

# **Clearwater River Watershed District**

## **Phase II Project Report to the MPCA: Lake Louisa Nutrient TMDL and The Clearwater River, Clear Lake to Lake Betsy Bacteria and Dissolved Oxygen TMDL**

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# Acronyms

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BOD	Biochemical Oxygen Demand
CAFO	Confined Animal Feeding Operation
Carlson TSI	Carlson Trophic Status Index
CBOD	Carbonaceous BOD
CBOD-5	5-Day Biochemical Oxygen Demand
CBOD-20	20-Day Biochemical Oxygen Demand
CBOD-u	Ultimate Biochemical Oxygen Demand
CFR	Code of Federal Regulations
cfs	cubic feet per second
CFU/100 mL	colony forming units per 100 milliliters
CWA	Clear Water Act
CRWD	Clearwater River Watershed District
DO	Dissolved oxygen
EPA	Environmental Protection Agency
FC	Fecal Coliform
Lbs	Pounds
MDNR	Minnesota Department of Natural Resources
µg/L	micrograms per liter
mg/L	milligrams per liter
mi <sup>2</sup>	square miles
MOS	Margin of Safety
MPCA	Minnesota Pollution Control Agency
NCHF	North Central Hardwood Forest
NH <sub>3</sub>	Total Ammonia-Nitrogen
NO <sub>2</sub> / NO <sub>3</sub> -N	Nitrate/ Nitrite- Nitrogen
NPS	non-point source
QA	Quality Assurance

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## Acronyms

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QC	Quality Control
SOD	Sediment Oxygen Demand
STORET	EPA's "STOrage and RETreival" System
TKN	Total Kjeldahl Nitrogen
TMDL	Total Maximum Daily Load
TN	Total Nitrogen
TP	Total phosphorus
TSS	Total Suspended Solids
USGS	United States Geological Survey
WWTP	Wastewater Treatment Plant
USDA	United States Department of Agriculture

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## 1.0 Executive Summary

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Section 303(d) of the Federal Clean Water Act (CWA) requires the Minnesota Pollution Control Agency (MPCA) to identify water bodies that do not meet water quality standards and to develop total maximum daily pollutant loads for those water bodies. A total maximum daily load (TMDL) is the amount of a pollutant that a water body can assimilate without exceeding the established water quality standard for that pollutant. Through a TMDL, pollutant loads can be distributed or allocated to point and non-point sources within the watershed that discharge to the water body.

This report prepared by Wenck Associates, Inc. (Wenck) for the Clearwater River Watershed District (CRWD), presents data collected in Phase II of the TMDL process for the listed segment of the Clearwater River between Clear Lake and Lake Betsy and for Lake Louisa in the CRWD located in central Minnesota.

- **Phase I** consisted of a review of existing information to better define existing conditions, identify data gaps, and develop plans for collecting and analyzing necessary additional information in subsequent phases.
- **Phase II** consisted of data collection and evaluation, the results of which are presented herein.
- **Phase III** will consist of setting the TMDL. Water quality models will help the CRWD quantify the TMDL and allocate loads to point sources and non point sources. An implementation plan to meet the load reductions will also be prepared. A work plan for Phase III was submitted to the MPCA in July 2007.
- **Phase IV** will consist of implementation of the load reductions established in Phase III.

Two 303d Impaired Waters are addressed in this report:

- Lake Louisa (MnDNR Lake ID 86-0282-00), and
- Clearwater River between Clear Lake and Lake Betsy in Meeker County (stream segment 07010203-502)

A segment of the Clearwater River between Grass Lake and the Mississippi River was added to the impaired waters list for dissolved oxygen in 2006. Phase I and II for this reach will be addressed in a separate report, Phase III for this reach will be combined with Phase III for the two segments addressed herein.

Lake Louisa is impaired due to excess nutrients, which can affect swimming and other recreational uses. Listed stream segment 07010203-502 is located on the Clearwater River between Clear Lake and Lake Betsy in Meeker County. The segment is listed because monitoring data have revealed that:

- Dissolved oxygen (DO) concentrations at times fall below the 5-milligram per liter (mg/L) water quality standard, which could impact fisheries and aquatic life,
- Discrete fecal coliform (FC) bacteria concentrations at times exceed 2,000 colony forming units per 100 milliliters (CFU/100 mL), and/or the geometric mean FC of at least 5 samples collected within a calendar month across several years of monitoring data at times exceeds 200 CFU/100 mL. This could pose a risk to swimmers and limit other recreational uses.

During Phase I of this TMDL, existing data collected by the MPCA, CRWD, and United States Geological Survey (USGS) between 1981 and 2003 was analyzed to define the extent, persistence, and severity of the DO depletion and FC exceedance in the Clearwater River, and sources of excess nutrients in Lake Louisa. Potential sources were reviewed. The results of that study are contained in the Phase I Report. Phase II of the TMDL study included field data collection to fill the data gaps necessary to establish the TMDL in Phase III.

The following is a synthesis of findings from Phase I and Phase II for each of the TMDLs:

### **Clearwater River-Clear Lake to Lake Betsy:**

#### **Dissolved Oxygen**

- The DO impairment is generally limited to the area of Kingston Wetland and downstream during low flow conditions ( $Q < 6$  cfs). This is supported by historic data as summarized in Phase I.
- Though long-term monitoring conducted between 1981 and 2003 show that 56% of DO violations occurred between 1989 and 1994, however recent data collection indicates the impairment is ongoing.
- Data shows that DO concentrations are fairly consistent from upstream to downstream, with the exception of a DO sag in the area of Kingston Wetland.

#### **Bacteria**

- The variety of conditions under which bacteria concentrations in the Clearwater River and its tributaries exceed both the 200 CFU/ 100 mL and the 2,000 CFU/ 100 mL standards point to a combination of sources that influence in-stream bacteria concentrations differently under different conditions.
- Specific conditions contributing to the impairment are non-point source and include manure application, urban runoff, and livestock grazing in riparian areas.
- Bacteria concentrations routinely exceed the chronic standard in tributaries along the listed reach indicating that the sources are widespread geographically.

### **Lake Louisa:**

- Phosphorus loads to Lake Louisa are primarily the result of loads from Clearwater River, but are also affected by internal cycling of phosphorus.
- The wetland upstream of the lake is acting as a sedimentation basin removing nutrients from river inflows to the lake.
- Though water quality in Lake Louisa has improved dramatically since 1981, average summer TP concentrations were reduced by 80%; the lake is still impaired with respect to nutrients.



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## 2.0 Introduction

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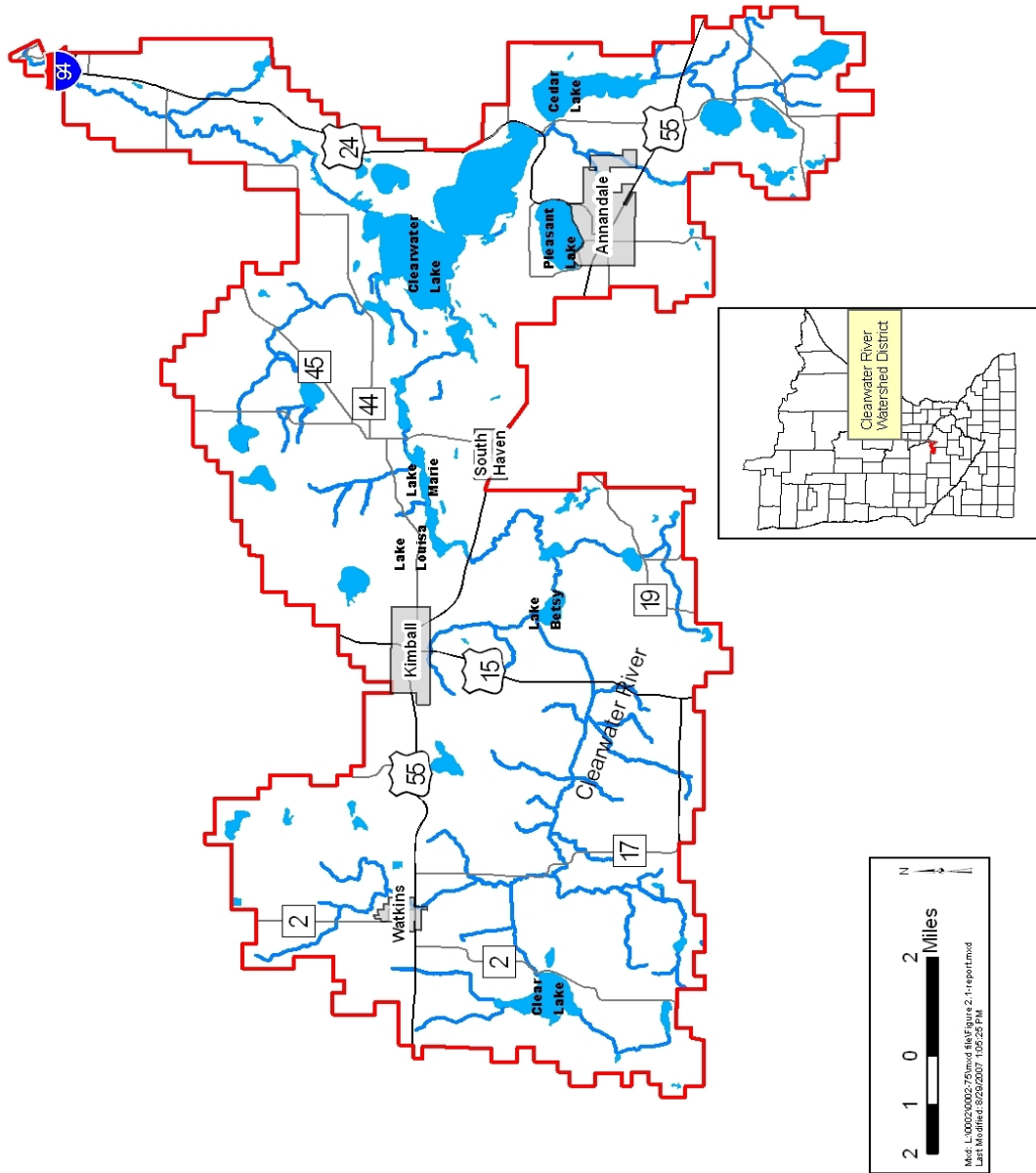
The Clearwater River Watershed District is a predominantly agricultural 168-square mile watershed in central Minnesota (Figure 2.1). The Clearwater River and the Clearwater River Chain of Lakes are the predominant water features in of the District. Lake Louisa is one lake in the Clearwater River Chain of Lakes. As specified in Minnesota Rules, Chapter 7050, the Clearwater River's and Lake Louisa's designated uses for Class 2B waters are aquatic life, recreation, industrial consumption, agriculture, wildlife, aesthetic enjoyment, and navigation.

The Clearwater River Watershed District has been proactive in the protection and improvement of water quality and has made considerable improvements in water quality throughout the District. However, monitoring data has shown that a 9.7-mile stretch of Clearwater River between Clear Lake and Lake Betsy does not meet water quality standards for fecal coliforms and dissolved oxygen (DO), and that Lake Louisa does not meet water quality standards for nutrients.

The Clean Water Act requires the State to develop TMDLs for impaired waters. A TMDL is the amount of a pollutant that a water body can assimilate without exceeding the pollutant's water quality standard.

The State of Minnesota's Clean Water Act Section 303(d) list of impaired waters within the Clearwater River Watershed District is summarized in Table 2.1 and Figure 2.2.

Figure 2.1 Clearwater River Watershed District

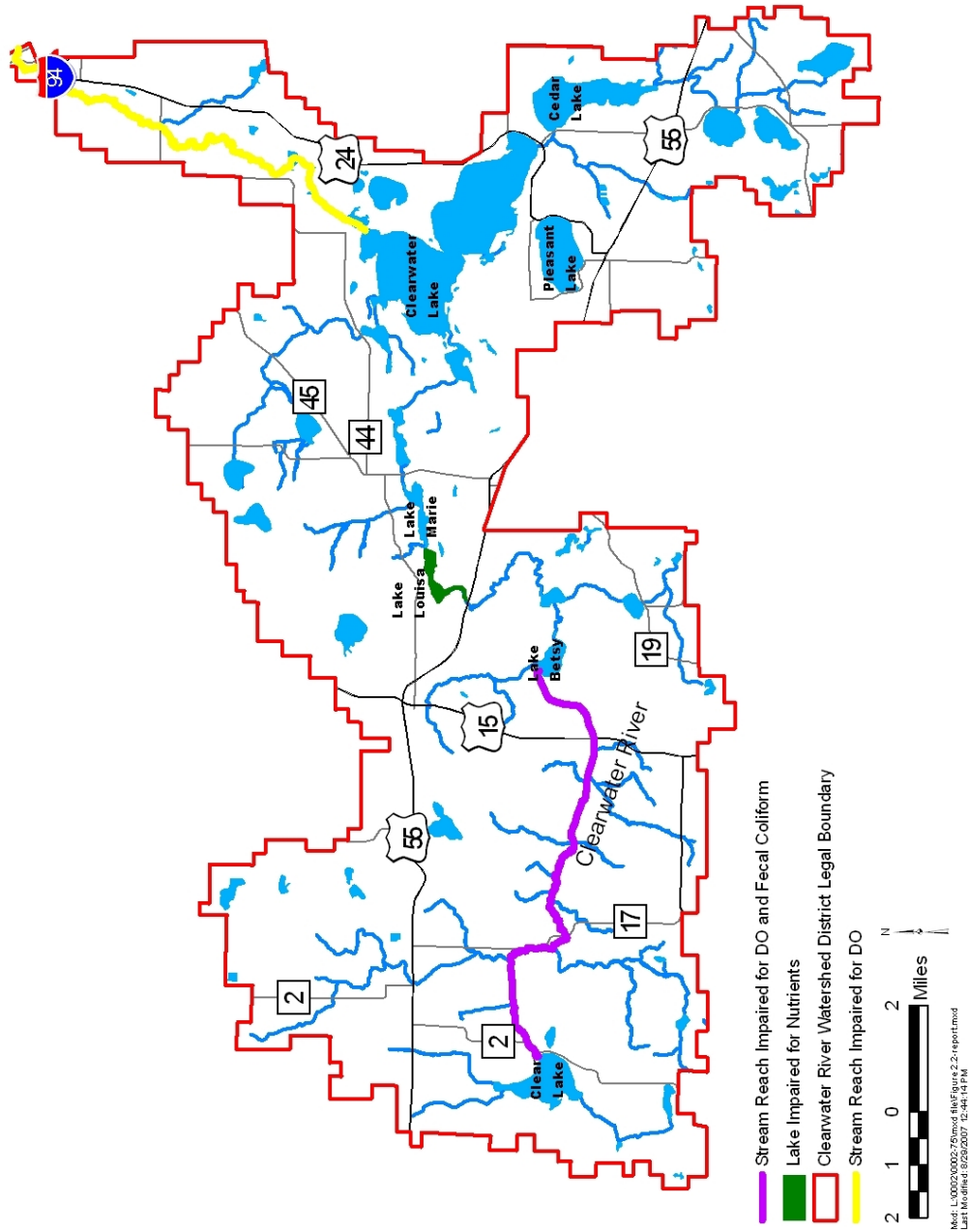


**Table 2.1 Summary of 303(d) Listings in the CRWD**

<u>Water Body</u>	<u>Reach/ Lake ID</u>	<u>Listing Parameter</u>	<u>Impaired Use</u>	<u>Addressed in this Report</u>
Lake Louisa	86-0282-00	Excess Nutrients	Swimming	Yes
Clearwater River, Clear Lake to Lake Betsy	07010203-502	Fecal Coliform	Swimming	Yes
		Low Oxygen	Aquatic Life	Yes
Clearwater River, Grass Lake to the Mississippi River	07010203-511	Low Oxygen	Aquatic Life	No*

\* A Work Plan for Phase III for all current listings was submitted to the MPCA in July 2007. Phase I & II for the newly listed reach of the Clearwater River between Grass Lake and the Mississippi is ongoing. The report documenting Phase II data collection in that segment, as well as a review of existing data will be presented under separate cover when all field work is complete in late 2007 or early 2008.

Figure 2.2 Impaired Waters in the CRWD



In October 2003, the CRWD applied for a grant under the TMDL program to conduct a Phase I TMDL Study. Phase I included compilation and analysis of existing water quality data for the watershed and preparation of a work plan to outline the remaining work necessary to complete the TMDLs for Lake Louisa and for the Clearwater River between Clear Lake and Lake Betsy. This report presents the data collected in Phase II, a detailed work plan for Phase III was submitted to the MPCA in July 2007.

The TMDL process will provide science-based pollutant load allocations and information that the District and other local officials can use when making decisions regarding land use, and land management that will affect water quality within the watershed. The main objectives for the Clearwater River Watershed District's TMDL Project are listed below:

- Define the spatial extent, persistence, severity, and causes of the DO depletion and high bacteria problem in the Clearwater River;
- Quantify point and non-point sources of oxygen demand and bacteria to the Clearwater River and nutrients to Lake Louisa. Assess their contributions to water quality impairments by land use category and main-stem river and tributary sub-watersheds for targeting priority areas for rehabilitation as well as protection;
- Allocate the Clearwater River and Lake Louisa assimilative capacity to both point and non-point sources of pollution and develop a margin of safety (MOS) protective of water quality standards; and
- Develop models for evaluating the impact of management practices and rehabilitation alternatives on water quality.

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## 3.0 Data Collected

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Field monitoring for the Clearwater River between Clear Lake and Lake Betsy and Lake Louisa was conducted between August 2005 and October 2006 to fill data gaps identified in Phase I. Specifically, the field data collection was conducted to determine the spatial and temporal extent of the DO and bacteria impairments on the Clearwater River and to quantify the sources. Data was further collected to measure in-lake nutrient concentrations and nutrient loadings to Lake Louisa.

Field monitoring for the Clearwater River between Grass Lake and the Mississippi River is ongoing in 2007. Field data collection is under way to determine the spatial and temporal extent of the DO impairment on the Clearwater River and to quantify the sources.

Monitoring was conducted in accordance with the work plan approved in Phase I and is described in sections 3.1 and 3.2 of this report. There were no significant deviations from the approved Monitoring Plan detailed in the Phase I Report.

### 3.1 CLEARWATER RIVER, CLEAR LAKE TO LAKE BETSY

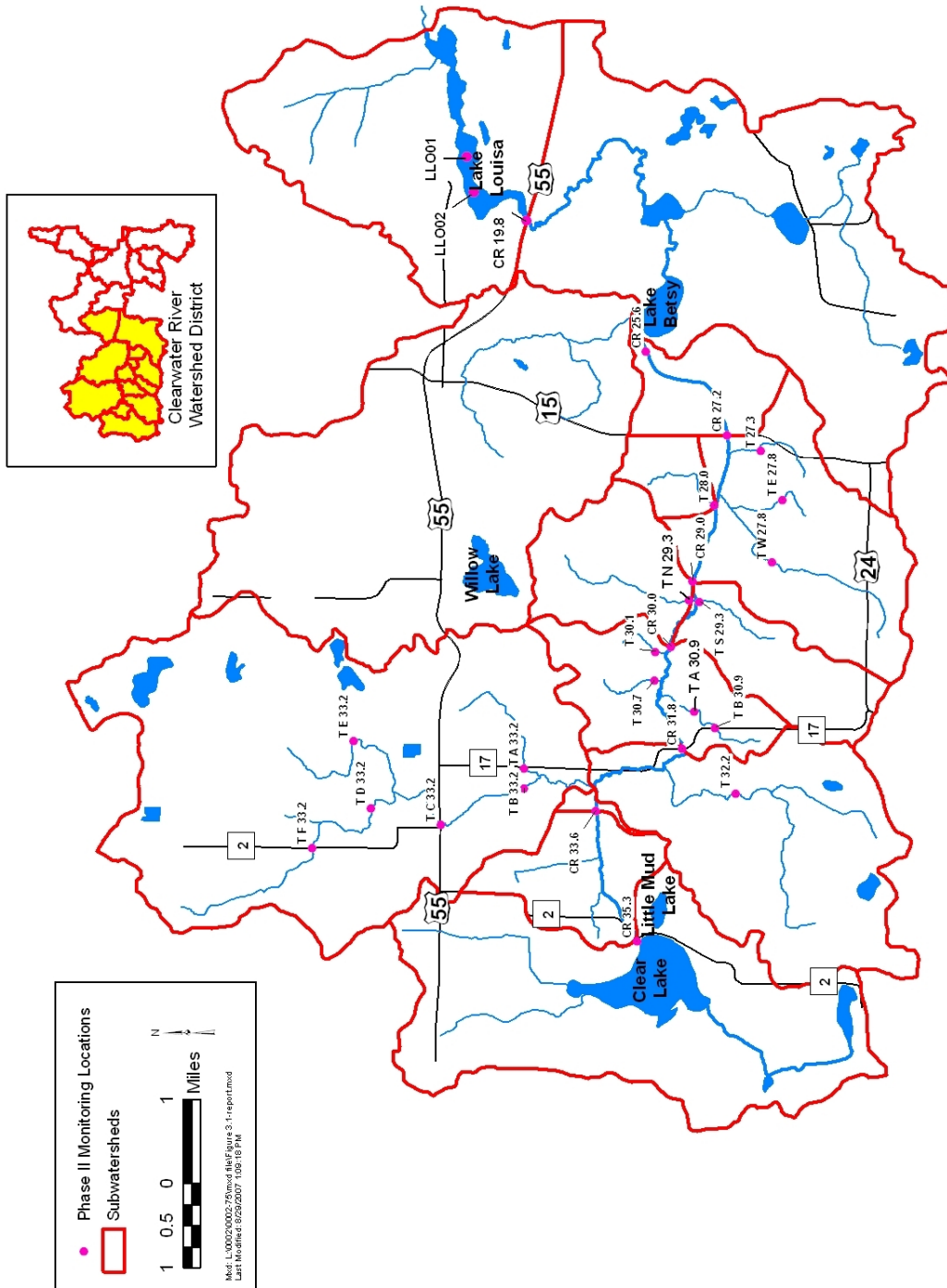
Figure 3.1 shows the monitoring locations for the DO and bacteria TMDL in the Clearwater River between Clear Lake and Lake Betsy. Table 3.1 lists monitoring station descriptions. Data collection at these locations included:

- Both low and high flow synoptic surveys of the Clearwater River between Clear Lake and Lake Betsy were conducted. Low flow synoptic surveys were conducted August 15, 2005 and September 26-27, 2005 (Appendix A). Dissolved oxygen and bacteria were

measured during the August 15, 2005 survey because flows were zero throughout most of the reach.

- The Clearwater River main stem was also sampled approximately twice monthly in 2006 as flow conditions permitted between May and October. The high-flow synoptic survey was conducted April 18-19, 2006. Longitudinal water quality, flow, and loading profiles from 2006 sampling are included in Appendix B.
- Box plots in Appendix C show the mean, max, min and standard deviation of water quality parameters from upstream to downstream for data collected during Phase II (2005 and 2006). Field and lab data sheets are in Appendix D.
- Continuous DO measurements were collected during each synoptic survey, and for an extended period in 2005 and 2006. Data are plotted in Appendix E.
- Continuous stage was measured at Fairhaven Dam and upstream of Lake Betsy in 2005 and 2006. Rating curves were developed and flow records were produced. Results are in Appendix F.
- A time of travel dye study was conducted in the listed reach under two flow regimes September 27-29, 2005 and April 19-20, 2006. During the time of travel study, flows at the downstream end of the reach (CR 25.6) were 9.5 cfs during the 2005 survey and 32.6 cfs during the 2006 survey, therefore satisfying the project requirements of obtaining time of travel during high and low flow. Results are shown in Appendix G.
- A field survey was conducted. Appendix H contains a digital map; users can point and click locations on the map to view photos and the field survey results. The riparian corridor study included evaluation of riparian canopy and vegetation, in-stream macrophytes, stream substrate, and channel stability.
- Passive sampling for optical brighteners was conducted on the Clearwater River April 19 through May 2, 2006. Results are shown in Appendix I.

Figure 3.1 Phase II Monitoring Locations





**Table 3.1 Monitoring Station Descriptions**

<b>TMDL Site ID</b>	<b>Station Description</b>
CR 25.6	CLEARWATER R AT 732ND AVE, 2.4 MI S OF KIMBALL
CR 27.2	CLEARWATER R AT CSAH-15, 3.5 MI S OF KIMBALL PRAIRIE
T 27.3	TRIBUTARY TO CLEARWATER R AT 353RD ST, 3.6 MI S OF KIMBALL
T E 27.8	TRIBUTARY TO CLEARWATER R AT 350TH ST, 4.0 MI SW OF KIMBALL
T W 27.8	TRIBUTARY TO CLEARWATER R AT 707TH ST, 4.2 MI SW OF KIMBALL
CR 29.0	CLEARWATER R AT BR IN S20/SEQ 4 MI SE OF WATKINS
CR 30.0	CLEARWATER R AT 697TH ST, 3.2 MI SW OF KIMBALL
T 30.1	TRIBUTARY TO CLEARWATER R AT 365TH ST, 3.2 MI SE OF WATKINS
T 30.7	TRIBUTARY TO CLEARWATER R AT 365TH ST, 3.0 MI SE OF WATKINS
T A 30.9	TRIBUTARY TO CLEARWATER R AT 365TH ST, 3.2 MI SE OF WATKINS
T B 30.9	TRIBUTARY TO CLEARWATER R AT CO HWY 17, 3.5 MI SE OF WATKINS
CR 31.8	CLEARWATER R AT CSAH-17, 3.3 MI SSE OF WATKINS
T 32.2	TRIBUTARY TO CLEARWATER R AT 355TH ST, 3.5 MI S OF WATKINS
T A 33.2	TRIBUTARY (CD-20) TO CLEARWATER R AT CSAH-17 AND 380TH ST, 1.5 MI SE OF WATKINS
T B 33.2	TRIBUTARY (CD-20) TO CLEARWATER R .1 MI N 380TH ST, 1.2 MI SE OF WATKINS
T C 33.2	TRIBUTARY (CD-20) TO CLEARWATER R AT CSAH-55, 0.2 MI SE OF WATKINS
T D 33.2	TRIBUTARY (CD-20) TO CLEARWATER R AT 4TH ST N, 0.2 MI NE OF WATKINS
T E 33.2	TRIBUTARY (CD-20) TO CLEARWATER R NEAR MEEKER-STEARN'S BOUNDARY, 1.2 MI NE OF WATKINS
T F 33.2	TRIBUTARY (CD-20) TO CLEARWATER R AT CO HWY 2, 0.8 MI N OF WATKINS
CR 33.6	CLEARWATER R AT 675TH ST, 1.6 MI S OF WATKINS
CR 35.3	CLEARWATER R (CD-44) AT 657TH AVE, 2.8 MI SW OF WATKINS

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## 3.2 LAKE LOUISA

- Lake Louisa was sampled five times in May to October 2006 at three depths in both the east and west basins of the lake.
- The Clearwater River directly upstream of Lake Louisa was sampled five times in May to October 2006. Appendix J contains plotted data for Lake Louisa, Appendix K contains field and lab data sheets for Lake Louisa.
- A pressure transducer was installed at the Fairhaven Dam to record flow out of Lake Louisa (Appendix E).

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## 4.0 Results and Analysis

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### 4.1 CLEARWATER RIVER, CLEAR LAKE TO LAKE BETSY

Results of the field survey, hydrologic monitoring and water quality sampling conducted in the Clearwater River and tributary watershed in 2005 and 2006 are presented in this section.

Water quality data is compared with that of minimally impacted streams in the North Central Forest Ecoregion.

Longitudinal water quality profiles allow an evaluation of the extent of impairment. In stream and tributary loadings are calculated and evaluated. Each of these elements allows an evaluation of the sources of bacteria and oxygen demand in the watershed.

#### 4.1.1 Field Survey

The Clearwater River between Clear Lake and Lake Betsy extends between CR 35.3 in the upstream end at Clear Lake and CR 25.6 at Lake Betsy. The channel in this 9.7 mile reach of the Clearwater River impaired with respect to dissolved oxygen and bacteria can be broken into three distinct sections based on channel characteristics such as slope, morphometry and channel bed. Table 4.1.1 summarizes stream characterization in each reach.

In the 1.7-mile upstream segment between of the Clearwater River between Clear Lake and CR 33.6 the slope is 0. The channel is primarily ditched in this segment, sometimes draining large wetland complexes. The riparian land use is primarily pasture, wetland and agriculture.

The next reach between CR 33.6 and CR 29.0 is steeper, in fact the maximum slope of 33 ft/ mile occurs between 33.6 and 31.8. Downstream of this the slope ranges from 5 to 10 ft/ river mile. The portion of the river between mile 33.6 and 29.0 is more sinuous, the sediments are generally coarser. The channel in this segment is mostly flanked by a woody riparian buffer consisting of trees and grasses.

Between CR 29.0 and CR 25.0 the river is ditched through large wetlands. The first of these wetlands is the Kingston wetland located between river mile 29.0 and 27.2. In 1985 a CRWD project diverted low flow streamflow out of the main ditched channel and around to the edges of the Kingston wetland allowing stream flow to filter back into the channel through the wetland. The project was one of several in the Clearwater River Chain of Lakes Restoration; an effort that reduced total phosphorus and sediment loading in the Clearwater River and downstream lakes by an order of magnitude.

Downstream of river mile 25.6, the slope of the river is small, and in fact there is backflow from Lake Betsy into the Clearwater River from time to time.

Photos of the stream, along with assessment of the sediments, and riparian cover are presented in Appendix G. A summary of field survey results is presented in Table 4.1.1.

**Table 4.1.1 Stream Characteristics of the Clearwater River between Clear Lake and Lake Betsy**

River Mile	Drainage Area (acres)	Elevation (ft NGVD)	Slope (ft/ mile)	Stream Width (ft)	Tree Canopy	Sediment Description	Description
CR 35.3	6,801	1,129	--	12	Mowed turf grass riparian, 75% upstream, 25% downstream	gravel and cobbles, medium to coarse sand	Clear Lake Outlet
CR 33.6	8,214	1,129	0	12	20% upstream, 100% downstream	medium to coarse sandy clay upstream; coarser sand, some gravel and cobble.	Straight narrow ditch with steep banks upstream, flowing through agricultural land. Downstream, channel has more meanders and is heavily forested. Channel widens and sediment is coarser graided.
CR 31.8	23,679	1,070	33	14	75% in the area	Fine to medium sand, layers of gravel, some cobble and boulders	Meandering channel, undercut banks, braided, sediment deposits
CR 30.0	25,602	1,060	6	14	100% upstream, 90% downstream	clean medium to coarse sand, organic material at surface	Meandering channel, undercut banks, braided, sediment deposits
CR 29.0	28,633	1,050	10	18	60% upstream, 90% downstream	Medium to coarse sand, some gravel	Meandering channel, undercut banks, braided, sediment deposits, Kingston Wetland downstream
CR 27.2	32,704	1,040	6	43	10% upstream, 60% downstream	Wetland soils, organic muck	County Road 15, ditched and dredged channel
CR 25.6	33,877	1,032	5	35	90% upstream, 20% downstream	Sandy edges, organic muck	Ditched, straight channel with undercut banks. Forested banks upstream. Cow pasture on the northbank downstream.
CR 25.0	33,976	1,032	0	--			Lake Betsy Inlet

T:\0002\75\_TMDL Ph2\Report\[Rpt Outline.xls]Table4.1

## 4.1.2 Hydrology

Precipitation and runoff volumes were below average in 2006. Precipitation was measured by the MPCA at the Fairhaven Dam, and in Watkins by a citizen precipitation recorder. Annual precipitation in Fairhaven was 26.13 inches, a 1 inch departure from the 1971-2000 Normal at St. Cloud. Precipitation in the upper watershed near Watkins was 22.59 inches, a 4.54 inch departure from St. Cloud normal precipitation (Table 4.1.2).

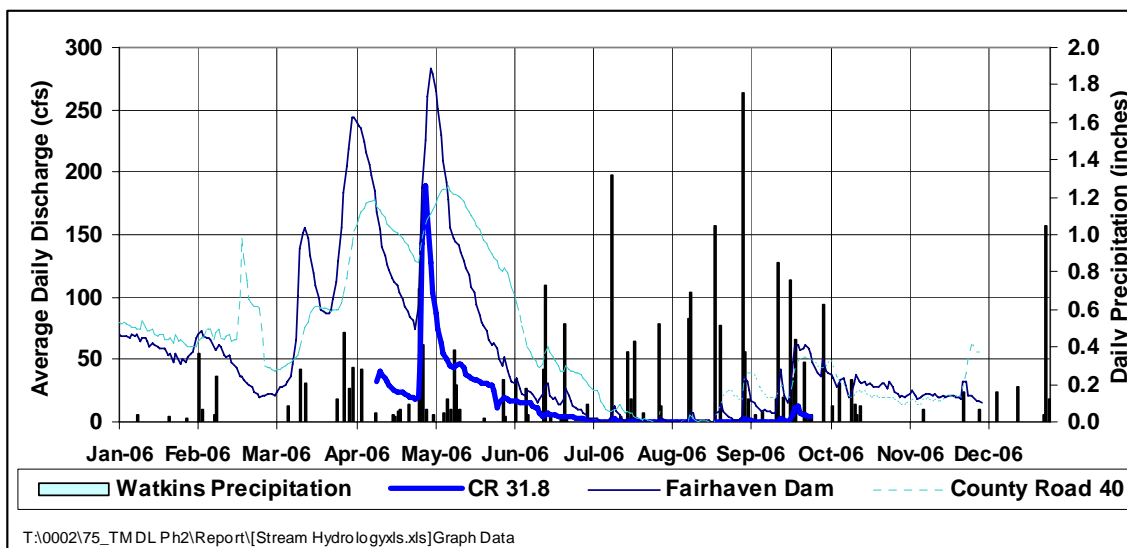
**Table 4.1.2 2006 Precipitation in the Upper Clearwater River Watershed District**

		2006 Precipitation	
		Fairhaven Dam (MPCA)	Watkins
	1971-2000 Normal (St.)		
January	0.76	0.52	0.09
February	0.59	0.34	0.71
March	1.50	0.97	1.17
April	2.13	4.38	2.94
Ma	2.97	1.04	1.24
June	4.51	6.61	2.11
Jul	3.34	1.69	2.93
August	3.93	2.88	2.88
September	2.93	6.89	5.31
October	2.24	0.71	1.35
November	1.54	0.1	0.23
December	0.69	0	1.63
<b>Total</b>	<b>27.13</b>	<b>26.13</b>	<b>22.59</b>

T:\0002\75\_TMDL Ph2\Report\[Stream Hydrologyxls.xls]Precip

Continuous stage measurements were recorded in the Clearwater River at CR 31.8 in the middle of the impaired reach, at Fairhaven Dam downstream of Lake Marie, and at County Road 40 downstream of Grass Lake in the lower watershed. Figure 4.1.1 shows average daily flow at these locations and precipitation at Watkins. Average flows and runoff volumes are summarized in Table 4.1.3. All flow data is provisional and will be finalized in the Phase III report.

**Figure 4.1.1 2006 Average Daily Stream flow and Precipitation**



Note: Flow data is provisional and will be finalized in the Phase III report.

**Table 4.1.3 2006 Average Flow and Runoff in the Clearwater River Watershed District**

Station/ Location	2006			
	Tributary Sub-watershed Area (sq. mi.)	Runoff Volume (ac-ft)	Runoff Over Watershed (inches)	Average Flow (cfs)
CR 31.8	37	6,590	3.3	14
Fairhaven Dam	91	36,573	7.5	55
CSAH 40	164	42,673	4.9	61

T:\0002\75\_TMDL Ph2\Report\Stream Hydrology\xls.xls]Graph Data

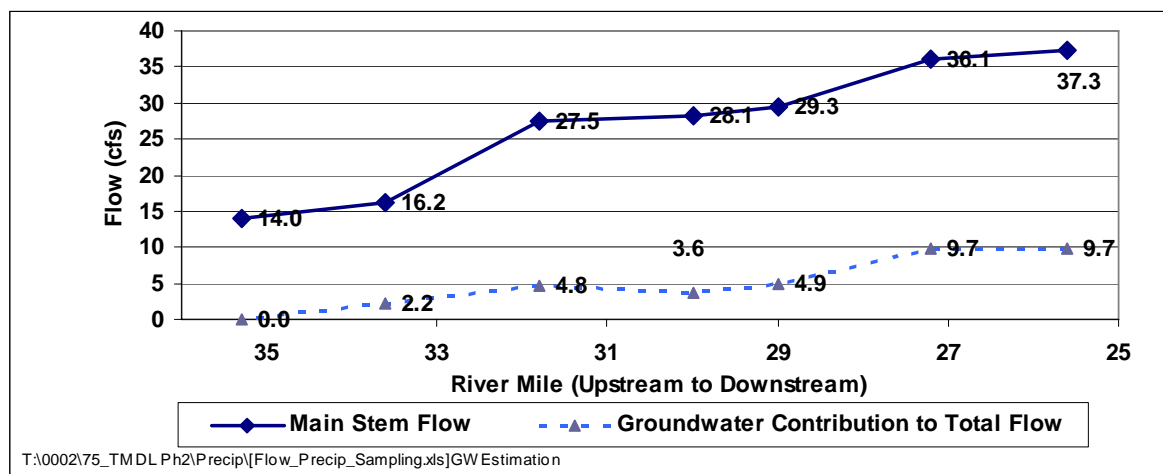
Flow at CR 31.8 peaked at 190 cfs on May 1, 2006. The total runoff from the 37 square mile drainage area to CR 31.8 was 3.3 inches during 2006. Runoff at the Fairhaven Dam for the same period was 7.5 inches over the 91 square mile watershed, surprisingly high for a dry year. The average flow was 55 cfs over the flow period. Flow at Fairhaven Dam peaked on May 3, 2006 at 283 cfs. Runoff downstream of Grass Lake at CSAH 40 was 4.9 inches over the 164 square mile

watershed. The average flow was 61 cfs over the flow period. Flow peaked there on May 10, 2006 at 189 cfs.

The peak flows were the result of precipitation events in late April and early May of 2006 as opposed to spring melt conditions. Due to prevailing dry conditions during the summer, precipitation events later in the season did not increase flows significantly.

The increase in runoff from the upper watershed to the lower watershed is likely due to groundwater inflow. This is supported by synoptic survey data collected in 2005 and 2006. Longitudinal flow profiles in September 2005 and April 2006 show increasing flow in dry weather from upstream to downstream. Figure 4.1.2 shows groundwater contribution as percent of total flow. During dry weather, with no snow melt or point sources, incremental increases or decreases in main stem flow that are not from tributary inflows are attributed to groundwater gains or losses.

**Figure 4.1.2 Flow Profile of the Clearwater River During April 18, 2006 Synoptic Survey**





### 4.1.3 Water Quality

Synoptic surveys and bi-weekly river profile sampling of the Clearwater River between Clear Lake and Lake Betsy were conducted in both wet and dry weather and over a range of flow conditions (Table 4.1.4).

**Table 4.1.4 Sample Event Conditions**

TMDL Samples Collected	Wet/ Dry	CR 29.0 Flow (cfs)	Days Since Last Precipitation Event >0.1 inch	Amount of Last Precipitation (inches)	*
8/15/2005	dry	0.4	6	0.08	
7/12/2006	dry	0.5	18	0.52	
6/15/2006	dry	3.8	6	0.16	
5/30/2006	dry	11.1	17	0.2	
4/19/2006	dry	29.2	13	0.28	
4/18/2006	dry	29.3	12	0.28	
8/23/2006	wet	0.3	1	1.05	
7/26/2006	wet	1.1	4	0.43	
6/28/2006	wet	3.0	4	0.52	
10/5/2006	wet	6.3	1	0.63	
9/25/2006	wet	7.6	2	1.43	(1)
9/27/2005	wet	9.7	3	0.22	
9/26/2005	wet	10.9	2	0.22	(2)

(1) 3 day event ending 2 days prior

(2) 0.78 inches 5 days prior

T:\0002\75\_TMDL Ph2\Precip\[Flow\_Precip\_Sampling.xls]Summary

Table 4.1.5 compares water quality in the Clearwater River in 2005 and 2006 to that of minimally impacted streams in the North Central Hardwood Forest Ecoregion.

