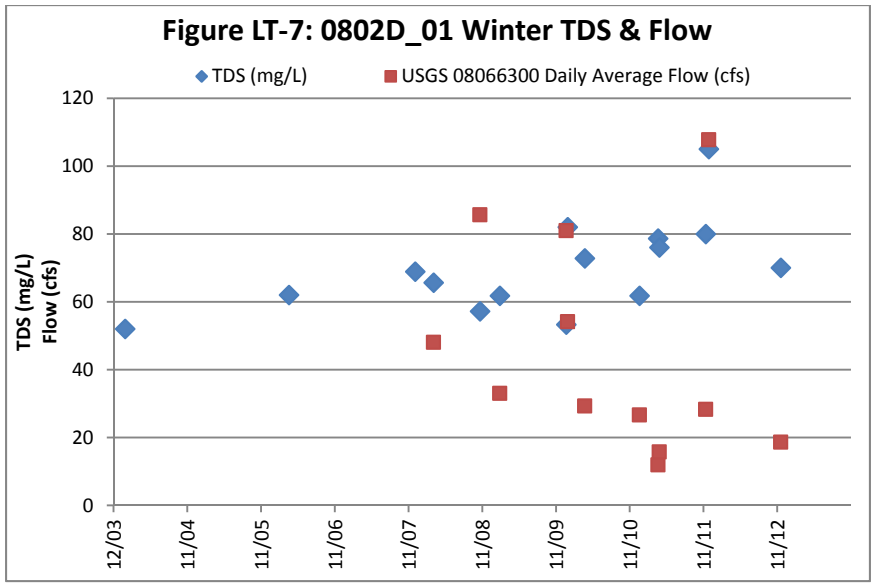


Figure LT-7: 0802D_01 Winter TDS & Flow

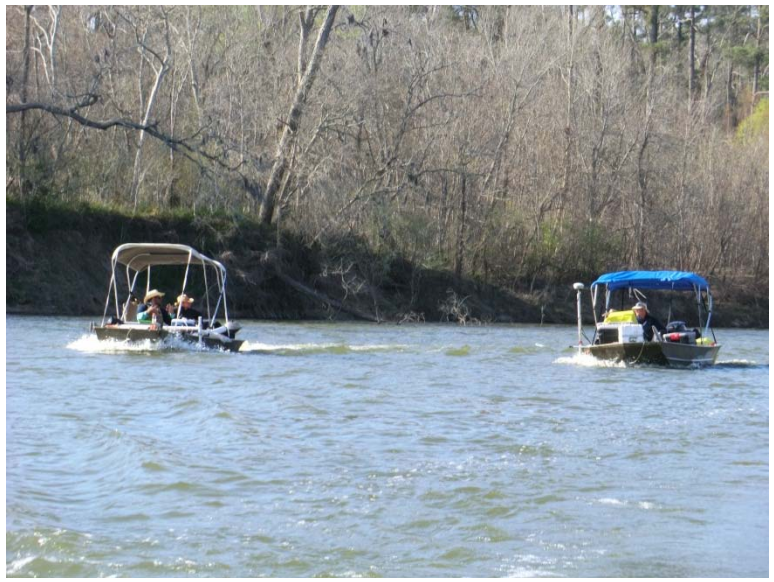

Image LT- 1: Boaters along 0802

Table LT-9: 0802D Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0802D_01	10688	NO3	Summer	0.22	-0.01	0.09	0.01	-1.82	-0.41	-0.64	14	0.06	0.14	0.09	0.08	0.01	0.00	0.08	9/26/07	9/24/13
0802D_01	10688	TDS	Winter	0.35	3.43	0.02	1.28	2.67	1.76	1.62	15	69.80	105.00	78.65	68.90	61.75	52.00	16.90	1/27/04	12/18/12
0802D_01	10688	Days Since Precip	POR	0.15	-0.69	0.07	0.36	-1.94	-0.61	-1.83	24	4.38	8.00	7.00	6.00	0.75	0.50	6.25	9/26/07	9/24/13
0802D_01	10688	Lab Turb	Winter	0.77	-0.27	0.00	0.05	-5.22	1.21	1.63	10	12.69	46.50	12.50	9.45	7.70	3.50	4.80	1/27/04	12/12/11

Segment 0801 – Trinity River Tidal

Overview

This 34 mile segment is tidally influenced and runs from the confluence of Anahuac Channel in Chambers County to a point 1.9 miles downstream of US 90 in Liberty County. This rural segment is all within the Coastal Prairie and Marsh ecoregion and is almost evenly split between forest and agriculture/pasture land uses.

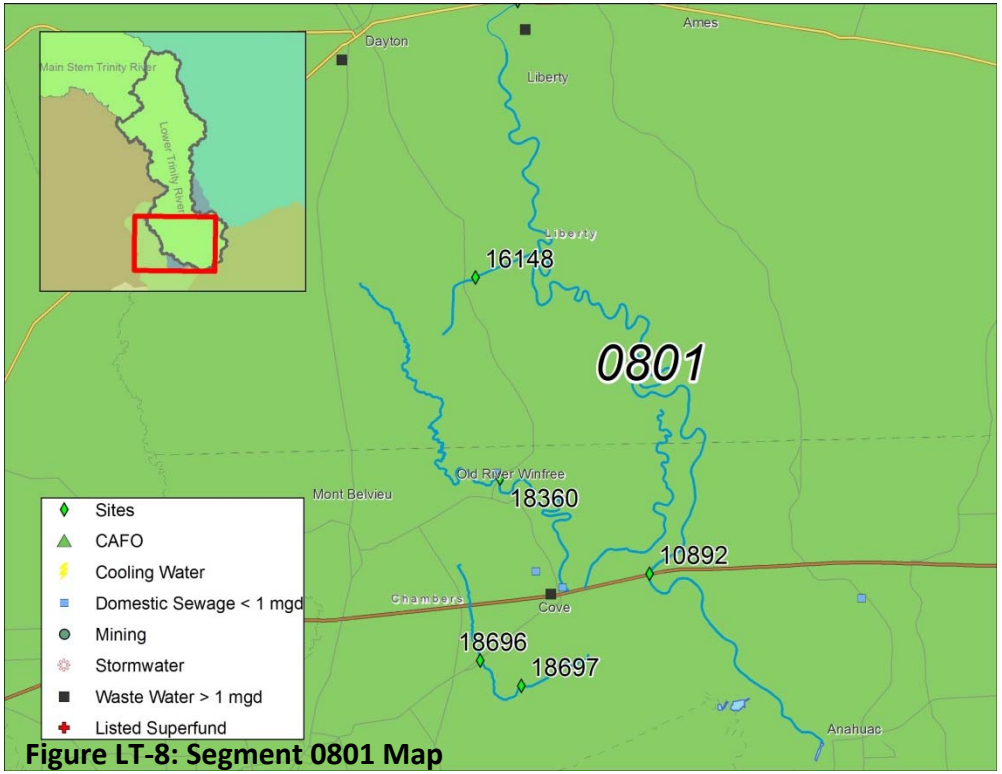


Figure LT-8: Segment 0801 Map

Assessments (Classified Segments):

Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0801_01 - Lower 25 miles of segment	Fully Supporting	Fully Supporting
General Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0801_01	Concern	Concern

This segment was found to have concerns for chlorophyll-a by both the TCEQ Draft 2014 Integrated Report and the in-house 5 year assessment. Chlorophyll-a is regularly above the screening level (Figure LT-9). This is expected as it is downstream of both Lake Livingston, which is hypereutrophic, and segment 0802, which has concerns for chlorophyll-a. Similar to both segment 0802 and Lake Livingston, chlorophyll-a levels in 0801 are not correlated to nutrients.

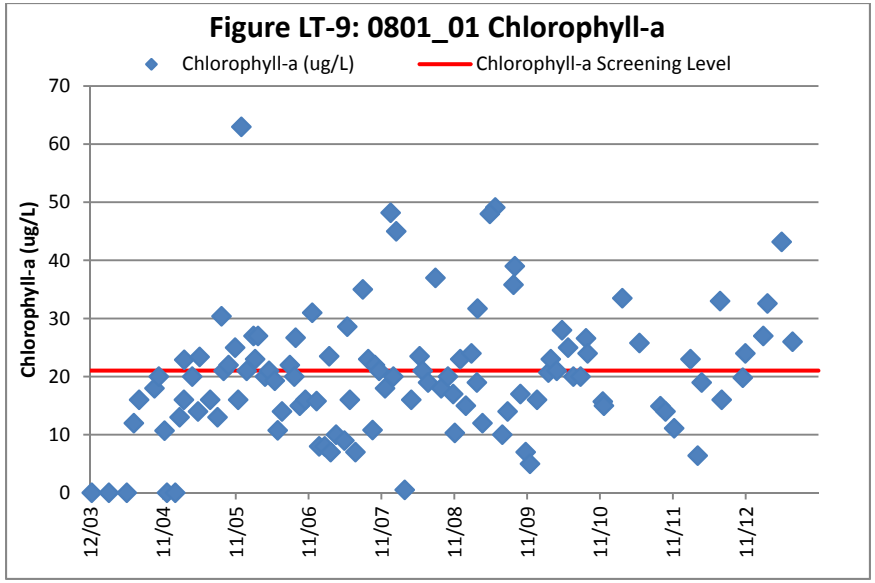




Image LT- 2: Wallisville Saltwater Barrier opening for boaters

Contact Recreation Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0801_01	Fully Supporting	Fully Supporting
Public Water Supply Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0801_01	Not Assessed (No Data)	Not Assessed (No Data)
Fish Consumption Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0801_01	Not Assessed (No Data)	Not Assessed (No Data)

Assessments (Unclassified Segments):

Aquatic Life Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0801B_01 - Entire segment	Fully Supporting	Fully Supporting
0801C_01 - Entire segment	Concern	Not Supporting
0801D_01 - From confluence with Trinity River Tidal upstream to confluence with Big Caney Creek	Fully Supporting	Fully Supporting

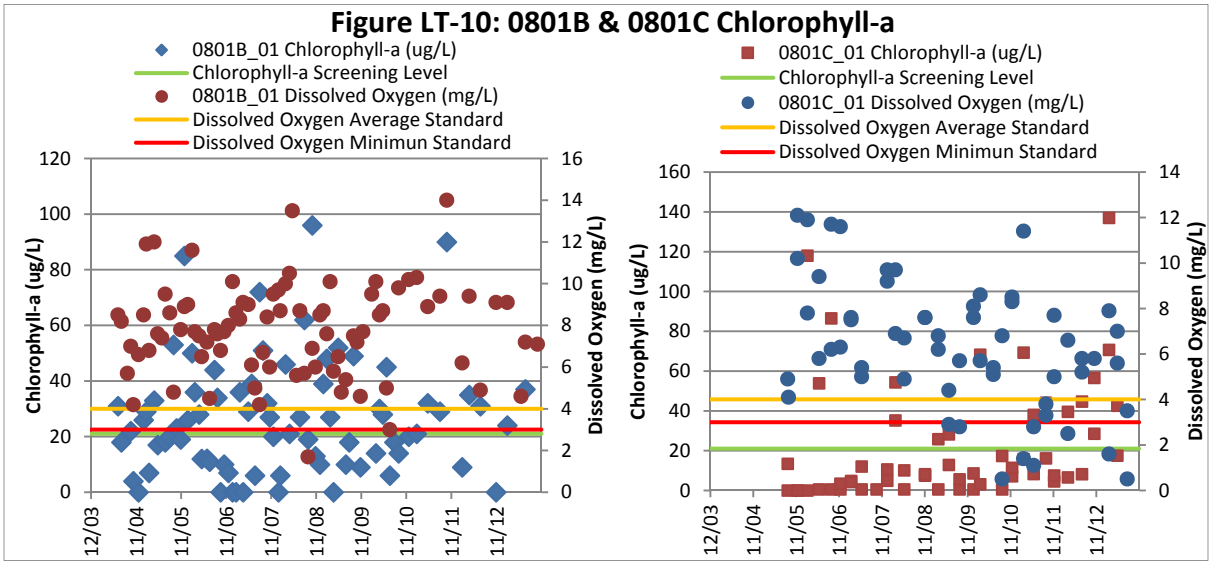
0801C was found to have issues due to depressed dissolved oxygen by both the TCEQ Draft 2014 Integrated Report and the in-house 5 year assessment. 0801C was part of a special study after it was found to be not supporting by the 2008 Integrated Report based on data collected from the tidal portion of the stream only. Above the tidal portion, the stream was found to be fully supporting. However, low dissolved oxygen appears to remain an issue in the tidally influenced portion of the stream (see Figure LT-9 below) and may be related to algal populations as chlorophyll-a levels are also a concern.

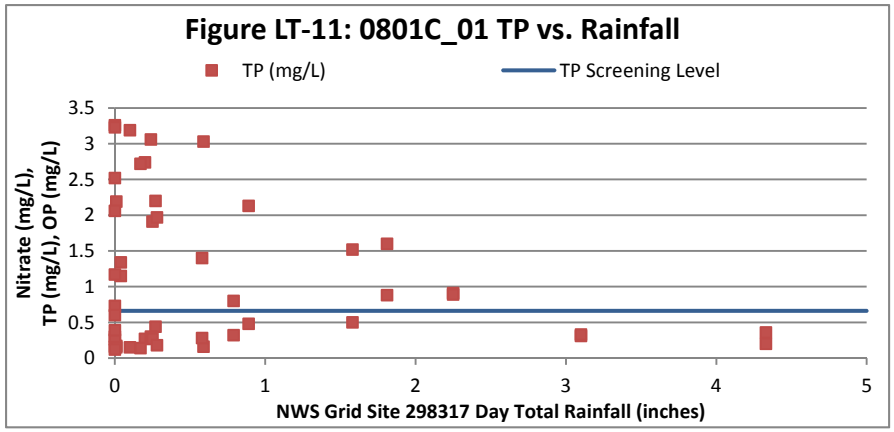
General Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0801B_01	Concern	Concern
0801C_01	Concern	Concern
0801D_01	No Concern	Concern

0801B and 0801C were found to have concerns for chlorophyll-a by both the TCEQ Draft 2014 Integrated Report and the in-house 5 year assessment. In addition, the in-house 5 year assessment identified concerns for chlorophyll-a in 0801D. 0801C was found to have concerns for nitrate and TP by both the TCEQ Draft 2014 Integrated Report and the in-house 5 year assessment. 0801C was also found to have concerns for OP by the in-house 5 year assessment. Chlorophyll-a concerns in 0801D_01 are not unexpected as the water in the canal is pulled from 0801_01 which also has concerns for chlorophyll-a.

Similar to the chlorophyll-a in 0801, 0802, and Lake Livingston, chlorophyll-a concerns in 0801B_01 and 0801C_01 are not correlated to nutrients. The most likely cause for elevated chlorophyll-a levels in these two assessment units is long residence time and light penetration which allows algal populations to increase. As shown in Figure LT-10, algal populations do not appear to be having an impact on dissolved oxygen in 0801B. However, in 0801C, there does appear to be a correlation between decreasing dissolved oxygen levels and increasing chlorophyll-a.

Figure LT-10: 0801B & 0801C Chlorophyll-a

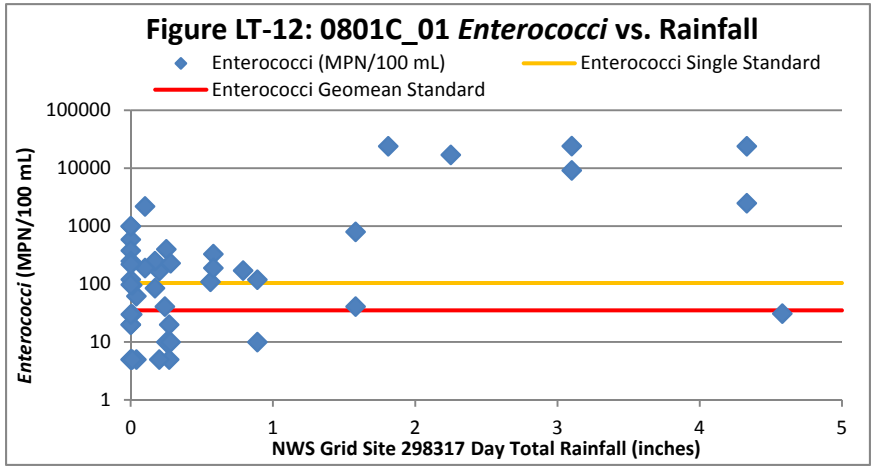




Nutrients in 0801C_01 are negatively correlated to rainfall events as shown by TP in Figure LT-11. This indicates that there is a constant source of nutrients into the stream which are diluted during wet weather. Possible sources are irrigation of agricultural fields and residential yards, as well as, upstream wastewater treatment facilities.

Contact Recreation Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0801B_01	Not Assessed (No Data)	Not Assessed (No Data)
0801C_01	Not Supporting	Not Supporting
0801D_01	No Concern	No Concern

0801C was found to be not supporting due to elevated levels of *Enterococci* by both the TCEQ Draft 2014 Integrated Report and the in-house 5 year assessment. As shown in Figure LT-12, *Enterococci* levels in this assessment unit are well correlated to rainfall (correlation coefficient=0.613). This indicates that *Enterococci* are introduced to the stream via runoff. The watershed for this stream is largely rural with both wooded areas and agricultural/pasture land. Livestock, wildlife, pets, and failing septic systems are probable sources of Enterococci.



Public Water Supply Use:	**TCEQ Draft 2014 Integrated Report**	**In-House 5 Year Assessment**
0801B_01	Not Assessed (No Data)	Not Assessed (No Data)
0801C_01	Not Assessed (No Data)	Not Assessed (No Data)
0801D_01	Not Assessed (No Data)	Not Assessed (No Data)

Fish Consumption Use:	TCEQ Draft 2014 Integrated Report	In-House 5 Year Assessment
0801B_01	Not Assessed (No Data)	Not Assessed (No Data)
0801C_01	Not Assessed (No Data)	Not Assessed (No Data)
0801D_01	Fully Supporting	Not Assessed (No Data)

Trend Analysis Overview

Table LT-10: Trend Analysis Result Summary

Lower Trinity		Air Temp			Days Since Precip			Secchi Depth			DO			pH			Sp Cond			*Enterococci*			Chlorophyll-a			TSS		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0801_01	10892		DN																									
0801_01	20839											DN			DN											DN		
0801B_01	18360						UP																				DN	
0801C_01	18696							DN			DN		DN						UP		UP			UP			UP	
0801C_01	18697										DN	DN	DN															

Lower Trinity		VSS			TDS			Chloride			SO4			Fluoride			NH3			NO3			TP		
Seg_AU	Site	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W	A	S	W
0801_01	10892										UP									DN	DN				DN
0801_01	20839																						DN	DN	
0801B_01	18360																								
0801C_01	18696	UP	UP				UP			UP			DN			UP	UP		UP		DN				UP
0801C_01	18697				UP			UP		UP	UP		UP												

Trends Key
A-All Months
S-Summer/Growing Season (May-October)
W-Winter/Dormant Sesaon (November-April)
UP Increasing Trends
DN Decreasing Trends

There were 37 significant trends identified for this segment as summarized in Table LT-10. For additional detail on trend methods, see the Data Review Methodology section.

Trends (Classified Segments):
See Table LT-11 for details of the significant trends analysis summary presented in Table LT-10. There is an increasing trend for sulfate in 0801_01 with an R^2 of 0.11. As shown in Figure LT-13, this trend appears to be drought related.

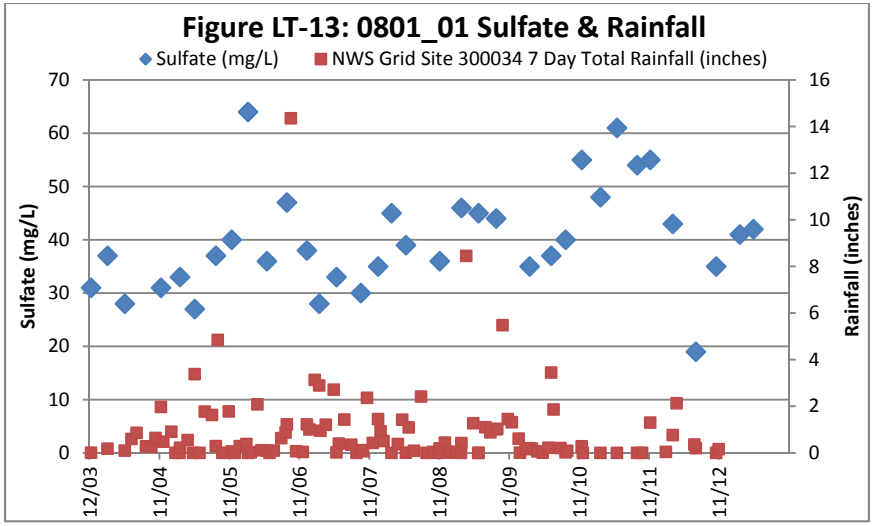


Table LT-11: 0801 Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0801_01	10892	Air Temp	Summer	0.62	-2.74	0.00	0.46	-5.91	-0.02	-0.91	23	28.20	35.00	32.00	28.00	24.40	19.40	7.60	7/7/04	10/29/08
0801_01	10892	NO3	POR	0.14	-0.38	0.00	0.12	-3.34	-0.16	-2.60	69	0.19	1.10	0.39	0.01	0.00	0.00	0.39	12/9/03	5/29/13
0801_01	10892	NO3	Summer	0.15	-0.35	0.03	0.15	-2.27	1.13	-1.21	32	0.08	0.62	0.09	0.01	0.00	0.00	0.08	6/2/04	5/29/13
0801_01	10892	TP	Winter	0.33	-0.12	0.00	0.03	-4.41	-0.30	0.20	41	0.16	0.46	0.21	0.15	0.11	0.04	0.10	12/9/03	3/19/13
0801_01	10892	SO4	POR	0.11	1.14	0.05	0.57	2.00	1.33	0.47	35	39.86	64.00	45.00	38.00	33.00	19.00	12.00	12/9/03	5/29/13
0801_01	20839	DO	Summer	0.41	-0.39	0.02	0.14	-2.75	0.29	-0.83	13	7.28	8.70	8.30	7.00	6.60	5.80	1.70	5/27/09	7/23/13
0801_01	20839	pH	Summer	0.54	-0.24	0.00	0.06	-3.91	-0.19	-0.73	15	8.11	8.80	8.50	8.10	7.80	7.40	0.70	5/27/09	7/23/13
0801_01	20839	TSS	POR	0.15	-0.26	0.04	0.12	-2.13	1.16	0.92	28	49.21	392.00	57.50	31.00	14.50	8.00	43.00	12/30/08	7/23/13
0801_01	20839	TP	POR	0.10	-0.11	0.08	0.06	-1.81	0.65	1.65	30	0.14	0.46	0.16	0.13	0.10	0.04	0.06	12/30/08	7/23/13
0801_01	20839	TP	Summer	0.21	-0.11	0.09	0.06	-1.84	1.11	0.43	15	0.13	0.27	0.14	0.12	0.10	0.07	0.04	5/27/09	7/23/13

Trends (Unclassified Segments):

See Table LT-12 for details of the significant trends analysis summary presented in Table LT-10. Increasing trends for *Enterococci* at station 18696 appear to be an artifact of sample timing in relation to rainfall events. All other increasing trends in 0801C appear to be drought related. Figure LT-14, shows chloride and ammonia for the period of record increasing as rainfall decreases. Dissolved solids and other parameters will concentrate in water bodies as evaporation takes place. As discussed in the General Use section of Assessments (Unclassified Segments), possible sources of nutrients are upstream wastewater treatment facilities and irrigation runoff. A lack of rainfall reduces dilution by fresh water inflows.