**Table 4.1.5 Water Quality in the Clearwater River and Minimally Impacted Streams of the North Central Hardwood Forest Ecoregion**

Parameter	Water Quality of Minimally Impacted Streams in NCHF, Annual 1970-1992*				2005-2006 Clearwater River, Main Stem			
	Mean	SD	MAX	MIN	Mean	SD	MAX	MIN
Conductivity (µmhos/cm)	298	83	840	40	826	262	1,716	442
pH (SU)	8.1	0.3	8.9	7.2	7.7	0.8	9.0	5.6
TSS (mg/L)	13.7	22.5	330	0.5	20	51	387	2
Ammonia-N (mg/L)	0.2	0.2	1.3	0.02	0.1	0.1	0.6	0.1
NO <sub>2</sub> +NO <sub>3</sub> (mg/L)	0.16	0.15	0.65	0.01	3.7	6.6	48	0.20
TP (mg/L)	0.13	0.15	1.6	0.01	0.21	0.13	0.72	0.04
Fecal Coliform (#/100mL)	920	3,277	27,000	4	621	12,609	60,000	10
BOD <sub>5</sub> (mg/L)	2.7	2.1	17	0.3	2.9	1.3	7.0	2.0

\*McCollar & Heiskary, 1993

T:\0002\75\_TMDL Ph2\Report\RAK FINAL DATA.xls\Table 4.2

The most striking differences between 2005 and 2006 Clearwater River means and Ecoregion means are conductivity, NO<sub>2</sub> +NO<sub>3</sub>, TSS, and total phosphorus. These values are consistent with a stream impacted by anthropogenic activities.

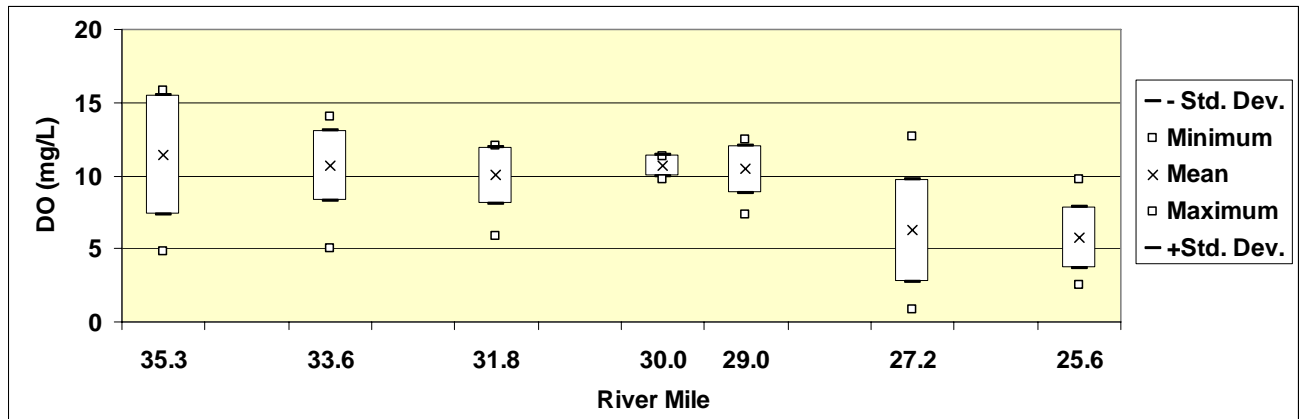
The high mean conductivity in the Clearwater River relative to the mean conductivity measured in minimally impacted streams in the Ecoregion further indicates that the stream has a groundwater contribution in this reach.

The chemical characteristics of the flow in the listed reach of the Clearwater River along with the dominant land use in the tributary watershed point to agricultural uses as the source of impairment. Concentrations of NO<sub>2</sub>+NO<sub>3</sub> are an order of magnitude higher in the Clearwater River compared to those of minimally impacted streams; NO<sub>2</sub>+ NO<sub>3</sub> is a key component of agricultural runoff because of its use as fertilizer. Nitrogen fertilizers are inexpensive and are sometimes over-applied leading to high concentrations in waters with agricultural watersheds. In further support of this conclusion, 75% of the land area tributary to the listed reach is cultivated or pasture.

### 4.1.3.1 Dissolved Oxygen

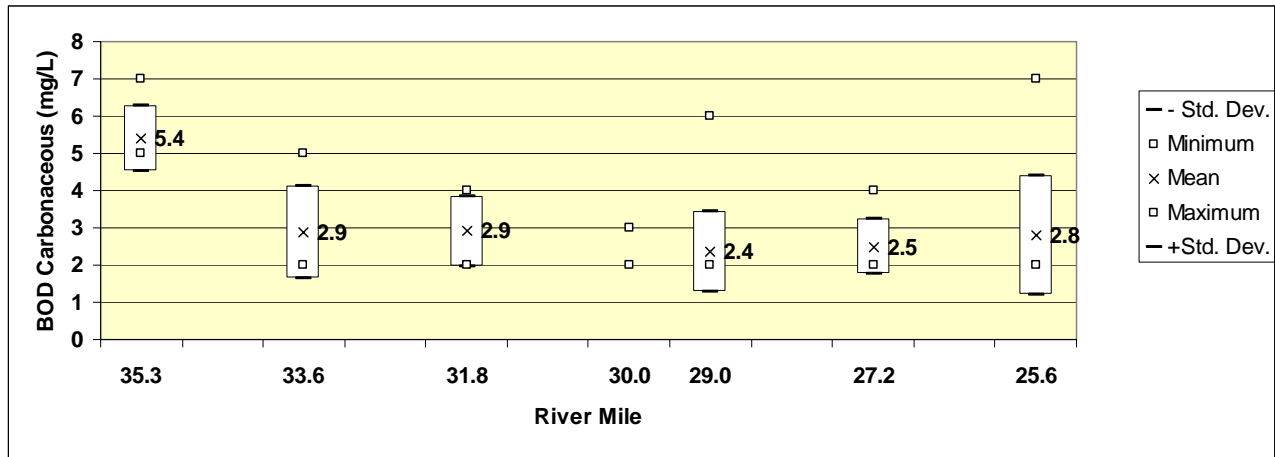
Discrete measurements of DO along the profile of the Clearwater River in 2005 and 2006 show that DO sag and the DO impairment is generally limited to the area of and downstream of the Kingston Wetland in low flow, high-temperature conditions. Otherwise, DO concentrations are fairly consistent upstream to downstream (Figure 4.1.3).

**Figure 4.1.3 Longitudinal DO Concentrations in the Clearwater River**

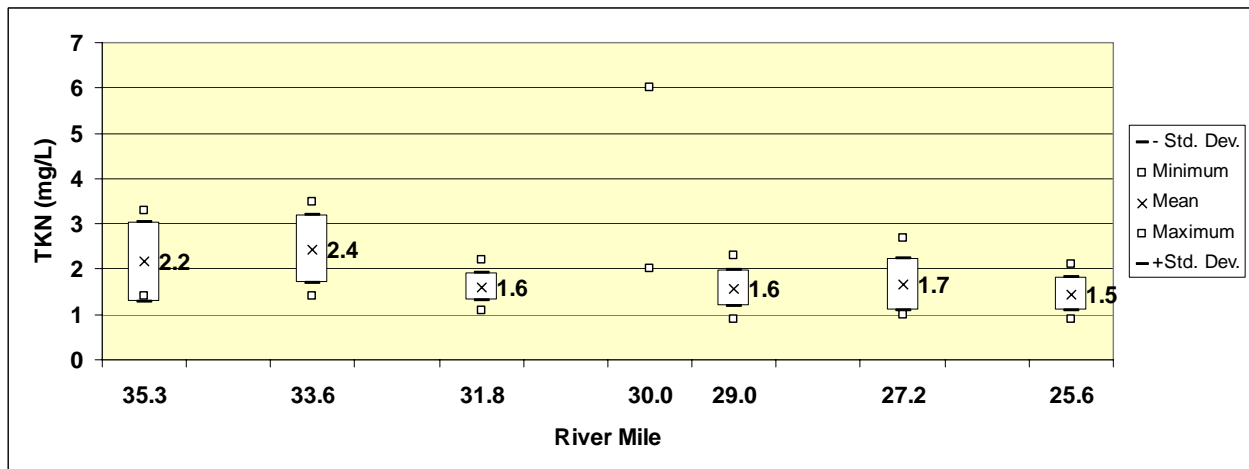


The consistent measurements of DO from upstream to downstream indicate the river is generally in equilibrium. This is supported by in-stream CBOD-5 and TKN concentrations (Figures 4.1.4 and 4.1.5).

**Figure 4.1.4 Longitudinal CBOD-5 Concentrations in the Clearwater River**



**Figure 4.1.5 Longitudinal TKN Concentrations in the Clearwater River**



The comparatively higher CBOD-5 concentrations in the upstream reach are likely due to organic material in the outflow of Clear Lake, a highly eutrophic lake with nuisance algae blooms.

Dissolved oxygen, temperature, conductivity and pH were measured continuously at the upstream and downstream of Kingston Wetland during 2005, and at CR 31.8 during late summer 2005 and 2006. Measurements were also collected at CR 25.6 during late summer of 2006.

Continuous measurements of dissolved oxygen showed that DO concentrations were consistently below the state DO standard of 5 mg/L in the area and downstream of Kingston Wetland throughout 2005, and occasionally dipped below the state DO standard upstream of Kingston wetland at the low point of the diurnal DO cycle. Results of all continuous DO monitoring are presented in Appendix E.

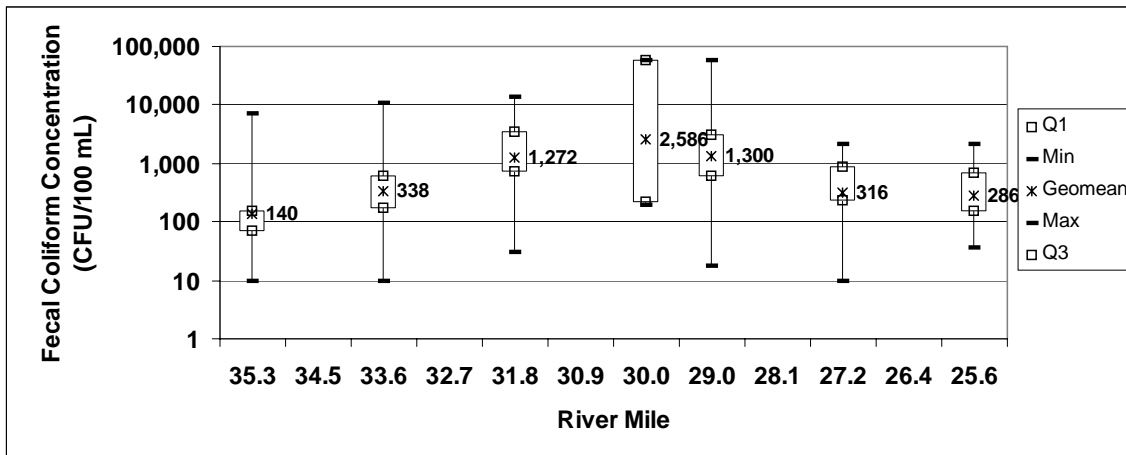
Dissolved oxygen concentrations at CR 31.1 in the upstream end of the listed reach dipped below the state standard at the low point of the diurnal cycle on 6 of 17 days measured in 2005 and 3 of 28 days in 2006. Daily maximum DO concentrations were above the state standard for all measurements collected. Diurnal variations of DO at CR 31.8 were high, 5 mg/L in 2005 and 3.5 in 2006.

Daily maximum DO concentrations near the downstream end of the listed reach at CR 26.1 in 2005 were consistently below the state standard. Daily minimum DO concentration at CR 25.6 dipped below the state standard 6 of 28 days measured in 2006, and the daily DO maximum fell below the state standard on 2 days. Average diurnal DO variation was 2.7 in 2006.

#### **4.1.3.2 Bacteria**

Log-mean fecal coliform concentrations were lowest, 140 cfu/ 100mL, at the upstream boundary of the listed reach of the Clearwater River. Concentrations increased steadily downstream and were highest between CR 31.8 and CR 29.0 with concentrations of 1,272 cfu/ 100mL and 1,300 cfu/ 100mL respectively (the peak value of 2,586 cfu/ 100mL represents only two sample events). Figure 4.1.6 shows the longitudinal geometric mean, minimum, maximum and log standard deviation of data collected in Phase II.

**Figure 4.1.6 Longitudinal Bacteria Concentrations in the Clearwater River**



The bacteria impairment impacts the entire reach, but appears to be highest in the central portion of the river.

#### 4.1.4 Source Assessment

An assessment of sources of oxygen demand and bacteria in the watershed is discussed in this section. The sources are non-point source in nature, no point sources were identified. Sources for both impairments include livestock and associated land practices including feedlots and pasturing, crop farming and associated land uses including drain tiles, urban runoff from the City of Watkins, septic systems, and natural sources such as wildlife and wetlands.

The number of fecal coliform samples collected in 2005 and 2006 exceeding the chronic and acute standards (200 and 2,000 CFU/ 100 mL respectively) is compared to channel flow and runoff conditions in the main stem (Table 4.1.6) and in main stem plus tributaries (Table 4.1.7).

**Table 4.1.6 2005 and 2006 Fecal Coliform Samples Exceeding 200 and 2,000 and Associated Channel Conditions (Main Stem)**

Main Stem Bacteria Samples Collected in 2005 and 2006						
	n	n >2,000 CFU/ 100 mL	n <2,000 CFU/ 100 mL	n <200 CFU/ 100 mL	Downstream Flow (cfs)	Conditions (1)
08/15/05	4	1	3	1	0.4	Dry
04/18/06	8	0	2	6	29.3	Dry
05/30/06	7	1	4	3	11.1	Dry
06/15/06	7	0	3	4	3.8	Dry
07/12/06	5	4	5	0	0.5	Dry
06/28/06	7	0	5	2	3	Moderate
07/26/06	4	1	3	1	1.1	Moderate
09/26/05	9	5	9	0	10.9	Wet
08/23/06	2	2	2	0	0.3	Wet
09/25/06	6	5	6	0	7.6	Wet
10/05/06	6	0	6	0	6.3	Wet

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(1) Dry= more than 5 days since last precipitation event;

Moderate= 4 or 5 days since last precipitation event

Wet= 1, 2, or 3 days since last precipitation event

**Table 4.1.7 2005 and 2006 Fecal Coliform Samples Exceeding 200 and 2,000 and Associated Channel Conditions (Main Stem & Tributaries)**

Main Stem & Tributary Bacteria Samples Collected in 2005 & 2006						
Date	N	n >2,000 CFU/ 100 mL	n <2,000 CFU/ 100 mL	n <200 CFU/ 100 mL	Downstream Flow (cfs)	Conditions (1)
8/15/05	9	1	4	4	0.4	Dry
4/18/06	23	0	3	20	29.3	Dry
5/30/06	9	1	5	3	11.1	Dry
6/15/06	9	1	4	4	3.8	Dry
7/12/06	5	4	1	0	0.5	Dry
6/28/06	9	0	6	3	3	Moderate
7/26/06	4	1	2	1	1.1	Moderate
9/26/05	22	13	9	0	10.9	Wet
8/23/06	2	2	0	0	0.3	Wet
9/25/06	7	5	2	0	7.6	Wet
10/5/06	7	2	5	0	6.3	Wet

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(1) Dry= more than 5 days since last precipitation event;

Moderate= 4 or 5 days since last precipitation event

Wet= 1, 2, or 3 days since last precipitation event

In the main stem of the Clearwater River, 63% acute bacteria exceedances occurred within three days of a precipitation event. This is consistent with historical data that showed 77% and 83% of FC samples exceeded 2,000 CFU/ 100 mL at CR 33.0 and CR 28.2 respectively occurred within 3 days of a precipitation event. Wet weather exceedances point to a multiplicity of sources.

Acute exceedances in dry weather are highly correlated to the presence of livestock in the streams, though also occurred in wet weather. Chronic exceedances occur in both wet and dry weather.

#### **4.1.4.1 Livestock**

Fecal coliform concentrations in excess of 60,000 CFU/ 100 mL during dry weather conditions during 2005 and 2006 were primarily observed in areas with riparian livestock pastures where livestock were routinely allowed access to the stream.

#### **4.1.4.2 Crop Farming**

Corn and soy bean rotation are the primary row crops in the watershed tributary to the portion of the Clearwater River between Clear Lake and Lake Betsy. The high in-stream concentrations of NO<sub>2</sub> + NO<sub>3</sub> indicate that crop farming is a source of nutrients to the stream. Organic and ammonia nitrogen in animal waste also contributes to NO<sub>2</sub> + NO<sub>3</sub> through the process of nitrification.

Liquid manure application can be a source of bacteria and oxygen demand to receiving waters. Manure is primarily applied to crops in the fall prior to a corn rotation and sometimes in the spring. Some of the exceedances of the bacteria standard observed between 1992 and 2003 coincide with periods of land application which may indicate land application does contribute to the bacteria impairment.



#### **4.1.4.3 Urban Runoff**

One urban area, Watkins, lies within the watershed tributary to the Clearwater River between Clear Lake and Lake Betsy. Watkins storm water enters the Clearwater River via County Ditch 20, between monitoring stations at CR 33.8 and CR 31.8. Flows in the upper portion of the Clearwater River are largely comprised of flow from this tributary area.

Five-day BOD concentrations in the Watkins tributary were consistently 2 to 3 mg/L. Concentrations upstream were below detection limit in all but three sampling events where concentrations were 4 to 5 mg/L. Downstream concentrations at CR 31.8 ranged from below detection limit to 4 mg/L. Oxygen demand loads in the upper portion of the watershed are largely from this tributary which includes the Watkins area, though the sources are not necessarily all urban as CD 20 also drains a large agricultural watershed.

Bacteria populations in excess of the detection limit, 60,000 CFU/ 100 mL were observed in the Watkins tributary during the wet weather synoptic survey, concentrations were only 45 CFU/ 100 mL during the dry weather synoptic survey.

#### **4.1.4.4 Septic Systems and Human Waste**

No homes, and therefore no septic systems, are located close enough to the Clearwater River to be a source of bacteria or oxygen demand to the Clearwater River in the impaired reach.

Wastewater from the City of Watkins and most of the homes ringing Clear Lake are routed to the WWTP at Watkins and land-applied north of the City outside of the area tributary to Clearwater River and is therefore not a source for bacteria or oxygen demand. A small number of homes on the southeast portion of Clear Lake are not connected to the sanitary sewer in this area.

#### **4.1.4.5 Wildlife**

The DNR area wildlife manager, Mr. Fred Bengston, stationed in Sauk Rapids, was interviewed regarding wildlife populations in the CRWD. A 2005 DNR assessment of whitetail deer indicated populations were 9.5 deer/ square mile in the western portion of the watershed near the listed reach of the Clearwater River (Minnesota DNR, 2005). Breeding populations of waterfowl were estimated based on a 2005 Waterfowl Breeding Population Survey (Minnesota DNR, 2005). The study found 6.2 ducks and 2.6 Canada geese per square mile in areas with similar wetland densities as the Clearwater River watershed. Since the population assessment documents breeding populations, it is representative of spring and early summer populations of waterfowl. As juveniles reach maturity, the population densities increase towards late summer and fall until migration (Minnesota DNR 2005).

Mr. Bengston indicated that while wildlife populations were considered moderate to high throughout the watershed, wildlife populations were not concentrated in areas along the Clearwater River corridor that would allow them to contribute significantly to high bacteria concentrations in the Clearwater River. In short, the pathways to transport the bacteria from the producer (the animal) to the impaired water were not significant, and therefore the bacterial loading from wildlife is not expected to be significant.

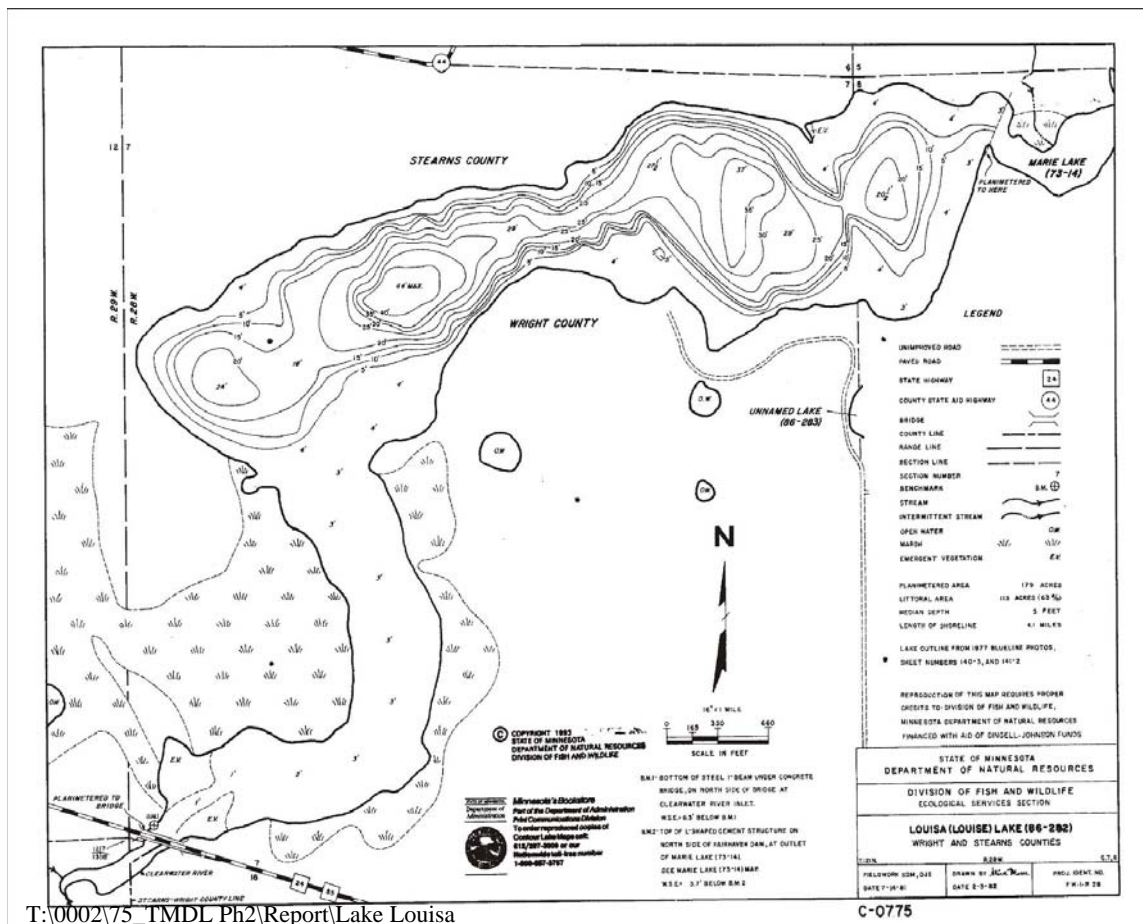
#### **4.1.4.6 Wetlands**

Though DO concentrations decrease from upstream to downstream in the Clearwater River, the most significant decrease in DO is observed downstream of the Kingston Wetland. The oxygen sag observed downstream of the Kingston Wetland combined with the fairly consistent contribution of watershed oxygen demand from upstream to downstream point to a relatively large SOD in the wetland as opposed to a major point source of oxygen demand or other watershed source of oxygen demand not identified. In short, the wetland appears to consume dissolved oxygen through SOD and plant/algal respiration.

## 4.2 LAKE LOUISA

Lake Louisa, on the Clearwater Chain of Lakes, is a 179-acre lake between Lake Betsy and Lake Marie (Figure 4.2.1). The littoral area for the lake is 113 acres, or 60% of the lake area. With two basins, the maximum depth is 44 feet and the mean depth is 12 feet. The dominant bottom substrate is sand, muck and silt with abundant macrophytes growing in depths up to 12 feet. Lake Louisa contains a viable fishery that is dominated by sunfish, northern pike, and largemouth bass. The lake is generally vertically stratified during the growing season.

**Figure 4.2.1 Lake Louisa**



Lake Louisa was included in the Clearwater River Chain of Lakes Restoration Project which began in 1980 and ended in 1993. During that project several nutrient load reduction measures

which reduced P concentrations in Lake Louisa and in the entire lake chain were undertaken, they included:

- Hypolimnetic aeration:
- Rough fish removal:
- Upgrading city wastewater treatment systems:
- Watershed BMPs,
- Wetland restoration and
- Wetland isolation.

Active mechanical harvesting of rough fish was conducted annually between 1984 and 1988; passive removal of rough fish is ongoing through a trap upstream of Lake Louisa at Highway 55 which was installed in 1998. Over 275,000 lbs of rough fish have been removed from Lake Louisa to date. Land application systems to treat wastewater from Watkins and Kimball went online in 1983 and 1985 respectively. Watershed BMPs including assistance with no-till farming and construction of manure storage lagoons were implemented throughout the watershed. Flow distribution structures were constructed around two wetlands near Kingston and on County Ditch 20 to filter river water through these previously ditched wetlands. In Watkins, a wetland was isolated and bypassed because it was exporting phosphorus due to historic discharges from a creamery.

These BMPs resulted in a dramatic decrease in TP concentrations in Lake Louisa. In-lake TP concentrations have declined from 440 µg/L in 1981 to 57 and 54 µg/L in the east and west basin respectively in 2006. Still, concentrations remain above the MPCA standard, and additional watershed load reductions are needed. To that end, data was collected towards completion of a TMDL study. The results of Lake Louisa water quality sampling from 2006 are discussed in this section and evaluated in the context of historical data available for Lake Louisa. Data collected in 2005 and 2006 are summarized in Appendix J; lab and field data is presented in Appendix K.

#### 4.2.1 Lake Louisa 2006 Hydrology

Annual precipitation near Lake Louisa was 2.43 to 5.97 inches below average in 2006, 26.13 inches of precipitation was recorded by the MPCA at the Fairhaven Dam east of Lake Louisa and 22.59 inches of precipitation was recorded by a volunteer in Watkins, west of Lake Louisa. The 2006 precipitation on Lake Louisa's area of 179 acres amounted to 337 to 390 acre-feet (ac-ft), equivalent to an average inflow rate of approximately 0.5 cubic feet per second (cfs). However, lake evaporation at this location is typically 30.1 inches per year (USDA, c. 1966), and this is equivalent to a water loss rate of about 450 ac-ft for 2006, or an average outflow rate of approximately 0.6 cfs.

A continuous flow record at the Fairhaven Dam yielded a 2006 total flow volume of 36,573 ac-ft for the Clearwater River at that location. This was equivalent to 7.53 inches of runoff, surprisingly high for a relatively dry year. Apportioning flows at upstream locations by drainage area gives the following relationship (Table 4.2.1):

**Table 4.2.1 Lake Louisa Water Balance**

	<b>Drainage Area</b>	<b>Runoff Volume</b>	<b>Runoff Depth</b>	<b>Average Flow</b>
<b>Location</b>	<b>(ac)</b>	<b>(ac-ft)</b>	<b>(inches)</b>	<b>(cfs)</b>
Lake Louisa Inflow	54,120	33,956	7.53	46.9
Lake Louisa Outflow	55,972	35,118	7.53	48.5
Fairhaven Dam	58,291	36,573	7.53	50.5

#### 4.2.2 Water Quality Standards and Numeric Targets

The Minnesota Pollution Control Agency (MPCA) developed numeric lake water quality standards for total phosphorus, chlorophyll-a, and Secchi depth. These three parameters are a measurement of indicators of eutrophication, which is the increase in biological productivity due to increased nutrient loading.

Because lake characteristics differ throughout the state, water quality standards vary by ecoregion and lake morphometry. The applicable water quality standards for the North Central Hardwood Forest Ecoregion are compared to 2006 mean water quality in Lake Louisa in Table 4.2.2. Though Lake Louisa is 60% littoral and may demonstrate some shallow lake characteristics, it is characterized as a deep lake since its maximum depth is greater than 15 feet, and is subject to the deep lake standard.

**Table 4.2.2: Water Quality Standards for North Central Hardwood Forest Lakes**

Lake Category	Total Phosphorus	Chlorophyll-a	Secchi Depth
	µg/L	µg/L	Meters
Shallow Lakes Standard (MPCA)	≤ 60	≤ 20	≥ 1
Deep Lakes Applicable Standard for Lake Louisa (MPCA)	≤ 40	≤ 14	≥ 1.4
Lake Louisa (east basin)	54	41	0.98
Lake Louisa (west basin)	57	35	0.97

### 4.2.3 2006 In-Lake Water Quality

Mean surface TP concentrations in the east and west basins of Lake Louisa were 54 and 57 µg/L respectively, exceeding the 40 µg/L state standard for TP. Mean surface ortho-phosphorus concentrations were both 10 µg/L (Table 4.2.3).

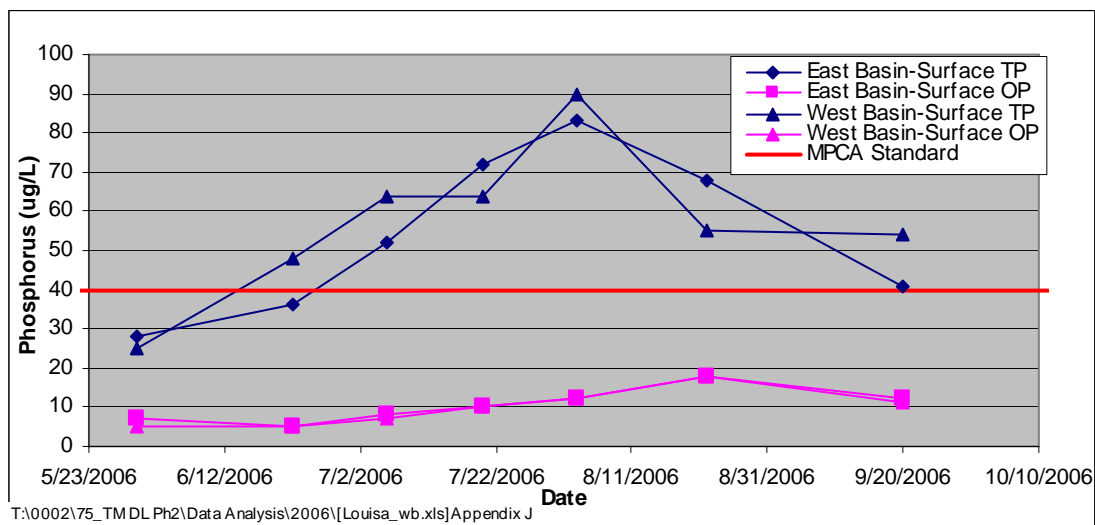
**Table 4.2.3 2006 Lake Louisa Mean Phosphorus Concentrations**

Sample Type	Mean East Basin TP (µg/L)	Mean West Basin TP (µg/L)	Mean West Basin OP (µg/L)	Mean West Basin OP (µg/L)
Surface	54	57	10	10
Middle	46	54	10	9
Bottom	176	148	143	139

Surface TP concentrations in both the east and west basins of Lake Louisa were lowest in spring, with a minimum concentration of 25 and 28 µg/L measured on May 30. Concentrations increased throughout the summer, reaching maximum concentrations in the east and west basin of 83 and

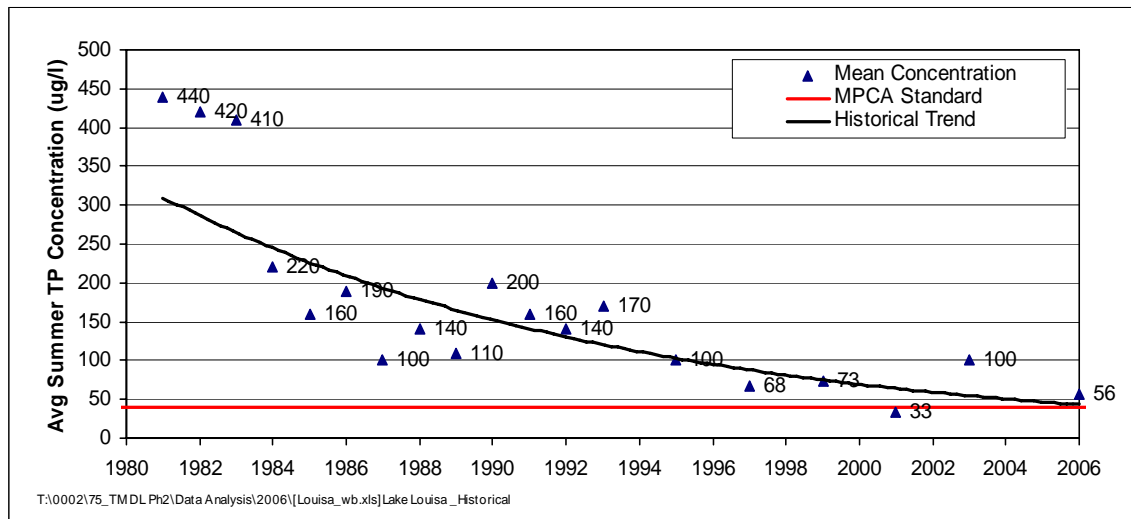
90 µg/L respectively on August 3. Surface TP concentrations in Lake Louisa exceeded the MPCA standard of 40 µg/L in six of seven samples that were collected in 2006 (Figure 4.2.2).

**Figure 4.2.2 2006 Lake Louisa Surface Phosphorus Concentrations**



Average summer surface TP concentrations have exhibited a decreasing trend since 1981. Overall, 2006 surface TP concentrations were well below the long-term average TP concentration of 173 µg/L. The average TP concentration was almost 90% lower in 2006 than it was in 1981. While the summer average TP concentrations have been decreasing, they remain above the MPCA standard (Figure 4.2.3).

**Figure 4.2.3 Lake Louisa Historical Average Summer Surface Total Phosphorus Concentrations**



The 2006 summer average surface orthophosphorus concentration was 10 µg/L in both the east and west basins of Lake Louisa. Concentration of OP and TP followed similar seasonal patterns. Surface OP concentrations remained low in the early summer before reaching a peak of 18 µg/L at both sites on August 22, and then decreased.

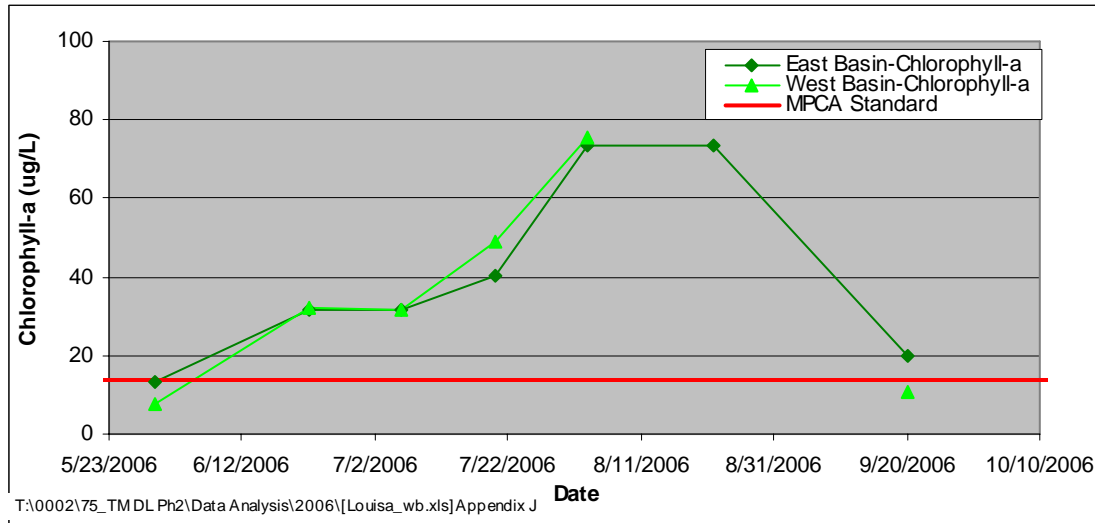
Orthophosphorus is the primary form of phosphorus used by algae and aquatic plants and provides a measurement of phosphorus that is immediately available for plant growth. Because of its availability for immediate uptake by plants, increased levels of ortho-phosphorus can cause increased algal growth. Ortho-phosphorus comprised 15-33% of the surface TP concentration in 2006.

The 2006 mean chlorophyll-a concentrations in the east and west basins of Lake Louisa were 41 and 35 µg/L respectively, both exceeded the MPCA standard of 14 µg/L. The minimum chlorophyll-a concentration for the east and west basins, 13 and 7 µg/L respectively, were observed during the May 30 sampling event. The chlorophyll-a concentration in both basins increased as the summer progressed, peaking at 74 µg/L on August 3 in the east basin and at 75 µg/L in the west basin before decreasing in the last two sample events. Six of seven samples



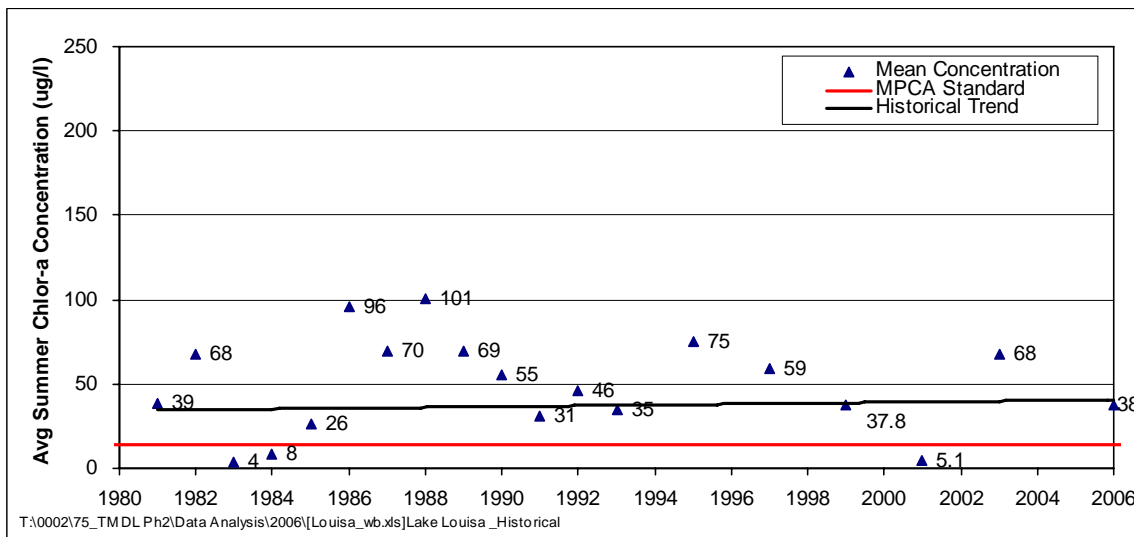
collected in the east basin exceeded the MPCA standard for chlorophyll-a; four of six samples collected in the west basin exceeded the MPCA standard for chlorophyll-a (Figure 4.2.4).

**Figure 4.2.4 2006 Lake Louisa Chlorophyll-a Concentrations**



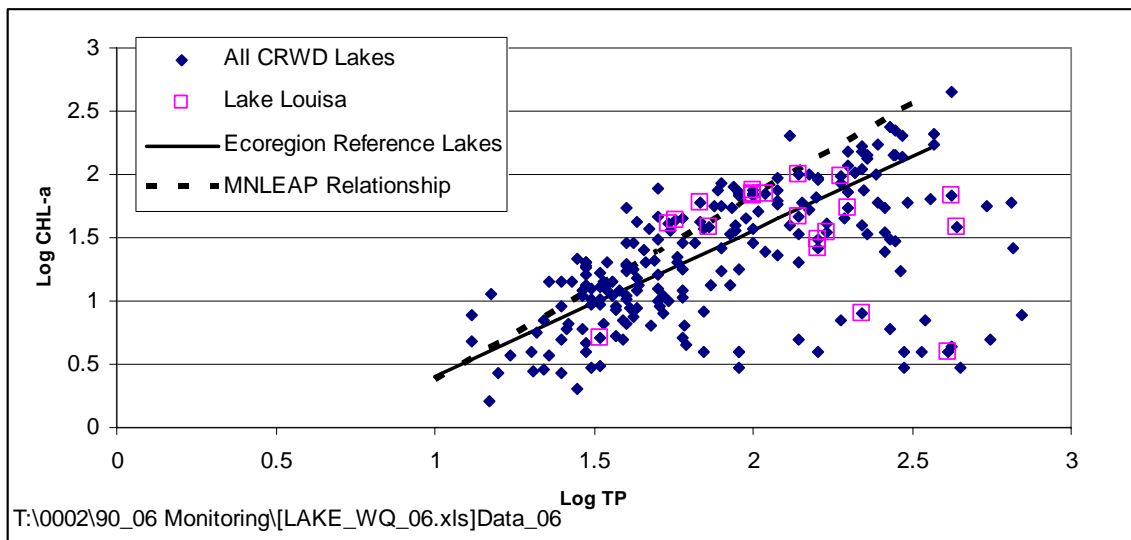
Chlorophyll-a concentrations in Lake Louisa exceeded the MPCA standard for nearly every year on record. The 2006 summer average concentration was below the long term average of 49  $\mu\text{g/L}$  (Figure 4.2.5).

**Figure 4.2.5 Lake Louisa Historical Average Summer Surface Chlorophyll-a Concentrations**



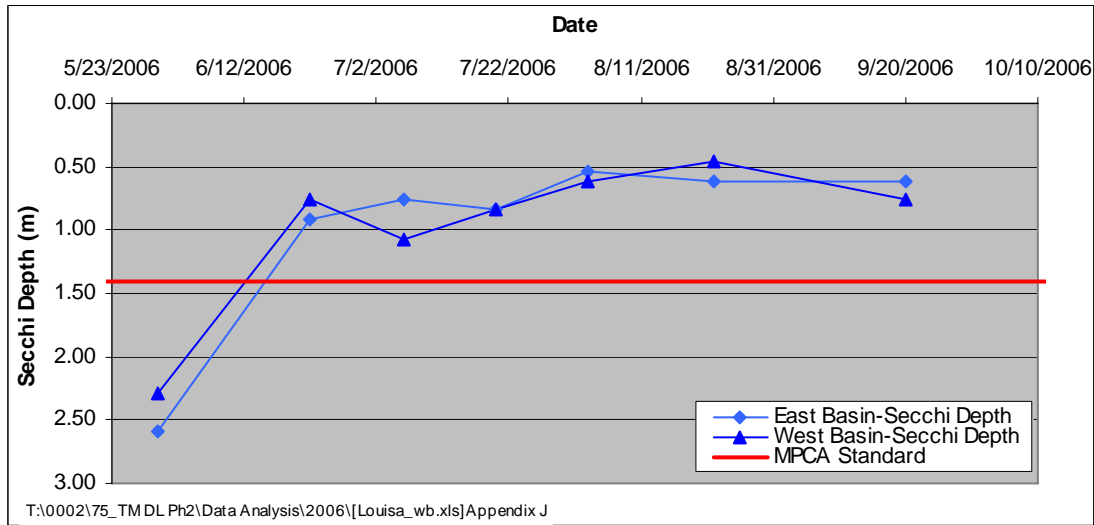
The lack of a clear trend in historical chlorophyll- a concentrations indicate that in some years, concentrations may have been limited by available light or other factors besides TP concentrations. This conclusion is supported by long-time residents who report that historically, Lake Louisa was turbid with very few macrophytes. Figure 4.2.6 compares the relationship between TP and chlorophyll-a for CRWD lakes, including Lake Louisa and Ecoregion reference lakes.

**Figure 4.2.6 Log Chlorophyll-a vs Log TP for CRWD Lakes, Lake Louisa and Ecoregion Reference Lakes**



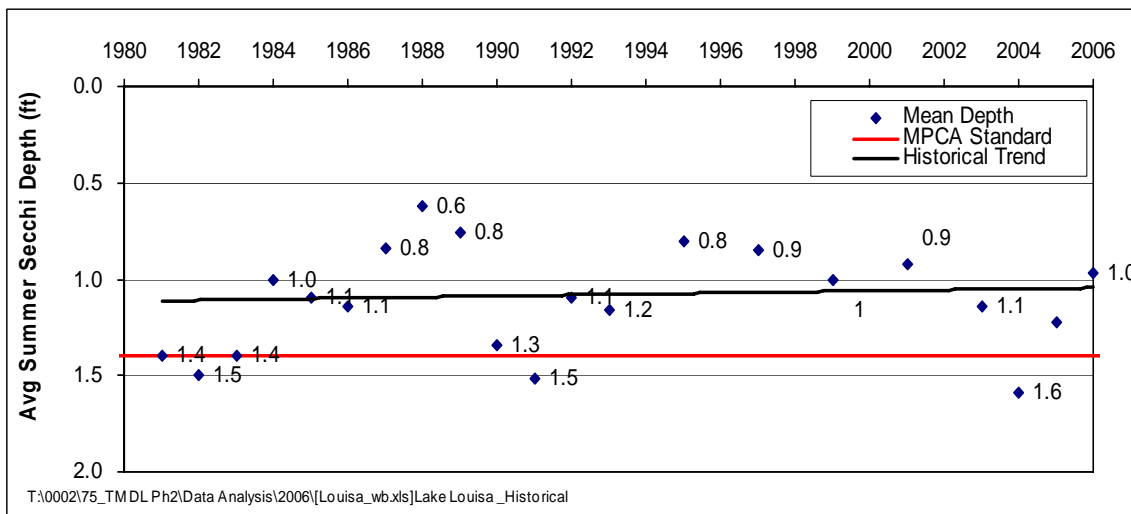
The 2006 summer average Secchi depths were similar in both basins of Lake Louisa, with an average of 0.98 meters in the east basin, and 0.97 meters in the west basin. The summer average Secchi depth in both basins was less than the MPCA standard of 1.4 meters. Seasonal variation was also similar in both basins, with maximum Secchi depths occurring on May 30, followed by an overall decrease throughout the summer. Measured Secchi depth was less than the MPCA standard during six of seven sample events in both basins in 2006 (Figure 4.2.7).

**Figure 4.2.7 2006 Lake Louisa Secchi Depth**



Secchi depths have violated the state standard in all but 5 of the past 21 years for which there is monitoring data (Figure 4.2.8). The long-term (1981- present) average Secchi depth in Lake Louisa is 1.1 meters. During this time period Secchi depth has shown a slight decreasing trend. This contrary trend was observed in Clearwater Lake over the same time period. In that case, it resulted from shifts in phytoplankton dominance.

**Figure 4.2.8 Lake Louisa Historical Secchi Depth**



#### 4.2.4 Source Assessments

The sources of nutrients to Lake Louisa include:

- In-lake nutrient cycling,
- Clearwater River,
- Local watershed,
- Septic systems,
- Atmospheric loads and
- Ambient groundwater inflows

These sources are assessed in the sections that follow.

#### 4.2.4.1 In-Lake Nutrient Cycling

High phosphorus concentrations in sediment and bottom water samples indicate that the sediments of Lake Louisa recycle a significant amount of phosphorus back into the water column. Two approaches were used to quantify the internal phosphorus loading in Lake Louisa. A 2003 study conducted by Wenck Associates quantified the sediments' phosphorus content in Lake Louisa and estimated the internal load as 3,600 lbs of phosphorus/year.

Another method utilized to assess phosphorus cycling in Lake Louisa involved developing the "anoxic factor" for the lake and applying an estimated sediment phosphorus release rate. The anoxic factor is expressed in days but is normalized over the area of the lake. For example, if the depth of oxygen depletion (<2 mg/L DO) over a period of time was 6 meters, then the number of days in the period was multiplied by the anoxic area at that depth and divided by the entire area of the lake. As the depth of oxygen depletion varied throughout the season, these results were summed up to derive the anoxic factor. An estimated release rate was then selected based upon the eutrophic state of the lake. The selected release rates represented a range based on previous lake studies. Applying different phosphorus release rates to the area of the lake that was anoxic resulted in internal phosphorus loads in Lake Louisa ranging from 1,100 to 2,500 lbs/year.

Temperature and dissolved oxygen measurements were taken at 1 meter intervals throughout the water column of Lake Louisa during the 2006 sampling trips. Temperature profiles indicate that the lake was stratified during the entire period from May 30 to September 20. The thermocline was typically present at a depth of 2 to 6 meters throughout the sampling period. Dissolved oxygen profiles indicate that the hypolimnion, that area of the lake below the thermocline, is anoxic for most of the summer. The depth below which Lake Louisa was considered anoxic in 2006 ranged from 2 to 4 meters.

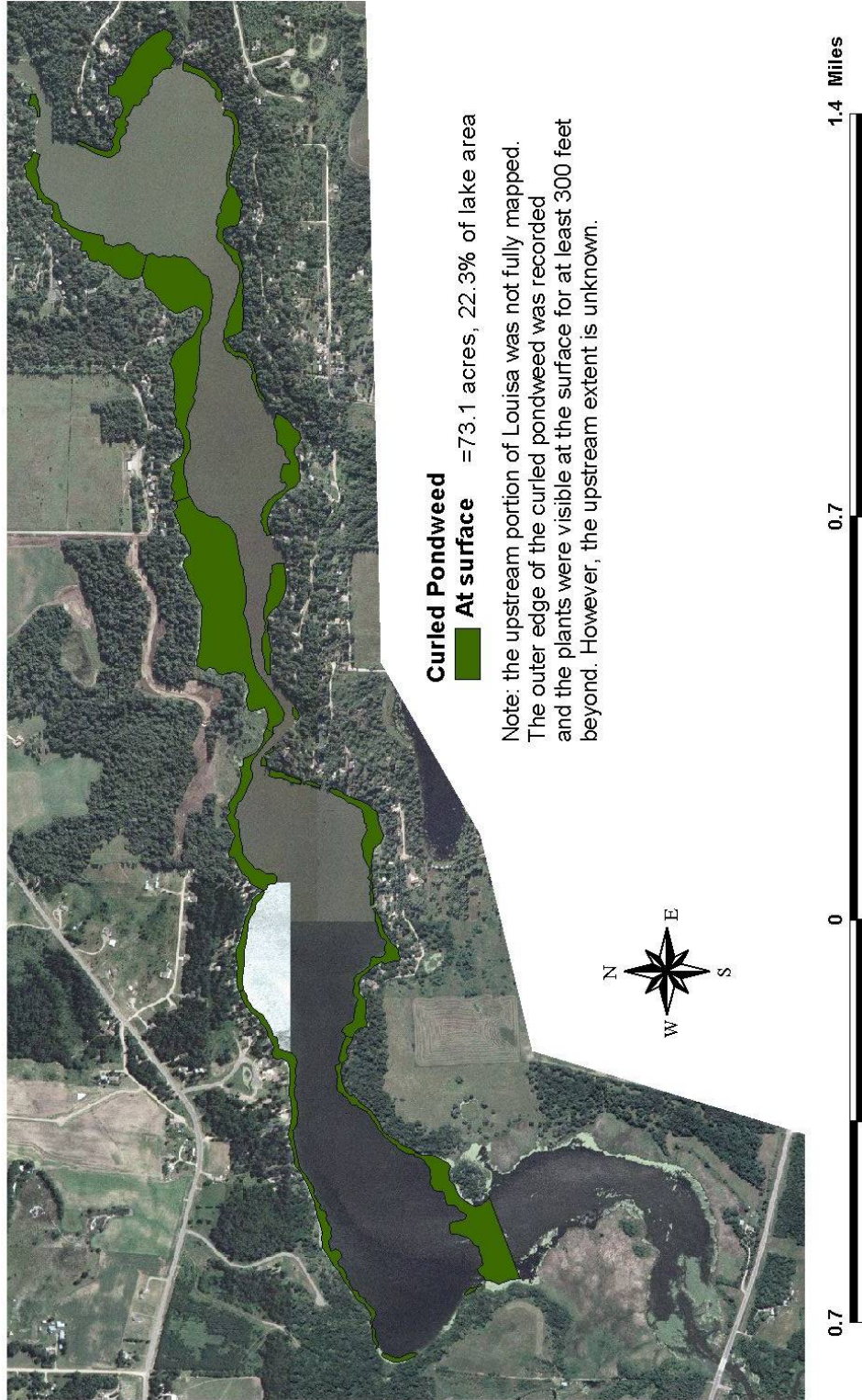
Bottom water samples were collected in both basins of Lake Louisa in 2006. The bottom phosphorus concentrations exhibited similar seasonal patterns in both basins of the lake. Bottom TP concentrations steadily increased throughout the summer, with maximum concentrations

occurring at both sites on September 20, 2006. Similarly, the proportion of bottom-water TP comprised of orthophosphorus increased steadily throughout the season, with orthophosphorus making up nearly all of the TP concentration on September 20, 2006. Since the lake was stratified during the part of the season that the phosphorus concentrations were increasing, the high concentrations of phosphorus observed in the samples collected near the bottom are an indication of phosphorus release from the bottom sediments of Lake Louisa.

The submergent aquatic plant curly leaf pondweed, may exacerbate internal phosphorus cycling. Curly leaf pondweed is abundant in early summer in Lake Louisa as demonstrated by an aquatic vegetation inventory conducted by the MN DNR on June 2, 2005. Figure 4.2.9 indicates that 73.1 acres, or 22.3% of the lake, had curly leaf pondweed growing to the water surface at the time of the inventory.

Figure 4.2.9 Lake Louisa Curly Leaf Pondweed Extent (From Minnesota DNR)

# Louisa/Marie Curled Pondweed 6/2/05



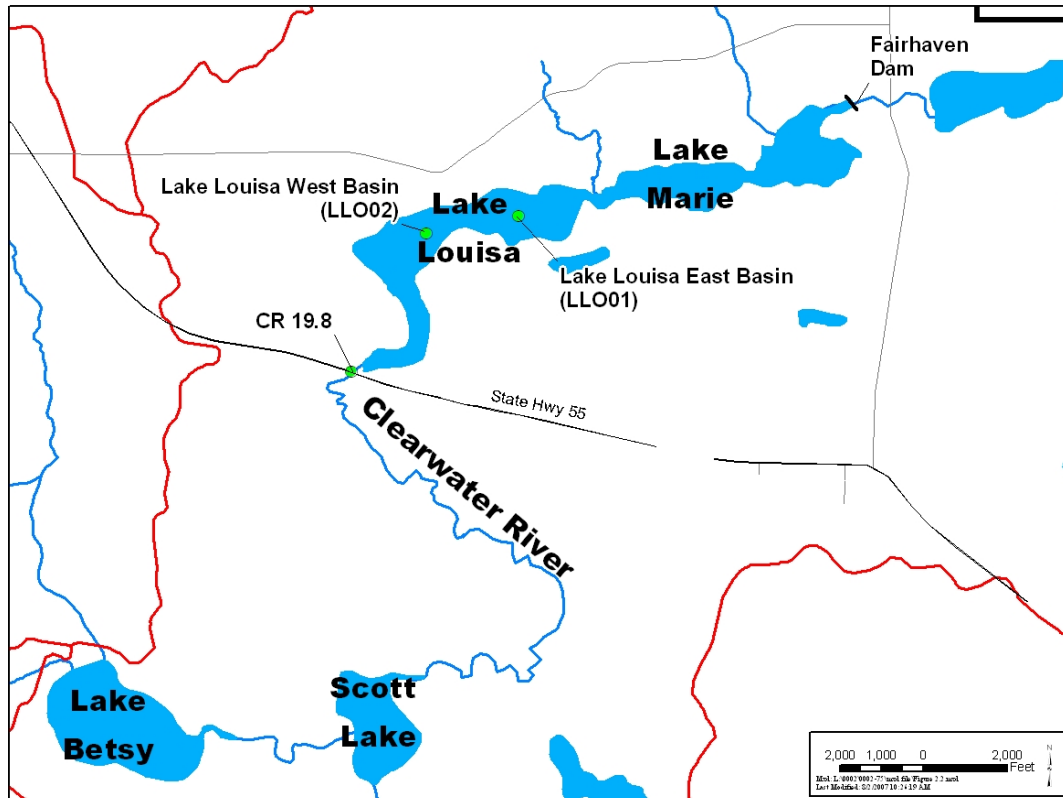
When the lake was surveyed again in August 2005, curly leaf pondweed was only found at one transect location, indicating that the curly leaf pondweed had died off by late summer. Curly leaf pondweed begins its growth in late winter and typically reaches the end of its life cycle and dies back by July, releasing large amounts of phosphorus and depleting dissolved oxygen. This pulse of phosphorus can cause nuisance algal blooms in the lake. While the senescence of curly leaf pondweed contributes a pulse of available phosphorus to Lake Louisa, since it is only found in approximately 22% of the lake, it likely is not a major source of phosphorus in the lake.

#### **4.2.4.2 Clearwater River**

The Clearwater River flows into Lake Louisa in the southwest corner of the lake. The river then flows through the lake, into Lake Marie, and over the dam at Fairhaven. The Clearwater River is responsible for a large portion of the nutrient load that is input to Lake Louisa during a typical year. The nutrient load from the Clearwater River for 2006 was calculated using concentrations from samples collected in the summer of 2006 at sampling point CR19.8, which is located at the Clearwater River inflow to Lake Louisa (Highway 55 bridge approximately 2 miles west of South Haven) at Clearwater River mile 19.8 (Figure 4.2.10).



**Figure 4.2.10 Lake Louisa Monitoring Locations and Adjacent Water Bodies**



The flow-weighted mean TP concentration of the samples collected at CR 19.8 was 104 µg/L. TP concentrations varied seasonally at CR 19.8. There were two peaks observed in TP concentrations on June 28 and September 25. The peak in TP concentration observed in September can be attributed to an increase in runoff from a heavy precipitation event prior to the sampling.

In 2006, the portion of the Clearwater River that is tributary to Lake Louisa had 7.5 inches of runoff over the watershed. This tributary area of 54,120 acres contributed a volume 34,000 acre-ft of water to Lake Louisa over the year.

Using the volume of water over the watershed and the flow-weighted TP concentrations at CR19.8, the total load of phosphorus to Lake Louisa from the Clearwater River in 2006 was calculated to be 9,600 lbs.

An alternative estimate based on inverting the Canfield-Bachmann model yields a smaller phosphorus load to Lake Louisa in 2006. According to this approach, the 2006 load of phosphorus to the lake was 6,450 lbs, which is considerably less than the load based on phosphorus concentrations and flow in the Clearwater River.

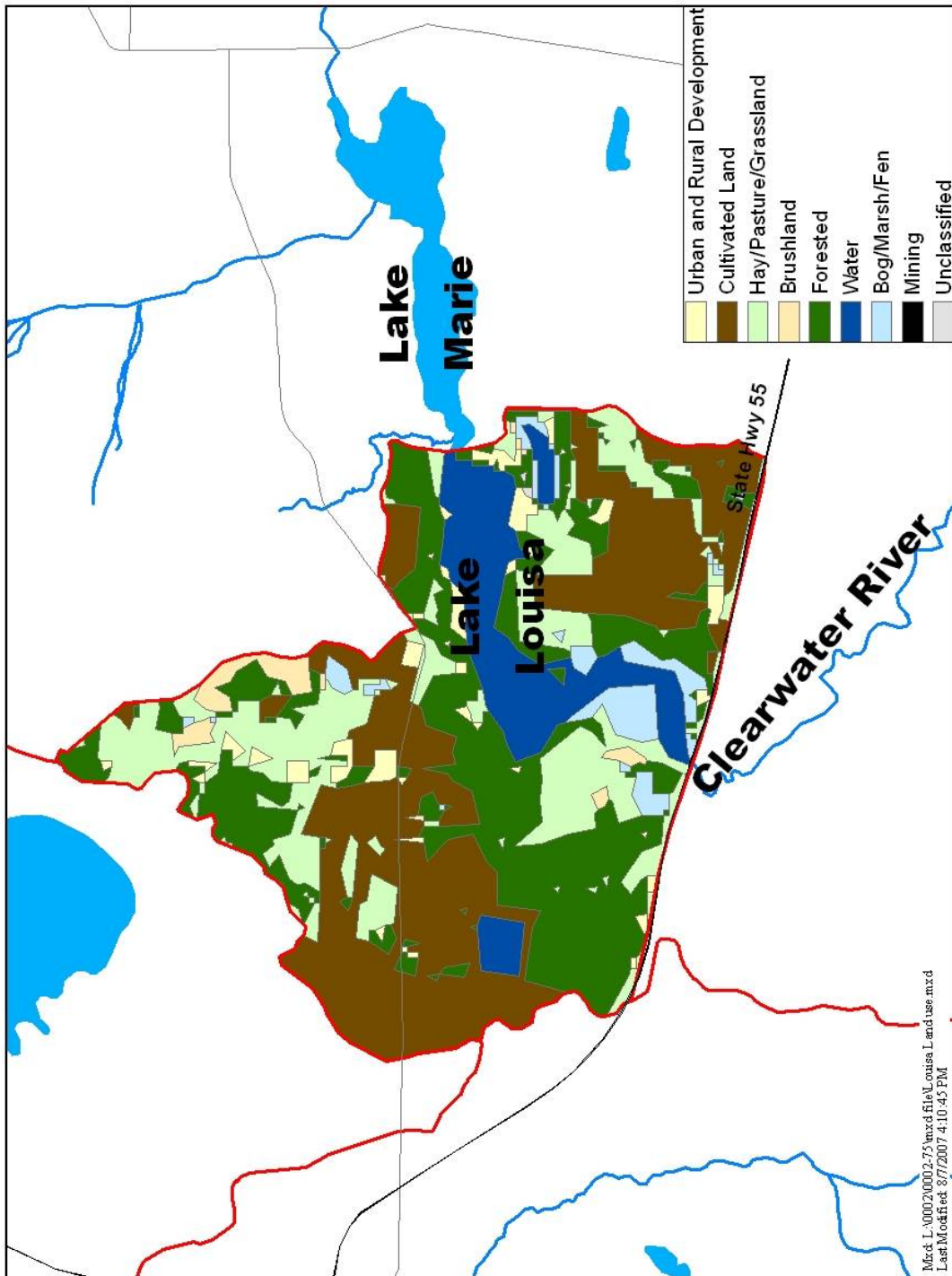
The Clearwater River enters Lake Louisa at the head of a large shallow bay that is densely vegetated with emergent and submergent vegetation. A vegetation inventory conducted in August 2005 by the MN DNR demonstrates that the entire bay is vegetated with floating leaf and submergent aquatic vegetation (Appendix J). This shallow bay may function as a treatment basin, with particulate phosphorus settling out as the stream flow disperses, and ortho-phosphorus being taken up by the abundant aquatic plants growing in the shallow bay. There is evidence of sediment settling out of the stream flow, as sediment deltas are present in the shallow bay downstream of the mouth of the Highway 55 bridge.

#### **4.2.4.3 Local Watershed**

Direct runoff from Lake Louisa's local watershed was a minimal source of nutrients during 2006 since precipitation was well below average.

The direct watershed to Lake Louisa encompasses approximately 1,852 acres. The land use within the directly contributing watershed is shown in Figure 4.2.11 and summarized in Table 4.2.3. The land use is predominantly agricultural, although agricultural activity, especially cultivated cropland, is less prominent in the direct contributing watershed to Lake Louisa than it is in the upstream portions of the CRWD. A small percentage of the subwatershed is developed, and a large portion of it is forested.

Figure 4.2.11-Lake Louisa Local Watershed Land Use



**Table 4.2.3-Lake Louisa Subwatershed Land Use**

<b>Land Use</b>	<b>Area (%)</b>
Urban and Rural Development	3.2%
Cultivated Land	32.3%
Hay/Pasture/Grassland	19.3%
Brushland	1.9%
Forested	28.8%
Open Water	10.8%
Wetland	3.7%
Unclassified	0.0%
Source: MN Land Use and Cover (MN DNR, 1996)	

The 2006 input of phosphorus to Lake Louisa from local watershed runoff was estimated by using the watershed loading rate over the portion of the Clearwater River watershed upstream from Lake Louisa. This portion of the watershed has a comparable land use to Lake Louisa's directly contributing watershed, and on average it exported 0.18 lbs of phosphorus/acre/year in 2006. Therefore, the load of phosphorus to Lake Louisa contributed by runoff from its local watershed is estimated as 320 lbs of phosphorus/year for 2006.

#### **4.2.4.4 Septic Systems**

A review of county parcel information indicates that there are 56 homes on the shoreline of Lake Louisa. Residents comprise both part-time and year-round residents. Assuming that each home has an individual septic system, an estimate of phosphorus input to the lake was calculated. There are two components that make up the waste that is treated by a septic system: household wastewater, which may contain soaps and detergents that incorporate phosphorus, and human waste. The production of phosphorus in human waste is about 1.5 grams P per capita per day, and a reasonable allowance for other household sources approximately doubles the daily per-capita production to 3 grams (Stumm and Stumm-Zollinger, 1972), equivalent to 2.4 lb P/capita/year. Assuming that three persons, on average, live in each home on the lake for an average of three quarters of each year, the total annual production would be 300 lb P/yr, of which perhaps one third, or 100 lb P/yr, would actually enter the lake.

#### 4.2.4.5 Atmospheric Loads

The atmosphere delivers phosphorus to water and land surfaces both in precipitation and in so-called “dryfall” (dust particles that are suspended by winds and later deposited). A recent statewide study of phosphorus sources commissioned by the MPCA (Barr, 2004) gives the following atmospheric load data for the upper Mississippi River watershed (Figure 4.2.4):

**Table 4.2.4 Atmospheric Deposition of P**

<b>Deposition Component</b>	<b>[kg/ha/yr]</b>	<b>[lb/ac/yr]</b>
Low-precipitation P deposition	0.0809	0.0722
Average-precipitation P deposition	0.1006	0.0898
High-precipitation P deposition	0.1228	0.1096
Dry P deposition	0.0703	0.0627
Dry-year total P deposition	0.1512	0.1349
Average-year total P deposition	0.1709	0.1525
Wet-year total P deposition	0.1931	0.1723

Since 2006 was a dry year, the appropriate total P deposition rate is 0.1349 lb/ac/yr. Taken over Lake Louisa’s area of 179 acres, the total atmospheric P load on the lake in 2006 is estimated as 8 lb for the year.

#### 4.2.4.6 Ambient Groundwater Inflow

Lake Louisa lies within the Anoka Sand Plain and is therefore subject to significant groundwater interaction. The hydrologic atlas, “Water Resources of the Mississippi and Sauk Rivers Watershed, Central Minnesota” (Helgesen et al., 1975; U.S Geological Survey HA-534), includes the Clearwater River watershed and contains a water table map indicating that

groundwater from the Sand Plain aquifer discharges to Lake Louisa (and to Clearwater River generally – as expected for a significant stream).

The rate of groundwater inflow to Lake Louisa is estimated to be 5,600 ac-ft/yr on the following basis:

$$\text{Rate of inflow} = (\text{hydraulic conductivity}) \cdot (\text{hydraulic gradient}) \cdot (\text{saturated thickness}) \cdot (\text{width})$$

The Anoka Sand Plain aquifer's hydraulic conductivity ranges from 30 to 150 meters per day, according to Landon and Delin (1995), giving a geometric mean value of 67 meters per day, or 220 ft/day. The water table map of Helgesen et al. (1975) shows hydraulic gradients toward Lake Louisa ranging from 0.002 to 0.018 ft/ft, with a geometric mean of 0.006 ft/ft. The median saturated sand thickness based on geologic logs from nine nearby wells is 42 ft. Finally, the width of groundwater flow into Lake Louisa is approximately 12,000 ft, being double the lake's upstream-downstream extent (because flow enters the lake from both north and south). The calculation of groundwater inflow is thus:

$$\text{Rate of inflow} = (220 \text{ ft/day}) \cdot (0.006 \text{ ft/ft}) \cdot (42 \text{ ft}) \cdot (12,000 \text{ ft}) = 665,280 \text{ ft}^3/\text{day},$$

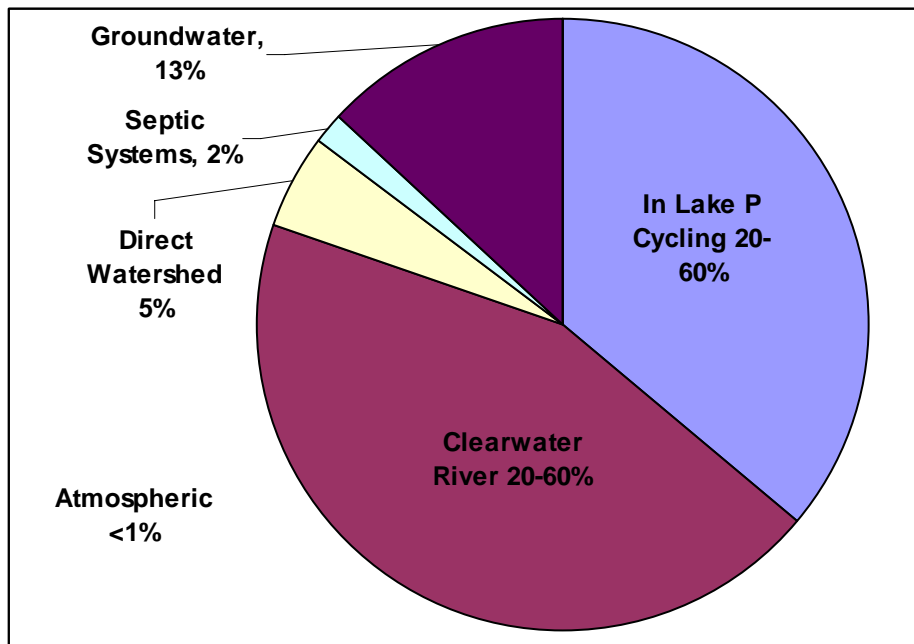
equivalent to 5,575 ac-ft/yr, or 5,600 ac-ft/yr, rounded appropriately. This result is also equivalent to an average groundwater inflow rate of 7.7 cfs.

The phosphorus load corresponding to the above groundwater inflow volume is estimated to be 850 lb/yr, based on a statewide median TP concentration for surficial glacial aquifers of 56 ug/L (MPCA, 1999).

#### 4.2.4.7 Summary of Sources

Based on the measured loads in 2006, historic information regarding internal P cycling, and inverted Canfield-Bachmann, a general breakdown of P sources to Lake Louisa is shown in Figure 4.2.12.

**Figure 4.2.12 2006 Nutrient Sources to Lake Louisa**



In Phase III, the data collected during 2006 will be used in conjunction with historical data to model Lake Louisa to narrow the range of values and quantify the driving conditions during wet and dry years.

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## 5.0 Stakeholder Involvement

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Six stakeholder involvement meetings have been held to date; they are summarized below:

### **December 17, 2003 in Annandale**

Watershed District Managers, the District Administrator, the MPCA Project Manager, and the Wenck Project Manager presented information about the TMDL process and the Clearwater River and Lake Louisa TMDL Project specifically. A question and answer session followed the presentation. County Soil and Water Conservation District Representatives from Wright, Meeker and Streamns Counties were invited, along with representatives from the Cities of Kimball and Watkins. Citizen advisory group members were also invited. Wright and Meeker County representatives attended.

### **December 17, 2003 in Annandale**

The Wenck Project Manager presented information about the TMDL process and the Clearwater River and Lake Louisa TMDL Project specifically. An analysis of existing data was presented. A question and answer session followed the presentation. County Soil and Water Conservation District Representatives from Wright, Meeker and Streamns Counties were invited, along with representatives from the Cities of Kimball and Watkins. Citizen advisory group members, and lake associations were also invited. A Meeker County representative attended, along with members of the Citizen Advisory Group, and Clearwater Lake Association.

### **March 16, 2004 in Watkins**

An additional meeting was held to solicit additional stakeholder involvement. The Wenck Project Manager presented information about the TMDL process and the Clearwater River and Lake Louisa TMDL Project specifically. An analysis of existing data was presented. A question and answer session followed the presentation.



Meeting invitations and a letter describing the TMDL Project were sent to resident's homes. County Soil and Water Conservation District Representatives from Wright, Meeker and Stearns Counties, as well as representatives from the Cities of Kimball and Watkins were invited. Citizen advisory group members and lake associations were invited. The goal of the meeting was to establish a representative stakeholder group. These representative stakeholders met two more times.

#### **July 15, 2007 Clearwater Chain of Lakes Association, Lake Louisa Working Group**

District Administrator Merle Anderson met with members of the Clearwater Chain of Lakes Association (CCOLA) to spark interest in a Lake Louisa working group. This group of citizens heard a summary of the TMDL process and progress and agreed to discuss the Lake Louisa TMDL with residents to encourage interest and participation.

#### **August 6, 2007, Clearwater Chain of Lakes Association, Lake Louisa Working Group**

District Administrator Merle Anderson and Project Engineer Rebecca Kluckhohn met with 16 members of the Clearwater Chain of Lakes Association (CCOLA). This group is comprised of Lake Louisa and Lake Marie residents concerned with upstream water quality. Each resident expressed concern about the perceived deterioration of water quality in the entire Chain of Lakes. Most residents had moved to the area since the major improvements in water quality in the 1980s as the result of the Clearwater Chain of Lakes Improvement Project. Residents speculated that many septic systems around the lakes needed replacement, but that costs would be prohibitive for several residents. Residents also expressed concerns about livestock allowed to graze in and near the lakes and the Clearwater River.

#### **August 10, 2007, Clear Lake Citizenship Dinner**

The CRWD's 6<sup>th</sup> Annual Citizenship Dinner was held at the Sportsman's Center at Clear Lake. Residents in the area of Clear Lake, the upstream boundary of the listed reach of the Clearwater River addressed in this report. Manager Anderson and District Engineer Norm Wenck listened to residents and answered questions about water quality in Clear Lake.

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## 6.0 References

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## **Appendix A**

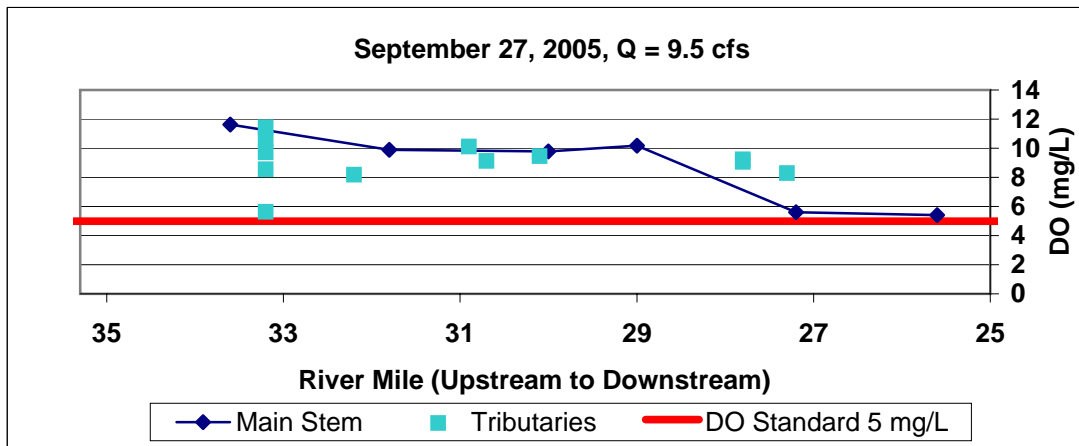
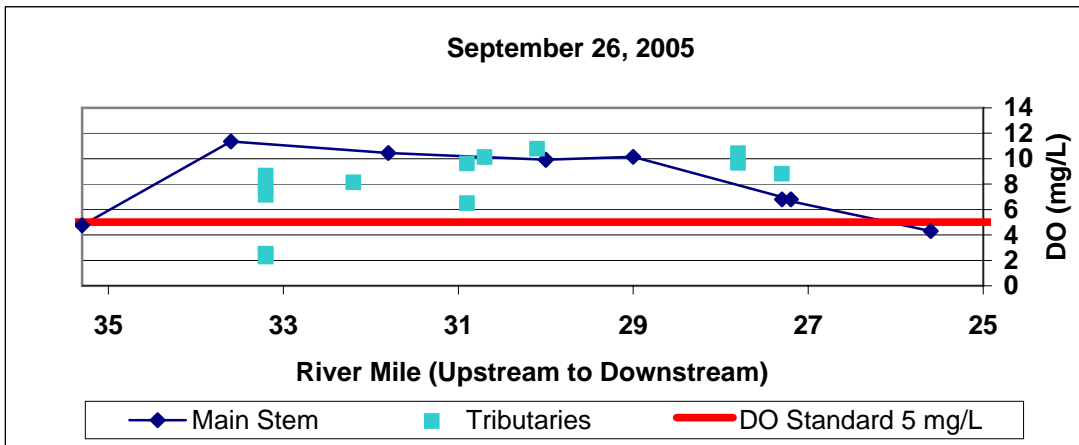
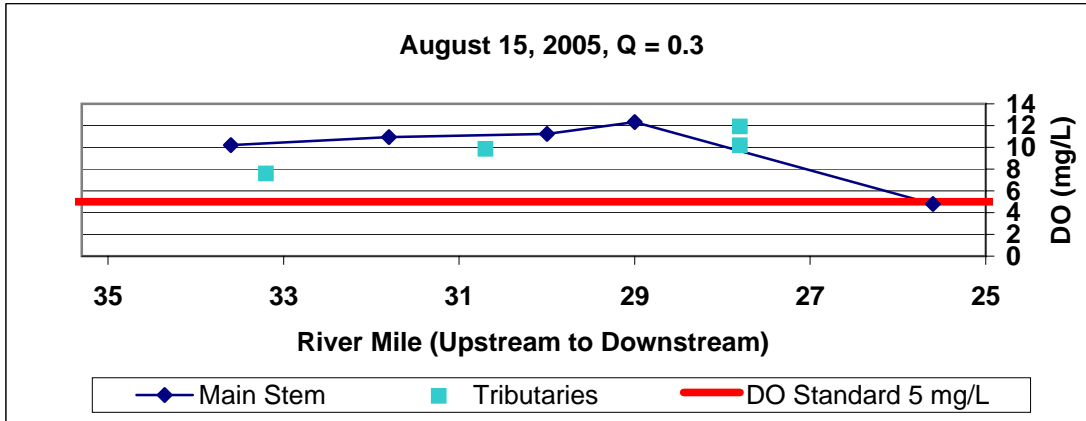
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### **2005 Clearwater River In-stream Loading and Water Quality Profiles**