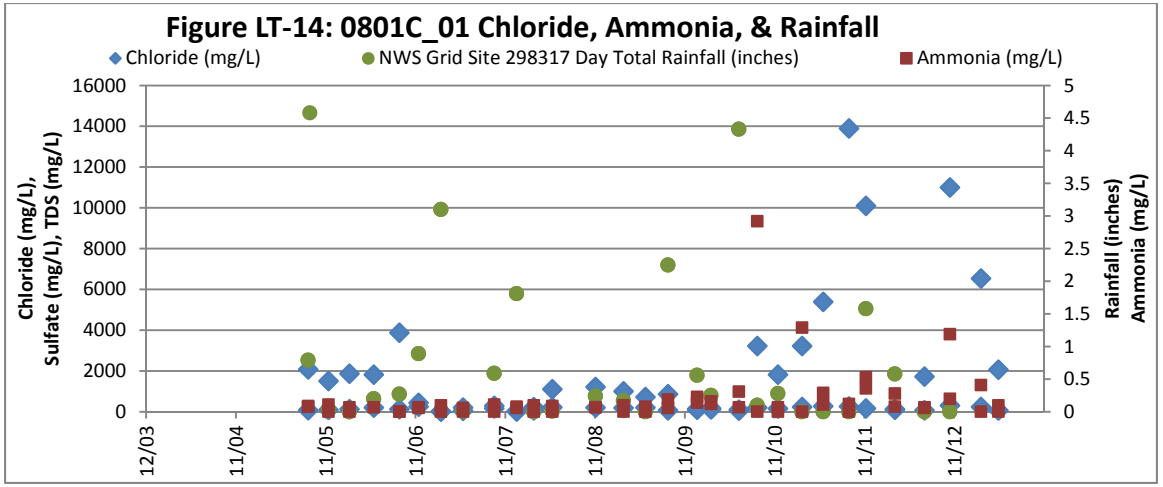


Table LT-12: 0801B, 0801C Trend Analysis Result Detail

Segment	Station	Parameter	Season	R^2	Slope	P	Std Dev	T	Skewness/SES	Kurtosis/SEK	N	Mean	Max	Q75	Median	Q25	Min	IQR	Min Date	Max Date
0801B_01	18360	TSS	Summer	0.12	-1.30	0.03	0.56	-2.31	1.73	-0.45	40	20.02	42.00	25.50	17.85	14.00	7.00	11.50	7/7/04	10/29/13
0801B_01	18360	Days Since Precip	Winter	0.16	0.41	0.07	0.21	1.95	1.58	-1.15	22	2.84	7.00	7.00	1.00	1.00	0.50	6.00	1/31/05	2/26/13
0801C_01	18696	Secchi Depth	POR	0.15	-0.03	0.04	0.01	-2.21	1.91	0.11	29	0.35	0.80	0.45	0.31	0.22	0.06	0.23	9/20/05	8/21/13
0801C_01	18696	Sp Cond	Winter	0.30	104.73	0.03	42.26	2.48	-1.32	0.53	16	1099.00	1840.00	1370.00	1195.00	880.00	150.00	490.00	12/12/05	3/19/13
0801C_01	18696	DO	POR	0.24	-0.50	0.01	0.17	-2.99	-0.65	-0.36	30	5.44	10.20	7.50	5.70	3.50	0.50	4.00	9/20/05	8/21/13
0801C_01	18696	DO	Winter	0.42	-0.71	0.01	0.22	-3.17	-1.39	0.12	16	6.43	10.20	7.75	7.20	5.75	1.40	2.00	12/12/05	3/19/13
0801C_01	18696	TSS	Summer	0.32	0.20	0.04	0.09	2.36	0.44	-0.78	14	20.71	64.00	29.00	14.00	8.00	4.00	21.00	9/20/05	5/29/13
0801C_01	18696	VSS	POR	0.15	0.25	0.03	0.11	2.26	1.19	-1.24	30	5.53	55.00	6.00	0.50	0.50	0.50	5.50	9/20/05	5/29/13
0801C_01	18696	VSS	Summer	0.22	0.70	0.09	0.38	1.85	1.91	0.92	14	3.14	12.00	5.00	0.50	0.50	0.50	4.50	9/20/05	5/29/13
0801C_01	18696	NH3	POR	0.40	0.42	0.00	0.10	4.28	-1.23	1.60	30	0.30	2.92	0.28	0.10	0.07	0.00	0.21	9/20/05	5/29/13
0801C_01	18696	NH3	Winter	0.63	0.58	0.00	0.12	4.87	-1.40	0.79	16	0.29	1.29	0.35	0.10	0.07	0.00	0.28	12/12/05	3/19/13
0801C_01	18696	NO3	Summer	0.27	-1.20	0.07	0.59	-2.04	0.18	-1.26	13	7.33	15.70	12.70	6.00	3.32	0.15	9.38	9/20/05	5/29/13
0801C_01	18696	TP	Winter	0.24	0.16	0.07	0.08	2.00	-0.38	-0.09	15	1.95	3.23	2.54	1.97	1.40	0.31	1.14	12/12/05	3/19/13
0801C_01	18696	Chloride	Winter	0.21	16.09	0.07	8.22	1.96	-0.66	-0.04	16	166.06	311.00	231.00	168.50	118.00	12.00	113.00	12/12/05	3/19/13
0801C_01	18696	SO4	Winter	0.20	-1.94	0.09	1.05	-1.84	-0.28	-0.59	16	26.31	45.00	34.00	28.00	19.00	10.00	15.00	12/12/05	3/19/13
0801C_01	18696	Fluoride	Winter	0.20	0.09	0.08	0.05	1.88	-1.76	0.39	16	1.01	1.55	1.39	1.11	0.79	0.03	0.61	12/12/05	3/19/13
0801C_01	18696	*Enterococci*	Summer	0.36	0.53	0.07	0.25	2.14	-0.31	1.10	10	2961.00	24000.00	1000.00	485.00	168.00	5.00	832.00	9/20/05	8/1/12
0801C_01	18696	TDS	Winter	0.31	66.20	0.02	26.31	2.52	-0.66	0.25	16	674.06	1196.00	845.00	694.25	489.00	137.00	356.00	12/12/05	3/19/13
0801C_01	18696	Chlorophyll-a	Summer	0.57	2.01	0.00	0.53	3.81	1.46	-0.48	13	5.10	17.50	8.26	0.50	0.50	0.00	7.76	9/20/05	5/29/13
0801C_01	18697	DO	POR	0.24	-0.62	0.01	0.21	-2.95	-0.23	-0.49	29	7.19	12.10	9.20	7.00	5.00	0.50	4.20	9/27/05	8/21/13
0801C_01	18697	DO	Summer	0.23	-0.52	0.08	0.28	-1.89	0.93	0.66	14	5.42	11.70	6.80	5.05	3.80	0.50	3.00	9/27/05	8/21/13
0801C_01	18697	DO	Winter	0.38	-0.58	0.01	0.20	-2.84	0.27	-0.59	15	8.84	12.10	11.40	8.50	7.60	5.00	3.80	12/12/05	3/19/13
0801C_01	18697	Chloride	POR	0.12	0.27	0.06	0.13	1.97	-1.02	-0.86	30	2549.53	13900.00	3230.00	1365.00	139.00	23.00	3091.00	9/20/05	5/29/13
0801C_01	18697	Chloride	Winter	0.19	0.37	0.09	0.20	1.80	-0.30	-0.99	16	2452.69	11000.00	2550.00	1115.00	112.50	23.00	2437.50	12/12/05	3/19/13
0801C_01	18697	SO4	POR	0.15	0.21	0.04	0.10	2.15	-0.02	-1.02	29	372.03	1870.00	458.00	238.00	43.00	16.00	415.00	9/20/05	5/29/13
0801C_01	18697	SO4	Winter	0.22	0.29	0.06	0.14	2.01	0.34	-0.91	16	352.06	1610.00	375.50	174.50	40.00	16.00	335.50	12/12/05	3/19/13
0801C_01	18697	TDS	POR	0.14	0.21	0.05	0.10	2.09	-0.48	-1.15	30	4682.78	23790.00	6320.00	3117.50	472.00	189.00	5848.00	9/27/05	8/21/13

Appendices

Segment and Assessment Unit Dictionary

0801 - Trinity River Tidal	
0801_01 - Lower 25 miles of segment	10892, 20839
0801B - Old River	
0801B_01 - Entire Segment	18360
0801C - Cotton Bayou	
0801C_01 - Entire Segment	17628, 17629, 17632, 17633, 18696, 18697, 20003
0801D - Lynchburg Canal	
0801D_01 - From confluence with Trinity River Tidal upstream to confluence with Big Caney Creek.	16148
0802 - Trinity River Below Lake Livingston	
0802_01 - Lower 17 miles of segment	10894
0802_02 - Approx. 9 miles upstream to approx. 15 miles downstream of SH 105	10895
0802_03 - 11 miles upstream to approx. 9 miles downstream of FM 787	10896
0802_04 - 5 miles upstream to 11 miles downstream of US 59	10897
0802_05 - Upper 6 miles of segment	16998
0802B - Long King Creek	
0802B_02 - From just upstream of the confluence with unnamed tributary (NHD RC 12030202001817) up to the confluence with Mud Creek, in Polk County.	10689
0802D - Menard Creek	
0802D_01 - Entire water body	10688
0802NA - Big Creek	
0802NA_01 - Entire water body	13685
0803 - Lake Livingston	
0803_01 - Lowermost portion of reservoir, adjacent to dam	10899, 14003, 14004
0803_02 - Lower portion of reservoir, East Wolf Creek	14005
0803_03 - Lower portion of reservoir, East Willow Springs	14006
0803_04 - Middle portion of reservoir, East Pointblank	14007, 14008
0803_05 - Middle portion of reservoir, downstream of Kickapoo Creek	10909, 14009
0803_06 - Middle portion of reservoir, centering on US 190	10911, 14010
0803_07 - Upper portion of reservoir, west of Carlisle	10913, 14013
0803_08 - Cove off upper portion of reservoir, East Trinity	14014
0803_09 - West Carolina Creek cove, off upper portion of reservoir	14011
0803_10 - Upper portion of reservoir, centering on SH 19	10914
0803_11 - Riverine portion of reservoir, centering on SH 21	10917
0803_12 - Remainder of reservoir	NA
0803A - Harmon Creek	
0803A_01 - A 16 mile (25.7 KM) stretch of Harmon Creek extending from Lake Livingston (normal pool elevation of 131 feet) upstream to the confluence of East Fork Harmon Creek.	10698
0803B - White Rock Creek	
0803B_01 - lower 25 miles of segment	10696
0803E - Nelson Creek	
0803E_01 - Entire water body.	10700, 10701
0803F - Bedias Creek	
0803F_01 - From the confluence with segment 0803 Trinity River up to confluence with Poole Creek (NHD RC 12030202000572)	10702

0803F_02 - From the confluence with Poole Creek (NHD RC 12030202000572) to upper end of NHD RC Bedias Creek (NHD RC 12030202000350)	10703
0803G - Lake Madisonville	
0803G_01 - Entire water body	16953
0804 - Trinity River Above Lake Livingston	
0804_01 - From the lower end of the segment up to just above the confluence with Hurricane Bayou in Houston County.	10918, 13690
0804_02 - From just upstream of the confluence with Hurricane Bayou up to just above the confluence with Boons Creek.	NA
0804_03 - From just upstream of the confluence with Boons Creek up to just above the confluence with Caney Creek.	NA
0804_04 - From the confluence with Caney Creek up to just above the confluence with Indian Creek in Anderson County.	10919
0804_05 - From just above the confluence with Indian Creek in Anderson County up to just above the confluence with Tehuacana Creek.	NA
0804_06 - From just above the confluence with Tehuacana Creek to just above the confluence with Richland Creek.	NA
0804_07 - From just above the confluence with Richland Creek in Henderson County, up to the upper end of the segment.	10920, 10921, 10922
0804B - Keechi Creek	
0804B_01 - Entire water body	10706
0804F - Tehuacana Creek	
0804F_01 - A 27 mile stretch of Tehuacana Creek extending from the confluence with 0804 of the Trinity River up to the confluence with Caney Creek (NHD RC 120302010000226).	10705, 20770
0804F_02 - A 28.4 mile (45.7 KM) stretch of Tehuacana Creek extending from the confluence with Caney Creek to the upper end (NHD RC 120302010000225) of Tehuacana Creek.	18572
0804G - Catfish Creek	
0804G_01 - Entire Segment	10717, 18596, 18597
0804H - Upper Keechi Creek	
0804H_01 - From the confluence with segment 0804 Trinity River up to confluence with Twin Branch (NHD RC 12030201027099)	18401, 20771
0804J - Fairfield Lake	
0804J_01 - Entire segment	17951
0804NA - Lower Keechi Creek	
0804NA_01 - Entire Segment	20382
0805 - Upper Trinity River	
0805_01 - From confluence of the Cedar Creek Reservoir discharge canal upstream to confluence of Smith Creek.	10924
0805_02 - From confluence of Smith Creek upstream to confluence of Tenmile Creek.	10925, 10926, 10927, 10928, 16121
0805_03 - From the confluence of Fivemile Creek upstream to the confluence of Cedar Creek.	10934, 10935, 13614, 17161, 20444, 20567
0805_04 - From confluence of Cedar Creek upstream to confluence of Elm Fork Trinity River	10936, 10937, 16088, 20933, 20934
0805_06 - From confluence of Tenmile Creek upstream to confluence of Fivemile Creek	10929, 10930, 10931, 10932, 20566
0805A - Red Oak Creek	
0805A_01 - Entire Segment	17506, 18569
0805B - Parsons Slough	
0805B_01 - Entire Segment	10839
0806 - West Fork Trinity River below Lake Worth	
0806_01 - From confluence of Village Creek upstream to confluence of Clear Fork Trinity River	10938, 10939, 10940, 11085, 16120, 17368, 17662, 17863, 18459, 20292, 20336, 20422
0806_02 - From confluence of Clear Fork Trinity River upstream to Lake Worth Dam	10941, 18460, 20424, 20425
0806A - Fosdic Lake	
0806A_01 - Entire lake	16818
0806B - Echo Lake	
0806B_01 - Entire lake	16813
0806D - Marine Creek	
0806D_01 - Entire water body	17370

0806E - Sycamore Creek	
0806E_01 - Five mile stretch of Sycamore Creek running upstream from confluence with the W. Fork of Trinity River to confluence with Echo Lake Tributary in Fort Worth	17131, 17369, 20431
0806F - Little Fossil Creek	
0806F_01 - Entire water body.	17129, 21425
0807 - Lake Worth	
0807_01 - Entire reservoir	10942, 15163, 15166, 15167
0808 - West Fork Trinity River Below Eagle Mountain Reservoir	
0808_01 - Entire segment	NA
0809 - Eagle Mountain Reservoir	
0809_01 - Lowermost portion of reservoir near east end of dam	10944
0809_02 - Dosier Slough cove	10947
0809_03 - Ash Creek cove	10949, 10950, 10951
0809_04 - Lowermost portion of reservoir near west end of dam	10945
0809_05 - Lower portion of reservoir east of Walnut Creek cove	10952
0809_06 - Walnut Creek cove	10954
0809_07 - Old Ranch cove	10958, 10959
0809_08 - Middle portion of reservoir near Cole subdivision	10956
0809_09 - Indian Creek cove	10961, 10962
0809_10 - Upper portion of reservoir near Indian Creek cove	10960
0809_11 - Darrett Creek cove	10965
0809_12 - Upper portion of reservoir near Newark Beach	10964
0809_14 - Mid-Lake, from just above Walnut Cr. Cove to Oakwood Rd. peninsula	17667
0809A - Walnut Creek	
0809A_01 - Entire Segment	10853
0809B - Ash Creek	
0809B_01 - Entire Segment	10854
0809NA - Derrett Creek	
0809NA_01 - Entire Segment	10858
0809NA - Dosier Creek	
0809NA_01 - Entire Segment	10855
0810 - West Fork Trinity River Below Bridgeport Reservoir	
0810_01 - Lower 25 miles of segment	10967, 10968, 10969, 14246, 17844
0810_02 - Upper 11 miles of segment	14904, 20840
0810A - Big Sandy Creek	
0810A_01 - Fifteen mile stretch of Big Sandy Creek running from confluence with Waggoner Creek to FM 1810 West of Alvord, Wise Co.	15688
0810B - Garrett Creek	
0810B_01 - Eighteen mile stretch of Garrett Creek running upstream from confluence with Salt Creek to Wise County Road approximately 14 miles upstream of SH114, Wise Co.	16767
0810C - Martin Branch	
0810C_01 - Eight mile stretch of Martin Branch running upstream from confluence with Center Creek to FM 730 south of Decatur, Wise County.	17848
0810D - Salt Creek	
0810D_01 - Eleven mile stretch of Salt Creek running upstream from confluence with Garrett Creek, Wise County.	16766
0811 - Bridgeport Reservoir	
0811_01 - Southeast portion of main body of reservoir	16762, 16764
0811_02 - Southwest portion of main body of reservoir	15165, 16763
0811_03 - Central portion of main body of reservoir	10970

0811_04 - Northern portion of main body of reservoir	15164
0811_05 - Remainder of reservoir	16736, 16759, 16760, 16761, 16765
0811NA - Beans Creek	
0811NA_01 - Entire Segment	16737
0811NA - Big Creek	
0811NA_01 - Entire Segment	16768
0812 - West Fork Trinity River Above Bridgeport Reservoir	
0812_01 - Lower 25 miles of segment	10972, 18058, 18059
0812_02 - Upper 60 miles of segment	NA
0813 - Houston County Lake	
0813_01 - Entire reservoir	10973
0814 - Chambers Creek Above Richland-Chambers Reservoir	
0814_01 - From the lower end of the segment up to just above the confluence with Cummins Creek.	10975
0814_02 - From just above the confluence with Cummins Creek up to just above the confluence with Waxahachie Creek.	10977, 20000
0814_03 - From just above the confluence with Waxahachie Creek up to just above the confluence with Mill Branch.	NA
0814_04 - From just above the confluence with Mill Branch to the upper end of the segment.	10978
0815 - Bardwell Reservoir	
0815_01 - Entire reservoir	10979, 16700, 17582, 18437, 18549, 18550
0815A - Waxahachie Creek	
0815A_01 - Entire creek	13686, 18519
0816 - Lake Waxahachie	
0816_01 - Entire reservoir	10980
0817 - Navarro Mills Lake	
0817_01 - Entire reservoir	10981, 17442, 18545, 18546, 18547, 18548, 20633
0818 - Cedar Creek Reservoir	
0818_01 - Lowermost portion of the reservoir, adjacent to the dam.	13845, 16745, 16748
0818_02 - Caney Creek cove	16744
0818_03 - Clear Creek cove	16743
0818_04 - Lower portion of reservoir east of Key Ranch Estates	13848, 16749
0818_05 - Cove off lower portion of reservoir adjacent to Clearview Estates	16746
0818_06 - Middle portion of reservoir downstream of Twin Creeks cove	15812, 16741, 16747, 16750, 17090, 18472, 18473
0818_07 - Twin Creeks cove	16739
0818_08 - Prairie Creek cove	16751, 16752
0818_09 - Upper portion of reservoir adjacent to Lacy Fork cove	13854, 16753, 18471
0818_10 - Lacy Fork cove	16771
0818_11 - Upper portion of reservoir east of Tolosa	16772
0818_12 - Uppermost portion of reservoir downstream of Kings Creek	16774, 18469, 18470
0818_13 - Cedar Creek cove	16773
0818_14 - Remainder of reservoir	NA
0818NA - Caney Creek	
0818NA_01 - Entire Segment	16758
0818NA - Cedar Creek	
0818NA_01 - Entire Segment	17842
0818NA - Clear Creek	
0818NA_01 - Entire Segment	16755
0818NA - Kings Creek	
0818NA_01 - Entire Segment	21000; 16778
0818NA - Lacy Fork Creek	