## Appendix A

### Clearwater River Watershed District Clearwater River Bacteria and DO TMDL

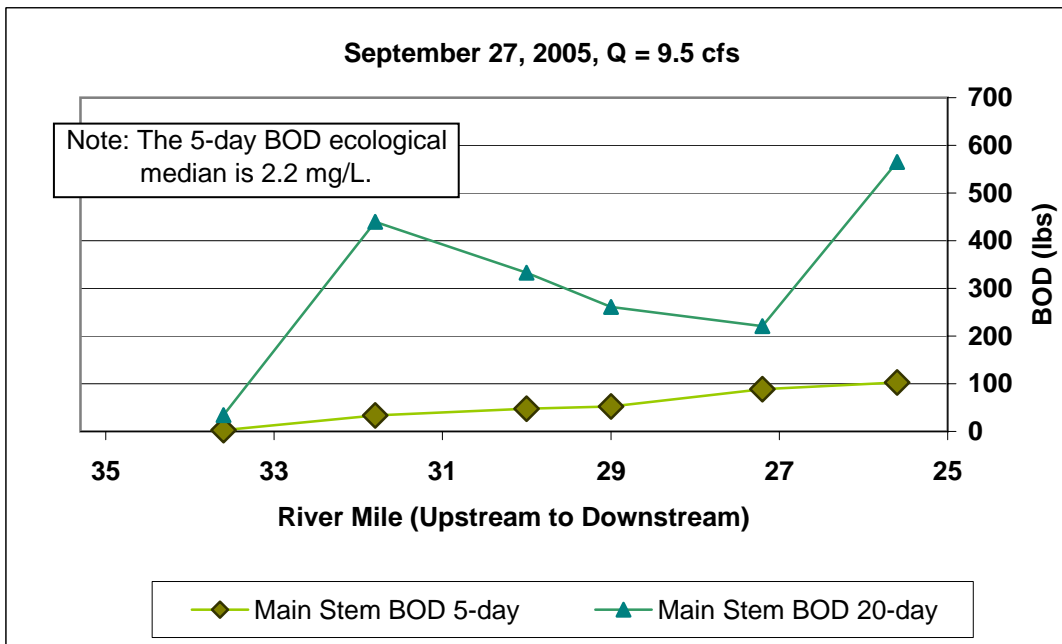
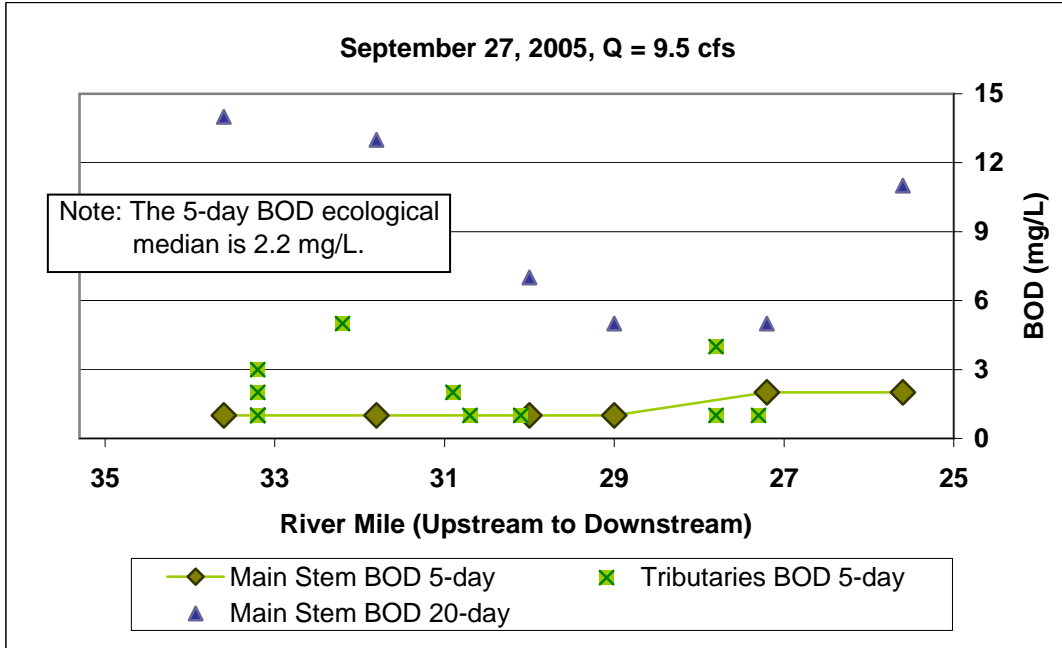
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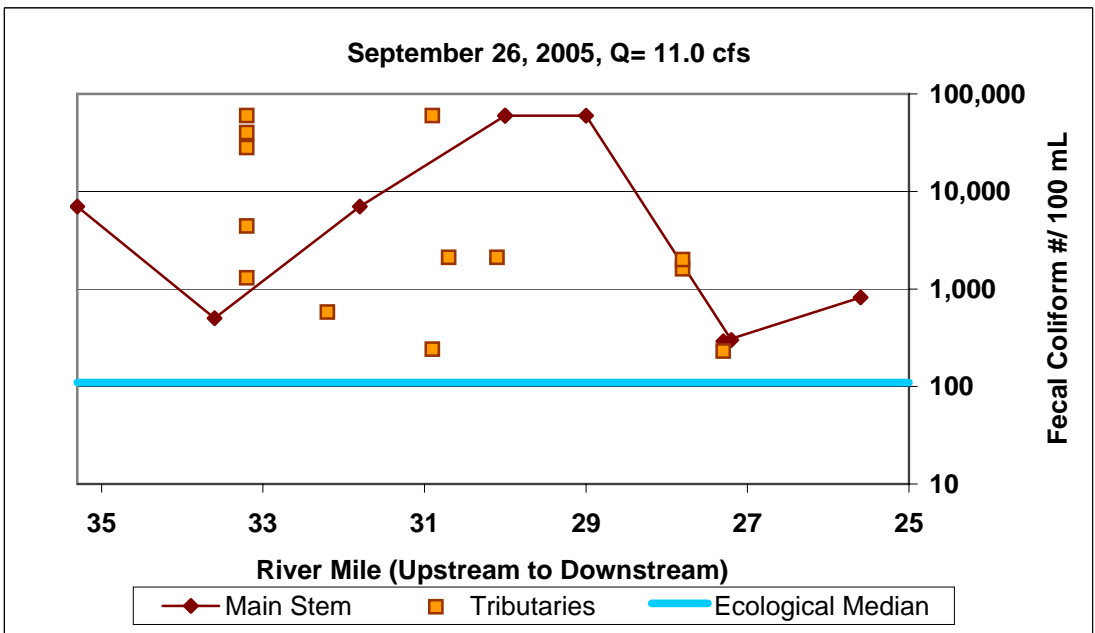
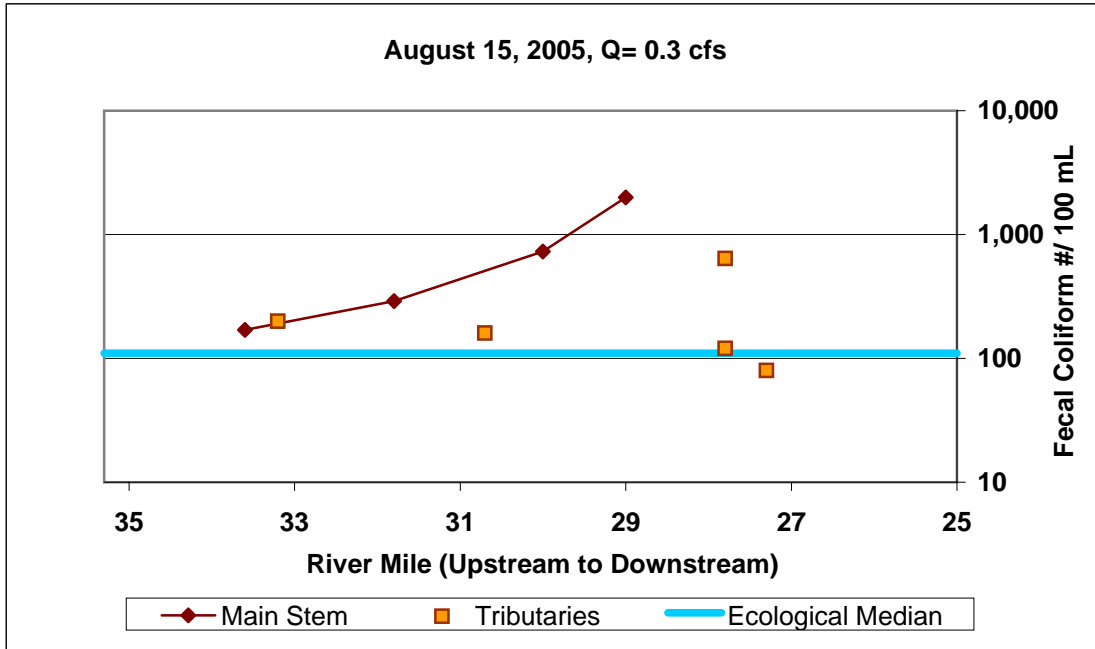
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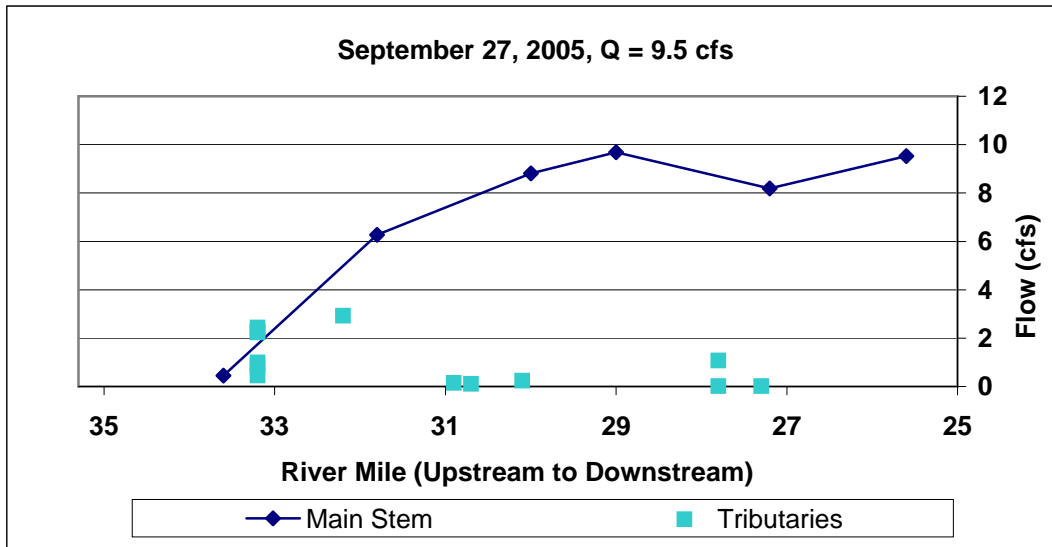
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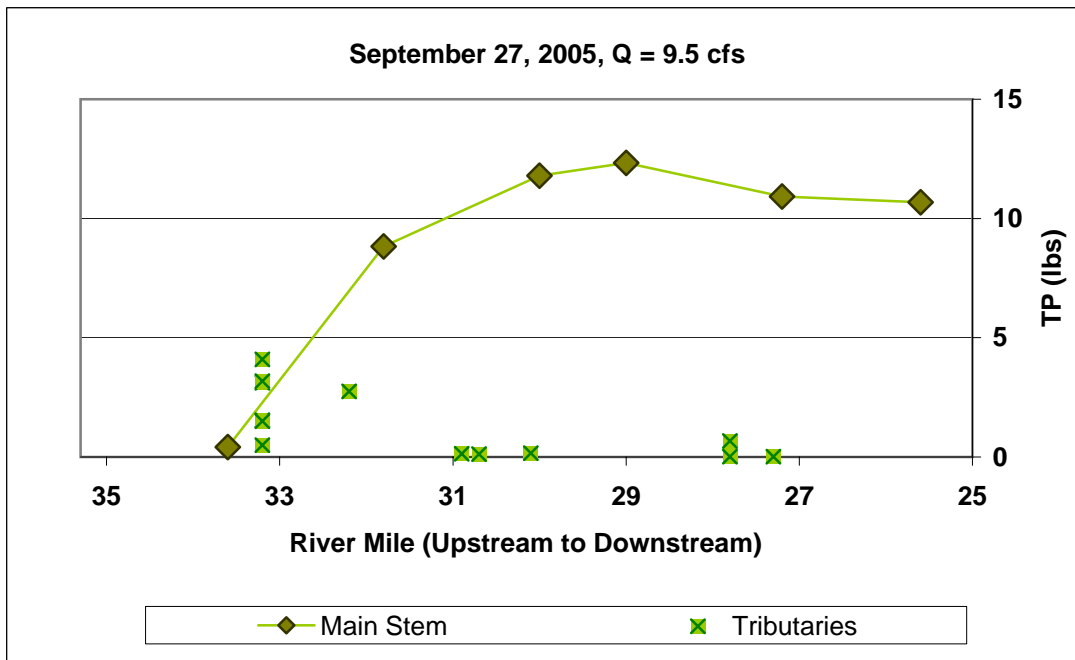
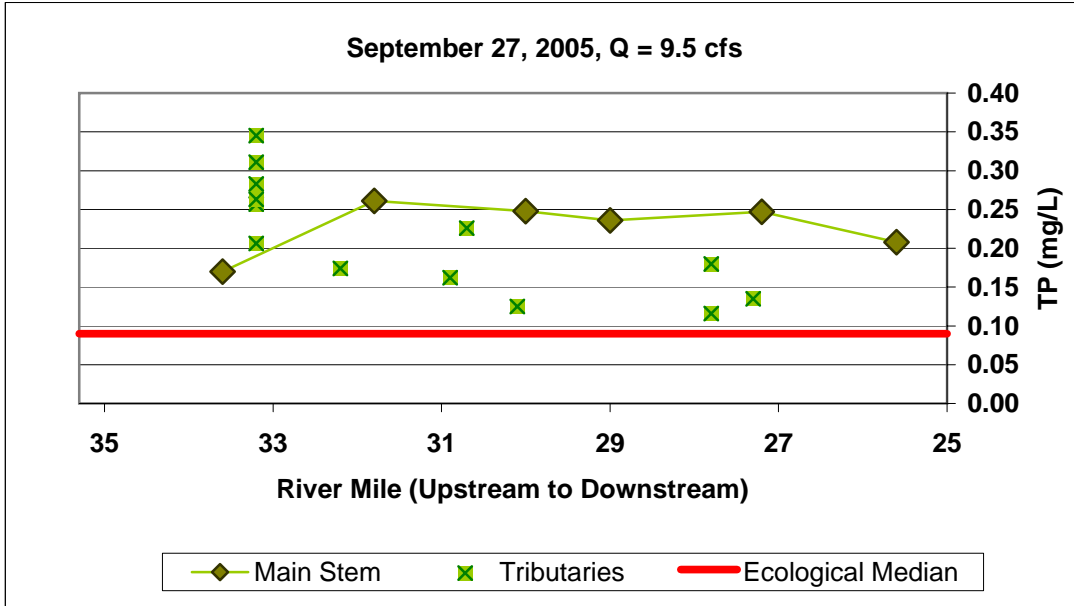




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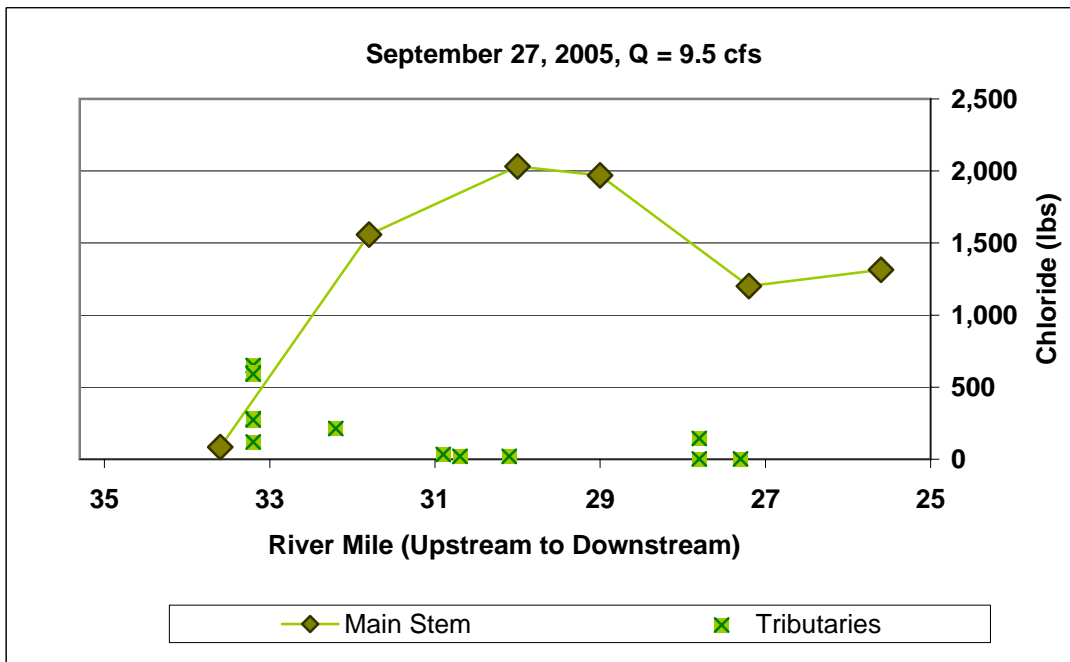
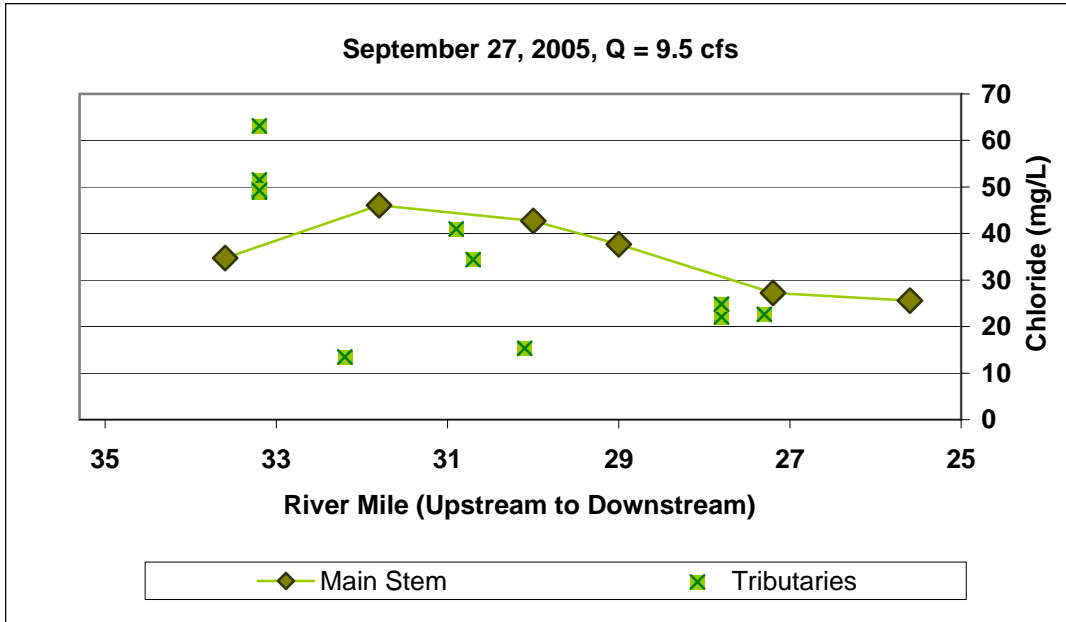
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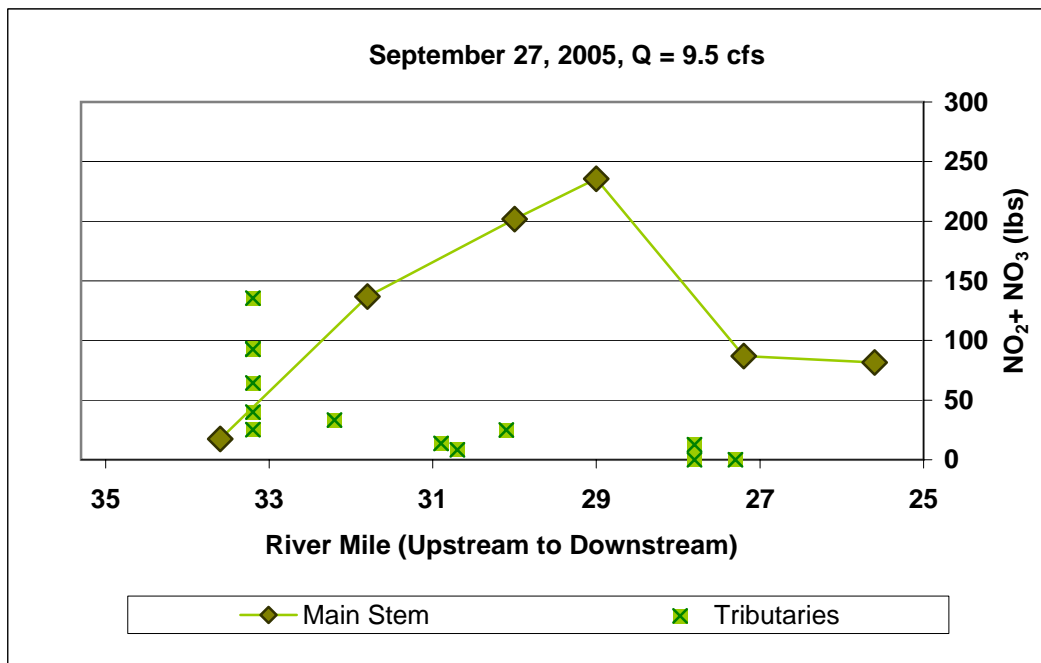
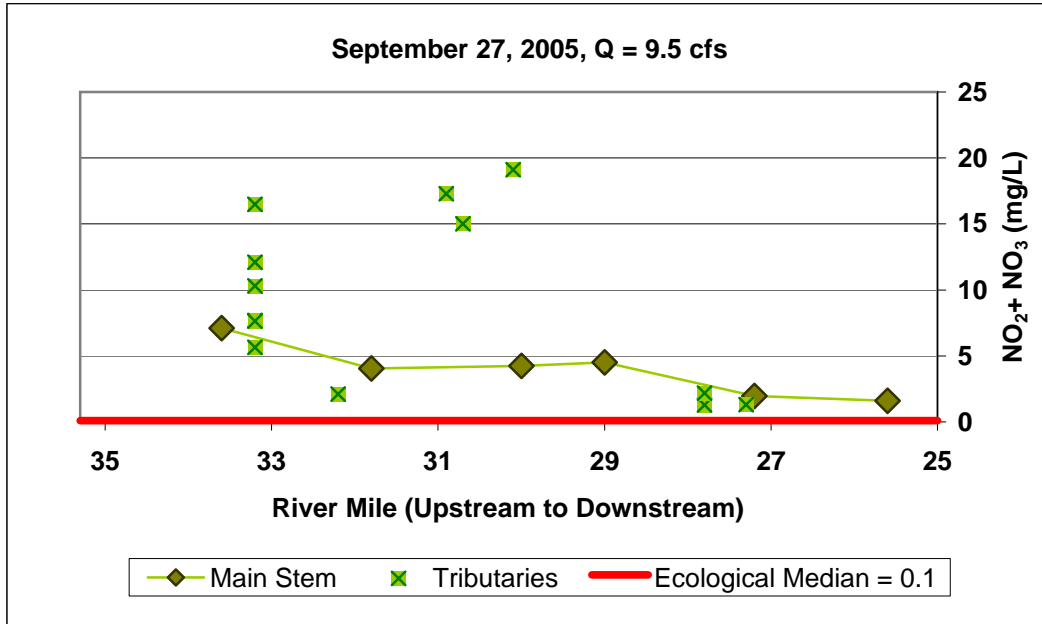
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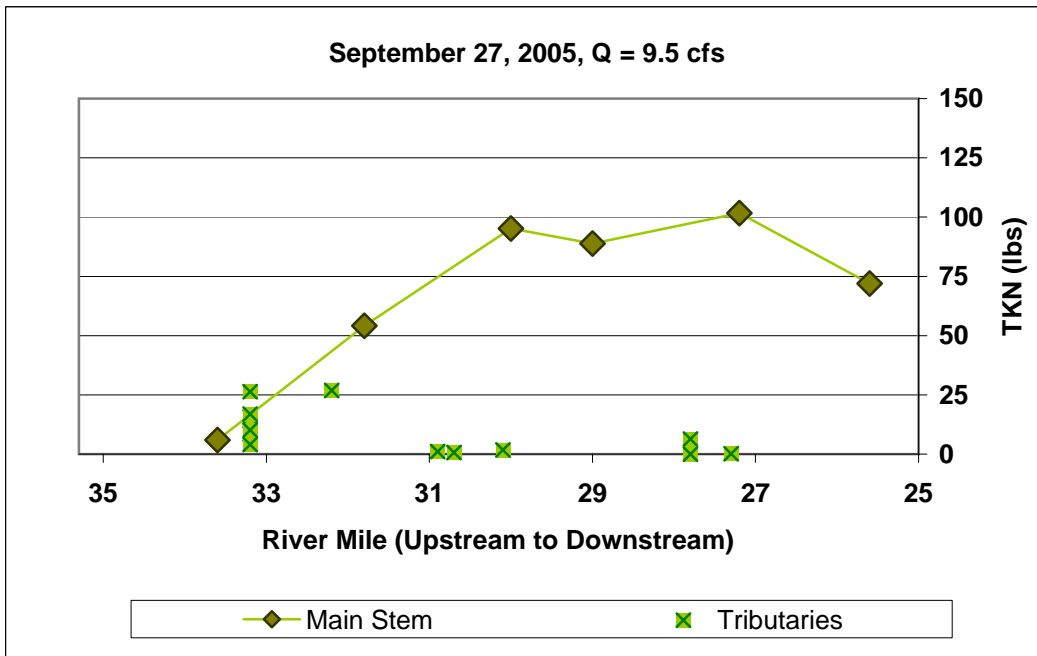
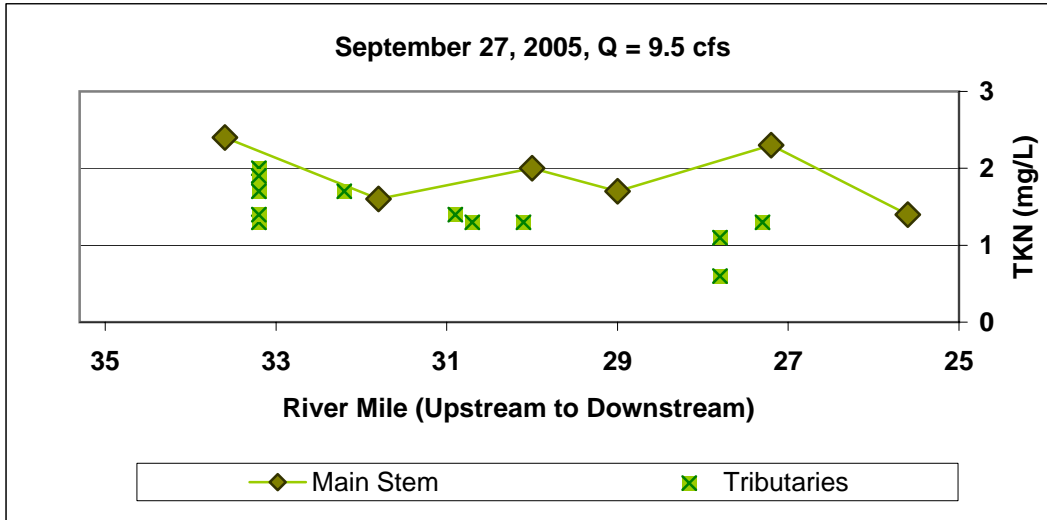
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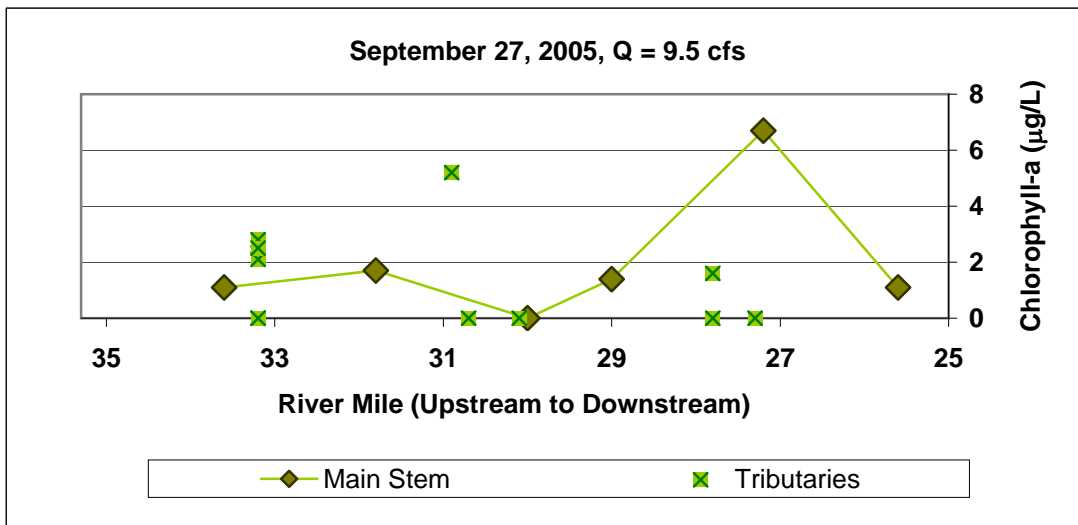
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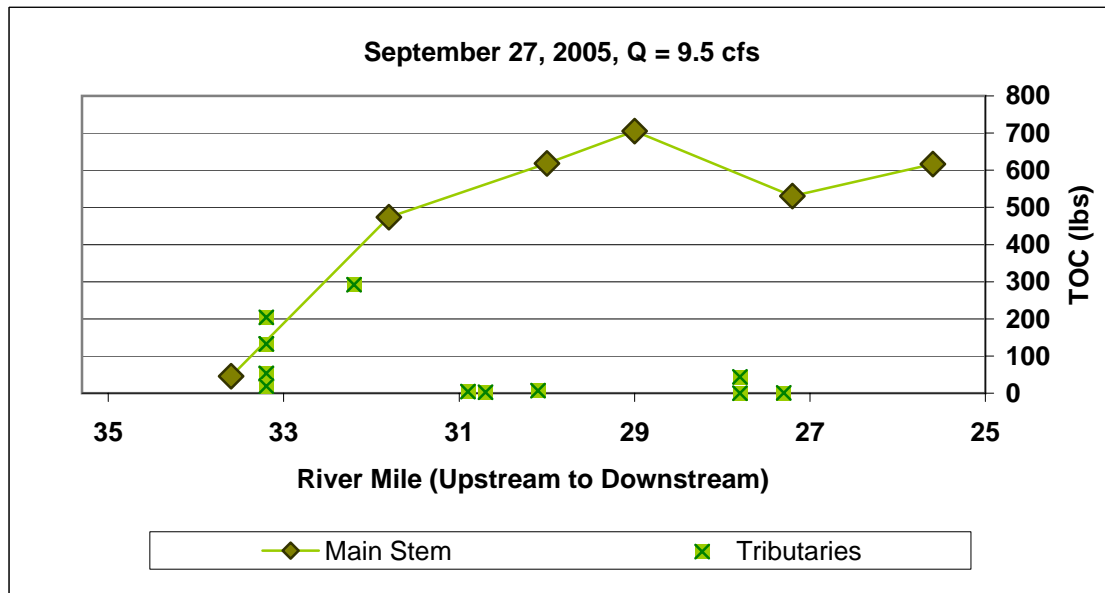
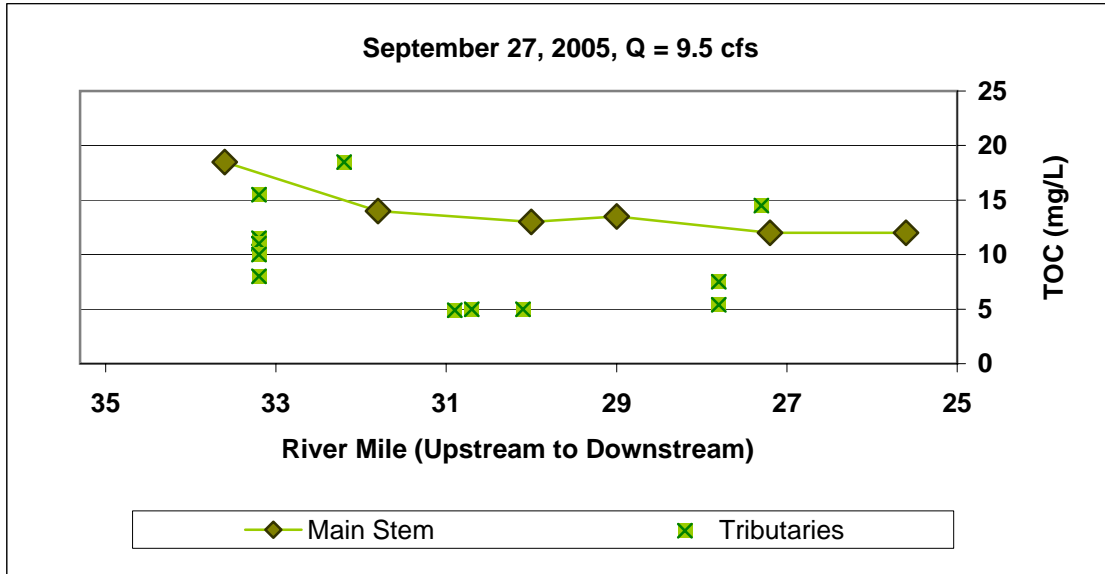
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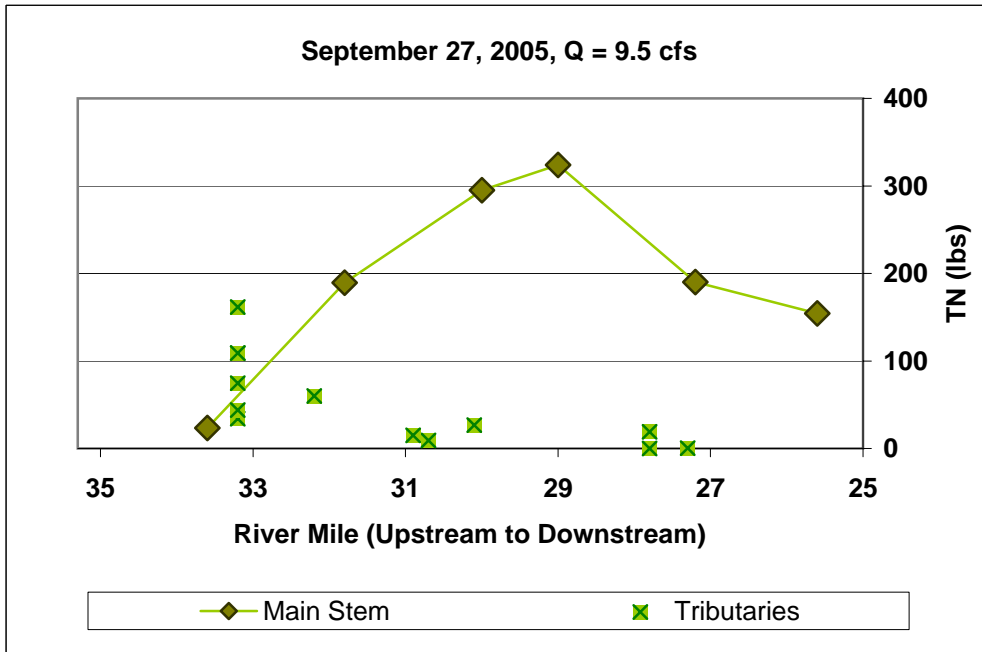
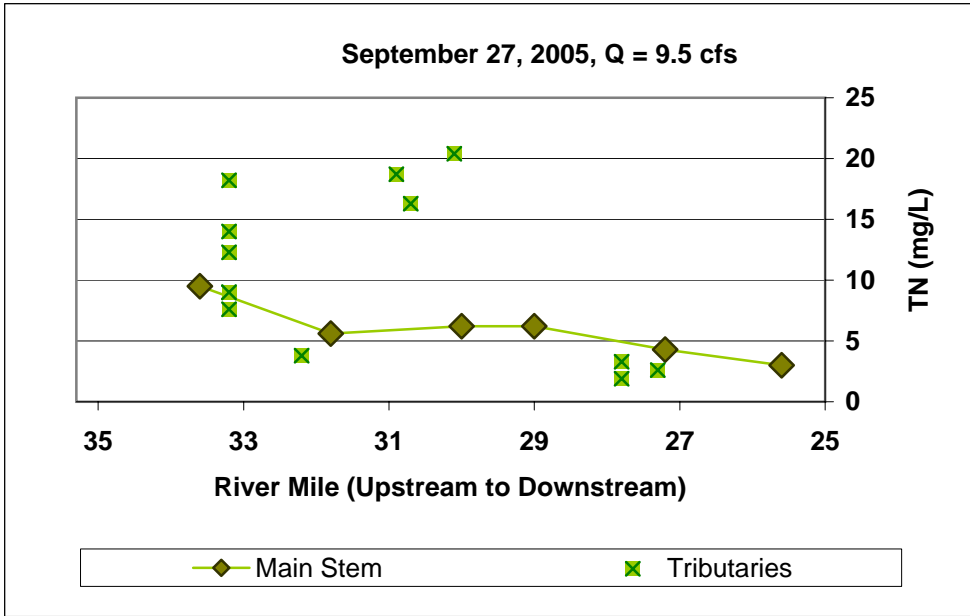
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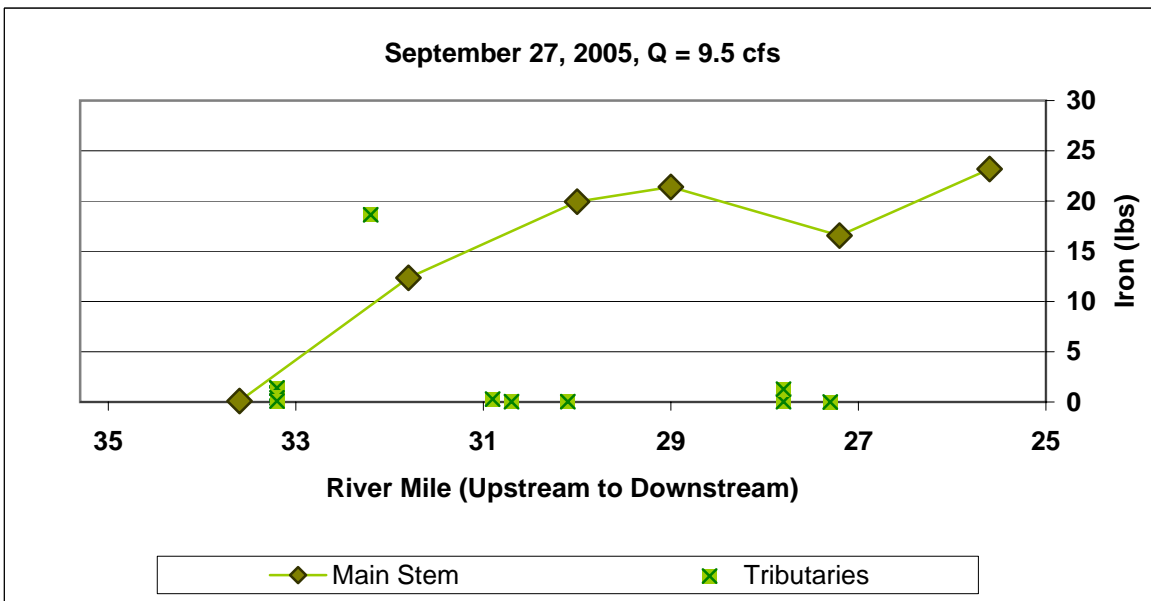
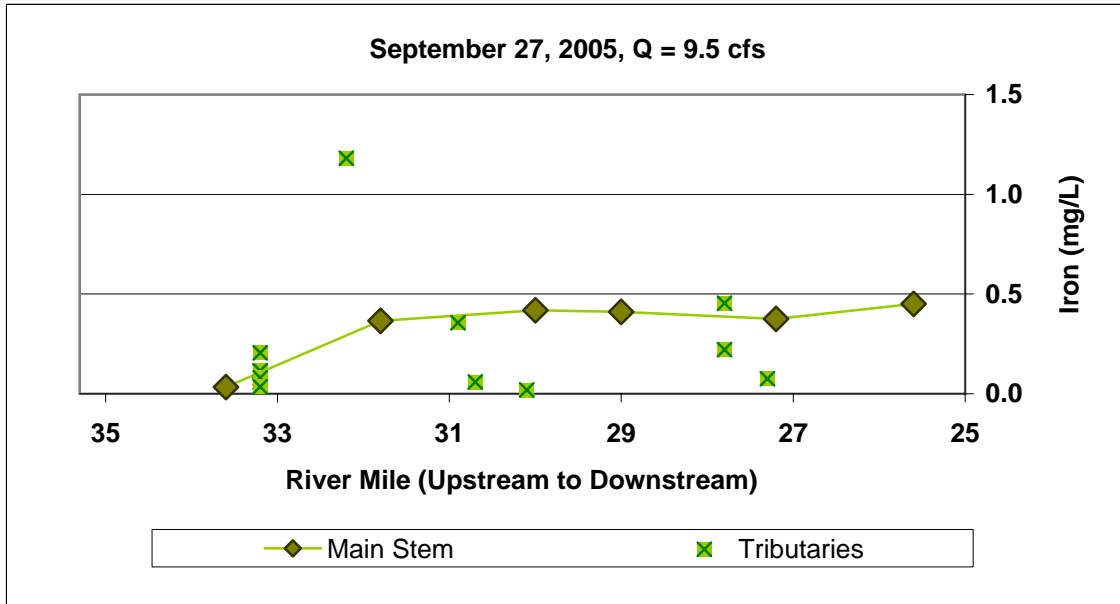
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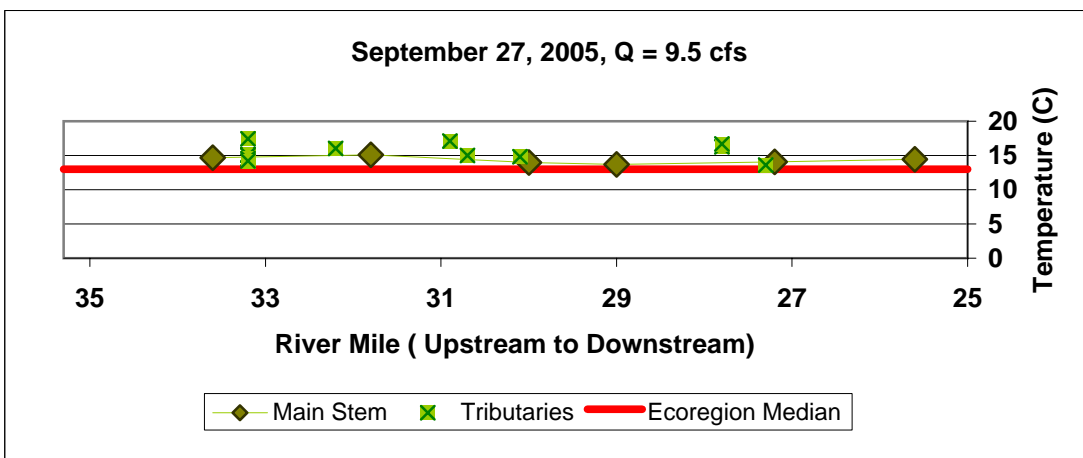
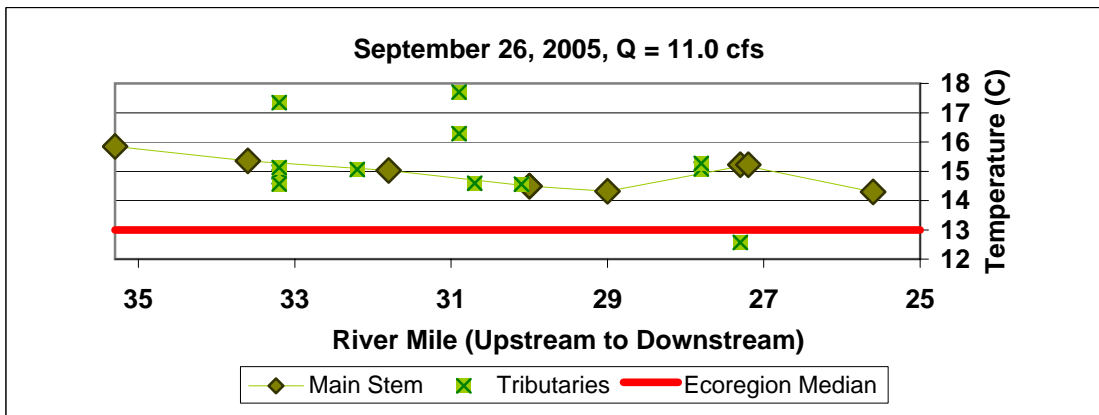
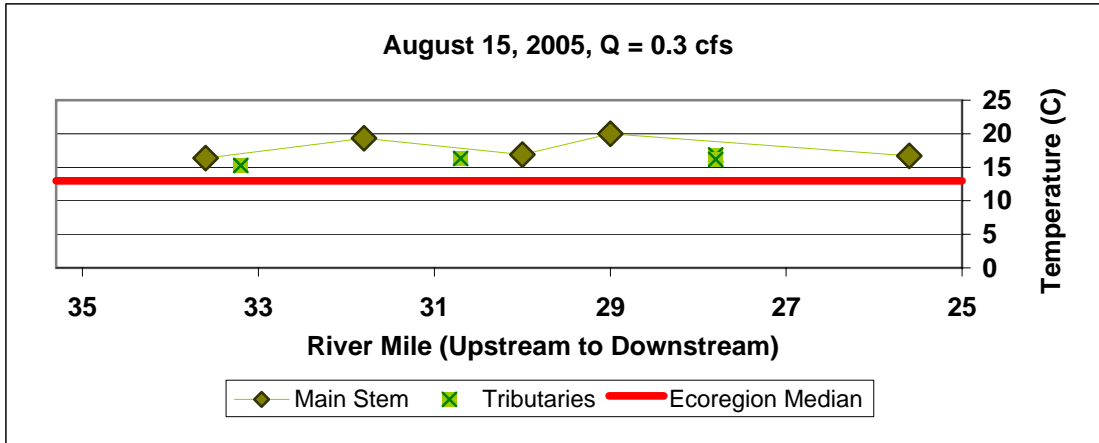