0818NA_01 - Entire Segment	16777
0818NA - North Twin Creek	
0818NA_01 - Entire Segment	16756
0818NA - Prairie Creek	
0818NA_01 - Entire Segment	16775
0818NA - South Twin Creek	
0818NA_01 - Entire Segment	16757
0819 - East Fork Trinity River	
0819_01 - Entire segment	10987, 10989, 10990, 10991, 10992, 10993, 10996, 10997, 13612, 20284, 20285, 20286
0819B - Buffalo Creek	
0819B_01 - Entire water body.	10824, 18576
0820 - Lake Ray Hubbard	
0820_01 - Lower portion of East Fork arm, centering on IH 30	16809
0820_02 - Middle portion of East Fork arm, centering on SH 66	16829
0820_04 - Lower portion of main body of reservoir extending up from dam to Yankee Cr. Arm.	10998, 20194
0820_05 - Mid-reservoir, I30 crossing Rowlett Cr. Arm to Yankee Cr. Arm	11001, 17829
0820_06 - Outfall canal from Lake Lavon Dam	17846
0820B - Rowlett Creek	
0820B_01 - Entire water body	10753, 10765, 17845, 21478
0820C - Muddy Creek	
0820C_01 - Entire creek	16828, 20110
0821 - Lake Lavon	
0821_01 - Lowermost portion of reservoir	15684, 15685
0821C - Wilson Creek	
0821C_01 - Entire water body	10777, 15041
0821D - East Fork Trinity River above Lake Lavon	
0821D_01 - Entire water body	13740
0822 - Elm Fork Trinity River Below Lewisville Lake	
0822_01 - Lower 11 miles of segment	16436, 17163, 17164, 18310, 18648, 20287
0822_02 - 4.5 miles upstream to 7.5 miles downstream DWU intake	11024, 16438, 17162
0822_03 - 1.0 mi upstream to 4.5 miles downstream SH 121	13615, 18358
0822_04 - Upper 1.5 miles of segment	15252, 16437
0822A - Cottonwood Branch	
0822A_01 - A 2.5 mile stretch of Cottonwood Branch running upstream from confluence with Hackberry Creek to approx. 0.5 miles downstream of N. Story Rd., Dallas Co.	17167, 17168, 18359
0822A_02 - A 3. 5 mile stretch of Cottonwood Branch running upstream from approximately 0.5 miles downstream of N. Story Rd. to Valley View Rd, Dallas, Co.	17165, 17166
0822B - Grapevine Creek	
0822B_01 - Entire water body	17169, 17531, 17939, 20311, 21188
0822C - Hackberry Creek	
0822C_01 - A 5.5 mile stretch of Hackberry Creek running upstream from confluence with S. Fork Hackberry Creek to approximately 2.4 miles upstream of SH 114 in Irving, Dallas Co.	17170, 17171, 17172, 17532, 17938
0822D - Ski Lake	
0822D_01 - Entire segment.	17849
0823 - Lewisville Lake	
0823_01 - Lowermost portion of reservoir	11025, 13995, 13996
0823_02 - Stewart Creek arm	13997, 16808
0823_03 - Hickory Creek arm	11027, 13998, 18475, 18476, 18477, 18478, 18479,

	20893
0823_04 - Little Elm Creek arm	17830
0823_05 - Middle portion of reservoir east of Lake Dallas	11026, 13999, 14001
0823_06 - Remainder of reservoir	18480, 18481
0823A - Little Elm Creek	
0823A_01 - From the confluence with Lake Lewisville in Denton Co., up to FM 455 in Collin Co. (Lower 12 miles of segment).	13617, 16826
0823A_02 - From FM 455 in Collin Co., up to 1.4 km above FM 121 in Grayson, Co. near Guenther. (Upper 15 miles of segment).	NA
0823B - Stewart Creek	
0823B_01 - Entire segment.	10860
0823C - Clear Creek	
0823C_01 - Lower 25 miles of segment	10859, 16827
0823C_02 - Upper 40 miles of segment	NA
0823D - Doe Branch	
0823D_01 - From the confluence (NHD RC 12030103023518) with Lake Lewisville/Elm Fork Trinity in Denton County to the headwaters (NHD RC 12030103005935) northeast of Celina, Collin Co., TX.	18560, 20291
0824 - Elm Fork Trinity River Above Ray Roberts Lake	
0824_01 - Lower 7.5 miles of segment	11029, 11031
0824_02 - 2 mile reach near unmarked county road, 1.4 km downstream Gainesville WWTP	11033
0824_03 - 3.5 mile reach near SH 51	15635, 17670
0824_04 - 25 mile reach near FM 3108	16432
0824_05 - Upper 48 miles of segment	NA
0825 - Denton Creek	
0825_01 - Entire segment	11034, 14244
0826 - Grapevine Lake	
0826_01 - Lowermost portion of reservoir	11035, 13873, 13874, 16113, 17827, 20889, 20890, 20891
0826_02 - Morehead Creek cove	11036, 11037, 16118, 20886
0826_03 - Lower portion of reservoir north of Oak Grove Park	16114
0826_04 - North Main Slough cove	16116, 16117, 20887, 20888
0826_05 - Middle portion of reservoir east of Meadowmere Park	13875, 16115
0826_06 - Middle portion of reservoir southeast of Walnut Grove Park	13876, 16112, 17828
0826_07 - Upper portion of reservoir east of Marshall Creek Park	13877, 13878, 16111, 20882
0826_08 - Remainder of reservoir	20880, 20881, 20883, 20884
0826A - Denton Creek	
0826A_01 - Lower 7.9 miles of creek	14485
0826A_02 - 15.7 miles upstream to 7.4 miles downstream of FM 156	14483
0827 - White Rock Lake	
0827_01 - Entire segment	11038
0827A - White Rock Creek above White Rock Lake	
0827A_01 - From the headwaters of White Rock Lake upstream to the upper end of the water body at NHD RC 12030105001118.	15280, 18517, 20289
0828 - Lake Arlington	
0828_01 - Lowermost portion of lake along western half of dam	11040, 13905
0828_02 - Lowermost portion of lake along eastern half of dam	13904
0828_03 - Western half of lower portion of lake	13903
0828_04 - Eastern half of lower portion of lake	13901
0828_05 - Western half of upper portion of lake	13899
0828_06 - Eastern half of upper portion of lake	11042, 13898

0828_07 - Uppermost portion of lake	13897
0828_08 - Remainder of lake	13900
0828A - Village Creek	
0828A_01 - From Lake Arlington to the headwaters	10780, 10786
0829 - Clear Fork Trinity River Below Benbrook Lake	
0829_01 - From the confluence with West Fork Trinity River to 1 mile upstream.	16119, 20427
0829_02 - From 1 mile upstream of the confluence with West Fork Trinity River up to the confluence with Mary's Creek.	11044, 11045, 16122, 18456
0829_03 - From the confluence with Mary's Creek up to Benbrook Dam in Tarrant County, TX.	13623
0829A - Lake Como	
0829A_01 - Entire lake	16814
0830 - Benbrook Lake	
0830_01 - Lower portion of reservoir	13830, 15151, 15161
0830_02 - Middle portion of reservoir	13831, 15156
0830_03 - Upper portion of reservoir	15158
0830_05 - Rock/Mustang Creek arm of Benbrook Lake.	13832
0830NA - Bear Creek	
0830NA_01 - Entire Segment	13624
0830NA - Rock Creek	
0830NA_01 - Entire Segment	16725
0831 - Clear Fork Trinity River Below Lake Weatherford	
0831_01 - Lower 12.75 miles, downstream from South Fork Trinity River confluence	13691, 17444, 17447
0831_03 - From the confluence with South Fork of Trinity R. to a point 2 mi upstream	17445
0831_04 - 2 mi upstream of South Fork Trinity River confluence to Squaw Ck. Confluence	11060
0831_05 - From the confluence of Squaw Ck. to Lake Weatherford Dam	17446, 17637
0831A - South Fork Trinity River	
0831A_01 - Eleven mile stretch of S. Fork Trinity River running upstream from confluence with Clear Fork Trinity River to confluence with Willow Creek, Parker Co.	17454, 17455
0831B - Unnamed Tributary of South Fork Trinity River	
0831B_01 - Entire segment.	17456
0832 - Lake Weatherford	
0832_01 - Entire reservoir	11061
0833 - Clear Fork Trinity River Above Lake Weatherford	
0833_03 - From the confluence of McKnight Branch to the confluence of Strickland Ck. approximately 8 kilometers (5 miles) upstream of FM 51 in Parker County.	11062
0833_04 - From the confluence with Dobbs Branch to confluence with McKnight Branch	17461
0833_05 - From the confluence of Dobbs Ck. to the lower end of segment	17462
0834 - Lake Amon G. Carter	
0834_01 - Entire reservoir	11063
0835 - Richland Creek Below Richland-Chambers Reservoir	
0835_01 - Entire segment.	NA
0836 - Richland-Chambers Reservoir	
0836_01 - Lowermost portion of reservoir, adjacent to dam	11065, 15168
0836_02 - Confluence of Richland and Chambers Creek arms	15169
0836_03 - Lower portion of Chambers Creek arm	15170, 18720
0836_04 - Upper portion of Chambers Creek arm	15199, 18724
0836_05 - Lower portion of Richland Creek arm	11068
0836_06 - Upper portion of Richland Creek arm	15172, 18727
0836_07 - Remainder of reservoir	16721, 18725, 18726
0836_08 - Post Oak Creek Arm off of Chambers Creek Arm of Richland Chambers Reservoir.	18723

0836B - Cedar Creek	
0836B_01 - Entire segment.	18716, 18718, 18719
0836C - Grape Creek	
0836C_01 - Entire segment.	18721
0836D - Post Oak Creek	
0836D_01 - Entire segment.	17847, 18722
0837 - Richland Creek Above Richland-Chambers Reservoir	
0837_01 - Entire segment	11070, 18344
0838 - Joe Pool Lake	
0838_01 - Lowermost portion of reservoir adjacent to the dam	11073, 13890, 13891, 13893, 13894
0838_02 - Mountain Creek arm	11071, 13896, 17684
0838_03 - Walnut Creek arm	11072, 13892
0838A - Mountain Creek	
0838A_01 - Entire segment.	13622, 21123
0838B - Sugar Creek	
0838B_01 - Entire segment.	17680
0838C - Walnut Creek	
0838C_01 - From the confluence with Joe Pool Lake up to the headwaters at Spring Street in Burleson.	13621, 20790
0838D - Hollings Branch	
0838D_01 - Hollings Branch from the confluence of the Mountain Creek arm of Joe Pool Lake upstream to the headwater 500 m downstream of US 67 in Midlothian	16433
0838E - Soap Creek	
0838E_01 - Soap Creek from the confluence of the Mountain Creek arm of Joe Pool Lake upstream to the headwater 6.6 km (3.98 miles) upstream of US 67 in Midlothian	16435
0839 - Elm Fork Trinity River Below Ray Roberts Lake	
0839_01 - Entire segment	13619
0839A - Clear Creek	
0839A_01 - Entire segment.	10859; 13618
0840 - Ray Roberts Lake	
0840_01 - Lowermost portion of reservoir adjacent to dam	14039, 17834
0840_02 - Lower portion of Jordan Creek arm west of Pilot Point	11076, 14044
0840_03 - Upper portion of Jordan Creek arm	16823
0840_04 - Buck Creek cove	16822
0840_05 - Lower portion of Elm Fork arm	NA
0840_06 - Middle portion of Elm Fork arm	14043
0840_07 - Upper portion of Elm Fork arm	16824
0840_08 - Remainder of reservoir	20894, 20895, 20896, 20897, 20898, 20899
0841 - Lower West Fork Trinity River	
0841_01 - From confluence of the Elm Fork Trinity River to the confluence with Johnson Creek.	11079, 11080, 11081, 11082, 11089, 17669
0841_02 - From the confluence with Johnson Creek upstream to the confluence of Village Creek.	11083, 11084, 11086, 11087, 11088, 17160
0841A - Mountain Creek Lake	
0841A_01 - Entire reservoir	NA
0841B - Bear Creek	
0841B_01 - Entire segment.	10864, 10865, 10866, 10867, 10868, 10869, 17663, 18313, 18315
0841C - Arbor Creek	
0841C_01 - Entire segment.	17666, 20610
0841D - Big Bear Creek	
0841D_01 - From the confluence with Little Bear Creek to SH 26, Tarrant County.	17089

0841E - Copart Branch Mountain Creek	
0841E_01 - Entire segment.	17672
0841F - Cottonwood Creek	
0841F_01 - Entire Segment.	10723, 17674, 17676, 20837
0841G - Dalworth Creek	
0841G_01 - Entire segment.	17671
0841H - Delaware Creek	
0841H_01 - Entire segment.	10871, 15617, 17175, 17176, 17177, 17178, 18314
0841I - Dry Branch Creek	
0841I_01 - Entire segment.	17173
0841J - Estelle Creek	
0841J_01 - Entire segment.	17174
0841K - Fish Creek	
0841K_01 - From South Belt Line Road (FM 1382) upstream to the upper end of the creek south of West Bardin Road (NHD RC 12030102000107) in Arlington, Tarrant County.	10724, 10725, 15294, 17677, 17679, 20342
0841L - Johnson Creek	
0841L_01 - From the confluence with the Lower West Fork Trinity River, upstream to just south of Mayfield Road in Arlington, Tarrant, Co..	10718, 10719, 10721, 17664, 17665, 18311
0841M - Kee Branch	
0841M_01 - Entire Segment.	10792, 15103, 16896
0841N - Kirby Creek	
0841N_01 - Entire segment	17675
0841O - Mountain Creek	
0841O_01 - Entire segment.	10815, 13672, 17681, 17682
0841P - North Fork Cottonwood Creek	
0841P_01 - Entire segment.	10722, 17673, 20836
0841Q - North Fork Fish Creek	
0841Q_01 - Entire segment.	17678, 20838
0841R - Rush Creek	
0841R_01 - Entire segment.	10788, 10790, 10791, 17190, 17191
0841S - Vilbig Lakes	
0841S_01 - A 5 acre area in NW corner of Vilbig Lakes, near confluence with unnamed creek, approx. 100 m south of intersection of Rusdell Rd./Marvel Dr. in Irving, Dallas, Co.	15624, 20793, 20794, 20795, 20796
0841T - Village Creek	
0841T_01 - A 7 mile stretch of Village Creek running upstream from confluence with West Fork Trinity River to SH 303 approx. 0.75 mi. downstream of Lake Arlington.	10778, 17189
0841U - West Irving Creek	
0841U_01 - A 4 mile stretch of West Irving Branch running upstream from approx. 0.4 mi. downstream of Oakdale Rd. to just south of Sowers Road in Irving, Dallas Co.	17179
0841V - Crockett Branch	
0841V_01 - Entire Segment.	15295, 17683

In-House 5 Year Assessment

Segment	Use	AU	Sites used for analysis	Parameter		Method	Result
0801 Trinity River Tidal	Aquatic Life Use	01	10892; 20839	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
0801 Trinity River Tidal	General Use	01	10892; 20839	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	10892; 20839	00940	CHLORIDE (MG/L AS CL)		Not Applicable
				00945	SULFATE (MG/L AS SO4)		Not Applicable
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Not Applicable
0801 Trinity River Tidal	Contact Recreation Use	01	10892; 20839	31701	ENTEROCOCCI, ENTEROLERT, IDEXX, (MPN/100 ML)	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0801B Old River	Aquatic Life Use	01	18360	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
0801B Old River	General Use	01	18360	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	18360	00940	CHLORIDE (MG/L AS CL)		Not Applicable
				00945	SULFATE (MG/L AS SO4)		Not Applicable
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Not Applicable
0801C Cotton Bayou	Aquatic Life Use	01	18696; 18697	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - Concern
						Grab Minimum	Adequate Data - Not Supporting
						Grab vs. 24 HR Avg	Adequate Data - Not Supporting
						Grab vs. 24 HR Min	Adequate Data - Not Supporting
0801C Cotton Bayou	General Use	01	18696; 18697	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - Concern
		Entire Segment	18696; 18697	00940	CHLORIDE (MG/L AS CL)		Not Applicable
				00945	SULFATE (MG/L AS SO4)		Not Applicable
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Not Applicable
0801C Cotton Bayou	Contact Recreation Use	01	18696; 18697	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Inadequate Data - Not Assessed
						Single Grab Standard	Inadequate Data - Not Assessed
				31701	ENTEROCOCCI, ENTEROLERT, IDEXX, (MPN/100 ML)	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Not Supporting
0801D Lynchburg	Aquatic Life Use	01	16148	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting

Canal						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Not Applicable
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Not Applicable
				01147	SELENIUM, TOTAL (UG/L AS SE)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Not Applicable
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
				01147	SELENIUM, TOTAL (UG/L AS SE)	Chronic	Limited Data - No Concern
0801D Lynchburg Canal	General Use	01	16148	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Limited Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Limited Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Limited Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	16148	00940	CHLORIDE (MG/L AS CL)		Not Applicable
				00945	SULFATE (MG/L AS SO4)		Not Applicable
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Not Applicable
0801D Lynchburg Canal	Contact Recreation Use	01	16148	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Limited Data - No Concern
						Single Grab Standard	Limited Data - No Concern
0802 Trinity River Below Lake Livingston	Aquatic Life Use	01	10894	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
		02	10895	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Inadequate Data - Not Assessed
						Grab Minimum	Inadequate Data - Not Assessed
						Grab vs. 24 HR Avg	Inadequate Data - Not Assessed
						Grab vs. 24 HR Min	Inadequate Data - Not Assessed
		03	10896	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
		04	10897	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting

				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Adequate Data - Fully Supporting
				01147	SELENIUM, TOTAL (UG/L AS SE)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
				01147	SELENIUM, TOTAL (UG/L AS SE)	Chronic	Limited Data - No Concern
		05	16998	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
0802 Trinity River Below Lake Livingston	General Use	01	10894	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Limited Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		02	10895	00400	PH (STANDARD UNITS)		Inadequate Data - Not Assessed
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Inadequate Data - Not Assessed
		03	10896	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Limited Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		04	10897	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		05	16998	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	10894; 10895; 10896; 10897; 16998	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0802 Trinity River Below Lake Livingston	Contact Recreation Use	01	10894	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		03	10896	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		04	10897	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting

		05	16998	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0802 Trinity River Below Lake Livingston	Public Water Supply Use	01	10894	00951	FLUORIDE, TOTAL (MG/L AS F)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		03	10896	00951	FLUORIDE, TOTAL (MG/L AS F)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		04	10897	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				01147	SELENIUM, TOTAL (UG/L AS SE)		Limited Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		05	16998	00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	10894; 10895; 10896; 10897; 16998	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0802B Long King Creek	Aquatic Life Use	02	10689	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Limited Data - No Concern
						Grab Minimum	Limited Data - No Concern
						Grab vs. 24 HR Avg	Limited Data - No Concern
						Grab vs. 24 HR Min	Limited Data - No Concern
0802B Long King Creek	General Use	02	10689	00400	PH (STANDARD UNITS)		Limited Data - No Concern
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Limited Data - No Concern
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Limited Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Limited Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Limited Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Limited Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Limited Data - No Concern
		Entire Segment	10689	00940	CHLORIDE (MG/L AS CL)		Limited Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Limited Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Limited Data - No Concern
0802B Long King Creek	Contact Recreation Use	02	10689	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Limited Data - No Concern
						Single Grab Standard	Limited Data - No Concern
0802B Long King Creek	Public Water Supply Use	02	10689	00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Limited Data - No Concern
		Entire Segment	10689	00940	CHLORIDE (MG/L AS CL)		Limited Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Limited Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Limited Data - No Concern
0802D Menard Creek	Aquatic Life Use	01	10688	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
0802D Menard Creek	General Use	01	10688	00400	PH (STANDARD UNITS)		Adequate Data - Not Supporting (Low pH)
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Limited Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Limited Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	10688	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
0802D Menard Creek	Contact Recreation Use	01	10688	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0802D Menard	Public Water Supply Use	01	10688	00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire	10688	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern

Creek		Segment		00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
0802NA Big Creek	Aquatic Life Use	Entire Segment	13685	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Limited Data - No Concern
						Grab Minimum	Limited Data - No Concern
						Grab vs. 24 HR Avg	Limited Data - No Concern
						Grab vs. 24 HR Min	Limited Data - No Concern
0802NA Big Creek	General Use	Entire Segment	13685	00400	PH (STANDARD UNITS)		Limited Data - No Concern
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Limited Data - No Concern
				00940	CHLORIDE (MG/L AS CL)		Limited Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Limited Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Limited Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Limited Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Limited Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Limited Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Limited Data - No Concern
0802NA Big Creek	Contact Recreation Use	Entire Segment	13685	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Limited Data - Not Supporting
						Single Grab Standard	Limited Data - No Concern
0802NA Big Creek	Public Water Supply Use	Entire Segment	13685	00940	CHLORIDE (MG/L AS CL)		Limited Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Limited Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Limited Data - No Concern
0803 Lake Livingston	Aquatic Life Use	01	10899	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Adequate Data - Fully Supporting
				01147	SELENIUM, TOTAL (UG/L AS SE)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
				01147	SELENIUM, TOTAL (UG/L AS SE)	Chronic	Limited Data - No Concern
		05	10909	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Adequate Data - Fully Supporting
				01147	SELENIUM, TOTAL (UG/L AS SE)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting

				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
				01147	SELENIUM, TOTAL (UG/L AS SE)	Chronic	Limited Data - No Concern
		06	10911	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Adequate Data - Fully Supporting
				01147	SELENIUM, TOTAL (UG/L AS SE)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
				01147	SELENIUM, TOTAL (UG/L AS SE)	Chronic	Limited Data - No Concern
		07	10913	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Adequate Data - Fully Supporting
				01147	SELENIUM, TOTAL (UG/L AS SE)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
				01147	SELENIUM, TOTAL (UG/L AS SE)	Chronic	Limited Data - No Concern
		10	10914	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting

						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Adequate Data - Fully Supporting
				01147	SELENIUM, TOTAL (UG/L AS SE)	Acute	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
				01147	SELENIUM, TOTAL (UG/L AS SE)	Chronic	Adequate Data - Fully Supporting
		11	10917	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Adequate Data - Fully Supporting
				01147	SELENIUM, TOTAL (UG/L AS SE)	Acute	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
				01147	SELENIUM, TOTAL (UG/L AS SE)	Chronic	Adequate Data - Fully Supporting
0803 Lake Livingston	General Use	01	10899	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		05	10909	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern

		06	10911	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - Concern
		07	10913	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - Concern
		10	10914	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - Concern
		11	10917	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - Concern
		Entire Segment	10899; 10909; 10911; 10913; 10914; 10917	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0803 Lake Livingston	Contact Recreation Use	01	10899	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		05	10909	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		06	10911	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		07	10913	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		10	10914	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		11	10917	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0803 Lake Livingston	Public Water Supply Use	01	10899	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				01147	SELENIUM, TOTAL (UG/L AS SE)		Limited Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		05	10909	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				01147	SELENIUM, TOTAL (UG/L AS SE)		Limited Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting

		06	10911	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				01147	SELENIUM, TOTAL (UG/L AS SE)		Limited Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		07	10913	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				01147	SELENIUM, TOTAL (UG/L AS SE)		Limited Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		10	10914	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				01147	SELENIUM, TOTAL (UG/L AS SE)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		11	10917	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				01147	SELENIUM, TOTAL (UG/L AS SE)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	10899; 10909; 10911; 10913; 10914; 10917	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0803A Harmon Creek	Aquatic Life Use	01	10698	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Limited Data - No Concern
						Grab Minimum	Limited Data - No Concern
						Grab vs. 24 HR Avg	Limited Data - No Concern
						Grab vs. 24 HR Min	Limited Data - No Concern
0803A Harmon Creek	General Use	01	10698	00400	PH (STANDARD UNITS)		Limited Data - No Concern
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Limited Data - No Concern
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Limited Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Limited Data - Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Limited Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Limited Data - Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Limited Data - Concern
		Entire Segment	10698	00940	CHLORIDE (MG/L AS CL)		Limited Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Limited Data - Not Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Limited Data - No Concern
0803A Harmon Creek	Contact Recreation Use	01	10698	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Limited Data - No Concern
						Single Grab Standard	Limited Data - No Concern
0803A Harmon Creek	Public Water Supply Use	01	10698	00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Limited Data - No Concern
		Entire Segment	10698	00940	CHLORIDE (MG/L AS CL)		Limited Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Limited Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Limited Data - No Concern
0803B White Rock Creek	Aquatic Life Use	01	10696	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Limited Data - No Concern
						Grab Minimum	Limited Data - No Concern
						Grab vs. 24 HR Avg	Limited Data - No Concern
						Grab vs. 24 HR Min	Limited Data - No Concern
0803B White Rock Creek	General Use	01	10696	00400	PH (STANDARD UNITS)		Limited Data - No Concern
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Limited Data - No Concern
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Limited Data - Concern

				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Limited Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Limited Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Limited Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Limited Data - No Concern
		Entire Segment	10696	00940	CHLORIDE (MG/L AS CL)		Limited Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Limited Data - Not Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Limited Data - No Concern
0803B White Rock Creek	Contact Recreation Use	01	10696	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Limited Data - No Concern
						Single Grab Standard	Limited Data - No Concern
0803B White Rock Creek	Public Water Supply Use	01	10696	00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Limited Data - No Concern
		Entire Segment	10696	00940	CHLORIDE (MG/L AS CL)		Limited Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Limited Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Limited Data - No Concern
0803E Nelson Creek	Aquatic Life Use	01	10700	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Limited Data - No Concern
						Grab Minimum	Limited Data - No Concern
						Grab vs. 24 HR Avg	Limited Data - No Concern
						Grab vs. 24 HR Min	Limited Data - No Concern
0803E Nelson Creek	General Use	01	10700	00400	PH (STANDARD UNITS)		Limited Data - No Concern
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Limited Data - No Concern
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Limited Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Limited Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Limited Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Limited Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Limited Data - No Concern
		Entire Segment	10700	00940	CHLORIDE (MG/L AS CL)		Limited Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Limited Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Limited Data - No Concern
0803E Nelson Creek	Contact Recreation Use	01	10700	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Limited Data - No Concern
						Single Grab Standard	Limited Data - No Concern
0803E Nelson Creek	Public Water Supply Use	01	10700	00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Limited Data - No Concern
		Entire Segment	10700	00940	CHLORIDE (MG/L AS CL)		Limited Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Limited Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Limited Data - No Concern
0803F Bedias Creek	Aquatic Life Use	01	10702	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Limited Data - No Concern
						Grab Minimum	Limited Data - No Concern
						Grab vs. 24 HR Avg	Limited Data - No Concern
						Grab vs. 24 HR Min	Limited Data - No Concern
0803F Bedias Creek	General Use	01	10702	00400	PH (STANDARD UNITS)		Limited Data - No Concern
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Limited Data - No Concern
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Limited Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Limited Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Limited Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Limited Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Limited Data - No Concern
		Entire Segment	10702	00940	CHLORIDE (MG/L AS CL)		Limited Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Limited Data - Not Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Limited Data - No Concern
0803F Bedias Creek	Contact Recreation Use	01	10702	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Limited Data - No Concern
						Single Grab Standard	Limited Data - No Concern
0803F Bedias Creek	Public Water Supply Use	01	10702	00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Limited Data - No Concern
		Entire Segment	10702	00940	CHLORIDE (MG/L AS CL)		Limited Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Limited Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Limited Data - No Concern
0803G Lake	Aquatic Life Use	01	16953	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern

Madisonville						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Limited Data - No Concern
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Limited Data - No Concern
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Limited Data - No Concern
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Limited Data - No Concern
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Limited Data - No Concern
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Limited Data - No Concern
				01147	SELENIUM, TOTAL (UG/L AS SE)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Limited Data - No Concern
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Limited Data - No Concern
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Limited Data - No Concern
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Limited Data - No Concern
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Limited Data - No Concern
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
				01147	SELENIUM, TOTAL (UG/L AS SE)	Chronic	Limited Data - No Concern
				01003	ARSENIC, BOTTOM DEPOSITS (MG/KG AS AS DRY WT)		Inadequate Data - Not Assessed
				01028	CADMIUM,TOTAL, BOTTOM DEPOSITS (MG/KG,DRY WT)		Inadequate Data - Not Assessed
				01029	CHROMIUM,TOTAL, BOTTOM DEPOSITS (MG/KG,DRY WT		Inadequate Data - Not Assessed
				01043	COPPER, BOTTOM DEPOSITS (MG/KG AS CU DRY WT)		Inadequate Data - Not Assessed
				01052	LEAD, BOTTOM DEPOSITS (MG/KG AS PB DRY WT)		Inadequate Data - Not Assessed
				01053	MANGANESE, BOTTOM DEPOSITS (MG/KG AS MN DRY WG		Inadequate Data - Not Assessed
				01068	NICKEL, TOTAL, BOTTOM DEPOSITS (MG/KG,DRY WT)		Inadequate Data - Not Assessed
				01078	SILVER, BOTTOM DEPOSITS (MG/KG AS AG DRY WT)		Inadequate Data - Not Assessed
				01093	ZINC, BOTTOM DEPOSITS (MG/KG AS ZN DRY WT)		Inadequate Data - Not Assessed
				01170	IRON, BOTTOM DEPOSITS (MG/KG AS FE DRY WT)		Inadequate Data - Not Assessed
				71921	MERCURY,TOT. IN BOT. DEPOS. (MG/KG) AS HG DRY WG		Inadequate Data - Not Assessed
0803G Lake Madisonville	General Use	01	16953	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Inadequate Data - Not Assessed
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	16953	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0803G Lake Madisonville	Contact Recreation Use	01	16953	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0803G Lake Madisonville	Public Water Supply Use	01	16953	00951	FLUORIDE, TOTAL (MG/L AS F)		Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)		Limited Data - No Concern
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)		Limited Data - No Concern
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Limited Data - No Concern
				01147	SELENIUM, TOTAL (UG/L AS SE)		Limited Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	16953	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0804 Trinity	Aquatic Life Use	01	13690	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern

River Above Lake Livingston						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Adequate Data - Fully Supporting
				01147	SELENIUM, TOTAL (UG/L AS SE)	Acute	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
				01147	SELENIUM, TOTAL (UG/L AS SE)	Chronic	Adequate Data - Fully Supporting
		04	10919	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
		07	10922	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting

				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
0804 Trinity River Above Lake Livingston	General Use	01	13690	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - Concern
		04	10919	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - Concern
		07	10922	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - Concern
		Entire Segment	13690; 10919; 10922	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0804 Trinity River Above Lake Livingston	Contact Recreation Use	01	13690	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		04	10919	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		07	10922	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0804 Trinity River Above Lake Livingston	Public Water Supply Use	01	13690	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				01147	SELENIUM, TOTAL (UG/L AS SE)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		04	10919	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		07	10922	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	13690; 10919; 10922	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern

0804B Keechi Creek	Aquatic Life Use	01	10706	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Inadequate Data - Not Assessed
						Grab Minimum	Inadequate Data - Not Assessed
						Grab vs. 24 HR Avg	Inadequate Data - Not Assessed
						Grab vs. 24 HR Min	Inadequate Data - Not Assessed
0804B Keechi Creek	General Use	01	10706	00400	PH (STANDARD UNITS)		Inadequate Data - Not Assessed
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Inadequate Data - Not Assessed
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Inadequate Data - Not Assessed
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Inadequate Data - Not Assessed
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Inadequate Data - Not Assessed
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Inadequate Data - Not Assessed
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Inadequate Data - Not Assessed
		Entire Segment	10706	00940	CHLORIDE (MG/L AS CL)		Inadequate Data - Not Assessed
				00945	SULFATE (MG/L AS SO4)		Inadequate Data - Not Assessed
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Inadequate Data - Not Assessed
0804B Keechi Creek	Contact Recreation Use	01	10706	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Inadequate Data - Not Assessed
						Single Grab Standard	Inadequate Data - Not Assessed
0804B Keechi Creek	Public Water Supply Use	01	10706	00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Inadequate Data - Not Assessed
		Entire Segment	10706	00940	CHLORIDE (MG/L AS CL)		Inadequate Data - Not Assessed
				00945	SULFATE (MG/L AS SO4)		Inadequate Data - Not Assessed
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Inadequate Data - Not Assessed
0804F Tehuacana Creek	Aquatic Life Use	01	10705; 20770	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Concern
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Limited Data - No Concern
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Limited Data - No Concern
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Limited Data - No Concern
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Limited Data - No Concern
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Limited Data - No Concern
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Limited Data - No Concern
				01147	SELENIUM, TOTAL (UG/L AS SE)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Limited Data - No Concern
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Limited Data - No Concern
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Limited Data - No Concern
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Limited Data - No Concern
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Limited Data - No Concern
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
				01147	SELENIUM, TOTAL (UG/L AS SE)	Chronic	Limited Data - No Concern
		02	18572	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Inadequate Data - Not Assessed
						Grab Minimum	Inadequate Data - Not Assessed
						Grab vs. 24 HR Avg	Inadequate Data - Not Assessed
						Grab vs. 24 HR Min	Inadequate Data - Not Assessed
0804F Tehuacana Creek	General Use	01	10705; 20770	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Inadequate Data - Not Assessed
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Limited Data - No Concern
		02	18572	00400	PH (STANDARD UNITS)		Inadequate Data - Not Assessed
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Inadequate Data - Not Assessed

				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Inadequate Data - Not Assessed
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Inadequate Data - Not Assessed
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Inadequate Data - Not Assessed
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Inadequate Data - Not Assessed
		Entire Segment	10705; 20770; 18572	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Not Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Not Supporting
0804F Tehuacana Creek	Contact Recreation Use	01	10705; 20770	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		02	18572	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Inadequate Data - Not Assessed
						Single Grab Standard	Inadequate Data - Not Assessed
0804F Tehuacana Creek	Public Water Supply Use	01	10705; 20770	00951	FLUORIDE, TOTAL (MG/L AS F)		Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)		Limited Data - No Concern
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)		Limited Data - No Concern
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Limited Data - No Concern
				01147	SELENIUM, TOTAL (UG/L AS SE)		Limited Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		02	18572	00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Inadequate Data - Not Assessed
		Entire Segment	10705; 20770; 18572	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0804G Catfish Creek	Aquatic Life Use	01	10717	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - Concern
				89857	DISSOLVED OXYGEN, 24-HOUR AVG. (MG/L) MIN. 4 MEA	Grab Screening Level	Limited Data - Concern
				00300	OXYGEN, DISSOLVED (MG/L)	Grab Minimum	Adequate Data - Fully Supporting
				89857	DISSOLVED OXYGEN, 24-HOUR AVG. (MG/L) MIN. 4 MEA	Grab Minimum	Limited Data - No Concern
				00300	OXYGEN, DISSOLVED (MG/L)	Grab vs. 24 HR Avg	Adequate Data - Not Supporting
				89857	DISSOLVED OXYGEN, 24-HOUR AVG. (MG/L) MIN. 4 MEA	Grab vs. 24 HR Avg	Limited Data - Not Supporting
				00300	OXYGEN, DISSOLVED (MG/L)	Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				89857	DISSOLVED OXYGEN, 24-HOUR AVG. (MG/L) MIN. 4 MEA	Grab vs. 24 HR Min	Limited Data - No Concern
0804G Catfish Creek	General Use	01	10717	00400	PH (STANDARD UNITS)		Adequate Data - Not Supporting (Low pH)
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Limited Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	10717	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0804G Catfish Creek	Contact Recreation Use	01	10717	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0804G Catfish Creek	Public Water Supply Use	01	10717	00951	FLUORIDE, TOTAL (MG/L AS F)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	10717	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0804H Upper Keechi Creek	Aquatic Life Use	01	20771	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting

						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Limited Data - No Concern
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Limited Data - No Concern
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Limited Data - No Concern
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Limited Data - No Concern
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Limited Data - No Concern
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Limited Data - No Concern
				01147	SELENIUM, TOTAL (UG/L AS SE)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Limited Data - No Concern
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Limited Data - No Concern
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Limited Data - No Concern
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Limited Data - No Concern
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Limited Data - No Concern
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
				01147	SELENIUM, TOTAL (UG/L AS SE)	Chronic	Limited Data - No Concern
0804H Upper Keechi Creek	General Use	01	20771	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Limited Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Limited Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Limited Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Inadequate Data - Not Assessed
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Limited Data - No Concern
		Entire Segment	20771	00940	CHLORIDE (MG/L AS CL)		Limited Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Limited Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0804H Upper Keechi Creek	Contact Recreation Use	01	20771	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Limited Data - No Concern
						Single Grab Standard	Limited Data - No Concern
0804H Upper Keechi Creek	Public Water Supply Use	01	20771	00951	FLUORIDE, TOTAL (MG/L AS F)		Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)		Limited Data - No Concern
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)		Limited Data - No Concern
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Limited Data - No Concern
				01147	SELENIUM, TOTAL (UG/L AS SE)		Limited Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Limited Data - No Concern
		Entire Segment	20771	00940	CHLORIDE (MG/L AS CL)		Limited Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Limited Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0804J Fairfield Lake	Aquatic Life Use	01	17951	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Limited Data - No Concern
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Limited Data - No Concern
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Limited Data - No Concern
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Limited Data - No Concern
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Limited Data - No Concern
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Limited Data - No Concern
				01147	SELENIUM, TOTAL (UG/L AS SE)	Acute	Limited Data - No Concern

				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Limited Data - No Concern
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Limited Data - No Concern
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Limited Data - No Concern
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Limited Data - No Concern
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Limited Data - No Concern
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
				01147	SELENIUM, TOTAL (UG/L AS SE)	Chronic	Limited Data - No Concern
0804J Fairfield Lake	General Use	01	17951	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Limited Data - Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - Concern
		Entire Segment	17951	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Not Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Not Supporting
0804J Fairfield Lake	Contact Recreation Use	01	17951	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0804J Fairfield Lake	Public Water Supply Use	01	17951	00951	FLUORIDE, TOTAL (MG/L AS F)		Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)		Limited Data - No Concern
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)		Limited Data - No Concern
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Limited Data - No Concern
				01147	SELENIUM, TOTAL (UG/L AS SE)		Limited Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	17951	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0804NA Lower Keechi Creek	Aquatic Life Use	Entire Segment	20382	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Not Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Limited Data - No Concern
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Limited Data - No Concern
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Limited Data - No Concern
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Limited Data - No Concern
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Limited Data - No Concern
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Limited Data - No Concern
				01147	SELENIUM, TOTAL (UG/L AS SE)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Limited Data - No Concern
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Limited Data - No Concern
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Limited Data - No Concern
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Limited Data - No Concern
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Limited Data - No Concern
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
				01147	SELENIUM, TOTAL (UG/L AS SE)	Chronic	Limited Data - No Concern
0804NA Lower	General Use	Entire Segment	20382	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting

Keechi Creek				00940	CHLORIDE (MG/L AS CL)		Limited Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Limited Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Limited Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Limited Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Limited Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Inadequate Data - Not Assessed
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Limited Data - No Concern
0804NA Lower Keechi Creek	Contact Recreation Use	Entire Segment	20382	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Limited Data - Not Supporting
						Single Grab Standard	Limited Data - No Concern
0804NA Lower Keechi Creek	Public Water Supply Use	Entire Segment	20382	00940	CHLORIDE (MG/L AS CL)		Limited Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Limited Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
				00951	FLUORIDE, TOTAL (MG/L AS F)		Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)		Limited Data - No Concern
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)		Limited Data - No Concern
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Limited Data - No Concern
				01147	SELENIUM, TOTAL (UG/L AS SE)		Limited Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Limited Data - No Concern
0805 Upper Trinity River	Aquatic Life Use	02	10925	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
		03	10934; 20444	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Limited Data - No Concern
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting

				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Limited Data - No Concern
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
				01003	ARSENIC, BOTTOM DEPOSITS (MG/KG AS AS DRY WT)		Inadequate Data - Not Assessed
				01028	CADMIUM,TOTAL, BOTTOM DEPOSITS (MG/KG,DRY WT)		Inadequate Data - Not Assessed
				01029	CHROMIUM,TOTAL, BOTTOM DEPOSITS (MG/KG,DRY WT		Inadequate Data - Not Assessed
				01043	COPPER, BOTTOM DEPOSITS (MG/KG AS CU DRY WT)		Inadequate Data - Not Assessed
				01052	LEAD, BOTTOM DEPOSITS (MG/KG AS PB DRY WT)		Inadequate Data - Not Assessed
				01053	MANGANESE, BOTTOM DEPOSITS (MG/KG AS MN DRY WG		Inadequate Data - Not Assessed
				01068	NICKEL, TOTAL, BOTTOM DEPOSITS (MG/KG,DRY WT)		Inadequate Data - Not Assessed
				01078	SILVER, BOTTOM DEPOSITS (MG/KG AS AG DRY WT)		Inadequate Data - Not Assessed
				01093	ZINC, BOTTOM DEPOSITS (MG/KG AS ZN DRY WT)		Inadequate Data - Not Assessed
				01170	IRON, BOTTOM DEPOSITS (MG/KG AS FE DRY WT)		Inadequate Data - Not Assessed
				34203	ACENAPHTHYLENE, DRY WT, BOTTOM (UG/KG)		Inadequate Data - Not Assessed
				34208	ACENAPHTHENE, DRY WT, BOTTOM (UG/KG)		Inadequate Data - Not Assessed
				34223	ANTHRACENE DRY WTBOTUG/KG		Inadequate Data - Not Assessed
				34250	BENZO-A-PYRENE DRY WTBOTUG/KG		Inadequate Data - Not Assessed
				34257	B-BHC-BETA DRY WTBOTUG/KG		Inadequate Data - Not Assessed
				34323	CHRYSENE DRY WTBOTUG/KG		Inadequate Data - Not Assessed
				34379	FLUORANTHENE DRY WTBOTUG/KG		Inadequate Data - Not Assessed
				34384	FLUORENE DRY WTBOTUG/KG		Inadequate Data - Not Assessed
				34399	HEXACHLOROETHANE DRY WTBOTUG/KG		Inadequate Data - Not Assessed
				34445	NAPHTHALENE DRY WTBOTUG/KG		Inadequate Data - Not Assessed
				34450	NITROBENZENE DRY WTBOTUG/KG		Inadequate Data - Not Assessed
				34464	PHENANTHRENE DRY WTBOTUG/KG		Inadequate Data - Not Assessed
				34472	PYRENE DRY WTBOTUG/KG		Inadequate Data - Not Assessed
				34529	BENZO(A)ANTHRACENE1,2-BENZANTHRACENDRYWTBOTUG/KG		Inadequate Data - Not Assessed
				34554	1,2,4-TRICHLOROBENZENE DRY WTBOTUG/KG		Inadequate Data - Not Assessed
				34569	1,3-DICHLOROBENZENE, DRY WT, BOTTOM (UG/KG)		Inadequate Data - Not Assessed
				34574	1,4-DICHLOROBENZENE, DRY WT, BOTTOM (UG/KG)		Inadequate Data - Not Assessed
				39076	BHC-ALPHA ISOMER, BOTTOM DEPOS (UG/KG DRY SOL)		Inadequate Data - Not Assessed
				39112	DI-N-BUTYL PHTHALATE, SEDIMENTS,DRY WT,UG/KG		Inadequate Data - Not Assessed
				39333	ALDRIN, BOTTOM DEPOS. (UG/KG DRY SOLIDS)		Inadequate Data - Not Assessed
				39351	CHLORDANE(TECH MIX&METABS) SED,DRY WT,UG/KG		Inadequate Data - Not Assessed
				39383	DIELDRIN IN BOTTOM DEPOS. (UG/KG DRY SOLIDS)		Inadequate Data - Not Assessed
				39393	ENDRIN IN BOTTOM DEPOS. (UG/KG DRY SOLIDS)		Inadequate Data - Not Assessed
				39403	TOXAPHENE IN BOTTOM DEPOS.(UG/KG DRY SOLIDS)		Inadequate Data - Not Assessed
				39423	HEPTACHLOR EPOXIDE IN BOT. DEP. (UG/KG DRY SOL.)		Inadequate Data - Not Assessed
				39519	PCBS, BOTTOM DEPOSITS (UG/KG DRY SOLIDS)		Inadequate Data - Not Assessed
				39705	HEXACHLOROBUTADIENE BOT. DEPOS. (UG/KG DRY WT)		Inadequate Data - Not Assessed
				39783	GAMMA BHC (LINDANE), SEDIMENT, DRY WT (UG/KG)		Inadequate Data - Not Assessed
		04	10937; 20933; 20934	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Limited Data - No Concern