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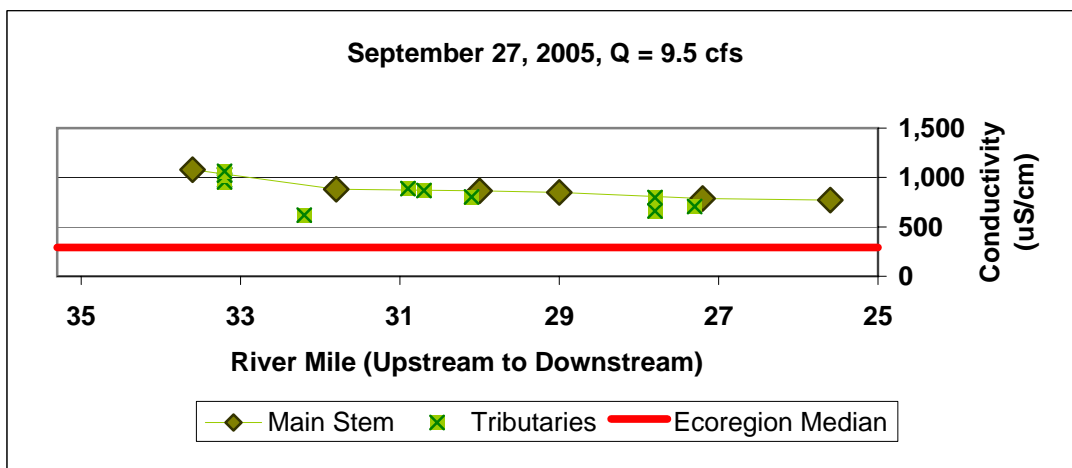
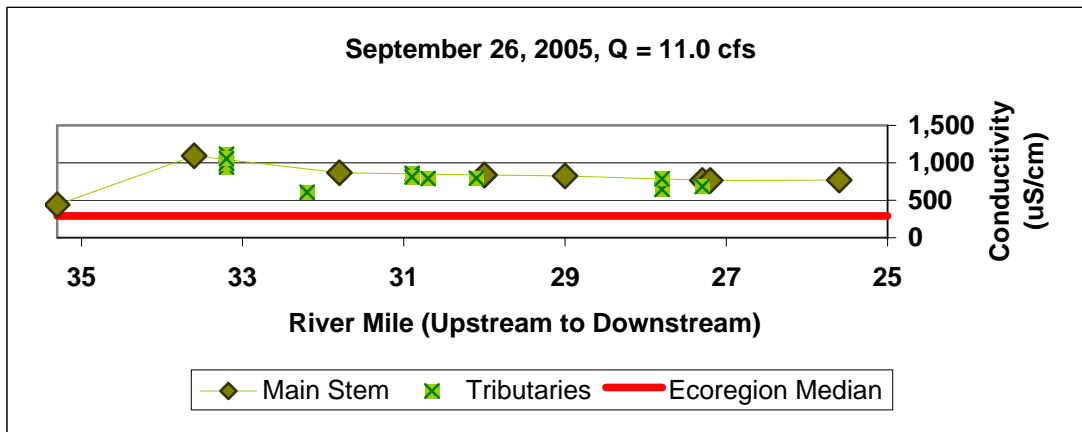
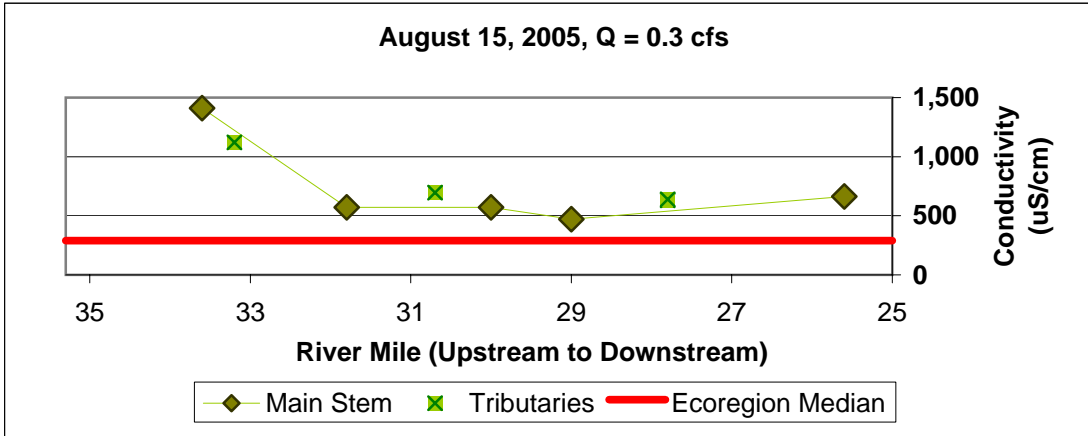
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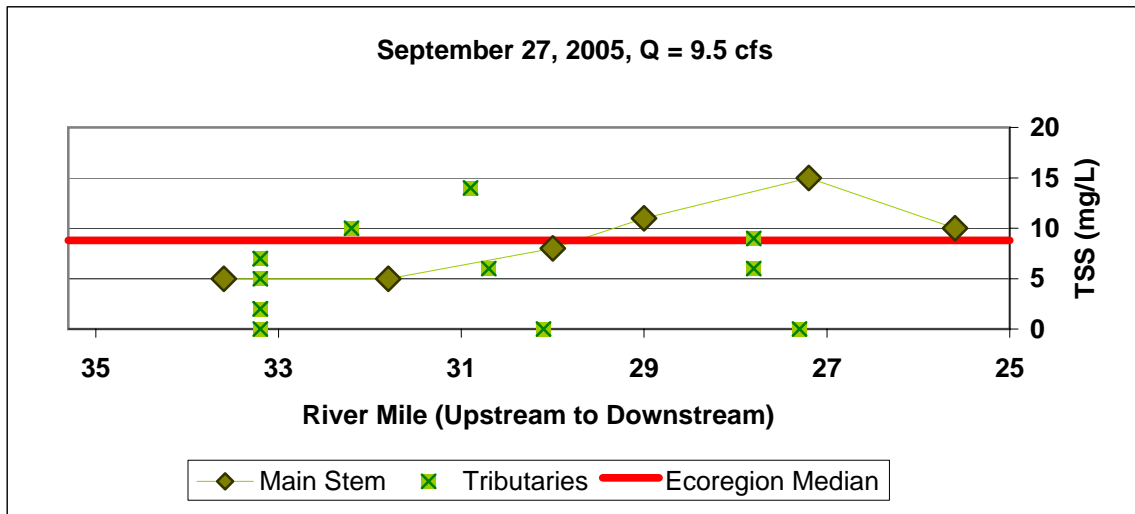
### 2005 Clearwater River In-stream Loading and Water Quality Profiles



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## Clearwater River Watershed District Clearwater River Bacteria and DO TMDL

### 2005 Clearwater River In-stream Loading and Water Quality Profiles



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## **Appendix B**

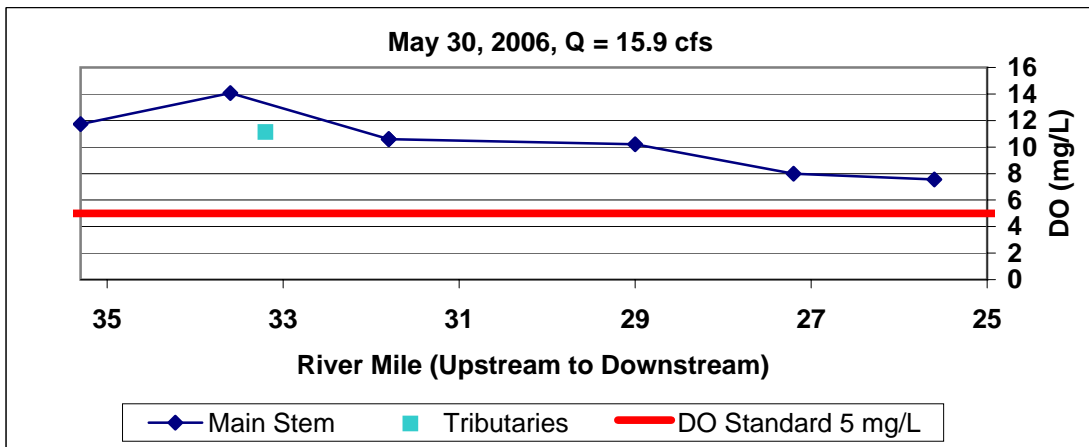
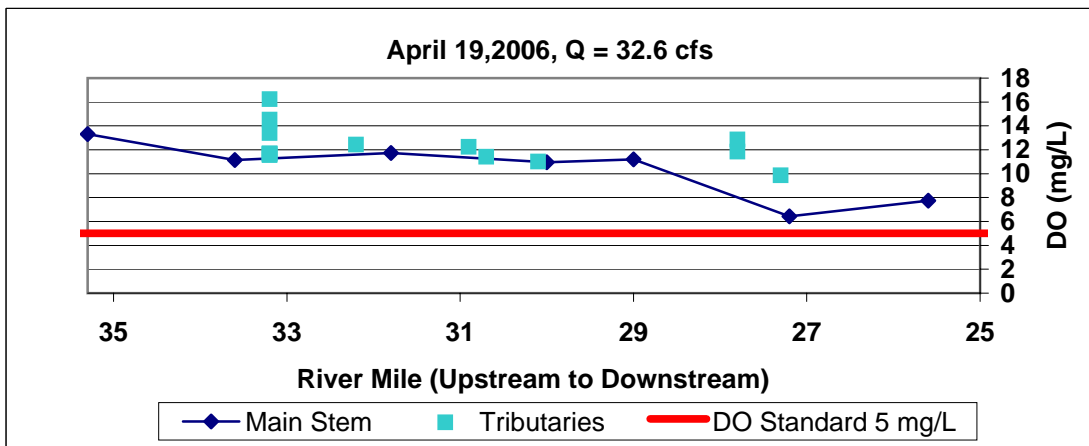
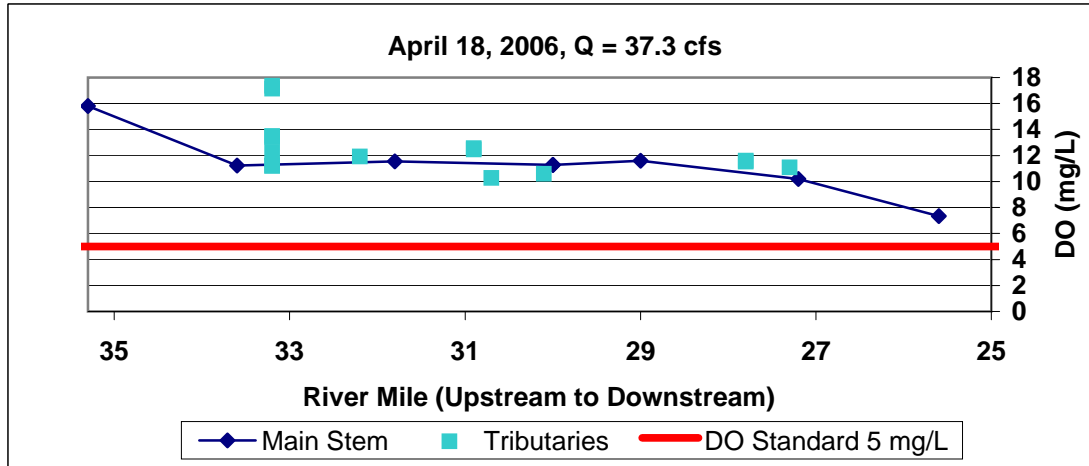
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### **2006 Clearwater River In-stream Loading and Water Quality Profiles**

## Appendix B

### Clearwater River Watershed District Clearwater River Bacteria and DO TMDL

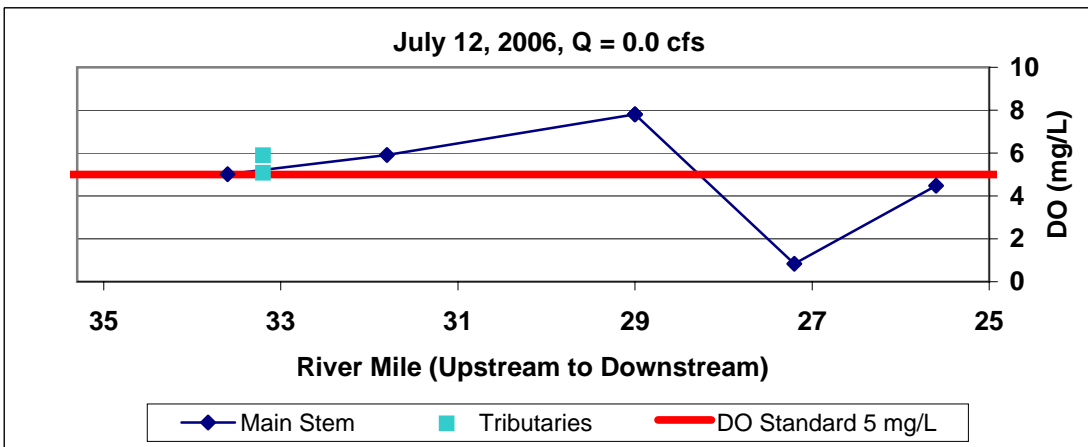
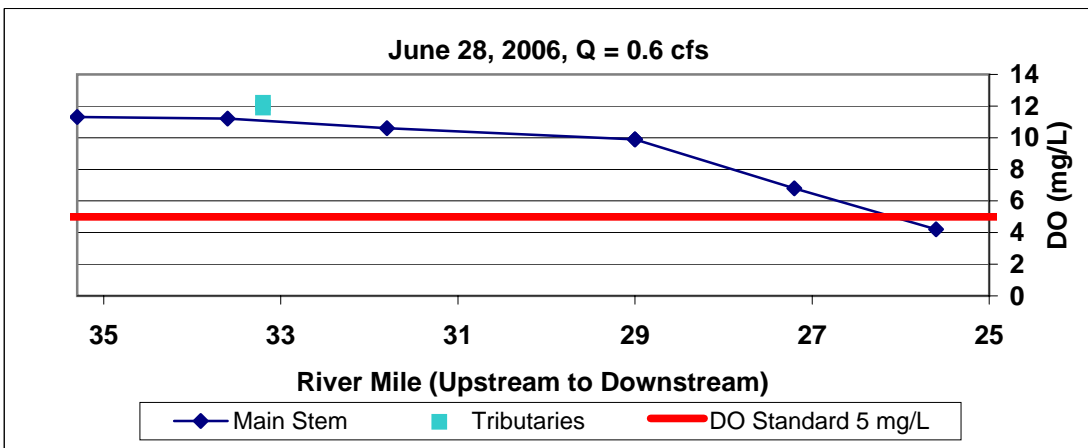
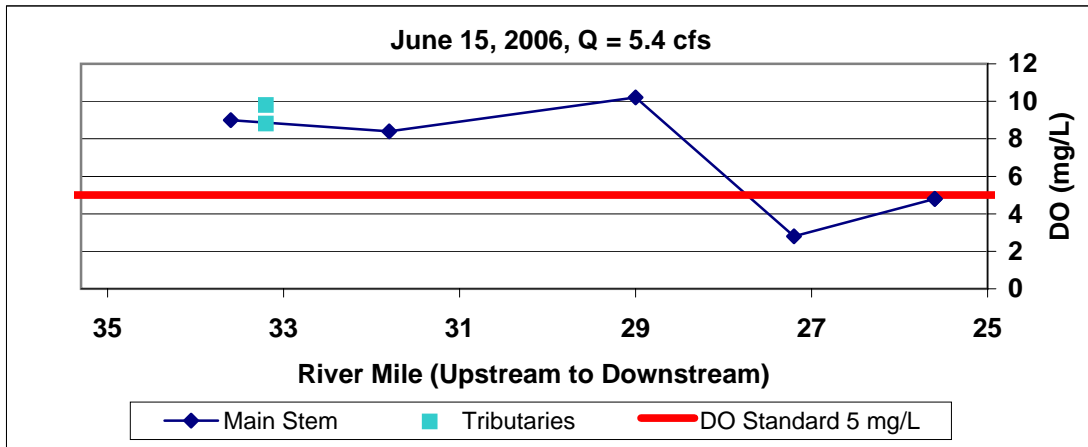
#### 2006 Clearwater River In-stream Loading and Water Quality Profiles



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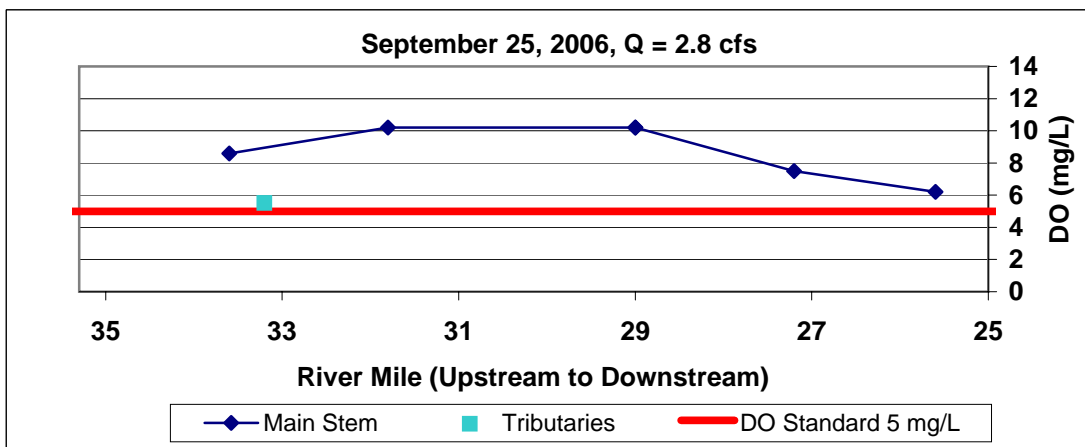
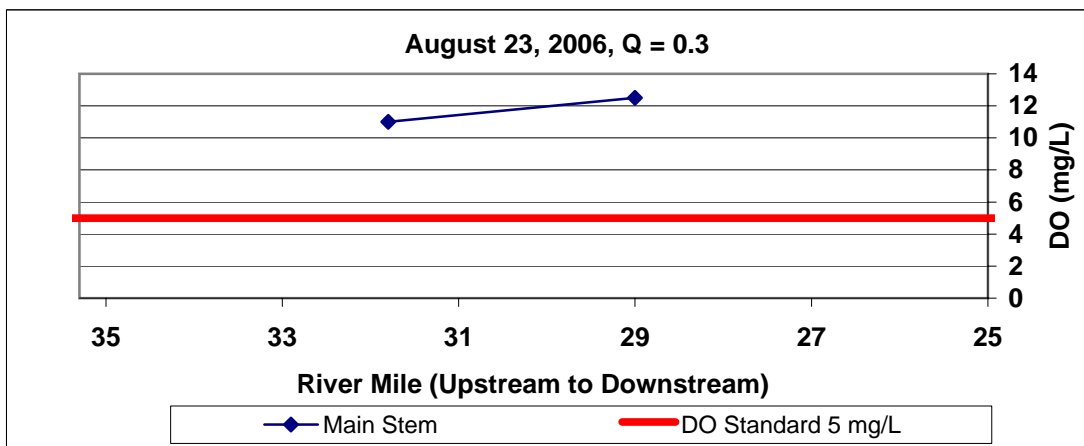
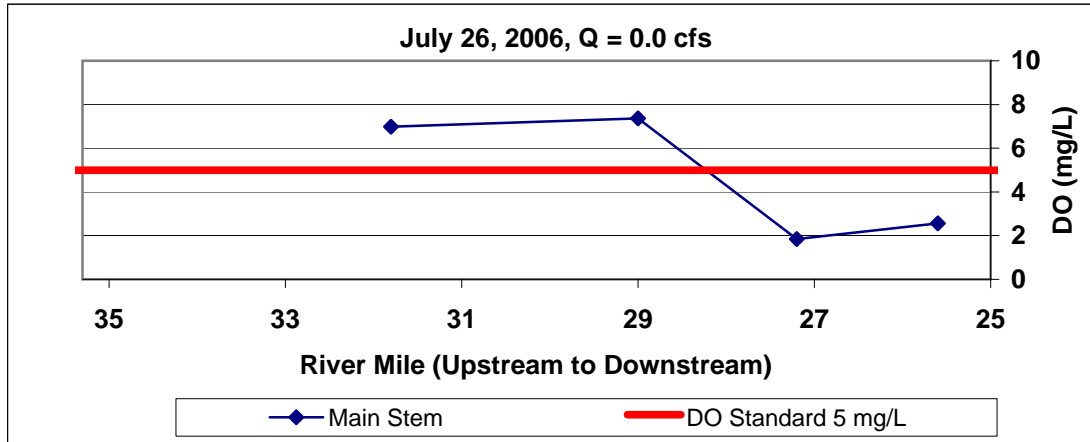
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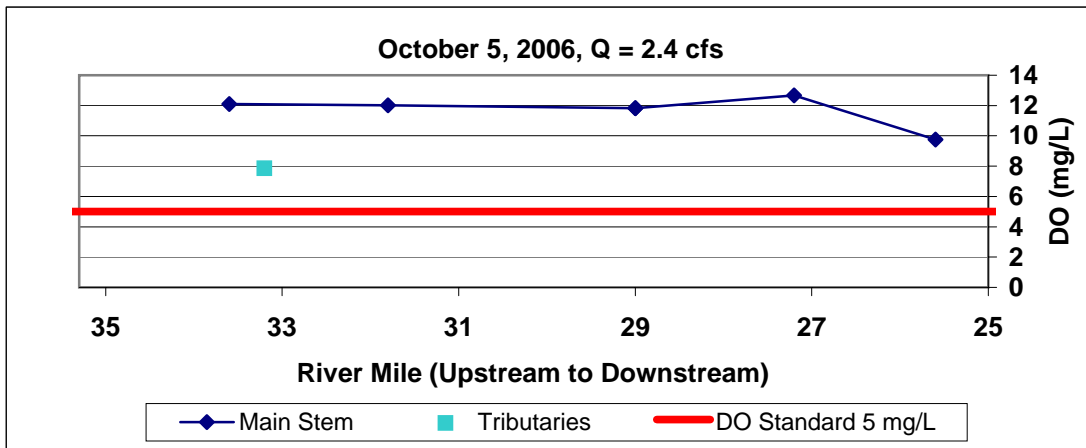
#### 2006 Clearwater River In-stream Loading and Water Quality Profiles



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### Clearwater River Watershed District Clearwater River Bacteria and DO TMDL

#### 2006 Clearwater River In-stream Loading and Water Quality Profiles

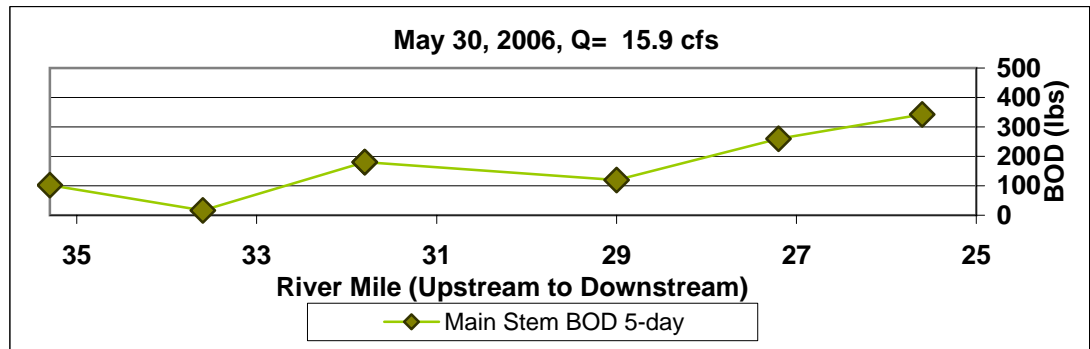
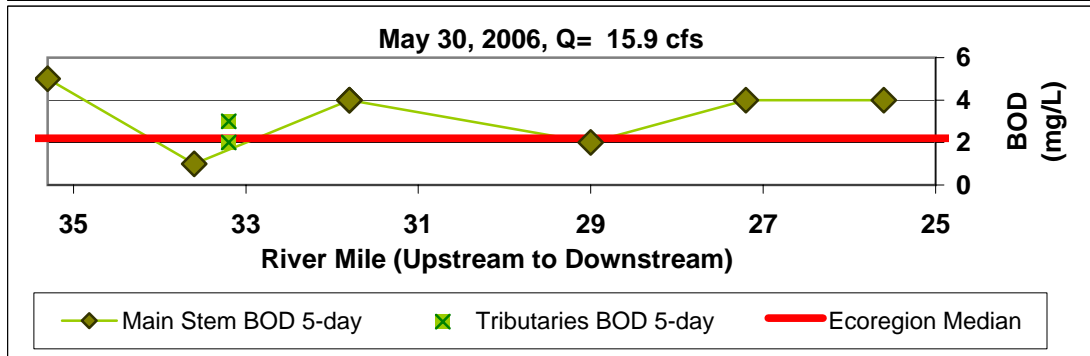
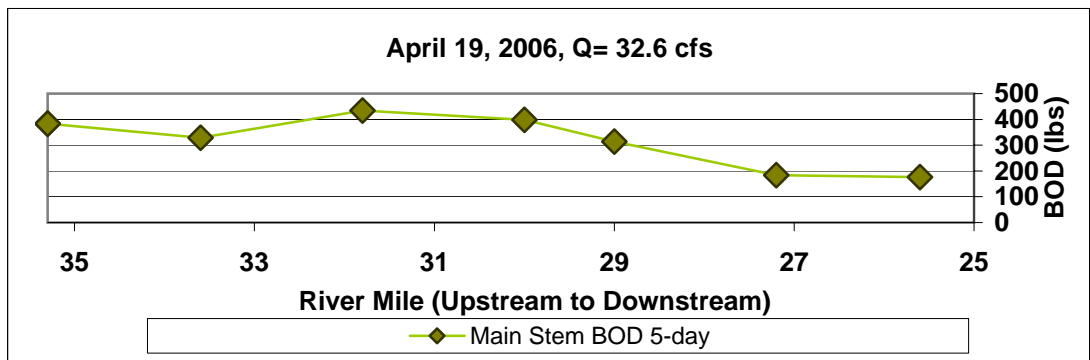
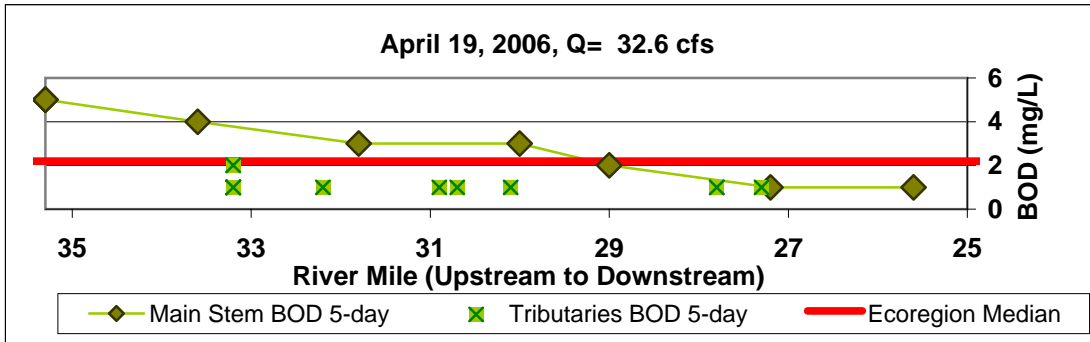




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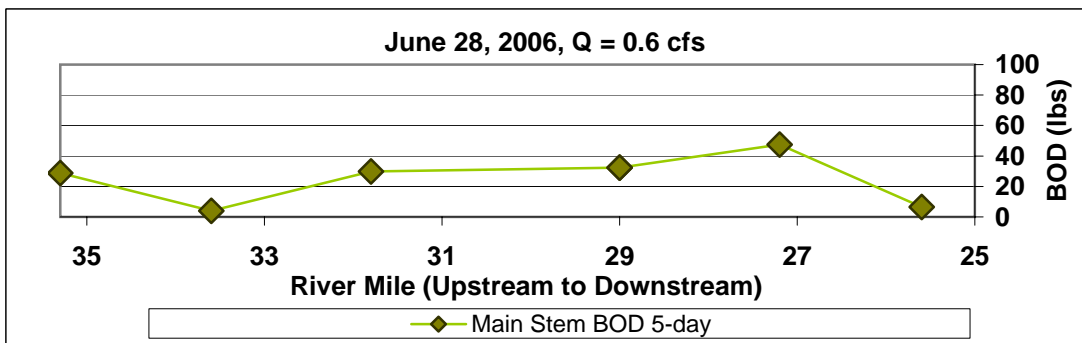
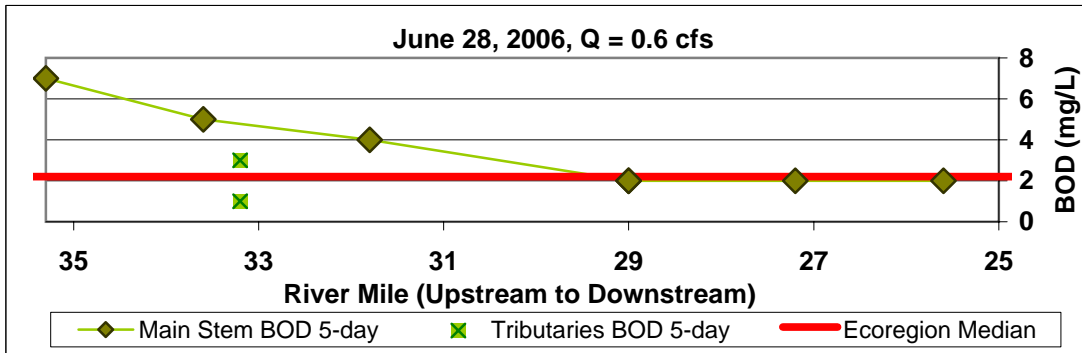
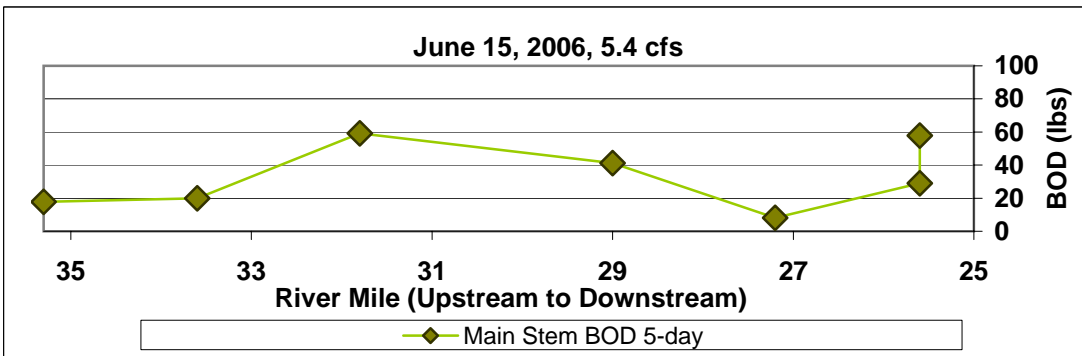
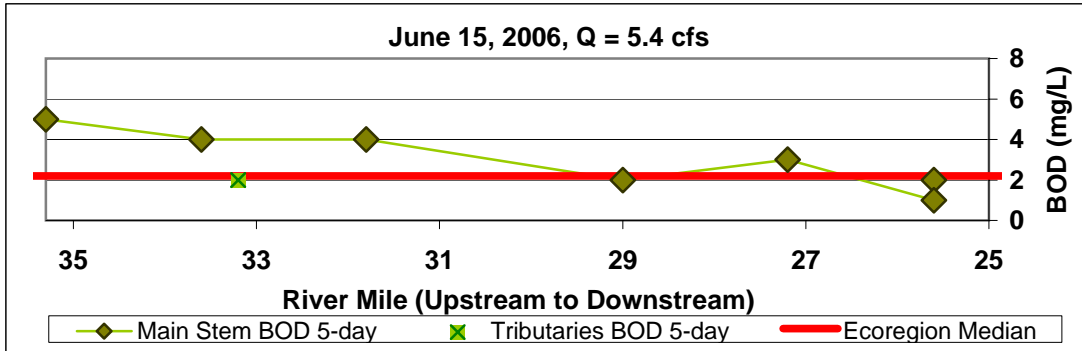
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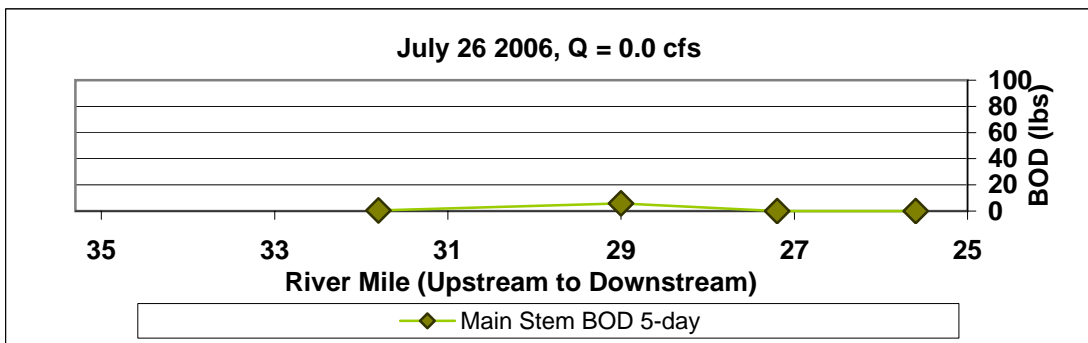
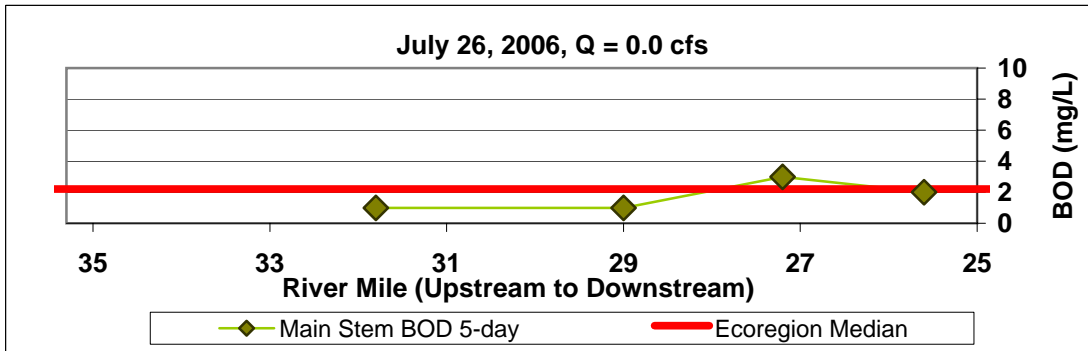
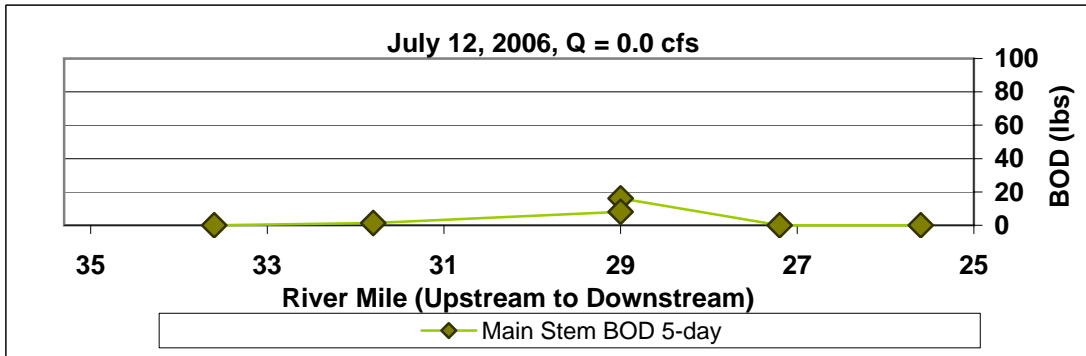
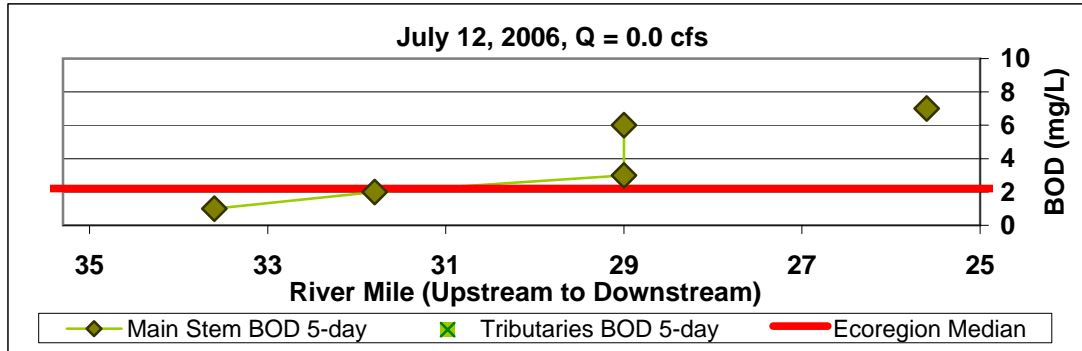
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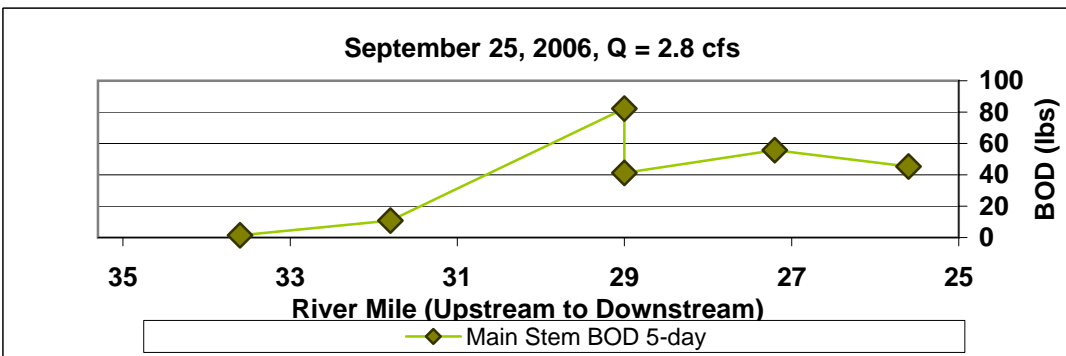
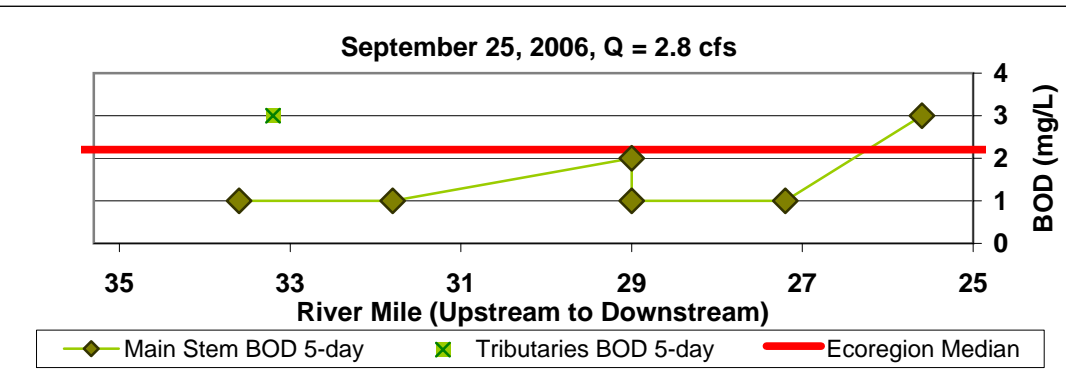
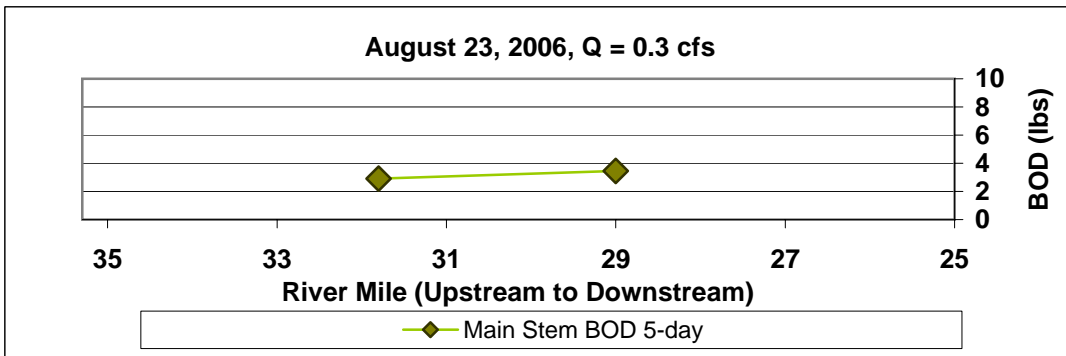
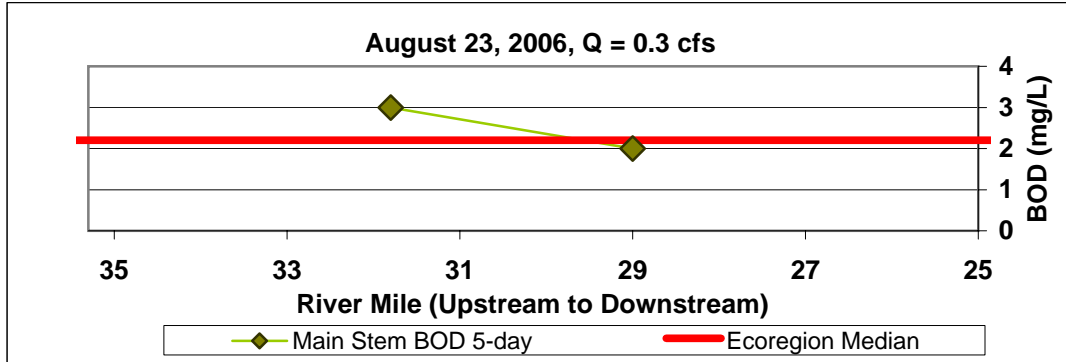
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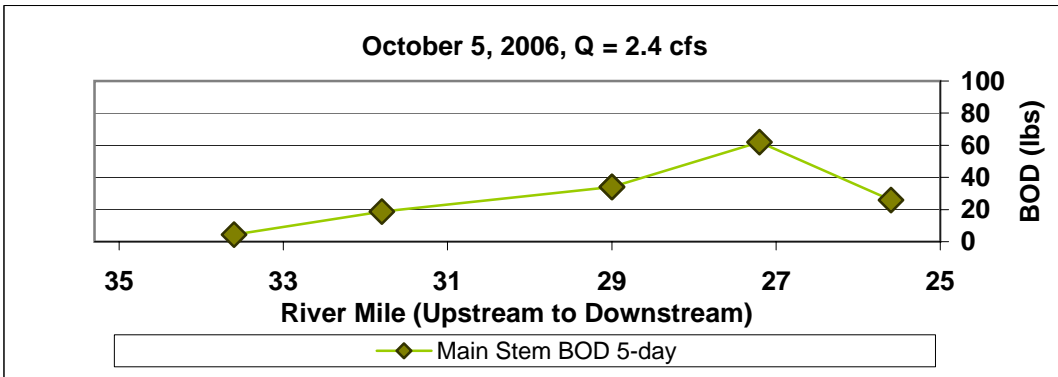
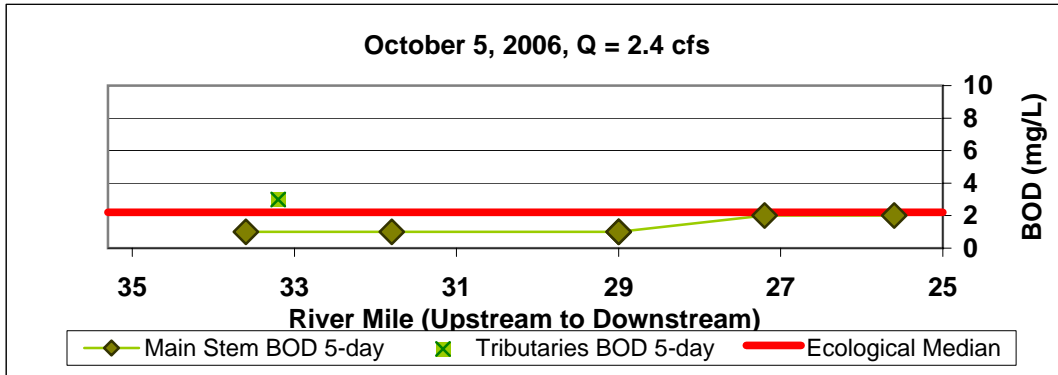
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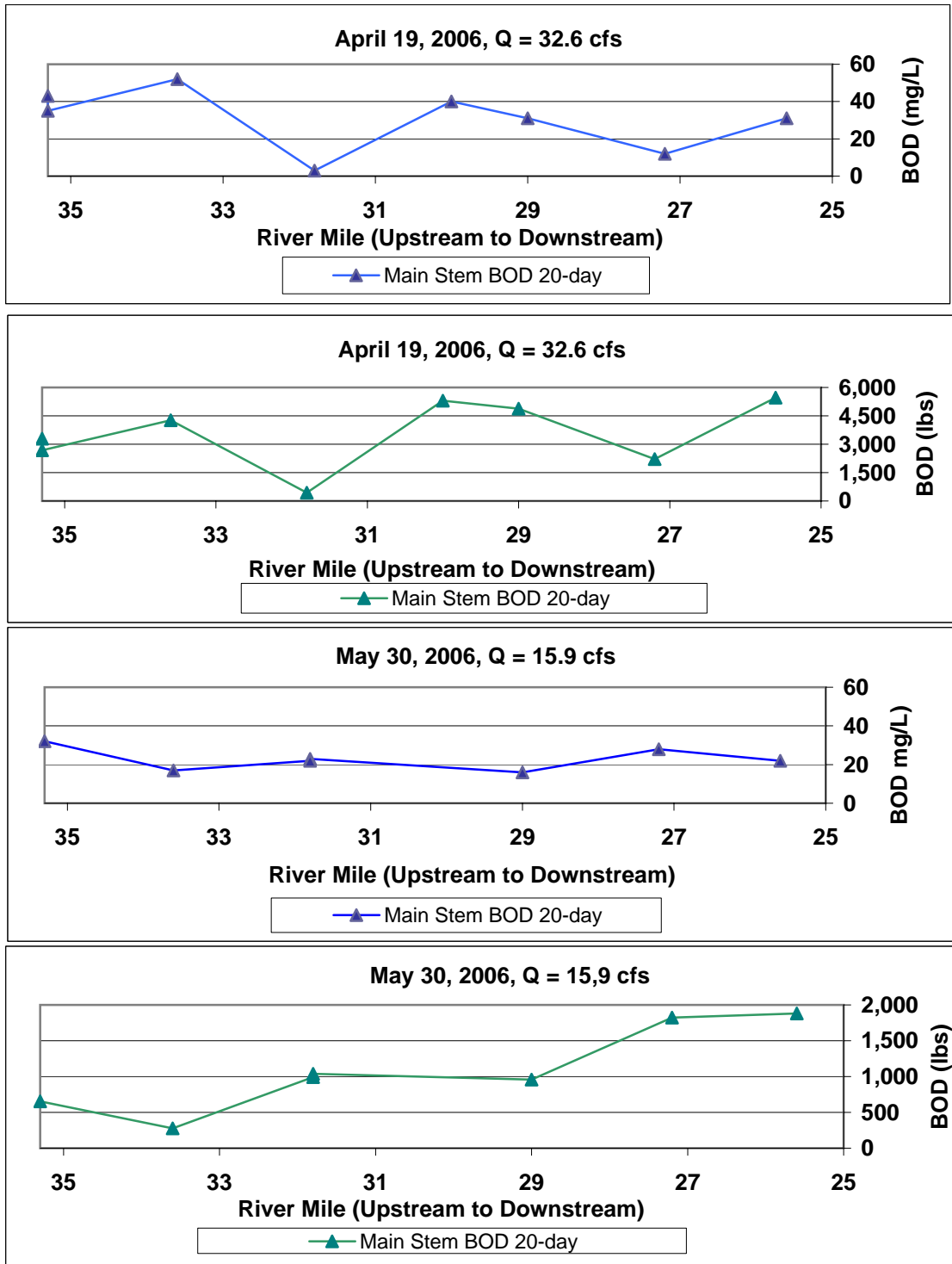
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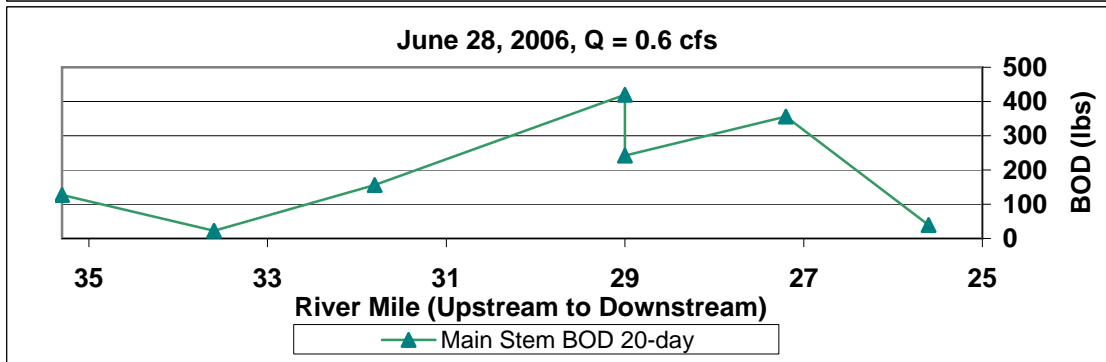
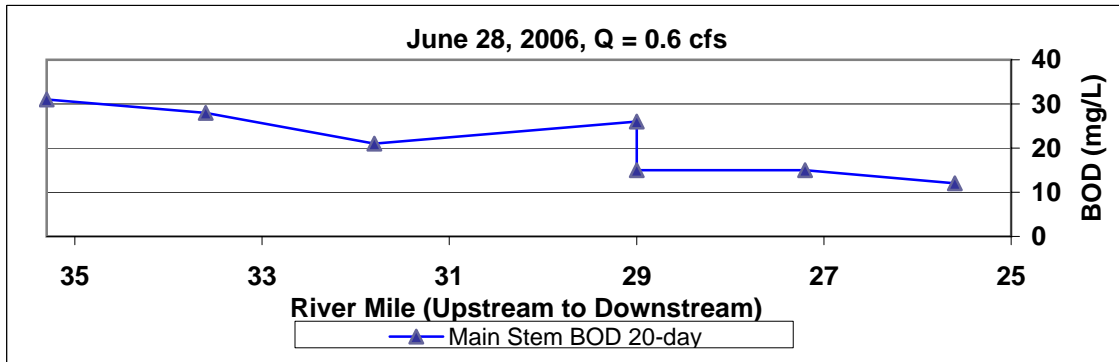
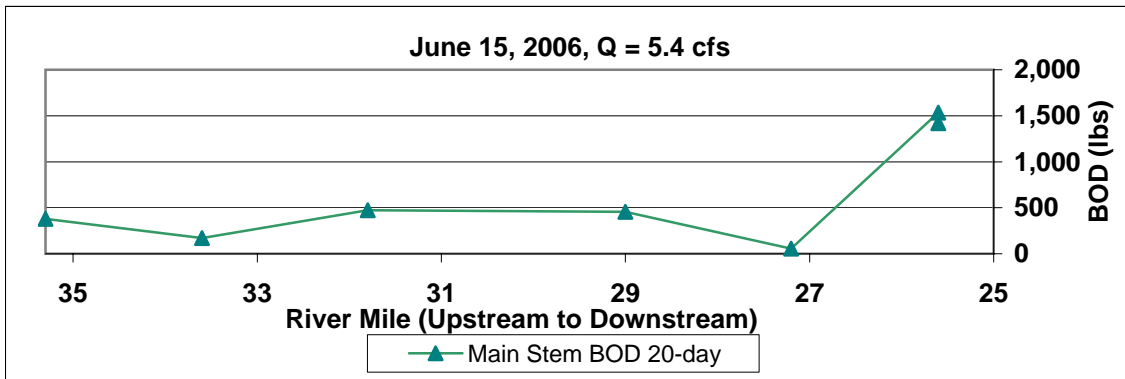
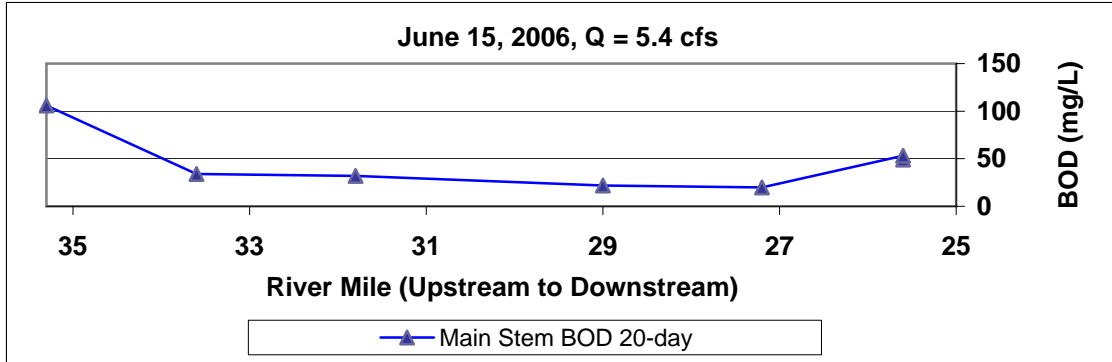
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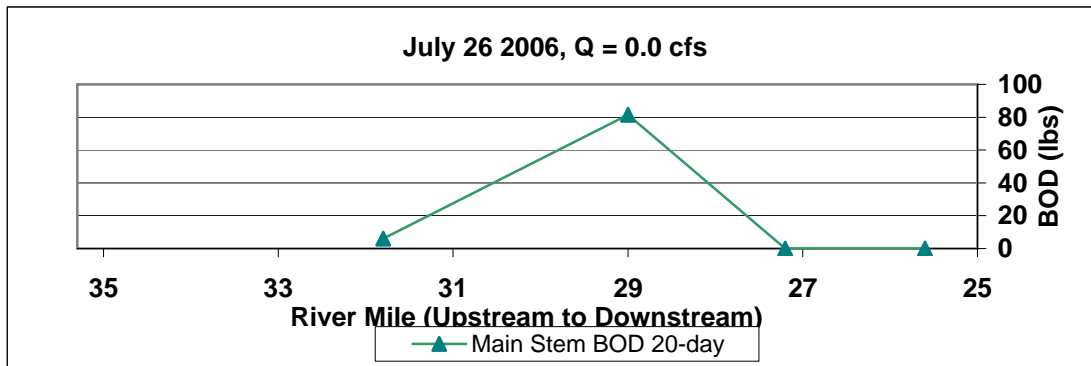
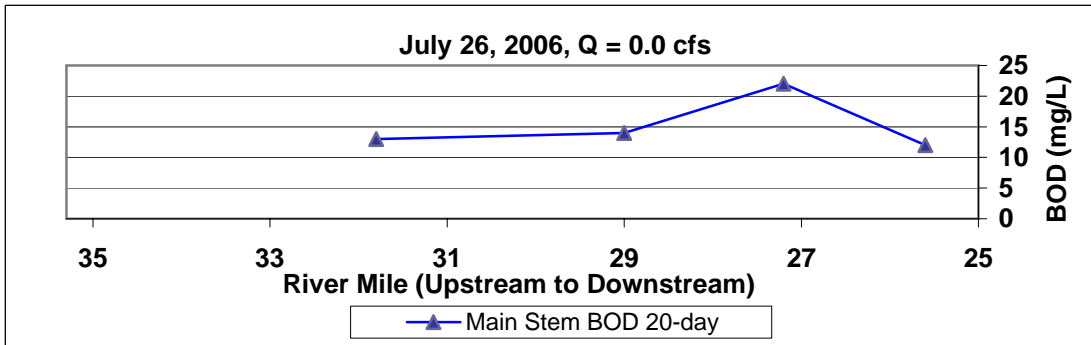
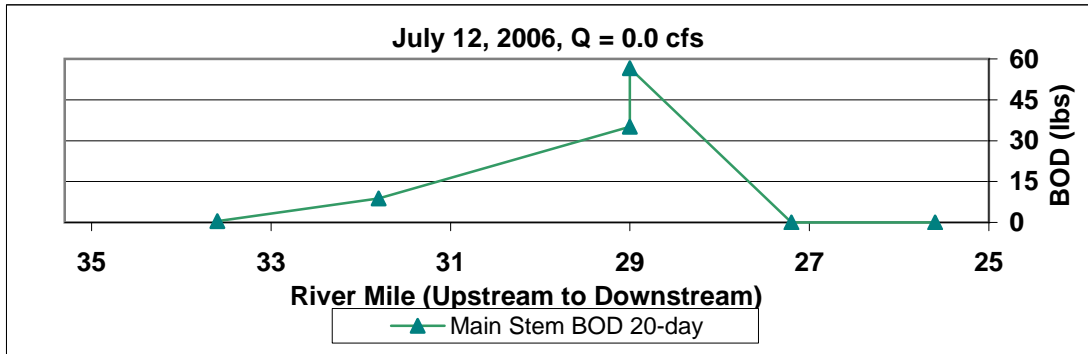
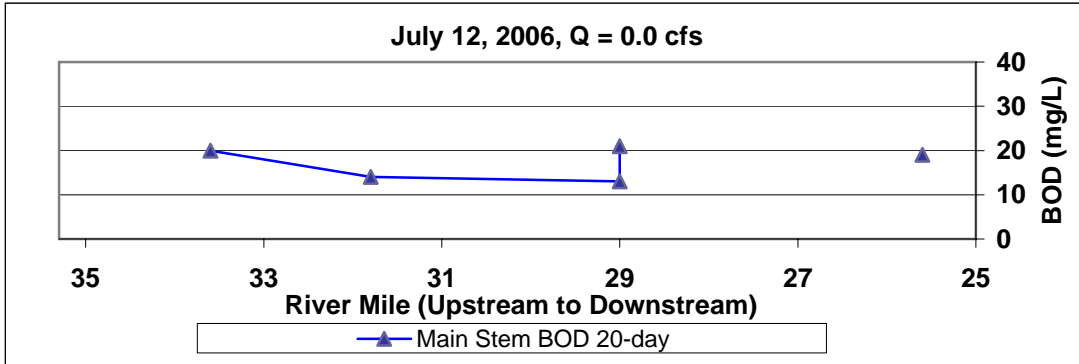
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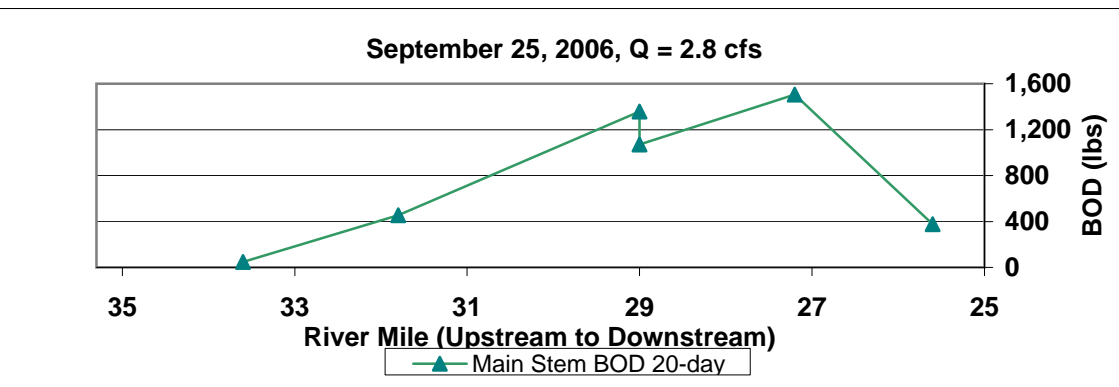
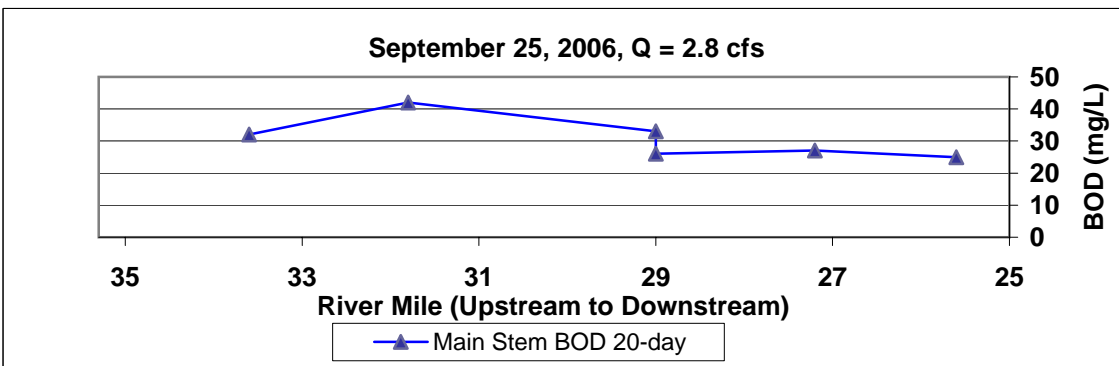
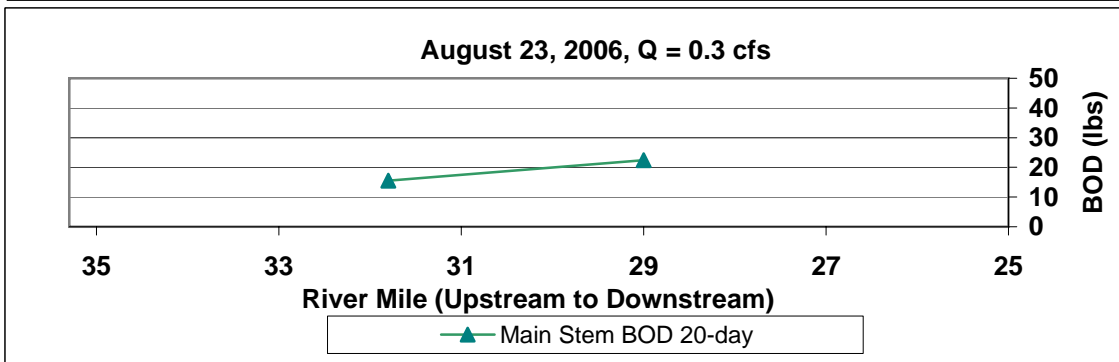
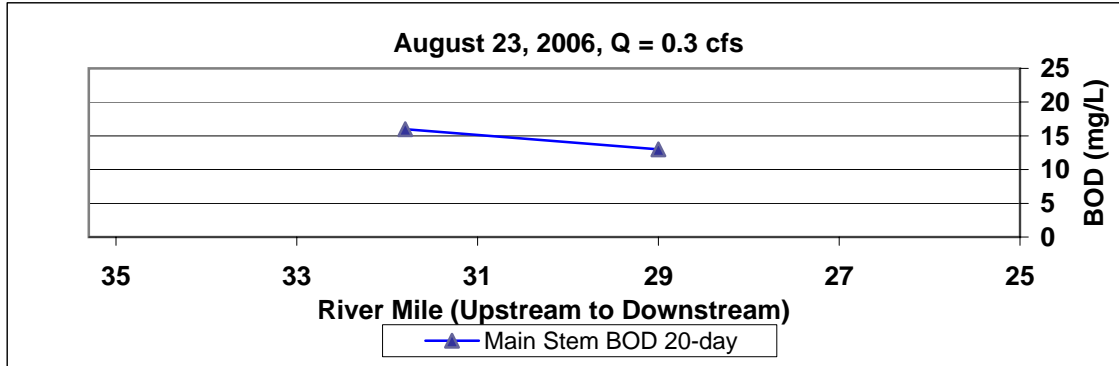