				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Limited Data - No Concern
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
0805 Upper Trinity River	General Use	02	10925	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - Concern
		03	10934; 20444	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - Concern
		04	10937; 20933; 20934	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - Concern
		Entire Segment	10925; 10934; 20444; 10937; 20933; 20934	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0805 Upper Trinity River	Contact Recreation Use	02	10925	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		03	10934; 20444	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Concern
		04	10937; 20933; 20934	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Concern
0805 Upper Trinity River	Public Water Supply Use	02	10925	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		03	10934; 20444	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		04	10937; 20933; 20934	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire	10925; 10934; 20444;	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern

		Segment	10937; 20933; 20934	00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0806 West Fork Trinity River Below Lake Worth	Aquatic Life Use	01	10938; 16120; 17368; 17863; 20292	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
0806 West Fork Trinity River Below Lake Worth	General Use	01	10938; 16120; 17368; 17863; 20292	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	10938; 16120; 17368; 17863; 20292	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0806 West Fork Trinity River Below Lake Worth	Contact Recreation Use	01	10938; 16120; 17368; 17863; 20292	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0806 West Fork Trinity River Below Lake Worth	Public Water Supply Use	01	10938; 16120; 17368; 17863; 20292	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	10938; 16120; 17368; 17863; 20292	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0806D Marine Creek	Aquatic Life Use	01	17370	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
0806D Marine Creek	General Use	01	17370	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
		Entire Segment	17370	70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0806D Marine Creek	Contact Recreation Use	01	17370	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Not Supporting
0806D	Public Water	Entire	17370	70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern

Marine Creek	Supply Use	Segment					
0806E Sycamore Creek	Aquatic Life Use	01	17369	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
0806E Sycamore Creek	General Use	01	17369	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
		Entire Segment	17369	70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0806E Sycamore Creek	Contact Recreation Use	01	17369	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Not Supporting
0806E Sycamore Creek	Public Water Supply Use	Entire Segment	17369	70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0806F Little Fossil Creek	Aquatic Life Use	01	21425	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Inadequate Data - Not Assessed
						Grab Minimum	Inadequate Data - Not Assessed
						Grab vs. 24 HR Avg	Inadequate Data - Not Assessed
						Grab vs. 24 HR Min	Inadequate Data - Not Assessed
0806F Little Fossil Creek	General Use	01	21425	00400	PH (STANDARD UNITS)		Inadequate Data - Not Assessed
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Inadequate Data - Not Assessed
		Entire Segment	21425	70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Inadequate Data - Not Assessed
0806F Little Fossil Creek	Contact Recreation Use	01	21425	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Inadequate Data - Not Assessed
						Single Grab Standard	Inadequate Data - Not Assessed
0806F Little Fossil Creek	Public Water Supply Use	Entire Segment	21425	70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Inadequate Data - Not Assessed
0807 Lake Worth	Aquatic Life Use	01	10942; 15163; 15166; 15167	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
0807 Lake Worth	General Use	01	10942; 15163; 15166; 15167	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	10942; 15163; 15166; 15167	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0807 Lake Worth	Contact Recreation Use	01	10942; 15163; 15166; 15167	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0807 Lake Worth	Public Water Supply Use	01	10942; 15163; 15166; 15167	00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	10942; 15163; 15166; 15167	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0809 Eagle Mountain Reservoir	Aquatic Life Use	01	10944	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
		05	10952	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting

		08	10956	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
		10	10960	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
		12	10964	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
0809 Eagle Mountain Reservoir	General Use	01	10944	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		05	10952	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		08	10956	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		10	10960	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		12	10964	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	10944; 10952; 10956; 10960; 10964	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0809 Eagle Mountain Reservoir	Contact Recreation Use	01	10944	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		05	10952	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		08	10956	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting

						Single Grab Standard	Adequate Data - Fully Supporting
		10	10960	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		12	10964	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0809 Eagle Mountain Reservoir	Public Water Supply Use	01	10944	00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		05	10952	00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		08	10956	00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		10	10960	00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		12	10964	00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	10944; 10952; 10956; 10960; 10964	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0809B Ash Creek	Aquatic Life Use	Entire Segment	10854	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
0809B Ash Creek	General Use	Entire Segment	10854	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Not Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - Concern
0809B Ash Creek	Contact Recreation Use	Entire Segment	10854	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Not Supporting
0809B Ash Creek	Public Water Supply Use	Entire Segment	10854	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
0809NA Derrett Creek	Aquatic Life Use	Entire Segment	10858	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
0809NA Derrett Creek	General Use	Entire Segment	10858	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Not Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
0809NA Derrett Creek	Contact Recreation Use	Entire Segment	10858	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0809NA Derrett Creek	Public Water Supply Use	Entire Segment	10858	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
0809NA Dosier Creek	Aquatic Life Use	Entire Segment	10855	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
0809NA Dosier Creek	General Use	Entire Segment	10855	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Not Supporting

				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
0809NA Dosier Creek	Contact Recreation Use	Entire Segment	10855	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0809NA Dosier Creek	Public Water Supply Use	Entire Segment	10855	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
0809A Walnut Creek	Aquatic Life Use	Entire Segment	10853	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
0809A Walnut Creek	General Use	Entire Segment	10853	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Not Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
0809A Walnut Creek	Contact Recreation Use	Entire Segment	10853	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0809A Walnut Creek	Public Water Supply Use	Entire Segment	10853	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
0810 West Fork Trinity River Below Bridgeport Reservoir	Aquatic Life Use	01	10967; 10969; 14246; 17844	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
		02	14904; 20840	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
0810 West Fork Trinity River Below Bridgeport Reservoir	General Use	01	10967; 10969; 14246; 17844	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Limited Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		02	14904; 20840	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
		Entire Segment	10967; 10969; 14246; 17844; 14904; 20840	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0810 West Fork Trinity River Below Bridgeport Reservoir	Contact Recreation Use	01	10967; 10969; 14246; 17844	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Not Supporting
		02	14904; 20840	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0810 West Fork Trinity River Below	Public Water Supply Use	01	10967; 10969; 14246; 17844	00951	FLUORIDE, TOTAL (MG/L AS F)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire	10967; 10969; 14246;	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern

Bridgeport Reservoir		Segment	17844; 14904; 20840	00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0810A Big Sandy Creek	Aquatic Life Use	01	15688	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Limited Data - No Concern
						Grab Minimum	Limited Data - No Concern
						Grab vs. 24 HR Avg	Limited Data - No Concern
						Grab vs. 24 HR Min	Limited Data - No Concern
0810A Big Sandy Creek	General Use	01	15688	00400	PH (STANDARD UNITS)		Limited Data - No Concern
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Limited Data - No Concern
		Entire Segment	15688	70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Limited Data - Concern
0810A Big Sandy Creek	Contact Recreation Use	01	15688	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Limited Data - Not Supporting
						Single Grab Standard	Limited Data - No Concern
0810A Big Sandy Creek	Public Water Supply Use	Entire Segment	15688	70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Limited Data - No Concern
0810B Garrett Creek	Aquatic Life Use	01	16767	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Limited Data - No Concern
						Grab Minimum	Limited Data - No Concern
						Grab vs. 24 HR Avg	Limited Data - No Concern
						Grab vs. 24 HR Min	Limited Data - No Concern
0810B Garrett Creek	General Use	01	16767	00400	PH (STANDARD UNITS)		Limited Data - No Concern
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Limited Data - No Concern
		Entire Segment	16767	70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Limited Data - No Concern
0810B Garrett Creek	Contact Recreation Use	01	16767	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0810B Garrett Creek	Public Water Supply Use	Entire Segment	16767	70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Limited Data - No Concern
0810C Martin Branch	Aquatic Life Use	01	17848	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
0810C Martin Branch	General Use	01	17848	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
		Entire Segment	17848	70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0810C Martin Branch	Contact Recreation Use	01	17848	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Not Supporting
0810C Martin Branch	Public Water Supply Use	Entire Segment	17848	70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0810D Salt Creek	Aquatic Life Use	01	16766	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Limited Data - No Concern
						Grab Minimum	Limited Data - No Concern
						Grab vs. 24 HR Avg	Limited Data - No Concern
						Grab vs. 24 HR Min	Limited Data - No Concern
0810D Salt Creek	General Use	01	16766	00400	PH (STANDARD UNITS)		Limited Data - No Concern
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Limited Data - No Concern
		Entire Segment	16766	70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Limited Data - Concern
0810D Salt Creek	Contact Recreation Use	01	16766	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Limited Data - No Concern
						Single Grab Standard	Limited Data - No Concern
0810D Salt Creek	Public Water Supply Use	Entire Segment	16766	70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Limited Data - No Concern
0811 Bridgeport Reservoir	Aquatic Life Use	01	16762; 16764	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting

				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Inadequate Data - Not Assessed
						Chronic	Inadequate Data - Not Assessed
		02	15165; 16763	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Inadequate Data - Not Assessed
						Grab Minimum	Inadequate Data - Not Assessed
						Grab vs. 24 HR Avg	Inadequate Data - Not Assessed
						Grab vs. 24 HR Min	Inadequate Data - Not Assessed
		03	10970	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
		04	15164	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Inadequate Data - Not Assessed
						Chronic	Inadequate Data - Not Assessed
0811 Bridgeport Reservoir	General Use	01	16762; 16764	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		02	15165; 16763	00400	PH (STANDARD UNITS)		Inadequate Data - Not Assessed
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Inadequate Data - Not Assessed
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Inadequate Data - Not Assessed
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Inadequate Data - Not Assessed
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Inadequate Data - Not Assessed
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Inadequate Data - Not Assessed
		03	10970	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		04	15164	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		05	16736; 16759; 16760; 16761; 16765	00400	PH (STANDARD UNITS)		Inadequate Data - Not Assessed
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Limited Data - No Concern
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Limited Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Limited Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Limited Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Limited Data - No Concern
		Entire Segment	16762; 16764; 15165; 16763; 10970; 15164; 16736; 16759; 16760; 16761; 16765	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0811 Bridgeport	Contact Recreation Use	01	16762; 16764	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting

Reservoir		03	10970	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		04	15164	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0811 Bridgeport Reservoir	Public Water Supply Use	01	16762; 16764	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Inadequate Data - Not Assessed
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		02	15165; 16763	00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Inadequate Data - Not Assessed
		03	10970	00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		04	15164	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Inadequate Data - Not Assessed
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		05	16736; 16759; 16760; 16761; 16765	00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Limited Data - No Concern
		Entire Segment	16762; 16764; 15165; 16763; 10970; 15164; 16736; 16759; 16760; 16761; 16765	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0811NA Beans Creek	Aquatic Life Use	Entire Segment	16737	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
0811NA Beans Creek	General Use	Entire Segment	16737	00400	PH (STANDARD UNITS)		Limited Data - No Concern
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Limited Data - No Concern
				00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Limited Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - Concern
0811NA Beans Creek	Contact Recreation Use	Entire Segment	16737	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Not Supporting
0811NA Beans Creek	Public Water Supply Use	Entire Segment	16737	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Limited Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
0811NA Big Creek	General Use	Entire Segment	16768	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
0811NA Big Creek	Contact Recreation Use	Entire Segment	16768	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Not Supporting
0811NA Big Creek	Public Water Supply Use	Entire Segment	16768	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
0812 West Fork Trinity River Above Bridgeport Reservoir	Aquatic Life Use	01	10972; 18059	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
0812 West Fork Trinity River Above Bridgeport Reservoir	General Use	01	10972; 18059	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Limited Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern

				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - Concern
		Entire Segment	10972; 18059	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Limited Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0812 West Fork Trinity River Above Bridgeport Reservoir	Contact Recreation Use	01	10972; 18059	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Not Supporting
0812 West Fork Trinity River Above Bridgeport Reservoir	Public Water Supply Use	01	10972; 18059	00951	FLUORIDE, TOTAL (MG/L AS F)		Limited Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	10972; 18059	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Limited Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0813 Houston County Lake	Aquatic Life Use	01	10973	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
0813 Houston County Lake	General Use	01	10973	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	10973	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0813 Houston County Lake	Contact Recreation Use	01	10973	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0813 Houston County Lake	Public Water Supply Use	01	10973	00951	FLUORIDE, TOTAL (MG/L AS F)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	10973	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0814 Chambers Creek Above Richland-Chambers Reservoir	Aquatic Life Use	01	10975	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
		02	10977	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
0814 Chambers Creek Above Richland-Chambers Reservoir	General Use	01	10975	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - Concern
		02	10977	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Inadequate Data - Not Assessed

				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Inadequate Data - Not Assessed
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Inadequate Data - Not Assessed
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Inadequate Data - Not Assessed
		Entire Segment	10975; 10977	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0814 Chambers Creek Above Richland-Chambers Reservoir	Contact Recreation Use	01	10975	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Concern
		02	10977	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Inadequate Data - Not Assessed
						Single Grab Standard	Inadequate Data - Not Assessed
0814 Chambers Creek Above Richland-Chambers Reservoir	Public Water Supply Use	01	10975	00951	FLUORIDE, TOTAL (MG/L AS F)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		02	10977	00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Inadequate Data - Not Assessed
		Entire Segment	10975; 10977	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0815 Bardwell Reservoir	Aquatic Life Use	01	10979	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
0815 Bardwell Reservoir	General Use	01	10979	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	10979	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Not Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0815 Bardwell Reservoir	Contact Recreation Use	01	10979	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0815 Bardwell Reservoir	Public Water Supply Use	01	10979	00951	FLUORIDE, TOTAL (MG/L AS F)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	10979	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0816 Lake Waxahachie	Aquatic Life Use	01	10980	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
0816 Lake Waxahachie	General Use	01	10980	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	10980	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0816 Lake	Contact Recreation	01	10980	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting

Waxahachie	Use					Single Grab Standard	Adequate Data - Fully Supporting
0816 Lake Waxahachie	Public Water Supply Use	01	10980	00951	FLUORIDE, TOTAL (MG/L AS F)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	10980	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0817 Navarro Mills Lake	Aquatic Life Use	01	10981	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
0817 Navarro Mills Lake	General Use	01	10981	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Inadequate Data - Not Assessed
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Limited Data - No Concern
		Entire Segment	10981	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0817 Navarro Mills Lake	Contact Recreation Use	01	10981	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0817 Navarro Mills Lake	Public Water Supply Use	01	10981	00951	FLUORIDE, TOTAL (MG/L AS F)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	10981	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0818 Cedar Creek Reservoir	Aquatic Life Use	01	16748	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
		04	16749	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
		06	16747; 16750	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
		09	16753	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
		11	16772	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
0818 Cedar Creek Reservoir	General Use	01	16748	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern

		04	16749	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		06	16747; 16750	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		09	16753	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		11	16772	00400	PH (STANDARD UNITS)		Adequate Data - Concern (High pH)
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Limited Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Limited Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Limited Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Limited Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Limited Data - No Concern
		Entire Segment	16748; 16749; 16747; 16750; 16753; 16772	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0818 Cedar Creek Reservoir	Contact Recreation Use	01	16748	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		04	16749	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		06	16747; 16750	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		09	16753	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		11	16772	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0818 Cedar Creek Reservoir	Public Water Supply Use	01	16748	00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		04	16749	00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		06	16747; 16750	00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		09	16753	00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		11	16772	00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Limited Data - No Concern
		Entire Segment	16748; 16749; 16747; 16750; 16753; 16772	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0818NA Caney Creek	Aquatic Life Use	Entire Segment	16758	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Inadequate Data - Not Assessed
						Grab Minimum	Inadequate Data - Not Assessed
						Grab vs. 24 HR Avg	Inadequate Data - Not Assessed
						Grab vs. 24 HR Min	Inadequate Data - Not Assessed
0818NA	General Use	Entire	16758	00400	PH (STANDARD UNITS)		Inadequate Data - Not Assessed

Caney Creek		Segment		00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Inadequate Data - Not Assessed
				00940	CHLORIDE (MG/L AS CL)		Inadequate Data - Not Assessed
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Inadequate Data - Not Assessed
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Inadequate Data - Not Assessed
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Inadequate Data - Not Assessed
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Inadequate Data - Not Assessed
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Inadequate Data - Not Assessed
0818NA Caney Creek	Contact Recreation Use	Entire Segment	16758	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Inadequate Data - Not Assessed
						Single Grab Standard	Inadequate Data - Not Assessed
0818NA Caney Creek	Public Water Supply Use	Entire Segment	16758	00940	CHLORIDE (MG/L AS CL)		Inadequate Data - Not Assessed
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Inadequate Data - Not Assessed
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Inadequate Data - Not Assessed
0818NA Cedar Creek	Aquatic Life Use	Entire Segment	17842	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
0818NA Cedar Creek	General Use	Entire Segment	17842	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - Concern
0818NA Cedar Creek	Contact Recreation Use	Entire Segment	17842	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Not Supporting
0818NA Cedar Creek	Public Water Supply Use	Entire Segment	17842	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
0818NA Clear Creek	Aquatic Life Use	Entire Segment	16755	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Inadequate Data - Not Assessed
						Grab Minimum	Inadequate Data - Not Assessed
						Grab vs. 24 HR Avg	Inadequate Data - Not Assessed
						Grab vs. 24 HR Min	Inadequate Data - Not Assessed
0818NA Clear Creek	General Use	Entire Segment	16755	00400	PH (STANDARD UNITS)		Inadequate Data - Not Assessed
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Inadequate Data - Not Assessed
				00940	CHLORIDE (MG/L AS CL)		Inadequate Data - Not Assessed
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Inadequate Data - Not Assessed
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Inadequate Data - Not Assessed
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Inadequate Data - Not Assessed
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Inadequate Data - Not Assessed
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Inadequate Data - Not Assessed
0818NA Clear Creek	Contact Recreation Use	Entire Segment	16755	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Inadequate Data - Not Assessed
						Single Grab Standard	Inadequate Data - Not Assessed
0818NA Clear Creek	Public Water Supply Use	Entire Segment	16755	00940	CHLORIDE (MG/L AS CL)		Inadequate Data - Not Assessed
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Inadequate Data - Not Assessed
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Inadequate Data - Not Assessed
0818NA Kings Creek	Aquatic Life Use	Entire Segment	21000; 16778	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
0818NA Kings Creek	General Use	Entire Segment	21000; 16778	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Not Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern

				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - Concern
0818NA Kings Creek	Contact Recreation Use	Entire Segment	21000; 16778	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Not Supporting
0818NA Kings Creek	Public Water Supply Use	Entire Segment	21000; 16778	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
0818NA Lacy Fork Creek	Aquatic Life Use	Entire Segment	16777	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Limited Data - No Concern
						Grab Minimum	Limited Data - No Concern
						Grab vs. 24 HR Avg	Limited Data - No Concern
						Grab vs. 24 HR Min	Limited Data - No Concern
0818NA Lacy Fork Creek	General Use	Entire Segment	16777	00400	PH (STANDARD UNITS)		Limited Data - No Concern
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Limited Data - No Concern
				00940	CHLORIDE (MG/L AS CL)		Limited Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Limited Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Limited Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Limited Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Limited Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Limited Data - No Concern
0818NA Lacy Fork Creek	Contact Recreation Use	Entire Segment	16777	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Limited Data - Not Supporting
						Single Grab Standard	Limited Data - Not Supporting
0818NA Lacy Fork Creek	Public Water Supply Use	Entire Segment	16777	00940	CHLORIDE (MG/L AS CL)		Limited Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Limited Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Limited Data - No Concern
0818NA North Twin Creek	Aquatic Life Use	Entire Segment	16756	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Limited Data - No Concern
						Grab Minimum	Limited Data - No Concern
						Grab vs. 24 HR Avg	Limited Data - No Concern
						Grab vs. 24 HR Min	Limited Data - No Concern
0818NA North Twin Creek	General Use	Entire Segment	16756	00400	PH (STANDARD UNITS)		Limited Data - No Concern
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Limited Data - No Concern
				00940	CHLORIDE (MG/L AS CL)		Limited Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Limited Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Limited Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Limited Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Limited Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Limited Data - No Concern
0818NA North Twin Creek	Contact Recreation Use	Entire Segment	16756	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Limited Data - Not Supporting
						Single Grab Standard	Limited Data - Concern
0818NA North Twin Creek	Public Water Supply Use	Entire Segment	16756	00940	CHLORIDE (MG/L AS CL)		Limited Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Limited Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Limited Data - No Concern
0818NA Prairie Creek	Aquatic Life Use	Entire Segment	16775	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Inadequate Data - Not Assessed
						Grab Minimum	Inadequate Data - Not Assessed
						Grab vs. 24 HR Avg	Inadequate Data - Not Assessed
						Grab vs. 24 HR Min	Inadequate Data - Not Assessed
0818NA Prairie Creek	General Use	Entire Segment	16775	00400	PH (STANDARD UNITS)		Inadequate Data - Not Assessed
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Inadequate Data - Not Assessed
				00940	CHLORIDE (MG/L AS CL)		Inadequate Data - Not Assessed
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Inadequate Data - Not Assessed
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Inadequate Data - Not Assessed
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Inadequate Data - Not Assessed
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Inadequate Data - Not Assessed
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Inadequate Data - Not Assessed

0818NA Prairie Creek	Contact Recreation Use	Entire Segment	16775	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Inadequate Data - Not Assessed
						Single Grab Standard	Inadequate Data - Not Assessed
0818NA Prairie Creek	Public Water Supply Use	Entire Segment	16775	00940	CHLORIDE (MG/L AS CL)		Inadequate Data - Not Assessed
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Inadequate Data - Not Assessed
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Inadequate Data - Not Assessed
0818NA South Twin Creek	Aquatic Life Use	Entire Segment	16757	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Inadequate Data - Not Assessed
						Grab Minimum	Inadequate Data - Not Assessed
						Grab vs. 24 HR Avg	Inadequate Data - Not Assessed
						Grab vs. 24 HR Min	Inadequate Data - Not Assessed
0818NA South Twin Creek	General Use	Entire Segment	16757	00400	PH (STANDARD UNITS)		Inadequate Data - Not Assessed
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Inadequate Data - Not Assessed
				00940	CHLORIDE (MG/L AS CL)		Inadequate Data - Not Assessed
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Inadequate Data - Not Assessed
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Inadequate Data - Not Assessed
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Inadequate Data - Not Assessed
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Inadequate Data - Not Assessed
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Inadequate Data - Not Assessed
0818NA South Twin Creek	Contact Recreation Use	Entire Segment	16757	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Inadequate Data - Not Assessed
						Single Grab Standard	Inadequate Data - Not Assessed
0818NA South Twin Creek	Public Water Supply Use	Entire Segment	16757	00940	CHLORIDE (MG/L AS CL)		Inadequate Data - Not Assessed
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Inadequate Data - Not Assessed
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Inadequate Data - Not Assessed
0819 East Fork Trinity River	Aquatic Life Use	01	10991; 10996	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
0819 East Fork Trinity River	General Use	01	10991; 10996	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - Concern
		Entire Segment	10991; 10996	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0819 East Fork Trinity River	Contact Recreation Use	01	10991; 10996	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0819 East Fork Trinity River	Public Water Supply Use	01	10991; 10996	00951	FLUORIDE, TOTAL (MG/L AS F)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	10991; 10996	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0820 Lake Ray Hubbard	Aquatic Life Use	01	16809	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Limited Data - No Concern