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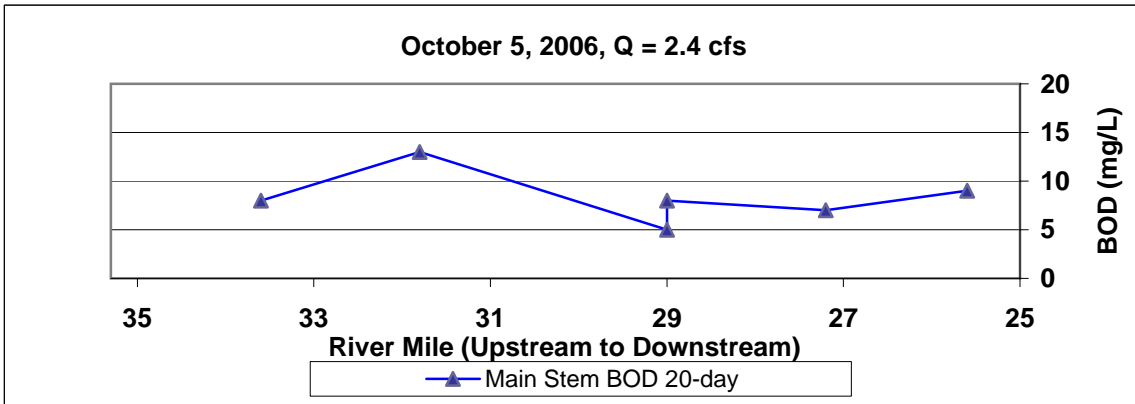
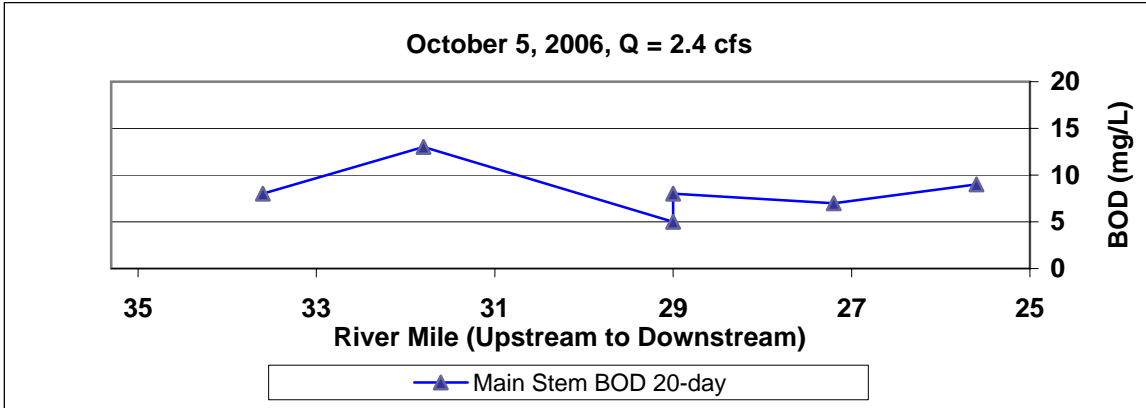
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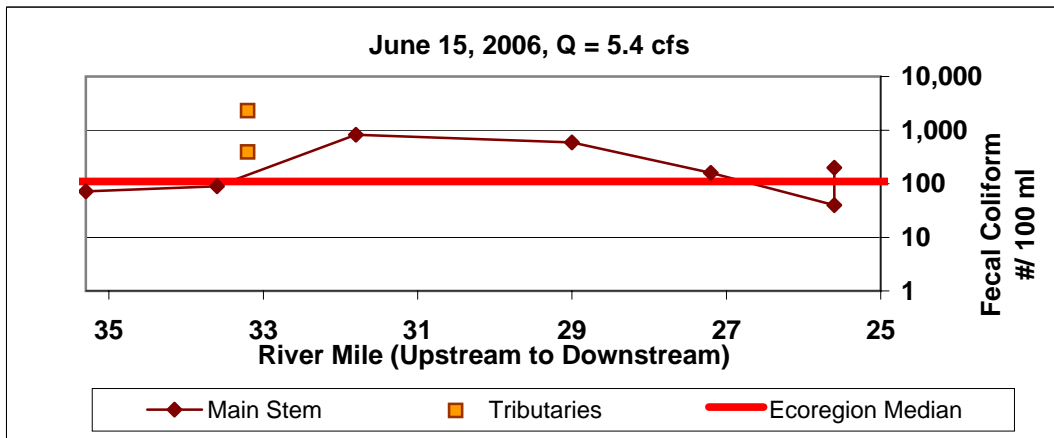
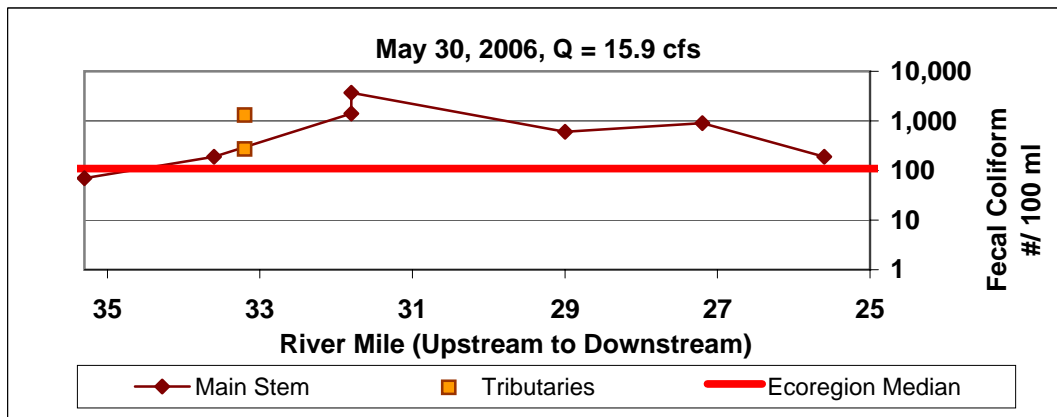
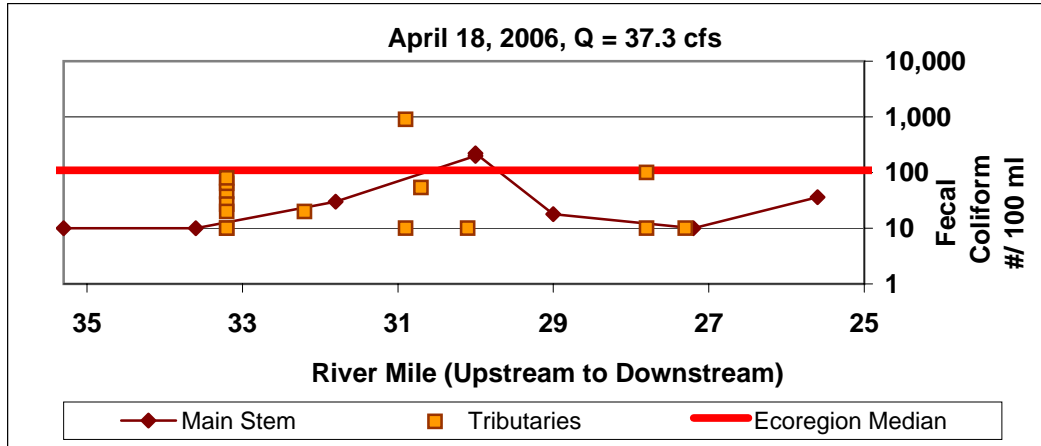
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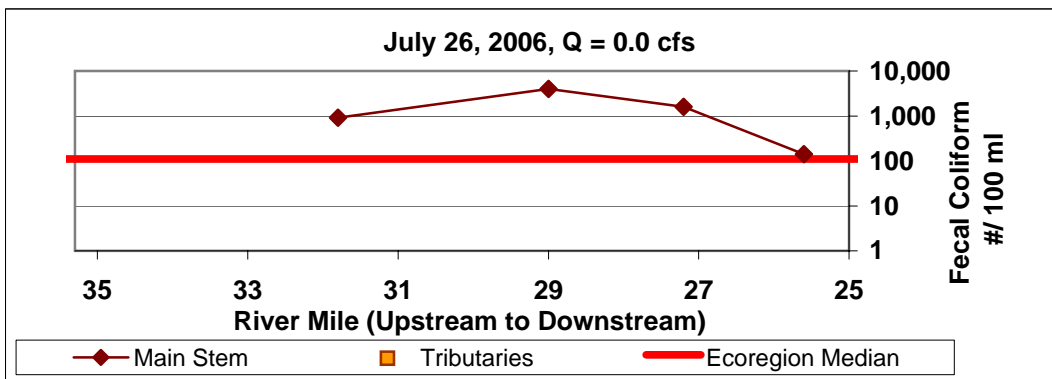
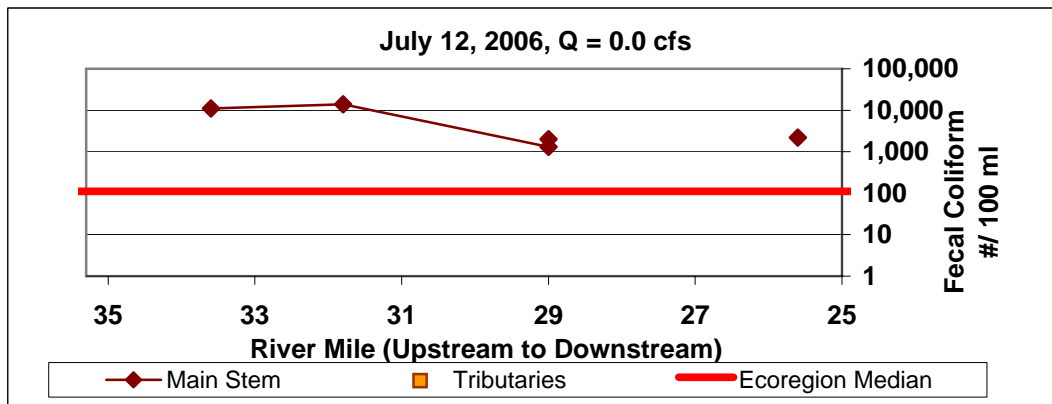
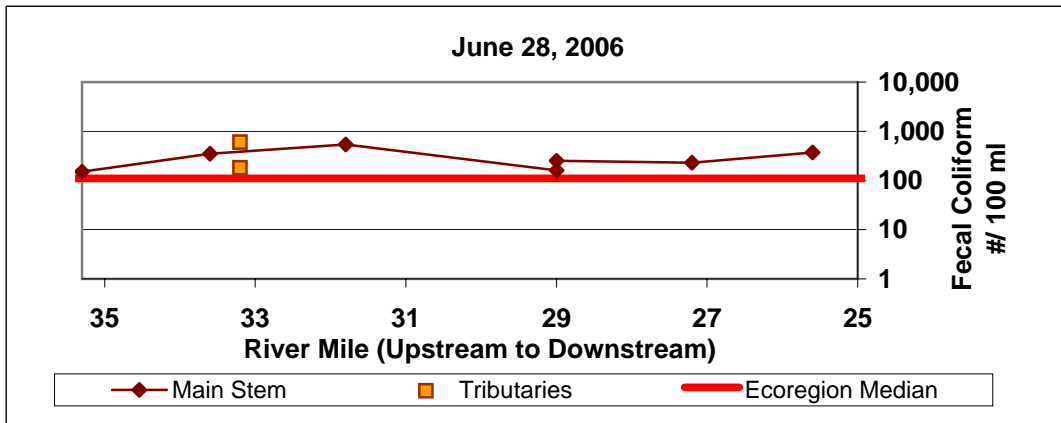
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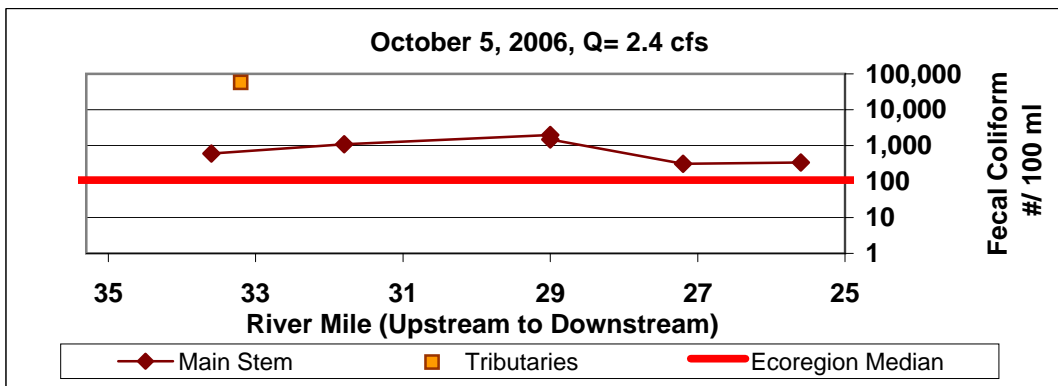
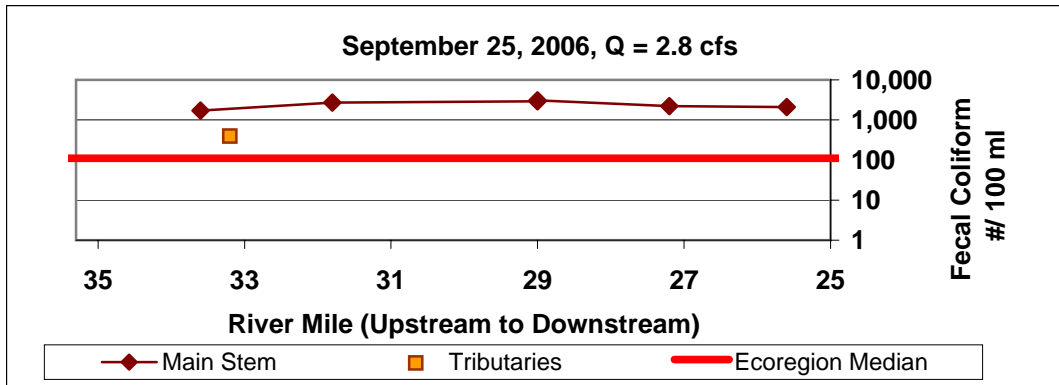
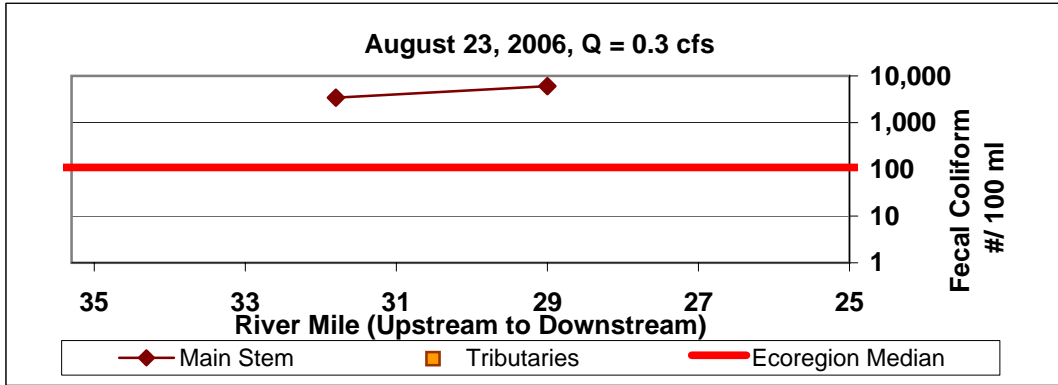
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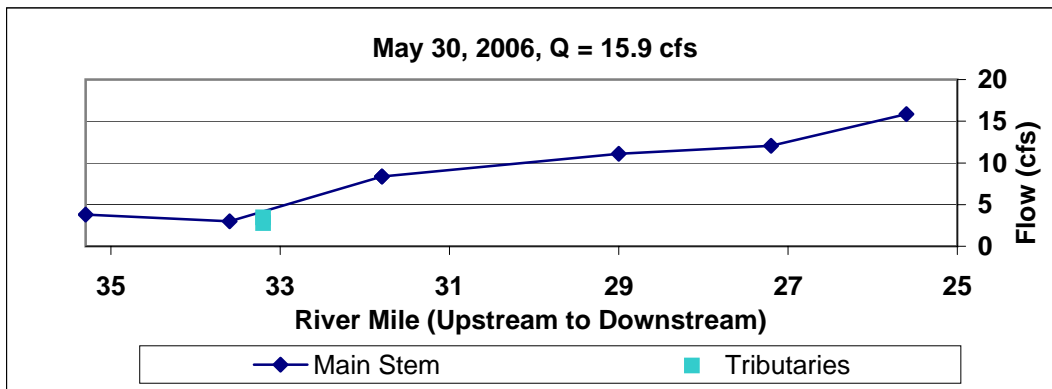
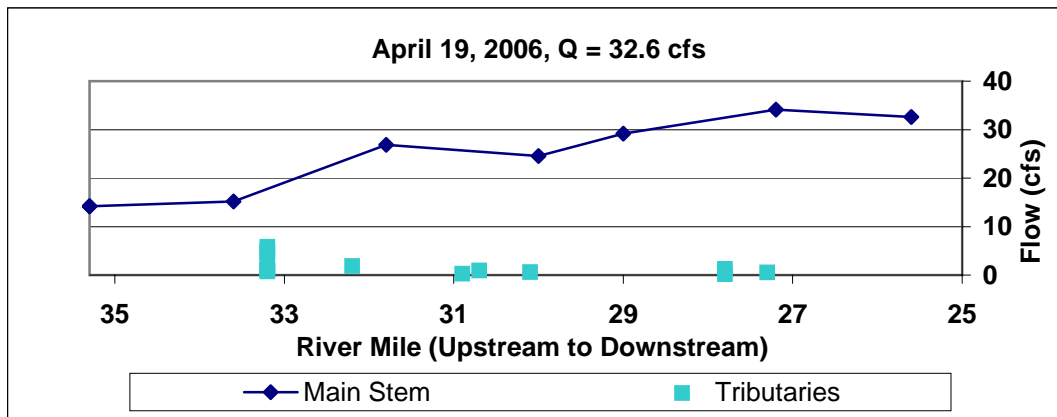
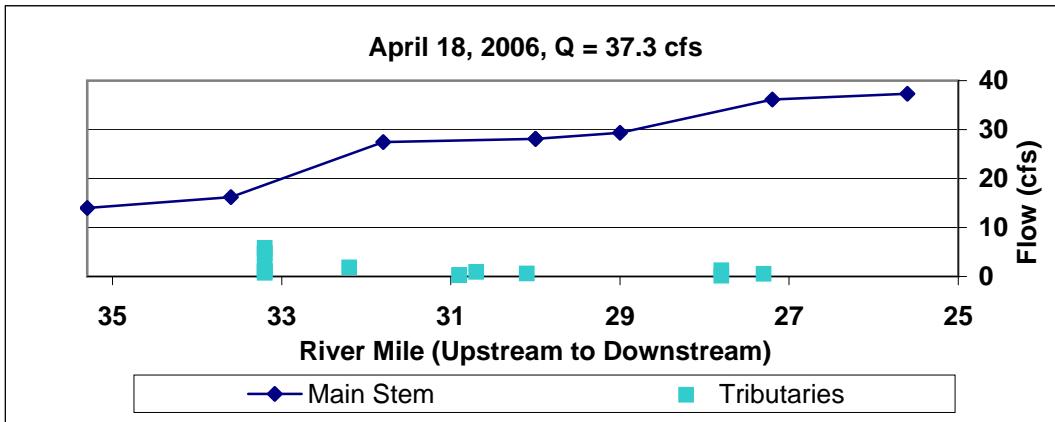
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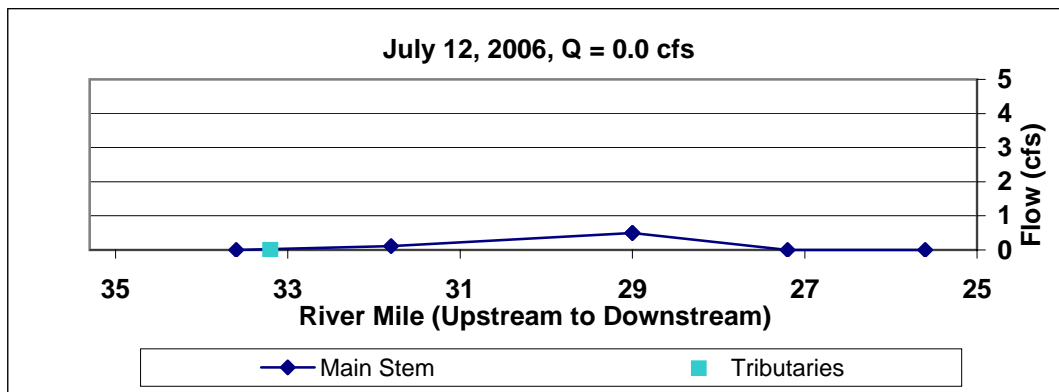
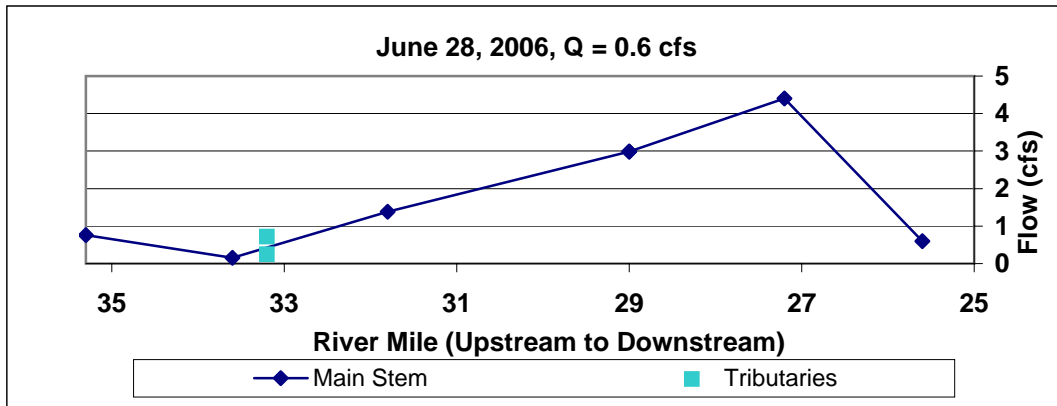
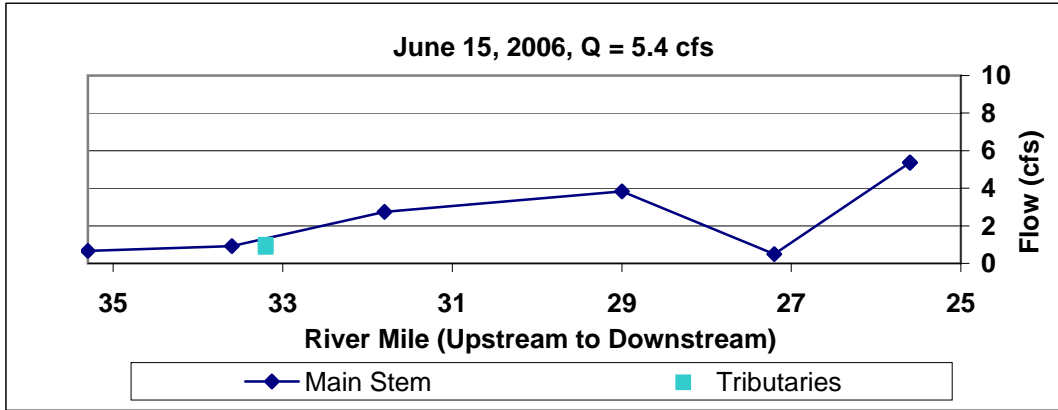
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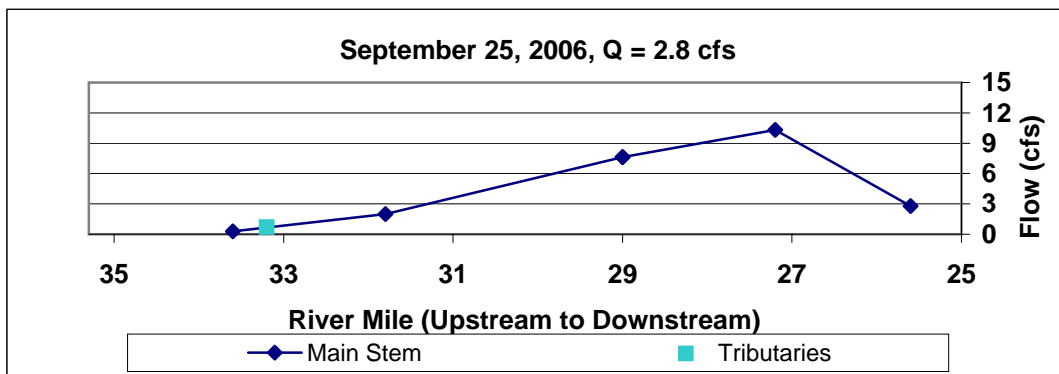
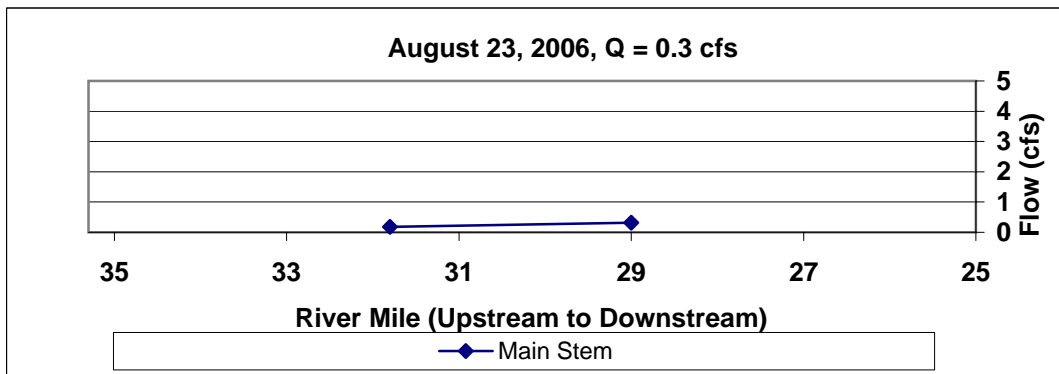
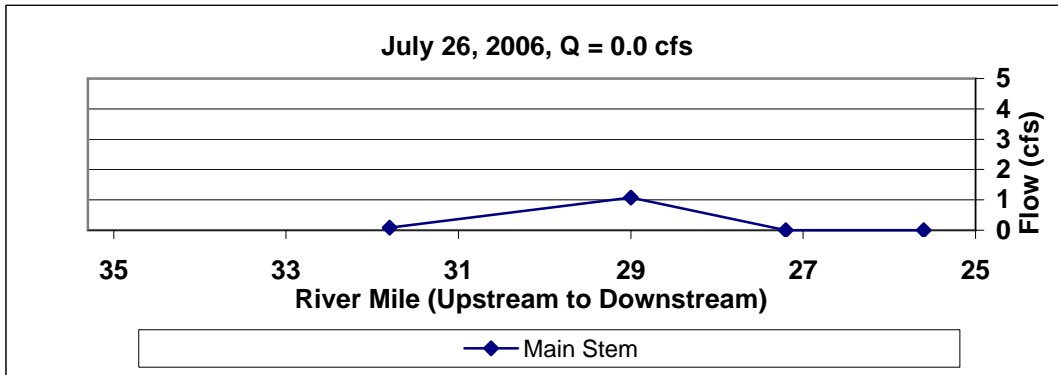
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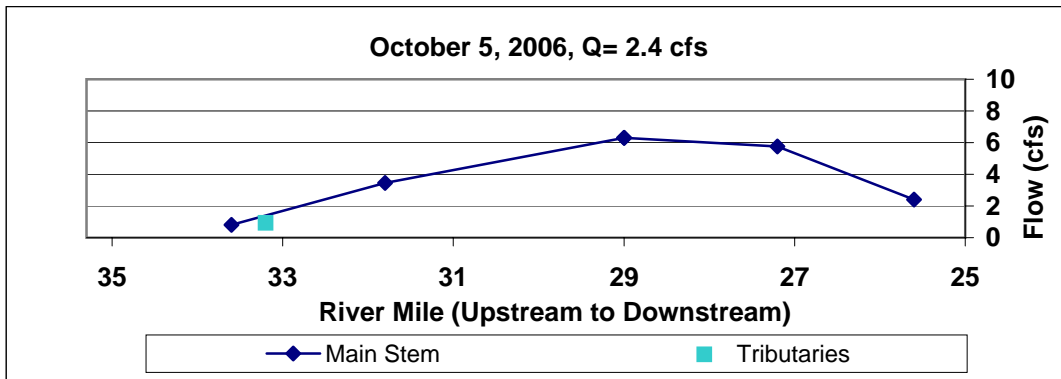




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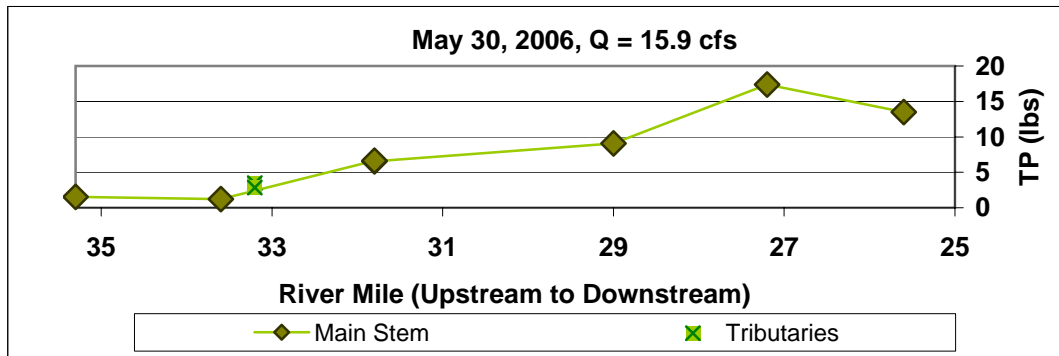
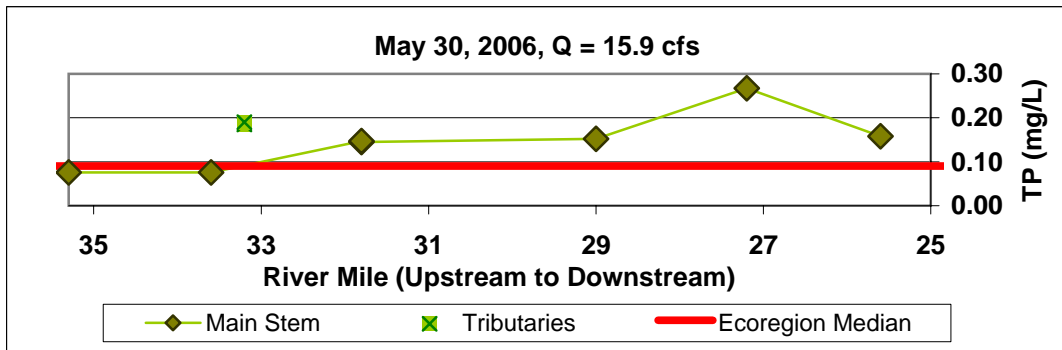
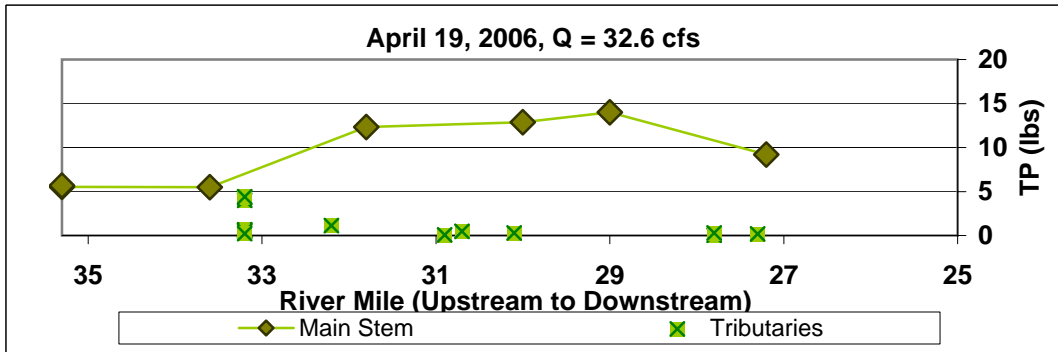
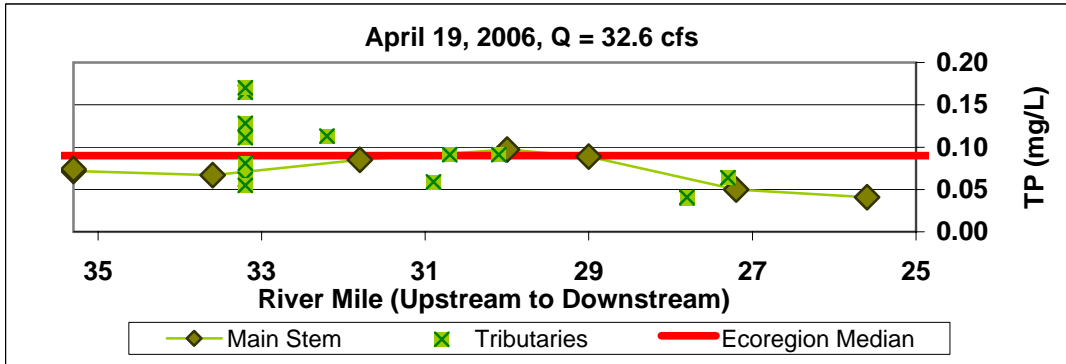
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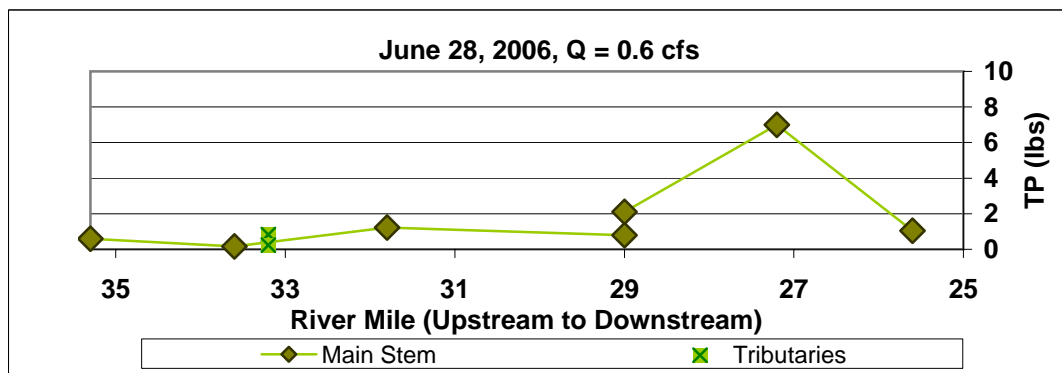
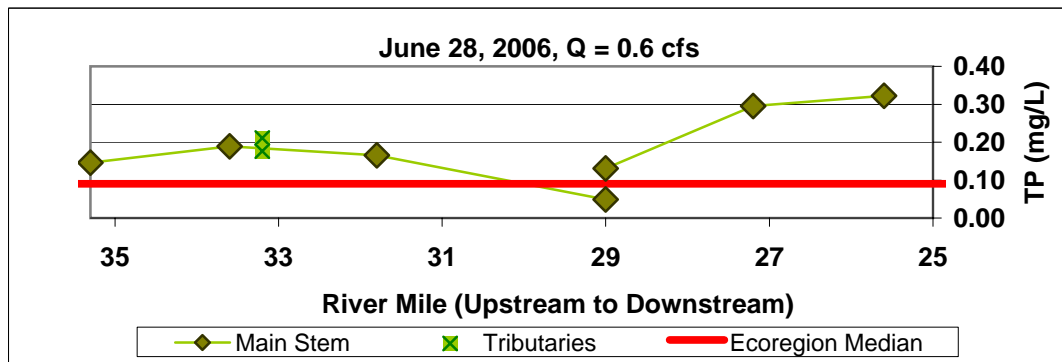
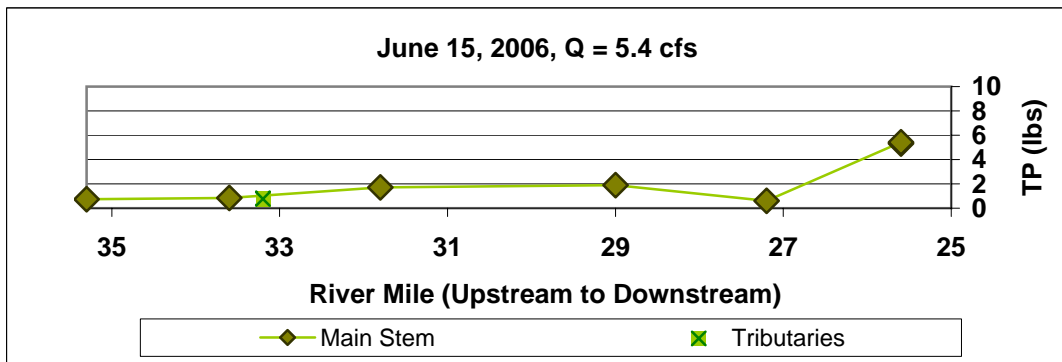
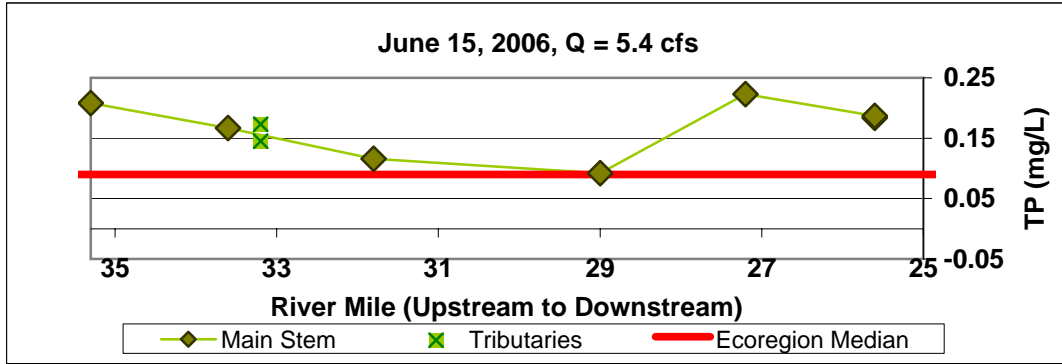
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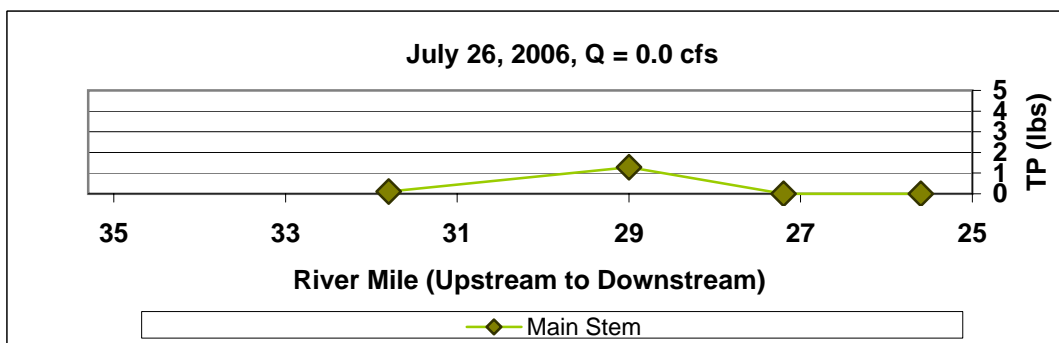
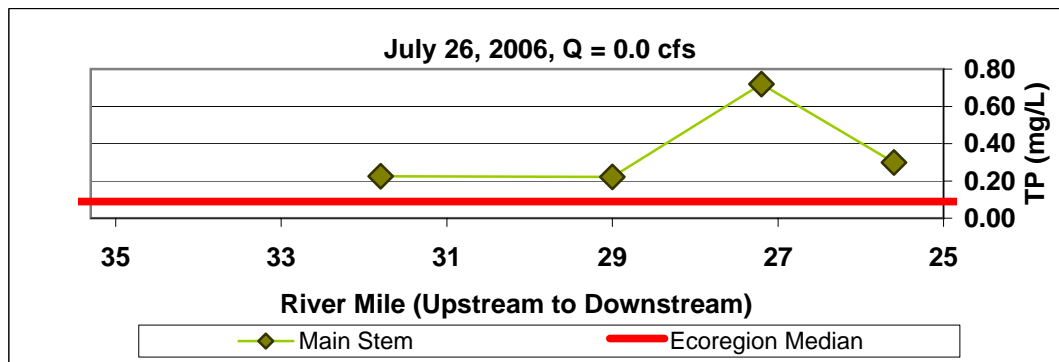
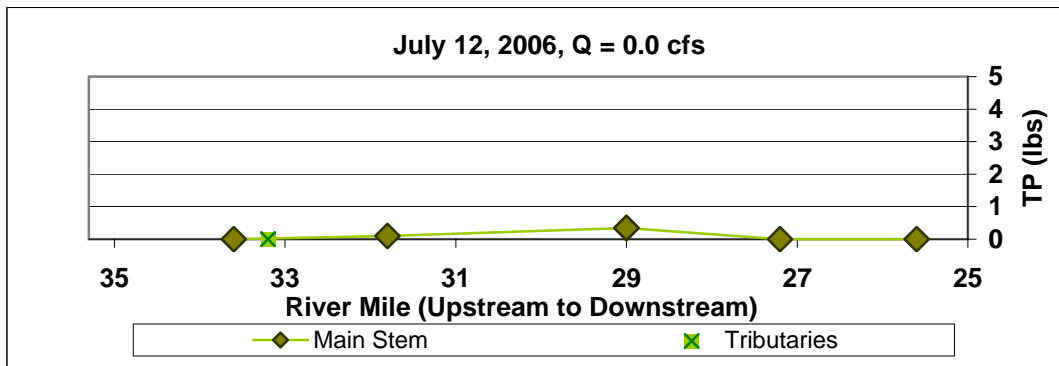
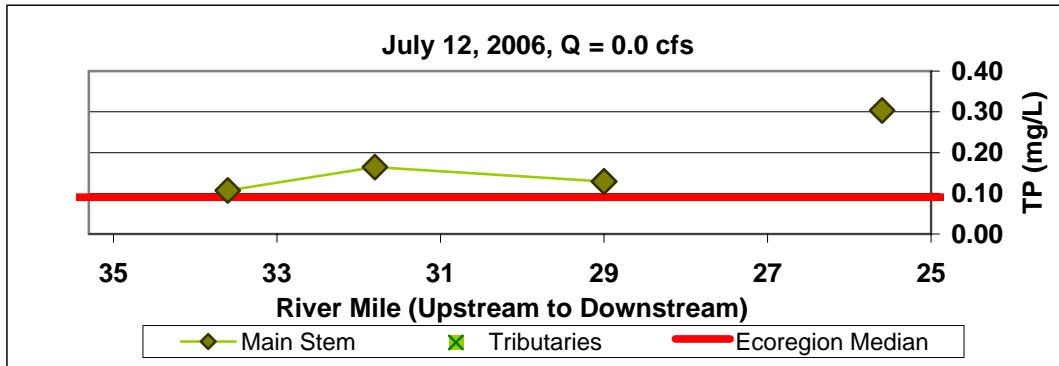
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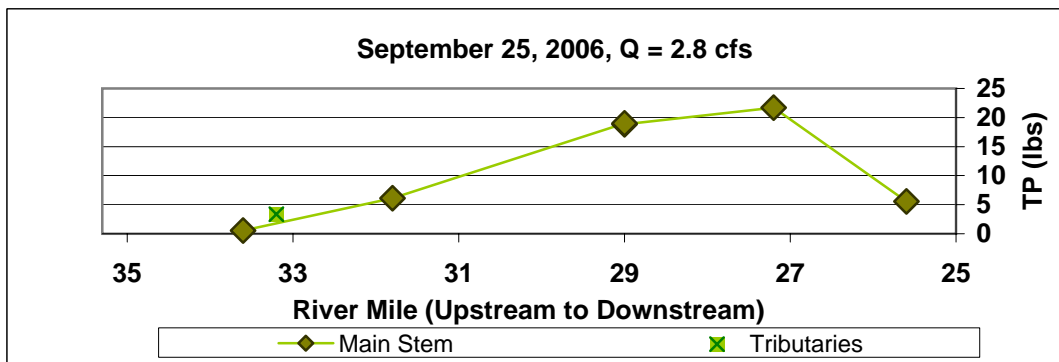
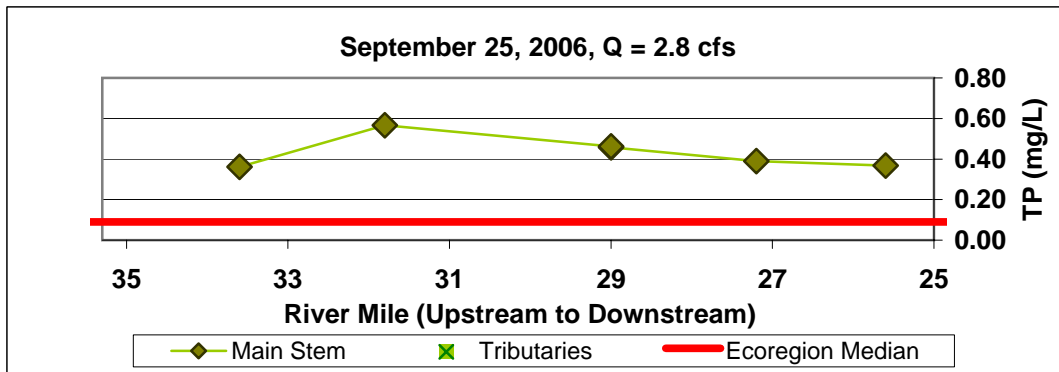
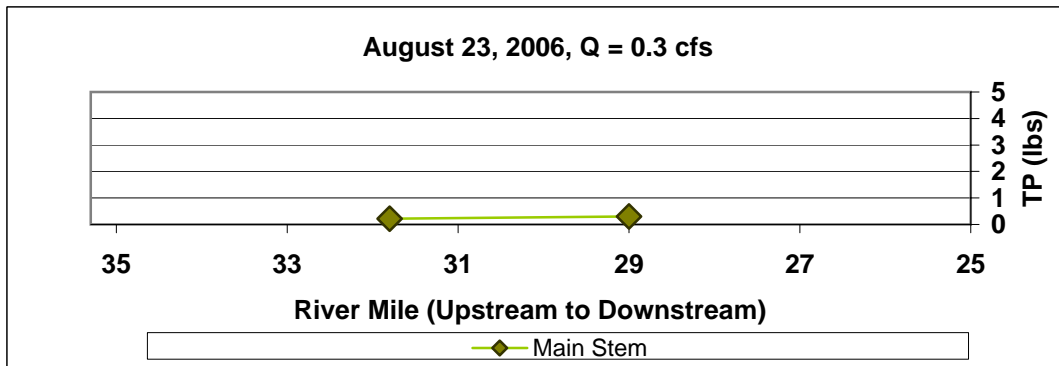
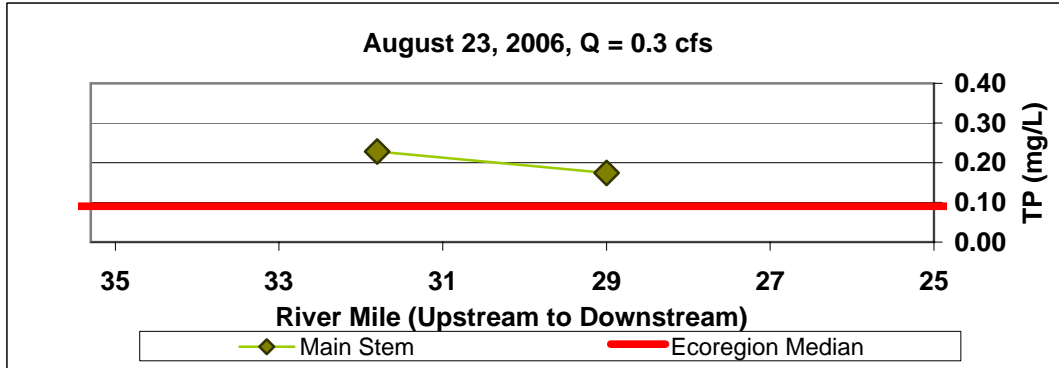
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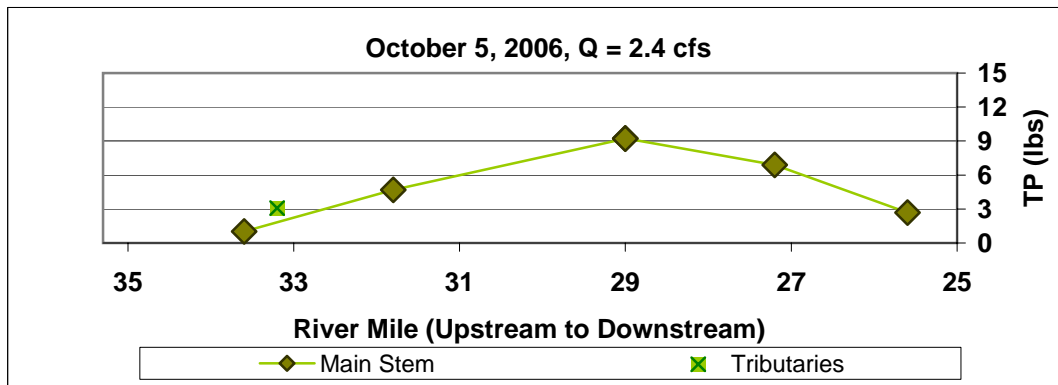
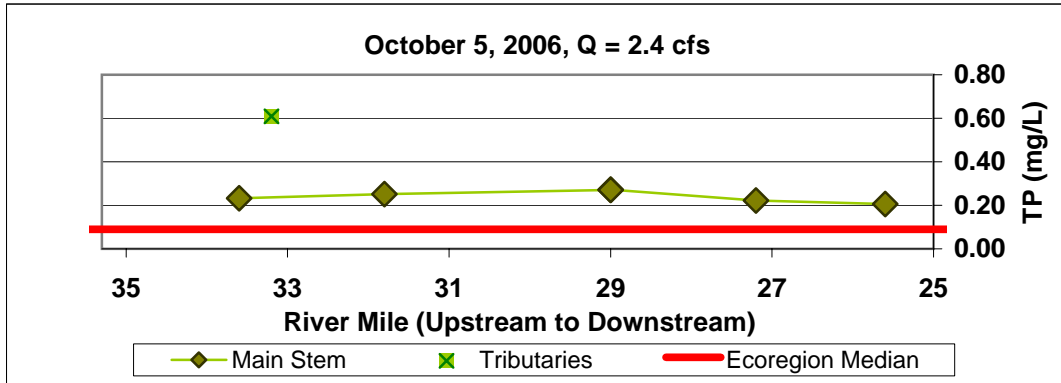
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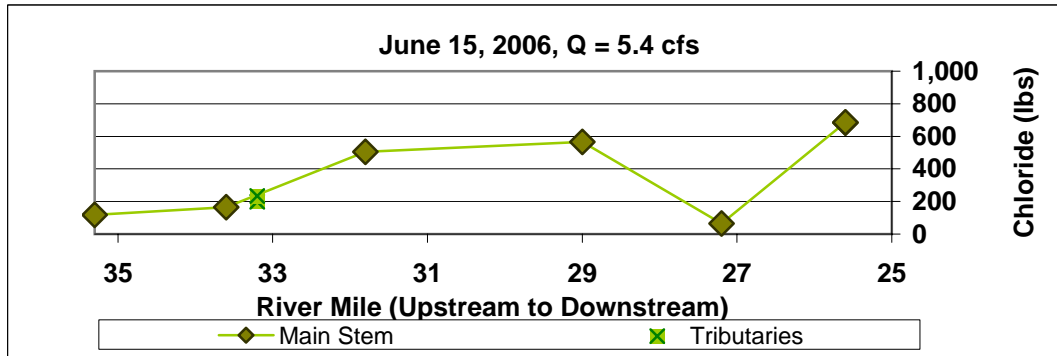
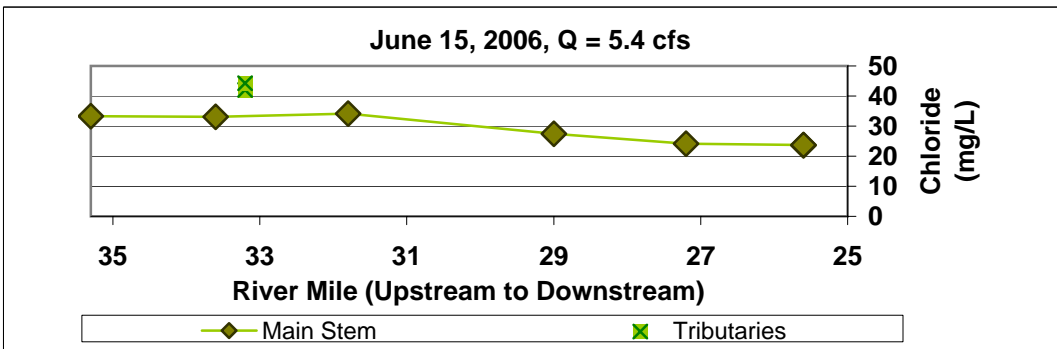
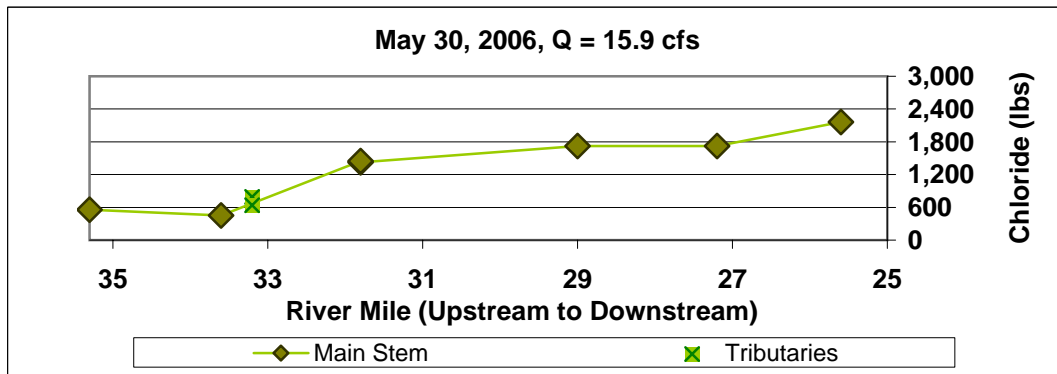
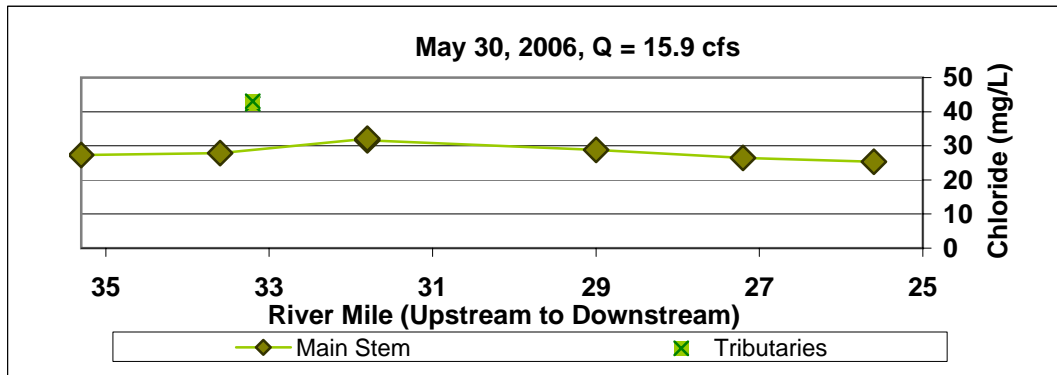
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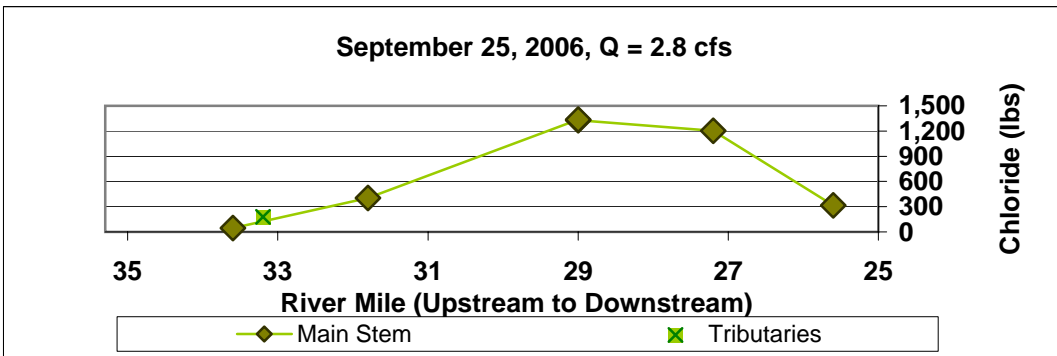
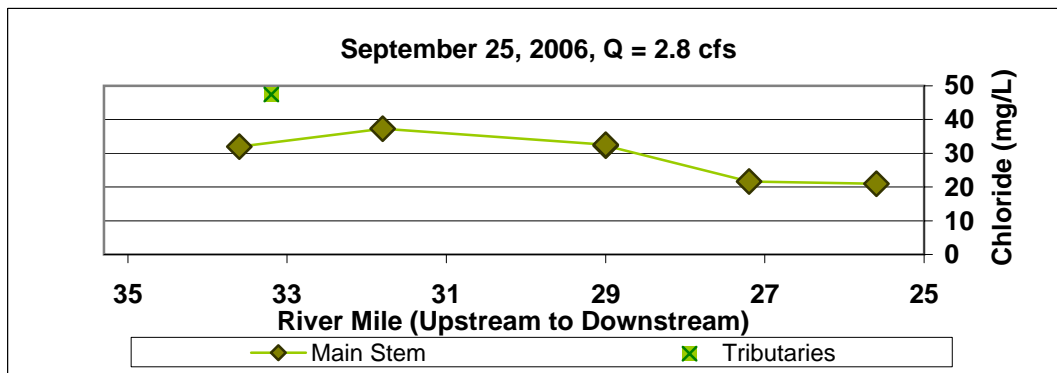
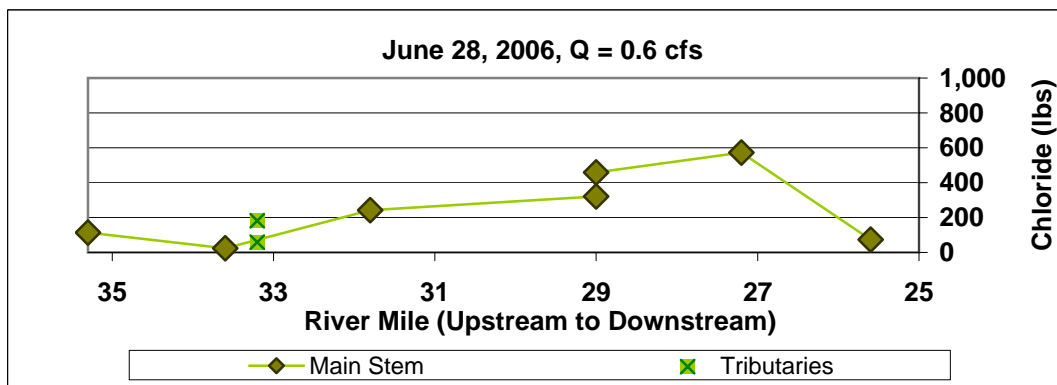
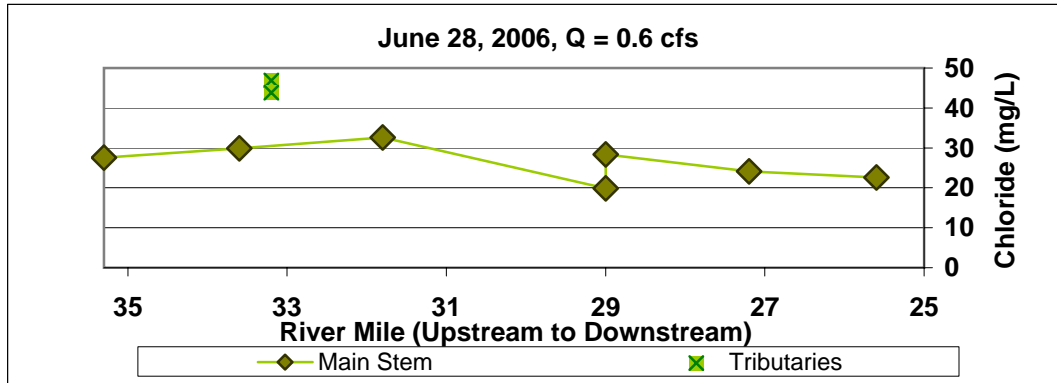
#### 2006 Clearwater River In-stream Loading and Water Quality Profiles