				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Limited Data - No Concern
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Limited Data - No Concern
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
		02	16829	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Limited Data - No Concern
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Limited Data - No Concern
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Limited Data - No Concern
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Limited Data - No Concern
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Limited Data - No Concern
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Limited Data - No Concern
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Limited Data - No Concern
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Limited Data - No Concern
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Limited Data - No Concern
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Limited Data - No Concern
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
		04	10998	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Limited Data - No Concern
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Limited Data - No Concern
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
		05	11001; 17829	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting

				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Limited Data - No Concern
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Limited Data - No Concern
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
		06	17846	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
0820 Lake Ray Hubbard	General Use	01	16809	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		02	16829	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		04	10998	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern

				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		05	11001; 17829	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		06	17846	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Inadequate Data - Not Assessed
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	16809; 16829; 10998; 10998; 11001; 17829; 17846	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0820 Lake Ray Hubbard	Contact Recreation Use	04	10998	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		05	11001; 17829	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		06	17846	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0820 Lake Ray Hubbard	Public Water Supply Use	01	16809	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01005	BARIUM, DISSOLVED (UG/L AS BA)		Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Limited Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
				32101	BROMODICHLOROMETHANE,WHOLE WATER,UG/L		Adequate Data - Fully Supporting
				32104	BROMOFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
				32106	CHLOROFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
		02	16829	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Limited Data - No Concern
				01005	BARIUM, DISSOLVED (UG/L AS BA)		Limited Data - No Concern
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)		Limited Data - No Concern
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Limited Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
				32101	BROMODICHLOROMETHANE,WHOLE WATER,UG/L		Adequate Data - Fully Supporting
				32104	BROMOFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
				32106	CHLOROFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
		04	10998	00951	FLUORIDE, TOTAL (MG/L AS F)		Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01005	BARIUM, DISSOLVED (UG/L AS BA)		Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Limited Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
				32101	BROMODICHLOROMETHANE,WHOLE WATER,UG/L		Adequate Data - Fully Supporting
				32104	BROMOFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
				32106	CHLOROFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
		05	11001; 17829	00951	FLUORIDE, TOTAL (MG/L AS F)		Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01005	BARIUM, DISSOLVED (UG/L AS BA)		Adequate Data - Fully Supporting

				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Limited Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
				32101	BROMODICHLOROMETHANE,WHOLE WATER,UG/L		Adequate Data - Fully Supporting
				32104	BROMOFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
				32106	CHLOROFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
		06	17846	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01005	BARIUM, DISSOLVED (UG/L AS BA)		Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
				32101	BROMODICHLOROMETHANE,WHOLE WATER,UG/L		Adequate Data - Fully Supporting
				32104	BROMOFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
				32106	CHLOROFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
		Entire Segment	16809; 16829; 10998; 10998; 11001; 17829; 17846	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0820B Rowlett Creek	Aquatic Life Use	01	10753; 10765; 17845; 21478	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
0820B Rowlett Creek	General Use	01	10753; 10765; 17845; 21478	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	10753; 10765; 17845; 21478	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0820B Rowlett Creek	Contact Recreation Use	01	10753; 10765; 17845; 21478	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Concern
0820B Rowlett Creek	Public Water Supply Use	01	10753; 10765; 17845; 21478	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01005	BARIUM, DISSOLVED (UG/L AS BA)		Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting

				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
				32101	BROMODICHLOROMETHANE,WHOLE WATER,UG/L		Adequate Data - Fully Supporting
				32104	BROMOFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
				32106	CHLOROFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
		Entire Segment	10753; 10765; 17845; 21478	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0820C Muddy Creek	Aquatic Life Use	01	16828	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Not Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
0820C Muddy Creek	General Use	01	16828	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Inadequate Data - Not Assessed
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - Concern
		Entire Segment	16828	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0820C Muddy Creek	Contact Recreation Use	01	16828	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0820C Muddy Creek	Public Water Supply Use	01	16828	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01005	BARIUM, DISSOLVED (UG/L AS BA)		Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
				32101	BROMODICHLOROMETHANE,WHOLE WATER,UG/L		Adequate Data - Fully Supporting
				32104	BROMOFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
				32106	CHLOROFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
		Entire Segment	16828	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0821C Wilson Creek	Aquatic Life Use	01	10777	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting

0821C Wilson Creek	General Use	01	10777	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Limited Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	10777	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0821C Wilson Creek	Contact Recreation Use	01	10777	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Concern
0821C Wilson Creek	Public Water Supply Use	01	10777	00951	FLUORIDE, TOTAL (MG/L AS F)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	10777	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0821D East Fork Trinity River above Lake Lavon	Aquatic Life Use	01	13740	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
0821D East Fork Trinity River above Lake Lavon	General Use	01	13740	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Limited Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	13740	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0821D East Fork Trinity River above Lake Lavon	Contact Recreation Use	01	13740	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0821D East Fork Trinity River above Lake Lavon	Public Water Supply Use	01	13740	00951	FLUORIDE, TOTAL (MG/L AS F)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	13740	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0822 Elm Fork Trinity River Below Lewisville Lake	Aquatic Life Use	01	17163; 18310; 20287	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Not Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Inadequate Data - Not Assessed
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting

				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Inadequate Data - Not Assessed
		02	16438; 17162	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
		03	18358	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
		04	15252	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting

				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Limited Data - No Concern
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Limited Data - No Concern
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
0822 Elm Fork Trinity River Below Lewisville Lake	General Use	01	17163; 18310; 20287	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		02	16438; 17162	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		03	18358	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Inadequate Data - Not Assessed
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		04	15252	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Inadequate Data - Not Assessed
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	17163; 18310; 20287; 16438; 17162; 18358; 15252	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0822 Elm Fork Trinity River Below Lewisville Lake	Contact Recreation Use	01	17163; 18310; 20287	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		02	16438; 17162	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		03	18358	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		04	15252	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0822 Elm Fork Trinity River Below Lewisville Lake	Public Water Supply Use	01	17163; 18310; 20287	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		02	16438; 17162	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting

				01005	BARIUM, DISSOLVED (UG/L AS BA)		Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
				32101	BROMODICHLOROMETHANE,WHOLE WATER,UG/L		Adequate Data - Fully Supporting
				32104	BROMOFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
				32106	CHLOROFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
		03	18358	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01005	BARIUM, DISSOLVED (UG/L AS BA)		Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
				32101	BROMODICHLOROMETHANE,WHOLE WATER,UG/L		Adequate Data - Fully Supporting
				32104	BROMOFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
				32106	CHLOROFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
		04	15252	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01005	BARIUM, DISSOLVED (UG/L AS BA)		Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
				32101	BROMODICHLOROMETHANE,WHOLE WATER,UG/L		Adequate Data - Fully Supporting
				32104	BROMOFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
				32106	CHLOROFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
		Entire Segment	17163; 18310; 20287; 16438; 17162; 18358; 15252	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0822A Cottonwood Branch	Aquatic Life Use	01	17167	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Limited Data - Concern
						Grab Minimum	Limited Data - No Concern
						Grab vs. 24 HR Avg	Limited Data - Not Supporting
						Grab vs. 24 HR Min	Limited Data - No Concern
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Inadequate Data - Not Assessed
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Inadequate Data - Not Assessed
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Inadequate Data - Not Assessed
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Inadequate Data - Not Assessed
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Inadequate Data - Not Assessed
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Inadequate Data - Not Assessed
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Inadequate Data - Not Assessed
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Inadequate Data - Not Assessed
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Inadequate Data - Not Assessed
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Inadequate Data - Not Assessed
		02	17166	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Not Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
0822A Cottonwood Branch	General Use	01	17167	00400	PH (STANDARD UNITS)		Limited Data - No Concern
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Limited Data - No Concern
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Limited Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Limited Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Limited Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Limited Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Limited Data - No Concern
		02	17166	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting

				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
		Entire Segment	17167; 17166	70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0822A Cottonwood Branch	Contact Recreation Use	01	17167	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Limited Data - No Concern
						Single Grab Standard	Limited Data - No Concern
		02	17166	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Not Supporting
0822A Cottonwood Branch	Public Water Supply Use	01	17167	01025	CADMIUM, DISSOLVED (UG/L AS CD)		Inadequate Data - Not Assessed
				01049	LEAD, DISSOLVED (UG/L AS PB)		Inadequate Data - Not Assessed
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Limited Data - No Concern
		Entire Segment	17167; 17166	70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0822B Grapevine Creek	Aquatic Life Use	Entire Segment	20311; 21188	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Not Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
0822B Grapevine Creek	General Use	Entire Segment	20311; 21188	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Not Supporting
0822B Grapevine Creek	Contact Recreation Use	Entire Segment	20311; 21188	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0822B Grapevine Creek	Public Water Supply Use	Entire Segment	20311; 21188	70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0822C Hackberry Creek	Aquatic Life Use	01	17170	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Not Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
0822C Hackberry Creek	General Use	01	17170	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	17170	70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0822C Hackberry Creek	Contact Recreation Use	01	17170	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0822C Hackberry Creek	Public Water Supply Use	01	17170	01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	17170	70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern

0822D Ski Lake	Aquatic Life Use	01	17849	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
0822D Ski Lake	General Use	01	17849	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	17849	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0822D Ski Lake	Contact Recreation Use	01	17849	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0822D Ski Lake	Public Water Supply Use	01	17849	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01005	BARIUM, DISSOLVED (UG/L AS BA)		Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
				32101	BROMODICHLOROMETHANE,WHOLE WATER,UG/L		Adequate Data - Fully Supporting
				32104	BROMOFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
				32106	CHLOROFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
		Entire Segment	17849	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0823 Lewisville Lake	Aquatic Life Use	02	16808	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Inadequate Data - Not Assessed
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting

				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Inadequate Data - Not Assessed
		03	11027	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
		04	17830	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
		05	11026	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting

				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Inadequate Data - Not Assessed
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Inadequate Data - Not Assessed
0823 Lewisville Lake	General Use	02	16808	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - Concern
		03	11027	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		04	17830	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		05	11026	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - Concern
		Entire Segment	16808; 11027; 17830; 11026	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0823 Lewisville Lake	Contact Recreation Use	02	16808	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		03	11027	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Limited Data - No Concern
						Single Grab Standard	Limited Data - No Concern
		04	17830	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Inadequate Data - Not Assessed
						Single Grab Standard	Inadequate Data - Not Assessed
		05	11026	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0823 Lewisville Lake	Public Water Supply Use	02	16808	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01005	BARIUM, DISSOLVED (UG/L AS BA)		Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting

				32101	BROMODICHLOROMETHANE,WHOLE WATER,UG/L		Adequate Data - Fully Supporting
				32104	BROMOFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
				32106	CHLOROFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
		03	11027	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01005	BARIUM, DISSOLVED (UG/L AS BA)		Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
				32101	BROMODICHLOROMETHANE,WHOLE WATER,UG/L		Adequate Data - Fully Supporting
				32104	BROMOFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
				32106	CHLOROFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
		04	17830	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01005	BARIUM, DISSOLVED (UG/L AS BA)		Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
				32101	BROMODICHLOROMETHANE,WHOLE WATER,UG/L		Adequate Data - Fully Supporting
				32104	BROMOFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
				32106	CHLOROFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
		05	11026	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01005	BARIUM, DISSOLVED (UG/L AS BA)		Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
				32101	BROMODICHLOROMETHANE,WHOLE WATER,UG/L		Adequate Data - Fully Supporting
				32104	BROMOFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
				32106	CHLOROFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
		Entire Segment	16808; 11027; 17830; 11026	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0823A Little Elm Creek	Aquatic Life Use	01	16826	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
0823A Little Elm Creek	General Use	01	16826	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern

				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	16826	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0823A Little Elm Creek	Contact Recreation Use	01	16826	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0823A Little Elm Creek	Public Water Supply Use	01	16826	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01005	BARIUM, DISSOLVED (UG/L AS BA)		Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
				32101	BROMODICHLOROMETHANE,WHOLE WATER,UG/L		Adequate Data - Fully Supporting
				32104	BROMOFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
				32106	CHLOROFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
		Entire Segment	16826	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0823C Clear Creek	Aquatic Life Use	01	16827	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Limited Data - No Concern
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Limited Data - No Concern
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Limited Data - No Concern
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Limited Data - No Concern
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Limited Data - No Concern
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Limited Data - No Concern
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Limited Data - No Concern
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Limited Data - No Concern
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Limited Data - No Concern
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Limited Data - No Concern
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
0823C Clear Creek	General Use	01	16827	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	16827	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0823C Clear Creek	Contact Recreation Use	01	16827	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0823C Clear Creek	Public Water Supply Use	01	16827	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Limited Data - No Concern
				01005	BARIUM, DISSOLVED (UG/L AS BA)		Limited Data - No Concern
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)		Limited Data - No Concern
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Limited Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
				32101	BROMODICHLOROMETHANE,WHOLE WATER,UG/L		Adequate Data - Fully Supporting

				32104	BROMOFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
				32106	CHLOROFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
		Entire Segment	16827	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0823D Doe Branch	Aquatic Life Use	01	20291	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Limited Data - No Concern
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Limited Data - No Concern
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Limited Data - No Concern
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Limited Data - No Concern
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Limited Data - No Concern
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Limited Data - No Concern
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Limited Data - No Concern
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Limited Data - No Concern
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Limited Data - No Concern
0823D Doe Branch	General Use	01	20291	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	20291	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0823D Doe Branch	Contact Recreation Use	01	20291	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0823D Doe Branch	Public Water Supply Use	01	20291	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Limited Data - No Concern
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)		Limited Data - No Concern
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Limited Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	20291	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0824 Elm Fork Trinity River Above Ray Roberts Lake	Aquatic Life Use	01	11031	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Limited Data - No Concern
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting

				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Limited Data - No Concern
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
		03	15635	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
0824 Elm Fork Trinity River Above Ray Roberts Lake	General Use	01	11031	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - Concern
		03	15635	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Limited Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	11031; 15635	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0824 Elm Fork Trinity River Above Ray Roberts Lake	Contact Recreation Use	01	11031	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		03	15635	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Not Supporting
0824 Elm Fork Trinity River Above Ray Roberts Lake	Public Water Supply Use	01	11031	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01005	BARIUM, DISSOLVED (UG/L AS BA)		Limited Data - No Concern
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
				32101	BROMODICHLOROMETHANE,WHOLE WATER,UG/L		Adequate Data - Fully Supporting
				32104	BROMOFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
				32106	CHLOROFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
		03	15635	00951	FLUORIDE, TOTAL (MG/L AS F)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	11031; 15635	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0825 Denton Creek	Aquatic Life Use	01	14244	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting

				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
0825 Denton Creek	General Use	01	14244	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Limited Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	14244	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Limited Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0825 Denton Creek	Contact Recreation Use	01	14244	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Concern
0825 Denton Creek	Public Water Supply Use	01	14244	00951	FLUORIDE, TOTAL (MG/L AS F)		Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01005	BARIUM, DISSOLVED (UG/L AS BA)		Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
				32101	BROMODICHLOROMETHANE,WHOLE WATER,UG/L		Adequate Data - Fully Supporting
				32104	BROMOFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
				32106	CHLOROFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
		Entire Segment	14244	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Limited Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0826 Grapevine Lake	Aquatic Life Use	01	11035; 17827	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting

				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
		05	13875	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
		06	16112; 17828	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
0826 Grapevine Lake	General Use	01	11035; 17827	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		05	13875	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern

		06	16112; 17828	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	11035; 17827; 13875; 16112; 17828	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0826 Grapevine Lake	Contact Recreation Use	01	11035; 17827	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		05	13875	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Limited Data - No Concern
						Single Grab Standard	Limited Data - No Concern
		06	16112; 17828	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0826 Grapevine Lake	Public Water Supply Use	01	11035; 17827	00951	FLUORIDE, TOTAL (MG/L AS F)		Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01005	BARIUM, DISSOLVED (UG/L AS BA)		Limited Data - No Concern
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Limited Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
				32101	BROMODICHLOROMETHANE,WHOLE WATER,UG/L		Adequate Data - Fully Supporting
				32104	BROMOFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
				32106	CHLOROFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
		05	13875	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01005	BARIUM, DISSOLVED (UG/L AS BA)		Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
				32101	BROMODICHLOROMETHANE,WHOLE WATER,UG/L		Adequate Data - Fully Supporting
				32104	BROMOFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
				32106	CHLOROFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
		06	16112; 17828	00951	FLUORIDE, TOTAL (MG/L AS F)		Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01005	BARIUM, DISSOLVED (UG/L AS BA)		Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
				32101	BROMODICHLOROMETHANE,WHOLE WATER,UG/L		Adequate Data - Fully Supporting
				32104	BROMOFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
				32106	CHLOROFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
		Entire Segment	11035; 17827; 13875; 16112; 17828	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0826A Denton Creek	Aquatic Life Use	01	14485	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting

				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Limited Data - No Concern
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Limited Data - No Concern
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
		02	14483	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Limited Data - No Concern
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Limited Data - No Concern
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Limited Data - No Concern
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Limited Data - No Concern
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Limited Data - No Concern
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Limited Data - No Concern
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Limited Data - No Concern
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Limited Data - No Concern
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Limited Data - No Concern
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Limited Data - No Concern
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
0826A Denton Creek	General Use	01	14485	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Inadequate Data - Not Assessed
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - Concern
		02	14483	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Inadequate Data - Not Assessed
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	14485; 14483	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0826A Denton Creek	Contact Recreation Use	01	14485	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		02	14483	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0826A Denton	Public Water Supply Use	01	14485	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01005	BARIUM, DISSOLVED (UG/L AS BA)		Adequate Data - Fully Supporting

Creek				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
				32101	BROMODICHLOROMETHANE,WHOLE WATER,UG/L		Adequate Data - Fully Supporting
				32104	BROMOFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
				32106	CHLOROFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
		02	14483	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Limited Data - No Concern
				01005	BARIUM, DISSOLVED (UG/L AS BA)		Limited Data - No Concern
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)		Limited Data - No Concern
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Limited Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
				32101	BROMODICHLOROMETHANE,WHOLE WATER,UG/L		Adequate Data - Fully Supporting
				32104	BROMOFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
				32106	CHLOROFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
		Entire Segment	14485; 14483	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0827 White Rock Lake	Aquatic Life Use	01	11038	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
0827 White Rock Lake	General Use	01	11038	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Limited Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	11038	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0827 White Rock Lake	Contact Recreation Use	01	11038	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0827 White Rock Lake	Public Water Supply Use	01	11038	00951	FLUORIDE, TOTAL (MG/L AS F)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	11038	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0827A White Rock Creek above White Rock Lake	Aquatic Life Use	01	15280; 18517; 20289	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Limited Data - No Concern
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting

				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Limited Data - No Concern
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
				01003	ARSENIC, BOTTOM DEPOSITS (MG/KG AS AS DRY WT)		Inadequate Data - Not Assessed
				01028	CADMIUM,TOTAL, BOTTOM DEPOSITS (MG/KG,DRY WT)		Inadequate Data - Not Assessed
				01029	CHROMIUM,TOTAL, BOTTOM DEPOSITS (MG/KG,DRY WT		Inadequate Data - Not Assessed
				01043	COPPER, BOTTOM DEPOSITS (MG/KG AS CU DRY WT)		Inadequate Data - Not Assessed
				01052	LEAD, BOTTOM DEPOSITS (MG/KG AS PB DRY WT)		Inadequate Data - Not Assessed
				01053	MANGANESE, BOTTOM DEPOSITS (MG/KG AS MN DRY WG		Inadequate Data - Not Assessed
				01068	NICKEL, TOTAL, BOTTOM DEPOSITS (MG/KG,DRY WT)		Inadequate Data - Not Assessed
				01078	SILVER, BOTTOM DEPOSITS (MG/KG AS AG DRY WT)		Inadequate Data - Not Assessed
				01093	ZINC, BOTTOM DEPOSITS (MG/KG AS ZN DRY WT)		Inadequate Data - Not Assessed
				01170	IRON, BOTTOM DEPOSITS (MG/KG AS FE DRY WT)		Inadequate Data - Not Assessed
				34203	ACENAPHTHYLENE, DRY WT, BOTTOM (UG/KG)		Inadequate Data - Not Assessed
				34208	ACENAPHTHENE, DRY WT, BOTTOM (UG/KG)		Inadequate Data - Not Assessed
				34223	ANTHRACENE DRY WTBOTUG/KG		Inadequate Data - Not Assessed
				34250	BENZO-A-PYRENE DRY WTBOTUG/KG		Inadequate Data - Not Assessed
				34257	B-BHC-BETA DRY WTBOTUG/KG		Inadequate Data - Not Assessed
				34323	CHRYSENE DRY WTBOTUG/KG		Inadequate Data - Not Assessed
				34379	FLUORANTHENE DRY WTBOTUG/KG		Inadequate Data - Not Assessed
				34384	FLUORENE DRY WTBOTUG/KG		Inadequate Data - Not Assessed
				34399	HEXACHLOROETHANE DRY WTBOTUG/KG		Inadequate Data - Not Assessed
				34445	NAPHTHALENE DRY WTBOTUG/KG		Inadequate Data - Not Assessed
				34450	NITROBENZENE DRY WTBOTUG/KG		Inadequate Data - Not Assessed
				34464	PHENANTHRENE DRY WTBOTUG/KG		Inadequate Data - Not Assessed
				34472	PYRENE DRY WTBOTUG/KG		Inadequate Data - Not Assessed
				34529	BENZO(A)ANTHRACENE1,2-BENZANTHRACENDRYWTBOTUG/KG		Inadequate Data - Not Assessed
				34554	1,2,4-TRICHLOROBENZENE DRY WTBOTUG/KG		Inadequate Data - Not Assessed
				34569	1,3-DICHLOROBENZENE, DRY WT, BOTTOM (UG/KG)		Inadequate Data - Not Assessed
				34574	1,4-DICHLOROBENZENE, DRY WT, BOTTOM (UG/KG)		Inadequate Data - Not Assessed
				39076	BHC-ALPHA ISOMER, BOTTOM DEPOS (UG/KG DRY SOL)		Inadequate Data - Not Assessed
				39112	DI-N-BUTYL PHTHALATE, SEDIMENTS,DRY WT,UG/KG		Inadequate Data - Not Assessed
				39333	ALDRIN, BOTTOM DEPOS. (UG/KG DRY SOLIDS)		Inadequate Data - Not Assessed
				39351	CHLORDANE(TECH MIX&METABS) SED,DRY WT,UG/KG		Inadequate Data - Not Assessed
				39383	DIELDRIN IN BOTTOM DEPOS. (UG/KG DRY SOLIDS)		Inadequate Data - Not Assessed
				39393	ENDRIN IN BOTTOM DEPOS. (UG/KG DRY SOLIDS)		Inadequate Data - Not Assessed
				39403	TOXAPHENE IN BOTTOM DEPOS.(UG/KG DRY SOLIDS)		Inadequate Data - Not Assessed
				39423	HEPTACHLOR EPOXIDE IN BOT. DEP. (UG/KG DRY SOL.)		Inadequate Data - Not Assessed
				39519	PCBS, BOTTOM DEPOSITS (UG/KG DRY SOLIDS)		Inadequate Data - Not Assessed
				39701	HEXACHLOROBENZENE IN BOT DEPOS (UG/KG DRY SOLIDS		Inadequate Data - Not Assessed
				39705	HEXACHLOROBUTADIENE BOT. DEPOS. (UG/KG DRY WT)		Inadequate Data - Not Assessed
				39783	GAMMA BHC (LINDANE), SEDIMENT, DRY WT (UG/KG)		Inadequate Data - Not Assessed
0827A White Rock Creek above White Rock Lake	General Use	01	15280; 18517; 20289	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	15280; 18517; 20289	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0827A White Rock Creek	Contact Recreation Use	01	15280; 18517; 20289	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Concern

above White Rock Lake							
0827A White Rock Creek above White Rock Lake	Public Water Supply Use	01	15280; 18517; 20289	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	15280; 18517; 20289	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0828 Lake Arlington	Aquatic Life Use	02	13904	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
		05	13899	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
		06	11042	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
		07	13897	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
0828 Lake Arlington	General Use	02	13904	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		05	13899	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Limited Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Limited Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Limited Data - No Concern
		06	11042	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		07	13897	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire	13904; 13899; 11042;	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting

		Segment	13897	00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0828 Lake Arlington	Contact Recreation Use	02	13904	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		05	13899	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		06	11042	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		07	13897	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0828 Lake Arlington	Public Water Supply Use	02	13904	00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		05	13899	00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		06	11042	00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		07	13897	00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	13904; 13899; 11042; 13897	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0828A Village Creek	Aquatic Life Use	01	10780; 10786	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Limited Data - No Concern
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Limited Data - No Concern
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Limited Data - No Concern
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Limited Data - No Concern
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Limited Data - No Concern
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Limited Data - No Concern
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Limited Data - No Concern
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Limited Data - No Concern
0828A Village Creek	General Use	01	10780; 10786	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	10780; 10786	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Not Supporting
0828A Village Creek	Contact Recreation Use	01	10780; 10786	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Not Supporting
0828A Village Creek	Public Water Supply Use	01	10780; 10786	01025	CADMIUM, DISSOLVED (UG/L AS CD)		Limited Data - No Concern
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Limited Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	10780; 10786	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0829 Clear Fork Trinity River Below Benbrook Lake	Aquatic Life Use	02	11045; 18456	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
0829 Clear Fork Trinity River Below Benbrook	General Use	02	11045; 18456	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern

Lake				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Limited Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	11045; 18456	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0829 Clear Fork Trinity River Below Benbrook Lake	Contact Recreation Use	02	11045; 18456	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Concern
0829 Clear Fork Trinity River Below Benbrook Lake	Public Water Supply Use	02	11045; 18456	00951	FLUORIDE, TOTAL (MG/L AS F)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	11045; 18456	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0830 Benbrook Lake	Aquatic Life Use	01	15151	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
		02	15156	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
		03	15158	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
		05	13832	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
0830 Benbrook Lake	General Use	01	15151	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		02	15156	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		03	15158	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		05	13832	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting

				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	15151; 15156; 15158; 13832	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0830 Benbrook Lake	Contact Recreation Use	01	15151	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		02	15156	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		03	15158	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		05	13832	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0830 Benbrook Lake	Public Water Supply Use	01	15151	00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		02	15156	00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		03	15158	00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		05	13832	00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	15151; 15156; 15158; 13832	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0830NA Bear Creek	Aquatic Life Use	Entire Segment	13624	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
0830NA Bear Creek	General Use	Entire Segment	13624	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Not Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
0830NA Bear Creek	Public Water Supply Use	Entire Segment	13624	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
0830NA Rock Creek	General Use	Entire Segment	16725	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Not Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
0830NA Rock Creek	Public Water Supply Use	Entire Segment	16725	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
0831	Aquatic Life Use	01	13691; 16414; 17444	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
0831	General Use	01	13691; 16414; 17444	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting

				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - Concern
		Entire Segment	13691; 16414; 17444	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0831	Contact Recreation Use	01	13691; 16414; 17444	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0831	Public Water Supply Use	01	13691; 16414; 17444	00951	FLUORIDE, TOTAL (MG/L AS F)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	13691; 16414; 17444	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0832	Aquatic Life Use	01	11061	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
0832	General Use	01	11061	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Limited Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	11061	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
0832	Contact Recreation Use	01	11061	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0832	Public Water Supply Use	01	11061	00951	FLUORIDE, TOTAL (MG/L AS F)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	11061	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
0834	Aquatic Life Use	01	11063	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Limited Data - No Concern
						Grab Minimum	Limited Data - No Concern
						Grab vs. 24 HR Avg	Limited Data - No Concern
						Grab vs. 24 HR Min	Limited Data - No Concern
0834	General Use	01	11063	00400	PH (STANDARD UNITS)		Limited Data - No Concern
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Limited Data - No Concern
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Limited Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Limited Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Limited Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Limited Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Limited Data - No Concern
		Entire Segment	11063	00940	CHLORIDE (MG/L AS CL)		Limited Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Limited Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Limited Data - No Concern
0834	Contact Recreation Use	01	11063	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Limited Data - No Concern
						Single Grab Standard	Limited Data - No Concern
0834	Public Water Supply Use	01	11063	00951	FLUORIDE, TOTAL (MG/L AS F)		Limited Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Limited Data - No Concern
		Entire Segment	11063	00940	CHLORIDE (MG/L AS CL)		Limited Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Limited Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Limited Data - No Concern

0836	Aquatic Life Use	01	15168	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
		02	15169	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
		03	15170	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
		04	15199	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
		05	11068	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
		06	15172	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
		07	16721	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Not Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
0836	General Use	01	15168	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		02	15169	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		03	15170	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		04	15199	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern

				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - Concern
		05	11068	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		06	15172	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		07	16721	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - Concern
		Entire Segment	15168; 15169; 15170; 15199; 11068; 15172; 16721	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0836	Contact Recreation Use	01	15168	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		02	15169	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		03	15170	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		04	15199	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		05	11068	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		06	15172	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		07	16721	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Not Supporting
0836	Public Water Supply Use	01	15168	00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		02	15169	00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		03	15170	00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		04	15199	00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		05	11068	00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		06	15172	00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		07	16721	00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	15168; 15169; 15170; 15199; 11068; 15172; 16721	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0836D	Aquatic Life Use	01	17847	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Limited Data - No Concern
						Grab Minimum	Limited Data - No Concern
						Grab vs. 24 HR Avg	Limited Data - No Concern
						Grab vs. 24 HR Min	Limited Data - No Concern
0836D	General Use	01	17847	00400	PH (STANDARD UNITS)		Limited Data - No Concern
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Limited Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern

				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	17847	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Limited Data - No Concern
0836D	Contact Recreation Use	01	17847	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Limited Data - Not Supporting
						Single Grab Standard	Limited Data - Not Supporting
0836D	Public Water Supply Use	01	17847	00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	17847	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Limited Data - No Concern
0837	Aquatic Life Use	01	11070	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Not Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
0837	General Use	01	11070	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Limited Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	11070	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0837	Contact Recreation Use	01	11070	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Concern
0837	Public Water Supply Use	01	11070	00951	FLUORIDE, TOTAL (MG/L AS F)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	11070	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0838A	Aquatic Life Use	01	21123	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Limited Data - No Concern
						Grab Minimum	Limited Data - No Concern
						Grab vs. 24 HR Avg	Limited Data - No Concern
						Grab vs. 24 HR Min	Limited Data - No Concern
0838A	General Use	01	21123	00400	PH (STANDARD UNITS)		Limited Data - No Concern
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Limited Data - No Concern
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Inadequate Data - Not Assessed
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Inadequate Data - Not Assessed
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Inadequate Data - Not Assessed
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Inadequate Data - Not Assessed
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Inadequate Data - Not Assessed
		Entire Segment	21123	00940	CHLORIDE (MG/L AS CL)		Limited Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Inadequate Data - Not Assessed
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Limited Data - No Concern
0838A	Contact Recreation Use	01	21123	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Limited Data - No Concern
						Single Grab Standard	Limited Data - No Concern
0838A	Public Water Supply Use	01	21123	00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Inadequate Data - Not Assessed
		Entire Segment	21123	00940	CHLORIDE (MG/L AS CL)		Limited Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Inadequate Data - Not Assessed
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Limited Data - No Concern
0838B	Aquatic Life Use	01	17680	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting

				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Limited Data - No Concern
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Limited Data - No Concern
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Inadequate Data - Not Assessed
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Limited Data - No Concern
				01147	SELENIUM, TOTAL (UG/L AS SE)	Acute	Inadequate Data - Not Assessed
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Limited Data - No Concern
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Limited Data - No Concern
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Inadequate Data - Not Assessed
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Limited Data - No Concern
				01147	SELENIUM, TOTAL (UG/L AS SE)	Chronic	Inadequate Data - Not Assessed
0838B	General Use	01	17680	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	17680	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0838B	Contact Recreation Use	01	17680	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0838B	Public Water Supply Use	01	17680	01025	CADMIUM, DISSOLVED (UG/L AS CD)		Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)		Limited Data - No Concern
				01147	SELENIUM, TOTAL (UG/L AS SE)		Inadequate Data - Not Assessed
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	17680	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0838C	Aquatic Life Use	01	13621; 20790	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
0838C	General Use	01	13621; 20790	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
		Entire Segment	13621; 20790	70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Not Supporting
0838C	Contact Recreation Use	01	13621; 20790	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0838C	Public Water Supply Use	Entire Segment	13621; 20790	70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0838D HOLLINGS BRANCH	Aquatic Life Use	Entire Segment	16433	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Limited Data - No Concern
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Limited Data - No Concern
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Inadequate Data - Not Assessed
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Inadequate Data - Not Assessed
				01147	SELENIUM, TOTAL (UG/L AS SE)	Acute	Inadequate Data - Not Assessed
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Limited Data - No Concern
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Limited Data - No Concern

				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Inadequate Data - Not Assessed
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Inadequate Data - Not Assessed
				01147	SELENIUM, TOTAL (UG/L AS SE)	Chronic	Inadequate Data - Not Assessed
0838D HOLLINGS BRANCH	General Use	Entire Segment	16433	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
0838D HOLLINGS BRANCH	Contact Recreation Use	Entire Segment	16433	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0838D HOLLINGS BRANCH	Public Water Supply Use	Entire Segment	16433	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)		Limited Data - No Concern
				01147	SELENIUM, TOTAL (UG/L AS SE)		Inadequate Data - Not Assessed
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
0838E SOAP CREEK	Aquatic Life Use	Entire Segment	16435	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Concern
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Limited Data - No Concern
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Inadequate Data - Not Assessed
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Inadequate Data - Not Assessed
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Inadequate Data - Not Assessed
				01147	SELENIUM, TOTAL (UG/L AS SE)	Acute	Inadequate Data - Not Assessed
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Limited Data - No Concern
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Inadequate Data - Not Assessed
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Inadequate Data - Not Assessed
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Inadequate Data - Not Assessed
				01147	SELENIUM, TOTAL (UG/L AS SE)	Chronic	Inadequate Data - Not Assessed
0838E SOAP CREEK	General Use	Entire Segment	16435	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Not Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Not Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Limited Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
0838E SOAP CREEK	Contact Recreation Use	Entire Segment	16435	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0838E SOAP CREEK	Public Water Supply Use	Entire Segment	16435	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern

				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)		Limited Data - No Concern
				01147	SELENIUM, TOTAL (UG/L AS SE)		Inadequate Data - Not Assessed
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Limited Data - No Concern
0839	Aquatic Life Use	01	13619	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
0839	General Use	01	13619	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	13619	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0839	Contact Recreation Use	01	13619	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0839	Public Water Supply Use	01	13619	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01005	BARIUM, DISSOLVED (UG/L AS BA)		Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
				32101	BROMODICHLOROMETHANE,WHOLE WATER,UG/L		Adequate Data - Fully Supporting
				32104	BROMOFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
				32106	CHLOROFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
		Entire Segment	13619	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0839A	Aquatic Life Use	01	10859; 13618	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
				89857	DISSOLVED OXYGEN, 24-HOUR AVG. (MG/L) MIN. 4 MEA	Grab Screening Level	Inadequate Data - Not Assessed
				00300	OXYGEN, DISSOLVED (MG/L)	Grab Minimum	Adequate Data - Fully Supporting
				89857	DISSOLVED OXYGEN, 24-HOUR AVG. (MG/L) MIN. 4 MEA	Grab Minimum	Inadequate Data - Not Assessed
				00300	OXYGEN, DISSOLVED (MG/L)	Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
				89857	DISSOLVED OXYGEN, 24-HOUR AVG. (MG/L) MIN. 4 MEA	Grab vs. 24 HR Avg	Inadequate Data - Not Assessed
				00300	OXYGEN, DISSOLVED (MG/L)	Grab vs. 24 HR Min	Adequate Data - Fully Supporting

				89857	DISSOLVED OXYGEN, 24-HOUR AVG. (MG/L) MIN. 4 MEA	Grab vs. 24 HR Min	Inadequate Data - Not Assessed
0839A	General Use	01	10859; 13618	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Limited Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	10859; 13618	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0839A	Contact Recreation Use	01	10859; 13618	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0839A	Public Water Supply Use	01	10859; 13618	00951	FLUORIDE, TOTAL (MG/L AS F)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	10859; 13618	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0840	Aquatic Life Use	01	14039; 17834	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Inadequate Data - Not Assessed
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Inadequate Data - Not Assessed
		02	11076; 14044	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting

				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
		03	16823	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Limited Data - No Concern
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Inadequate Data - Not Assessed
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Limited Data - No Concern
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Inadequate Data - Not Assessed
		04	16822	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Limited Data - No Concern
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Limited Data - No Concern
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
		06	14043	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
		07	16824	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting

				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
0840	General Use	01	14039; 17834	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		02	11076; 14044	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		03	16823	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - Concern
		04	16822	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		06	14043	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Inadequate Data - Not Assessed
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		07	16824	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	14039; 17834; 11076; 14044; 16823; 16822;	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting

			14043; 16824	70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0840	Contact Recreation Use	01	14039; 17834	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		02	11076; 14044	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		03	16823	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		04	16822	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
		06	14043	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Limited Data - No Concern
						Single Grab Standard	Limited Data - No Concern
		07	16824	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Inadequate Data - Not Assessed
						Single Grab Standard	Inadequate Data - Not Assessed
0840	Public Water Supply Use	01	14039; 17834	00951	FLUORIDE, TOTAL (MG/L AS F)		Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01005	BARIUM, DISSOLVED (UG/L AS BA)		Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
				32101	BROMODICHLOROMETHANE,WHOLE WATER,UG/L		Adequate Data - Fully Supporting
				32104	BROMOFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
				32106	CHLOROFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
		02	11076; 14044	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01005	BARIUM, DISSOLVED (UG/L AS BA)		Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
				32101	BROMODICHLOROMETHANE,WHOLE WATER,UG/L		Adequate Data - Fully Supporting
				32104	BROMOFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
				32106	CHLOROFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
		03	16823	00951	FLUORIDE, TOTAL (MG/L AS F)		Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01005	BARIUM, DISSOLVED (UG/L AS BA)		Limited Data - No Concern
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
				32101	BROMODICHLOROMETHANE,WHOLE WATER,UG/L		Adequate Data - Fully Supporting
				32104	BROMOFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
				32106	CHLOROFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
		04	16822	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01005	BARIUM, DISSOLVED (UG/L AS BA)		Limited Data - No Concern
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
				32101	BROMODICHLOROMETHANE,WHOLE WATER,UG/L		Adequate Data - Fully Supporting
				32104	BROMOFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
				32106	CHLOROFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
		06	14043	00951	FLUORIDE, TOTAL (MG/L AS F)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		07	16824	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01005	BARIUM, DISSOLVED (UG/L AS BA)		Adequate Data - Fully Supporting

				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
				32101	BROMODICHLOROMETHANE,WHOLE WATER,UG/L		Adequate Data - Fully Supporting
				32104	BROMOFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
				32106	CHLOROFORM, WHOLE WATER, UG/L		Adequate Data - Fully Supporting
		Entire Segment	14039; 17834; 11076; 14044; 16823; 16822; 14043; 16824	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0841	Aquatic Life Use	01	11081; 17669	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Acute	Limited Data - No Concern
				01000	ARSENIC, DISSOLVED (UG/L AS AS)	Chronic	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
				01106	ALUMINUM, DISSOLVED (UG/L AS AL)	Chronic	Not Applicable
0841	General Use	01	11081; 17669	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - Concern
		Entire Segment	11081; 17669	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0841	Contact Recreation Use	01	11081; 17669	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0841	Public Water Supply Use	01	11081; 17669	01000	ARSENIC, DISSOLVED (UG/L AS AS)		Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	11081; 17669	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0841B	Aquatic Life Use	01	10865; 10867; 10869; 17663	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting

				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01147	SELENIUM, TOTAL (UG/L AS SE)	Acute	Inadequate Data - Not Assessed
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
				01147	SELENIUM, TOTAL (UG/L AS SE)	Chronic	Inadequate Data - Not Assessed
0841B	General Use	01	10865; 10867; 10869; 17663	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	10865; 10867; 10869; 17663	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0841B	Contact Recreation Use	01	10865; 10867; 10869; 17663	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0841B	Public Water Supply Use	01	10865; 10867; 10869; 17663	01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01147	SELENIUM, TOTAL (UG/L AS SE)		Inadequate Data - Not Assessed
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	10865; 10867; 10869; 17663	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0841C	Aquatic Life Use	01	20610	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Inadequate Data - Not Assessed
						Grab Minimum	Inadequate Data - Not Assessed
						Grab vs. 24 HR Avg	Inadequate Data - Not Assessed
						Grab vs. 24 HR Min	Inadequate Data - Not Assessed
0841C	General Use	01	20610	00400	PH (STANDARD UNITS)		Inadequate Data - Not Assessed
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Inadequate Data - Not Assessed
0841D	Aquatic Life Use	01	17089	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Limited Data - No Concern
						Grab Minimum	Limited Data - No Concern
						Grab vs. 24 HR Avg	Limited Data - No Concern
						Grab vs. 24 HR Min	Limited Data - No Concern
0841D	General Use	01	17089	00400	PH (STANDARD UNITS)		Limited Data - No Concern
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Limited Data - No Concern
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Limited Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Limited Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Limited Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Limited Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Limited Data - No Concern
		Entire Segment	17089	00940	CHLORIDE (MG/L AS CL)		Limited Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Limited Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Limited Data - No Concern
0841D	Contact Recreation Use	01	17089	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Limited Data - No Concern
						Single Grab Standard	Limited Data - No Concern
0841D	Public Water Supply Use	01	17089	00951	FLUORIDE, TOTAL (MG/L AS F)		Limited Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Limited Data - No Concern
		Entire	17089	00940	CHLORIDE (MG/L AS CL)		Limited Data - No Concern

		Segment		00945	SULFATE (MG/L AS SO4)		Limited Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Limited Data - No Concern
0841E	Aquatic Life Use	01	17672	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Limited Data - No Concern
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Inadequate Data - Not Assessed
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Inadequate Data - Not Assessed
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Limited Data - No Concern
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Inadequate Data - Not Assessed
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Inadequate Data - Not Assessed
0841E	General Use	01	17672	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	17672	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0841E	Contact Recreation Use	01	17672	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0841E	Public Water Supply Use	01	17672	01025	CADMIUM, DISSOLVED (UG/L AS CD)		Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)		Limited Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	17672	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0841F	Aquatic Life Use	01	10723; 17674; 17676; 20837	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Not Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01147	SELENIUM, TOTAL (UG/L AS SE)	Acute	Inadequate Data - Not Assessed
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
				01147	SELENIUM, TOTAL (UG/L AS SE)	Chronic	Inadequate Data - Not Assessed
0841F	General Use	01	10723; 17674; 17676; 20837	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern

				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	10723; 17674; 17676; 20837	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0841F	Contact Recreation Use	01	10723; 17674; 17676; 20837	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Not Supporting
0841F	Public Water Supply Use	01	10723; 17674; 17676; 20837	01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Limited Data - No Concern
				01147	SELENIUM, TOTAL (UG/L AS SE)		Inadequate Data - Not Assessed
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	10723; 17674; 17676; 20837	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0841G	Aquatic Life Use	01	17671	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Concern
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Limited Data - No Concern
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Limited Data - No Concern
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Inadequate Data - Not Assessed
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Inadequate Data - Not Assessed
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Limited Data - No Concern
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Limited Data - No Concern
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Inadequate Data - Not Assessed
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Inadequate Data - Not Assessed
0841G	General Use	01	17671	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	17671	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Not Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0841G	Contact Recreation Use	01	17671	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Not Supporting
0841G	Public Water Supply Use	01	17671	01025	CADMIUM, DISSOLVED (UG/L AS CD)		Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)		Limited Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	17671	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0841H	Aquatic Life Use	01	17178	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting

				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
0841H	General Use	01	17178	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	17178	70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0841H	Contact Recreation Use	01	17178	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0841H	Public Water Supply Use	01	17178	01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	17178	70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0841I	Aquatic Life Use	01	17173	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Inadequate Data - Not Assessed
						Grab Minimum	Inadequate Data - Not Assessed
						Grab vs. 24 HR Avg	Inadequate Data - Not Assessed
						Grab vs. 24 HR Min	Inadequate Data - Not Assessed
0841I	General Use	01	17173	00400	PH (STANDARD UNITS)		Inadequate Data - Not Assessed
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Inadequate Data - Not Assessed
		Entire Segment	17173	70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Inadequate Data - Not Assessed
0841I	Contact Recreation Use	01	17173	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Inadequate Data - Not Assessed
						Single Grab Standard	Inadequate Data - Not Assessed
0841I	Public Water Supply Use	Entire Segment	17173	70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Inadequate Data - Not Assessed
0841J	Aquatic Life Use	01	17174	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Limited Data - Concern
						Grab Minimum	Limited Data - Not Supporting
						Grab vs. 24 HR Avg	Limited Data - Not Supporting
						Grab vs. 24 HR Min	Limited Data - Not Supporting
0841J	General Use	01	17174	00400	PH (STANDARD UNITS)		Limited Data - No Concern
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Limited Data - No Concern
		Entire Segment	17174	70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Limited Data - No Concern
0841J	Contact Recreation Use	01	17174	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Limited Data - No Concern
						Single Grab Standard	Limited Data - No Concern
0841J	Public Water Supply Use	Entire Segment	17174	70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Limited Data - No Concern
0841K	Aquatic Life Use	01	10724; 10725; 15294; 17677; 17679; 20342	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Not Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting

				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01147	SELENIUM, TOTAL (UG/L AS SE)	Acute	Inadequate Data - Not Assessed
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
				01147	SELENIUM, TOTAL (UG/L AS SE)	Chronic	Inadequate Data - Not Assessed
0841K	General Use	01	10724; 10725; 15294; 17677; 17679; 20342	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	10724; 10725; 15294; 17677; 17679; 20342	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Not Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0841K	Contact Recreation Use	01	10724; 10725; 15294; 17677; 17679; 20342	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Concern
0841K	Public Water Supply Use	01	10724; 10725; 15294; 17677; 17679; 20342	01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				01147	SELENIUM, TOTAL (UG/L AS SE)		Inadequate Data - Not Assessed
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	10724; 10725; 15294; 17677; 17679; 20342	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0841L	Aquatic Life Use	01	10718; 10719; 10721; 17664; 18311	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Not Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01147	SELENIUM, TOTAL (UG/L AS SE)	Acute	Inadequate Data - Not Assessed
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
				01147	SELENIUM, TOTAL (UG/L AS SE)	Chronic	Inadequate Data - Not Assessed
0841L	General Use	01	10718; 10719; 10721; 17664; 18311	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern

				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	10718; 10719; 10721; 17664; 18311	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0841L	Contact Recreation Use	01	10718; 10719; 10721; 17664; 18311	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Concern
0841L	Public Water Supply Use	01	10718; 10719; 10721; 17664; 18311	01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				01147	SELENIUM, TOTAL (UG/L AS SE)		Inadequate Data - Not Assessed
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	10718; 10719; 10721; 17664; 18311	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0841M	Aquatic Life Use	01	10792; 15103; 16896	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Limited Data - Concern
						Grab Minimum	Limited Data - No Concern
						Grab vs. 24 HR Avg	Limited Data - Concern
						Grab vs. 24 HR Min	Limited Data - No Concern
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Limited Data - No Concern
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Limited Data - No Concern
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Inadequate Data - Not Assessed
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Limited Data - No Concern
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Limited Data - No Concern
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Limited Data - No Concern
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Inadequate Data - Not Assessed
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Limited Data - No Concern
0841M	General Use	01	10792; 15103; 16896	00400	PH (STANDARD UNITS)		Limited Data - No Concern
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Limited Data - No Concern
		Entire Segment		70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Limited Data - No Concern
0841M	Contact Recreation Use	01	10792; 15103; 16896	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0841M	Public Water Supply Use	01	10792; 15103; 16896	01025	CADMIUM, DISSOLVED (UG/L AS CD)		Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)		Inadequate Data - Not Assessed
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Limited Data - No Concern
		Entire Segment	10792; 15103; 16896	70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Limited Data - No Concern
0841N	Aquatic Life Use	01	17675	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Not Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Limited Data - No Concern
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Limited Data - No Concern
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Limited Data - No Concern
				01147	SELENIUM, TOTAL (UG/L AS SE)	Acute	Inadequate Data - Not Assessed
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Limited Data - No Concern
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Limited Data - No Concern
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Limited Data - No Concern

				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Limited Data - No Concern
				01147	SELENIUM, TOTAL (UG/L AS SE)	Chronic	Inadequate Data - Not Assessed
0841N	General Use	01	17675	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	17675	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0841N	Contact Recreation Use	01	17675	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Not Supporting
0841N	Public Water Supply Use	01	17675	01025	CADMIUM, DISSOLVED (UG/L AS CD)		Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)		Limited Data - No Concern
				01147	SELENIUM, TOTAL (UG/L AS SE)		Inadequate Data - Not Assessed
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	17675	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0841O	Aquatic Life Use	01	10815; 17681; 17682	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Not Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01147	SELENIUM, TOTAL (UG/L AS SE)	Acute	Inadequate Data - Not Assessed
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
				01147	SELENIUM, TOTAL (UG/L AS SE)	Chronic	Inadequate Data - Not Assessed
0841O	General Use	01	10815; 17681; 17682	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	10815; 17681; 17682	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0841O	Contact Recreation Use	01	10815; 17681; 17682	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0841O	Public Water Supply Use	01	10815; 17681; 17682	01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Adequate Data - Fully Supporting
				01147	SELENIUM, TOTAL (UG/L AS SE)		Inadequate Data - Not Assessed
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	10815; 17681; 17682	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern

				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0841P	Aquatic Life Use	01	10722; 20836	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Not Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Limited Data - No Concern
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01147	SELENIUM, TOTAL (UG/L AS SE)	Acute	Inadequate Data - Not Assessed
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Limited Data - No Concern
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
				01147	SELENIUM, TOTAL (UG/L AS SE)	Chronic	Inadequate Data - Not Assessed
0841P	General Use	01	10722; 20836	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	10722; 20836	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0841P	Contact Recreation Use	01	10722; 20836	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Concern
0841P	Public Water Supply Use	01	10722; 20836	01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Limited Data - No Concern
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Limited Data - No Concern
				01147	SELENIUM, TOTAL (UG/L AS SE)		Inadequate Data - Not Assessed
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	10722; 20836	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0841Q	Aquatic Life Use	01	20838	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Not Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Limited Data - No Concern
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Inadequate Data - Not Assessed
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Inadequate Data - Not Assessed
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Inadequate Data - Not Assessed
				01147	SELENIUM, TOTAL (UG/L AS SE)	Acute	Inadequate Data - Not Assessed
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Limited Data - No Concern
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Inadequate Data - Not Assessed
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Inadequate Data - Not Assessed
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Inadequate Data - Not Assessed
				01147	SELENIUM, TOTAL (UG/L AS SE)	Chronic	Inadequate Data - Not Assessed

0841Q	General Use	01	20838	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	20838	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Fully Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0841Q	Contact Recreation Use	01	20838	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Concern
0841Q	Public Water Supply Use	01	20838	01025	CADMIUM, DISSOLVED (UG/L AS CD)		Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)		Limited Data - No Concern
				01147	SELENIUM, TOTAL (UG/L AS SE)		Inadequate Data - Not Assessed
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	20838	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0841R	Aquatic Life Use	01	10791; 17190; 17191	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Inadequate Data - Not Assessed
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Adequate Data - Fully Supporting
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Adequate Data - Fully Supporting
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Inadequate Data - Not Assessed
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Adequate Data - Fully Supporting
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Adequate Data - Fully Supporting
0841R	General Use	01	10791; 17190; 17191	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Limited Data - Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Limited Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Limited Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Limited Data - No Concern
		Entire Segment	10791; 17190; 17191	70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0841R	Contact Recreation Use	01	10791; 17190; 17191	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0841R	Public Water Supply Use	01	10791; 17190; 17191	01025	CADMIUM, DISSOLVED (UG/L AS CD)		Adequate Data - Fully Supporting
				01049	LEAD, DISSOLVED (UG/L AS PB)		Inadequate Data - Not Assessed
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Adequate Data - Fully Supporting
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Limited Data - No Concern
		Entire Segment	10791; 17190; 17191	70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0841S	Aquatic Life Use	01	20793; 20794; 20795; 20796	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - No Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Fully Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting

0841S	General Use	01	20793; 20794; 20795; 20796	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
		Entire Segment	20793; 20794; 20795; 20796	70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0841S	Contact Recreation Use	01	20793; 20794; 20795; 20796	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Fully Supporting
						Single Grab Standard	Adequate Data - Fully Supporting
0841S	Public Water Supply Use	Entire Segment	20793; 20794; 20795; 20796	70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern
0841T	Aquatic Life Use	01	17189	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Limited Data - No Concern
						Grab Minimum	Limited Data - No Concern
						Grab vs. 24 HR Avg	Limited Data - No Concern
						Grab vs. 24 HR Min	Limited Data - No Concern
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Limited Data - No Concern
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Limited Data - No Concern
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Inadequate Data - Not Assessed
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Acute	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Limited Data - No Concern
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Limited Data - No Concern
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Limited Data - No Concern
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Inadequate Data - Not Assessed
				01065	NICKEL, DISSOLVED (UG/L AS NI)	Chronic	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Limited Data - No Concern
0841T	General Use	01	17189	00400	PH (STANDARD UNITS)		Limited Data - No Concern
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Limited Data - No Concern
		Entire Segment	17189	70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Limited Data - No Concern
0841T	Contact Recreation Use	01	17189	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Limited Data - No Concern
						Single Grab Standard	Limited Data - No Concern
0841T	Public Water Supply Use	01	17189	01025	CADMIUM, DISSOLVED (UG/L AS CD)		Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)		Inadequate Data - Not Assessed
				01065	NICKEL, DISSOLVED (UG/L AS NI)		Limited Data - No Concern
		Entire Segment	17189	70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Limited Data - No Concern
0841U	Aquatic Life Use	01	17179	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Limited Data - Concern
						Grab Minimum	Limited Data - Concern
						Grab vs. 24 HR Avg	Limited Data - Not Supporting
						Grab vs. 24 HR Min	Limited Data - Concern
0841U	General Use	01	17179	00400	PH (STANDARD UNITS)		Limited Data - No Concern
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Limited Data - No Concern
		Entire Segment	17179	70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Limited Data - No Concern
0841U	Contact Recreation Use	01	17179	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Not Supporting
0841U	Public Water Supply Use	Entire Segment	17179	70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Limited Data - No Concern
0841V	Aquatic Life Use	01	17683	00300	OXYGEN, DISSOLVED (MG/L)	Grab Screening Level	Adequate Data - Concern
						Grab Minimum	Adequate Data - Fully Supporting
						Grab vs. 24 HR Avg	Adequate Data - Not Supporting
						Grab vs. 24 HR Min	Adequate Data - Fully Supporting
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Acute	Limited Data - No Concern
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Acute	Inadequate Data - Not Assessed
				01040	COPPER, DISSOLVED (UG/L AS CU)	Acute	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Acute	Limited Data - No Concern

				01090	ZINC, DISSOLVED (UG/L AS ZN)	Acute	Inadequate Data - Not Assessed
				01147	SELENIUM, TOTAL (UG/L AS SE)	Acute	Inadequate Data - Not Assessed
				01025	CADMIUM, DISSOLVED (UG/L AS CD)	Chronic	Limited Data - No Concern
				01030	CHROMIUM, DISSOLVED (UG/L AS CR)	Chronic	Inadequate Data - Not Assessed
				01040	COPPER, DISSOLVED (UG/L AS CU)	Chronic	Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)	Chronic	Limited Data - No Concern
				01090	ZINC, DISSOLVED (UG/L AS ZN)	Chronic	Inadequate Data - Not Assessed
				01147	SELENIUM, TOTAL (UG/L AS SE)	Chronic	Inadequate Data - Not Assessed
0841V	General Use	01	17683	00400	PH (STANDARD UNITS)		Adequate Data - Fully Supporting
				00010	TEMPERATURE, WATER (DEGREES CENTIGRADE)		Adequate Data - Fully Supporting
				70953	CHLOROPHYLL-A, FLUOROMETRIC METHOD, UG/L		Adequate Data - No Concern
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00610	NITROGEN, AMMONIA, TOTAL (MG/L AS N)		Adequate Data - No Concern
				00671	ORTHOPHOSPHATE PHOSPHORUS,DISS,MG/L,FLDFILT<15MIN		Adequate Data - No Concern
				00665	PHOSPHORUS, TOTAL, WET METHOD (MG/L AS P)		Adequate Data - No Concern
		Entire Segment	17683	00940	CHLORIDE (MG/L AS CL)		Adequate Data - Fully Supporting
				00945	SULFATE (MG/L AS SO4)		Adequate Data - Not Supporting
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - Fully Supporting
0841V	Contact Recreation Use	01	17683	31699	E. COLI, COLILERT, IDEXX METHOD, MPN/100ML	Geomean Standard	Adequate Data - Not Supporting
						Single Grab Standard	Adequate Data - Not Supporting
0841V	Public Water Supply Use	01	17683	01025	CADMIUM, DISSOLVED (UG/L AS CD)		Limited Data - No Concern
				01049	LEAD, DISSOLVED (UG/L AS PB)		Limited Data - No Concern
				01147	SELENIUM, TOTAL (UG/L AS SE)		Inadequate Data - Not Assessed
				00620	NITRATE NITROGEN, TOTAL (MG/L AS N)		Adequate Data - Fully Supporting
		Entire Segment	17683	00940	CHLORIDE (MG/L AS CL)		Adequate Data - No Concern
				00945	SULFATE (MG/L AS SO4)		Adequate Data - No Concern
				70300	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C) (MG/L)		Adequate Data - No Concern

Glossary

A

algae - Aquatic plants that are either attached or free floating in the water. Can affect DO and PH levels through photosynthesis and respiration.

algal blooms - Increase in algal population which can be caused by excessive nutrients and can lead to DO depletion.

ammonia (NH3) - Substance found in water and wastewater that is a nutrient for algal growth. Sources can include human and animal waste and fertilizers.

B

Best Management Practices (BMPs) – Types of pollution control techniques or methods.

C

chloride (Cl) - One of the major ions in water and wastewater. Concentrations can be increased by industrial processes. High chloride concentrations can affect metallic objects and growing plants.

chlorofluorocarbon (CFC) - Organic compound that contains carbon , chlorine, and fluorine, produced as a volatile derivative of methane and ethane. Widely used as refrigerants, propellants, and solvents.

chlorophyll-a - Photosynthetic pigment that is found in all green plants. The concentration of chlorophyll-a is used to estimate phytoplankton biomass in surface water.

Clean Rivers Program (CRP) - A partnership between the TCEQ and regional water authorities to coordinate and conduct water quality monitoring, assessment, and stakeholder participation to improve the quality of surface water within each river basin in Texas.

conductivity - The measure of water's ability to conduct an electrical current due to the amount of dissolved solids in the water. Value is affected by water temperature.

conventionals - A grouping of water chemistry parameters which does not include field, nutrients, bacteria, or metals. Includes parameters such as solids, sulfate, turbidity, chlorophyll-a, hardness, and alkalinity.

cubic feet per second (cfs) – Unit of measurement for stream flow.

D

dichlorodiphenyldichloroethane (DDD) – A metabolite of DDT, that is colorless and crystalline.

dichlorodiphenyldichloroethylene (DDE) - A common breakdown product of DDT formed by the loss of hydrogen chloride.

dichlorodiphenyltrichloroethane (DDT) - A highly toxic synthetic pesticide that is non-biodegradable. This chemical was banned in the U.S. in 1972.

dissolved oxygen (DO) - The measure of the amount of oxygen that is freely available in water. It is vital to fish and other aquatic life. DO is widely accepted as the single most important indicator of a water body's ability to support desirable aquatic life.

(DSHS) Texas Department of State Health Services - ecoregion - State agency which conducts tissue surveys and issues fish consumption bans in order to protect the public health as part of their many state health services.

E

Enforcement and Compliance History Online (ECHO) - Online EPA database that includes information on facilities regulated by the Clean Air Act, Clean Water Act, and RCRA.

Environmental Protection Agency (EPA) - Federal regulatory agency responsible for protection of human and environmental health.

Escherichia coli (E. coli) - A gram negative rod-shaped bacterium that can be an ideal indicator of environmental samples for fecal contamination. 0157:H7 is the illness causing strain of E. Coli.

eutrophic - Nutrient rich body of water which typically has high algal concentration and poor water quality.

F

flow - Quantity of water moving through a stream at a given point measured in cubic feet per second.

G

Geographic Information System (GIS) - Used in special analysis of water quality and data.

H

hypereutrophic - highest classification of eutrophication.

L

legacy pollutants - Contaminants which have been banned from production sale or use but which may persist in the environment.

M

micrograms per liter (ug/L) – Unit of measurement for constituents in water. Equal to parts per billion in pure water at standard temperature and pressure.

micromhos per centimeter (umhos/cm) – The unit of measure for conductivity and standard conductivity. Also known as microsiemens per centimeter (uS/cm).

milligrams per liter (mg/L) - Unit of measurement for constituents in water. Equal to parts per million in pure water at standard temperature and pressure.

most probable number (MPN) - Unit for E. coli values based on a statistical range for the analytical method.

N

national priority list (NPL) - List of sites threatened by hazardous contamination which can lead to further investigation and classification of a superfund.

nitrate (NO3) - The fraction of nitrogen that is readily available for plants and algae. High levels of nitrate in drinking water can cause methemoglobinemia, especially in infants.

nitrite (NO2) - Reduction of nitrate. Nitrite is the intermediate that oxidizes iron in the blood to methemoglobin and reduces oxygen-carrying capacity.

non-point source (NPS) - All sources of pollution not discharged from a pipe, includes runoff, atmospheric deposition, and precipitation.

North Texas Municipal Water District (NTMWD) - A conservation and reclamation district and political subdivision of the State of Texas. Authorized to acquire, treat, and distribute potable water, and to collect, treat and dispose of wastes, both liquid and solid, in order to reduce pollution, conserve and develop the natural resources of Texas.

number (N) – Number of values evaluated**.**

nutrient - Any substance used by living things to promote growth.

O

orthophosphate (OP) - The inorganic fraction of phosphorous most commonly found in water, generally the limiting nutrient for plant growth.

P

period of record (POR) – Date range for data being evaluated.

photosynthetic - The process of photosynthesis which is the conversion of sunlight and carbon dioxide and water into carbohydrates used for plant growth.

polycyclic aromatic hydrocarbons (PAH) - Commonly found in oil and gas byproducts including parking lot sealants, and asphalt. They are carcinogenic, mutagenic, teratogenic, and lipophylic. Typically found in soil and sediments.

polychlorinated biphenyl (PCB's) - Highly toxic class of organic compounds that were banned in by the United States Congress in 1979. PCB's were widely used as dielectric fluids in transformers, capacitors, and coolants.

R

Resource Conservation and Recovery Act (RCRA) - Federal regulations governing the disposal of solid and hazardous waste.

S

screening level - Water quality criterion for parameters which do not have standards.

sediment - Bottom layers composed of particles of sand, clay, silt, and plant or animal matter carried in water which are deposited in reservoirs and slow-moving areas of streams and rivers.

specific conductivity - The measure of water's ability to conduct an electrical current due to the amount of dissolved solids in the water. Value is corrected to standard temperature (25°C). This is the most commonly reported value.

standard units (SU) - Unit of measurement for pH. Usually ranges from 0 to 14 with 7 as neutral.

subwatershed - A portion of a larger watershed.

sulfate (SO4) - A naturally occurring substance commonly found in the water column that may cause digestive issues when in drinking water at high concentration levels.

superfund site - Abandoned sites and facilities that are determined by the EPA to be contaminated and are in need of clean up.

T

Tarrant Regional Water District (TRWD) - A raw water supplier for the north central Texas area covering an eleven county area. Maintains dams for reservoirs and more than 150 miles of pipeline. Also manages a flood control system in Tarrant county.

Texas Commission on Environmental Quality (TCEQ) - Environmental Agency for the State of Texas.

total dissolved solids (TDS) - The total amount of inorganic and organic material dissolved in water.

total phosphorus (TP) - The total of all phosphorus and can lead to eutrophication.

total maximum daily load (TMDL) - A value of the maximum amount of a pollutant that a body of water can receive and still meet water quality standards.

tributary - A stream or river that flows into a larger stream or river.

trichloroethylene (TCE) - A chlorinated hydrocarbon commonly used as an industrial solvent.

trophic status index (TSI) - Quantification of the eutrophication of reservoirs ranging from oligotrophic with low nutrient levels hyper eutrophic with high nutrient levels.

turbidity - A measure of water clarity which can be due to algae and other suspended particles.

U

United States Geological Survey (USGS) - Federal scientific research agency that gathers information on biology, geography, geology, and hydrology.

W

watershed - The area of land from which precipitation drains to a particular stream, river, or lake.

waste water treatment plant (WWTP) - Regional or local facility that treats municipal and industrial waste to acceptable levels which is then released into receiving waterbodies.