## Appendix B

### Clearwater River Watershed District Clearwater River Bacteria and DO TMDL

#### 2006 Clearwater River In-stream Loading and Water Quality Profiles

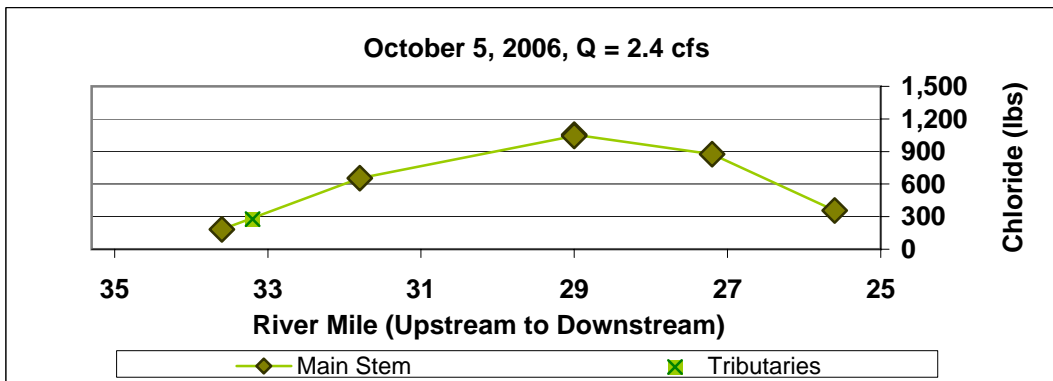
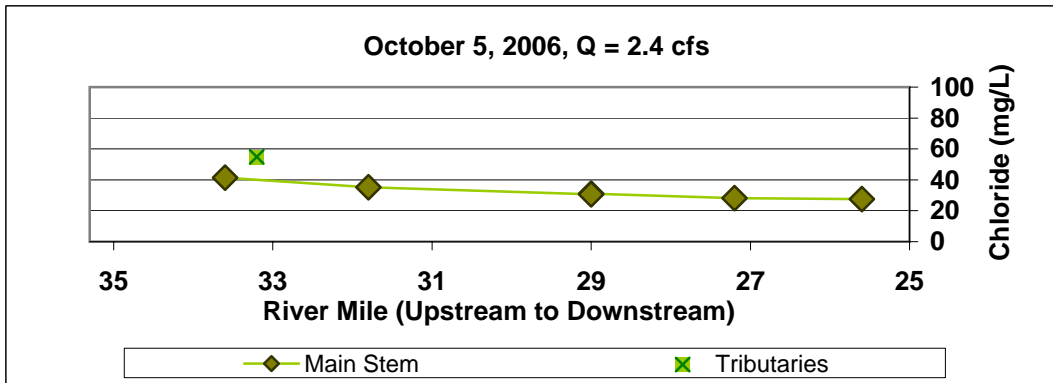




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### Clearwater River Watershed District Clearwater River Bacteria and DO TMDL

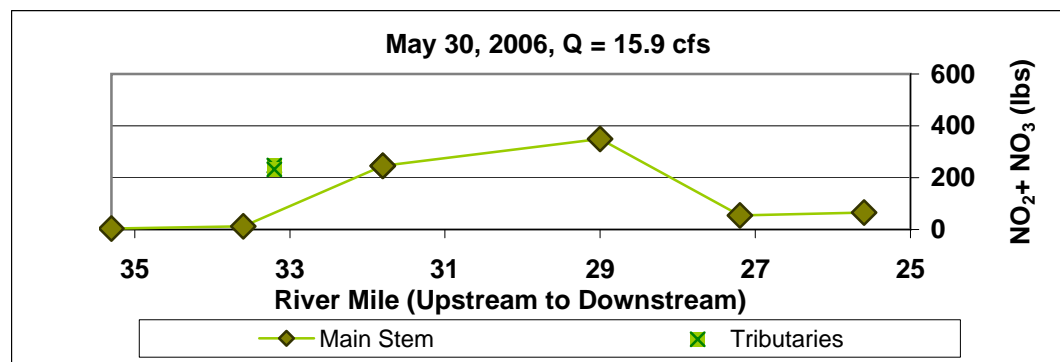
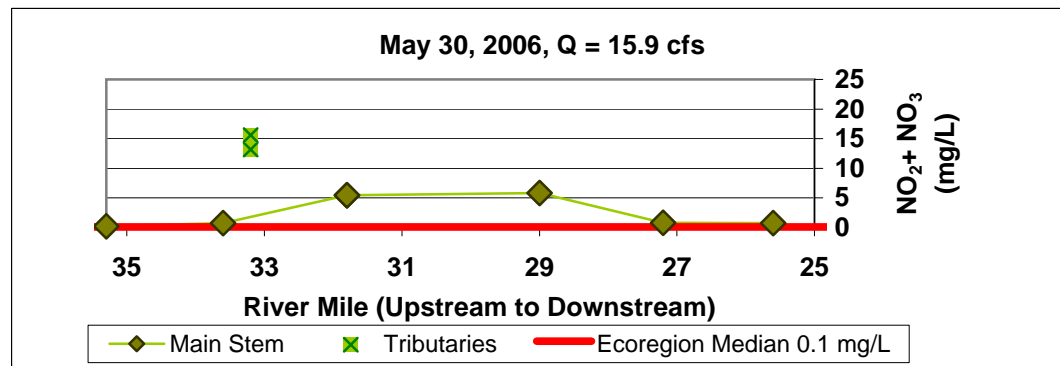
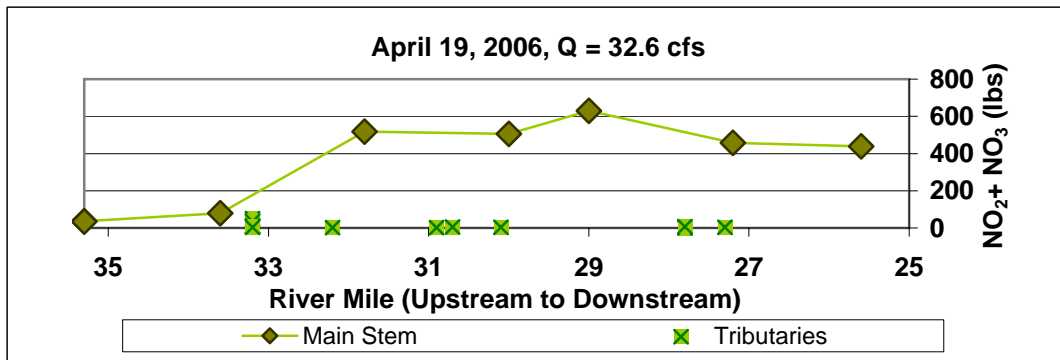
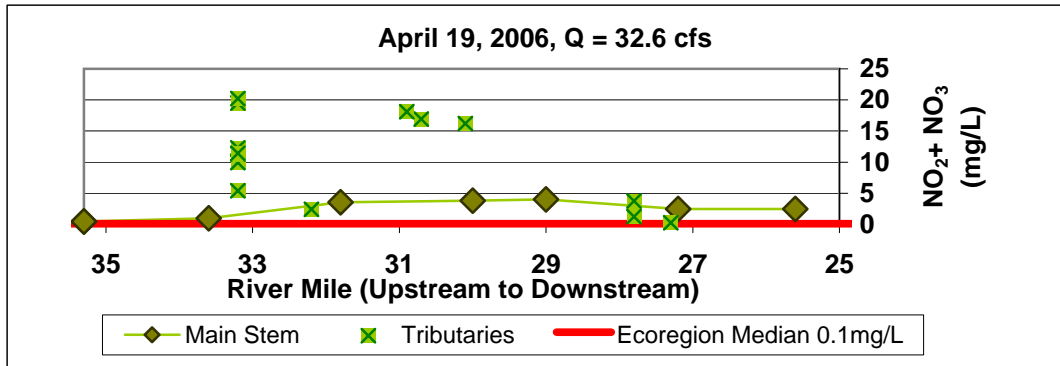
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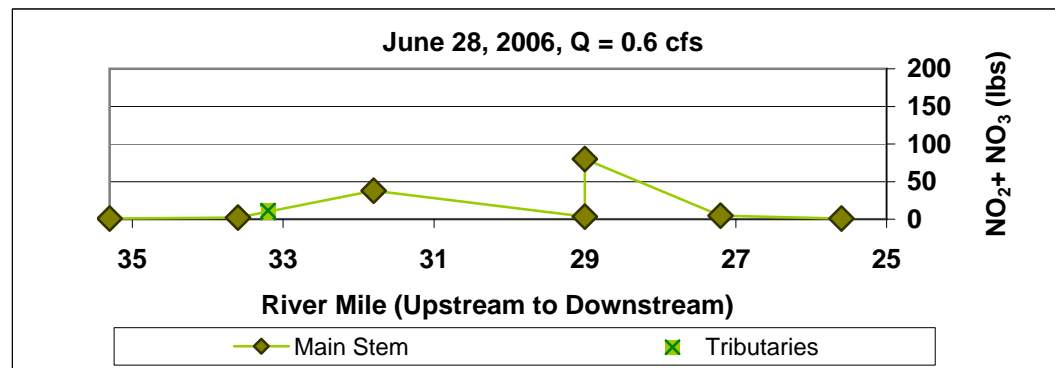
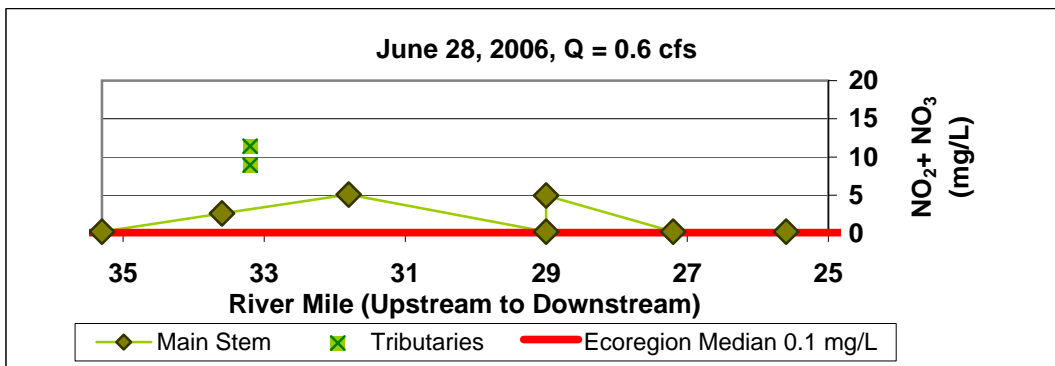
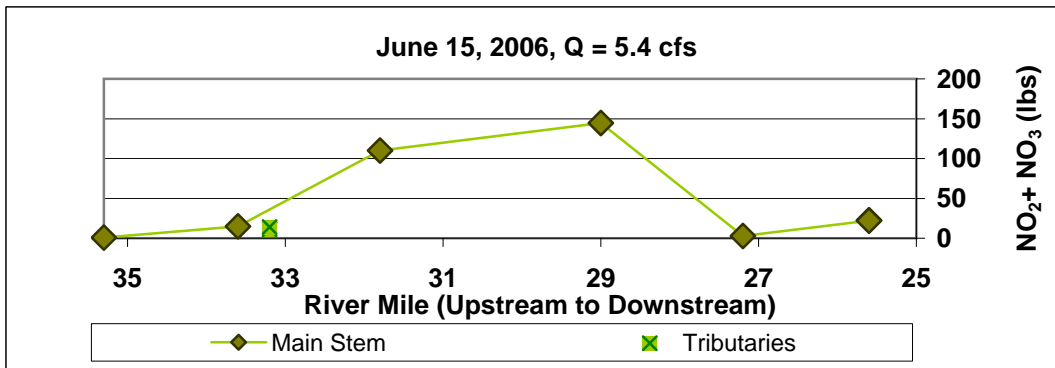
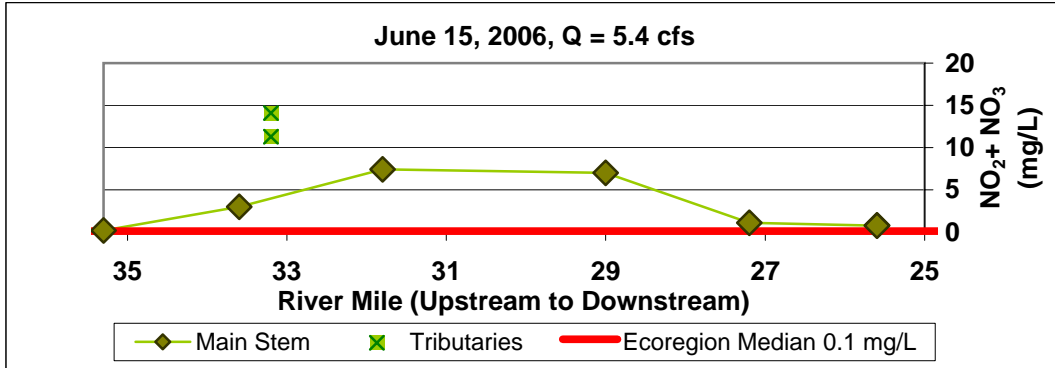
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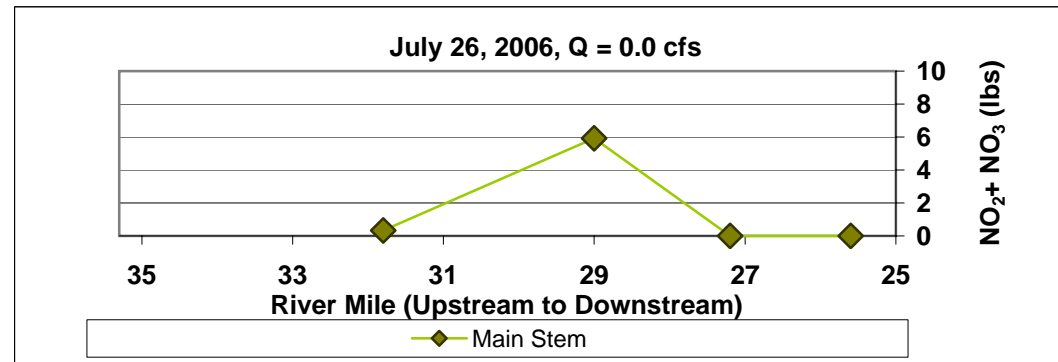
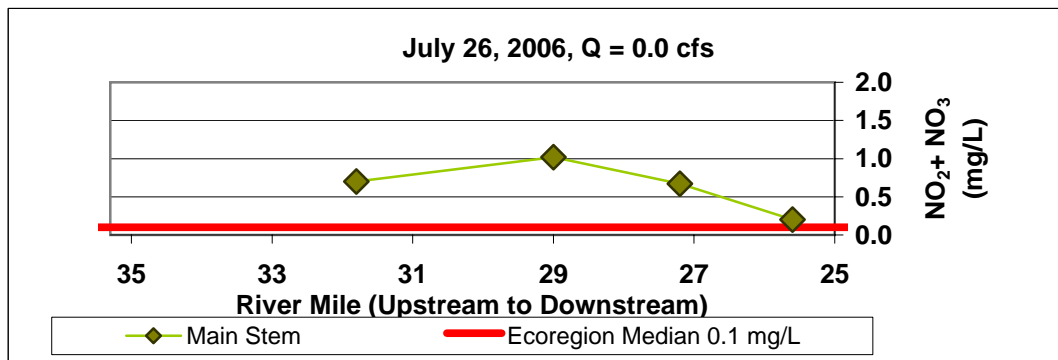
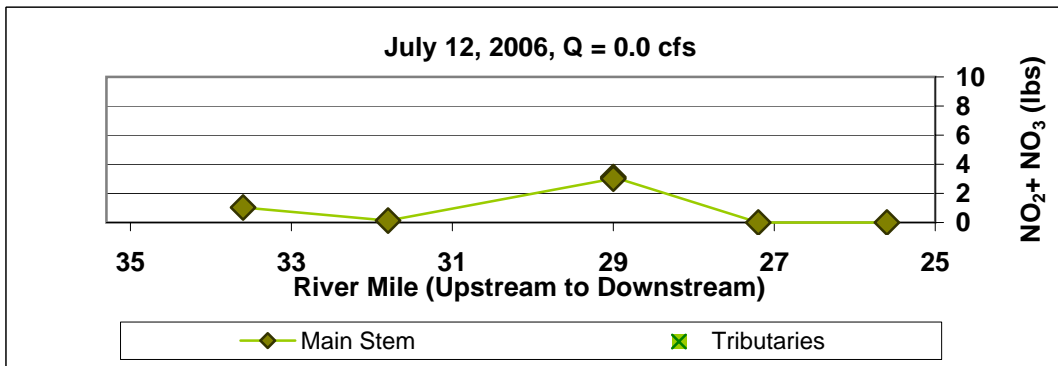
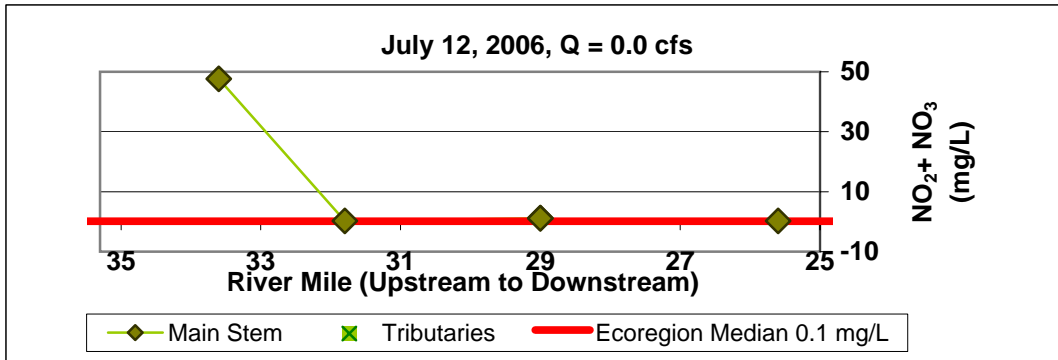
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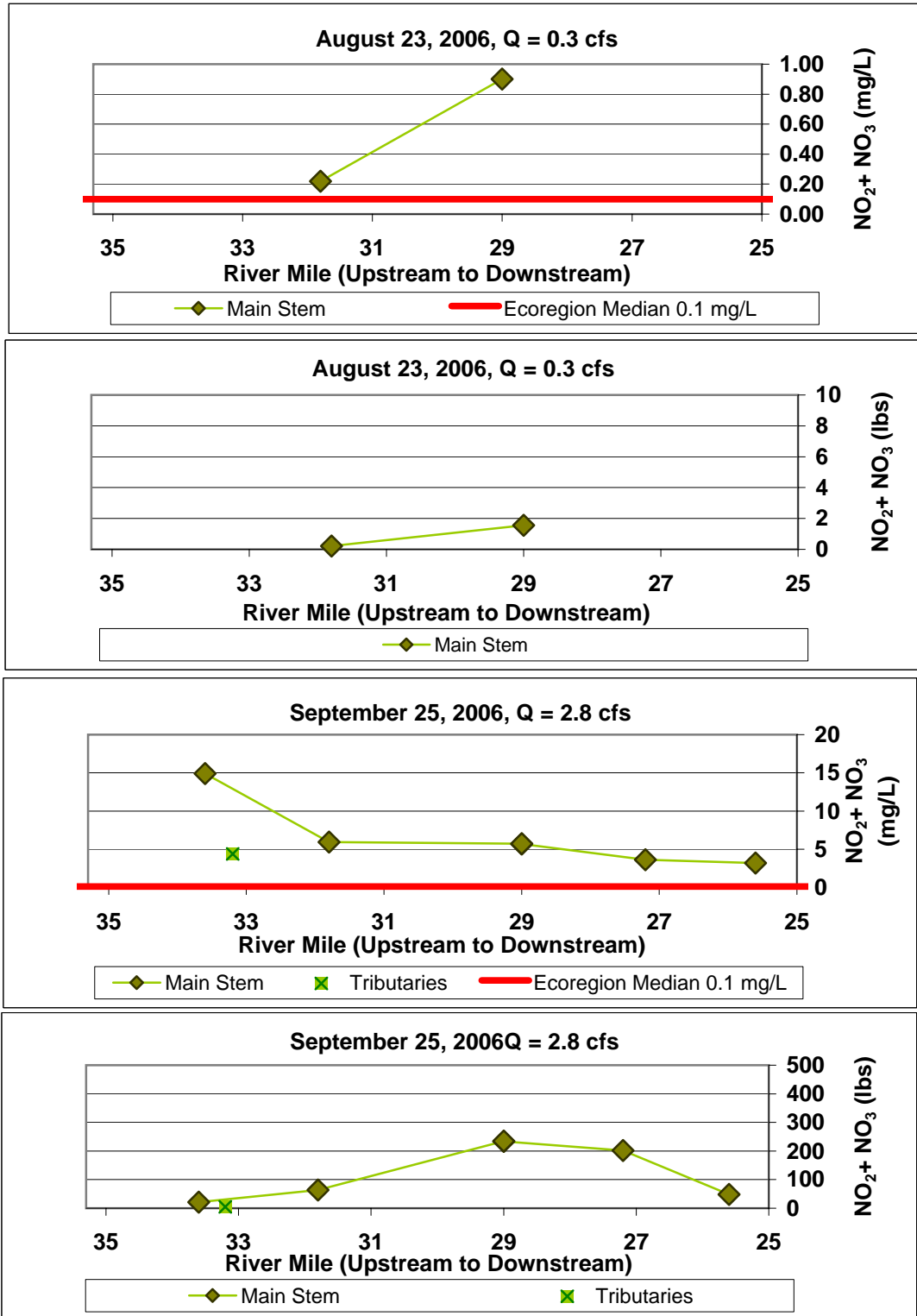
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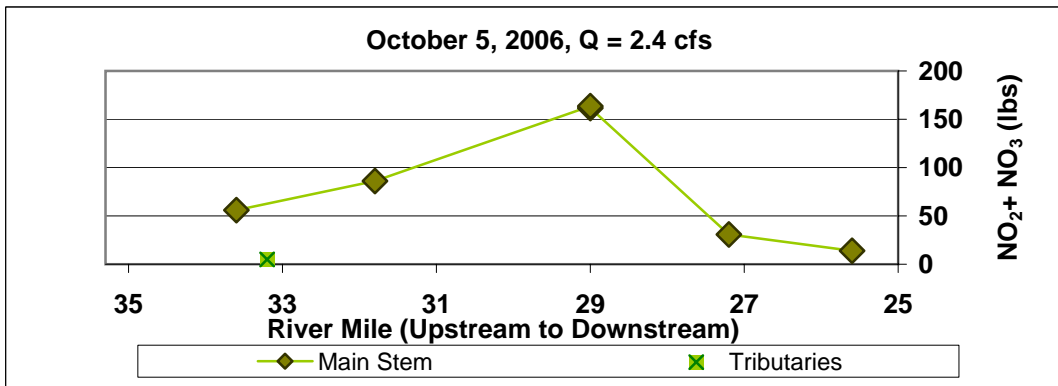
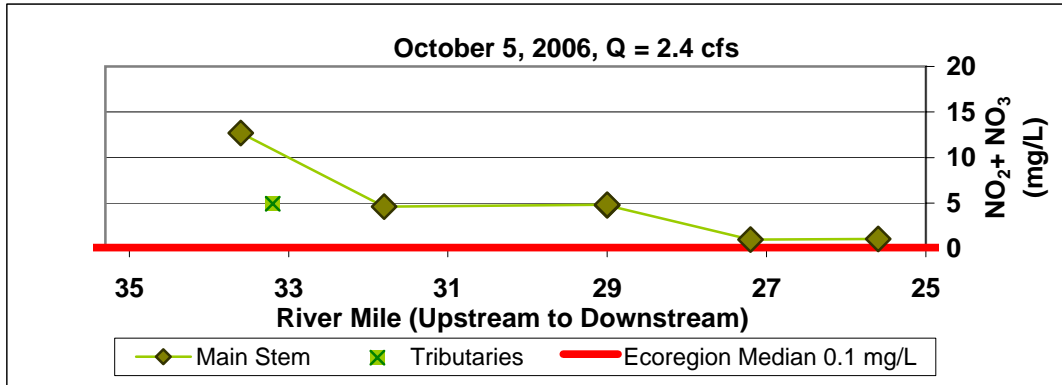
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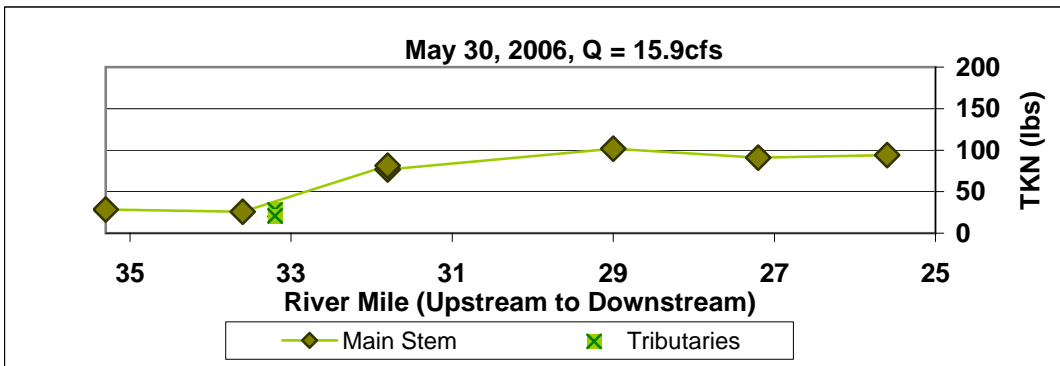
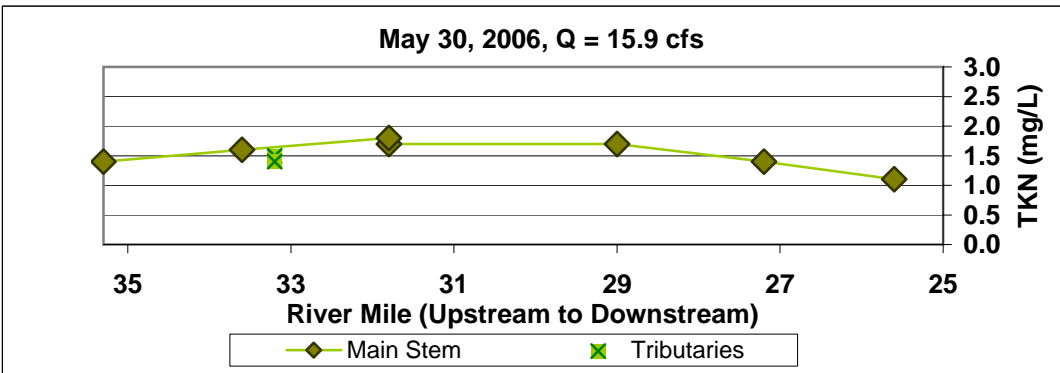
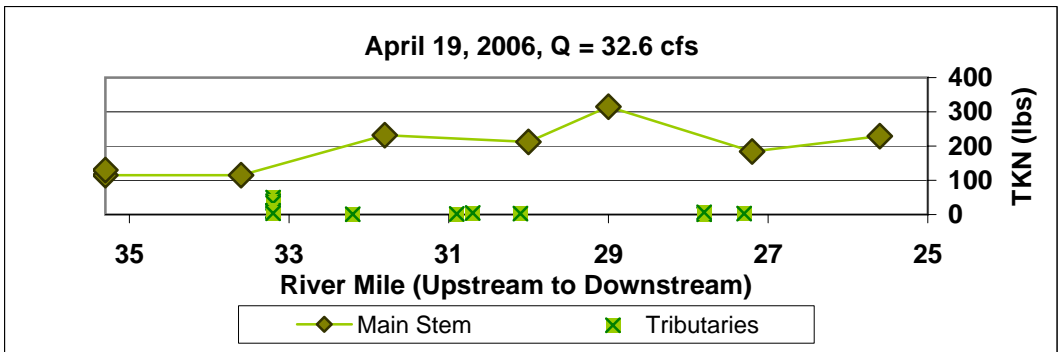
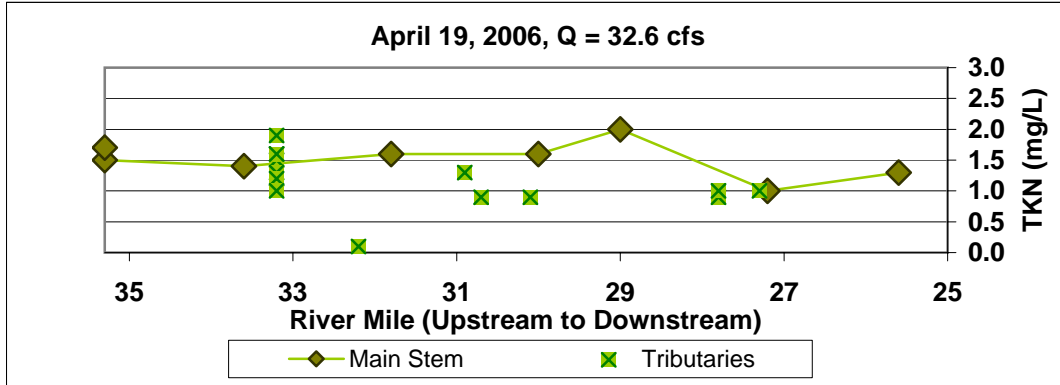
#### 2006 Clearwater River In-stream Loading and Water Quality Profiles



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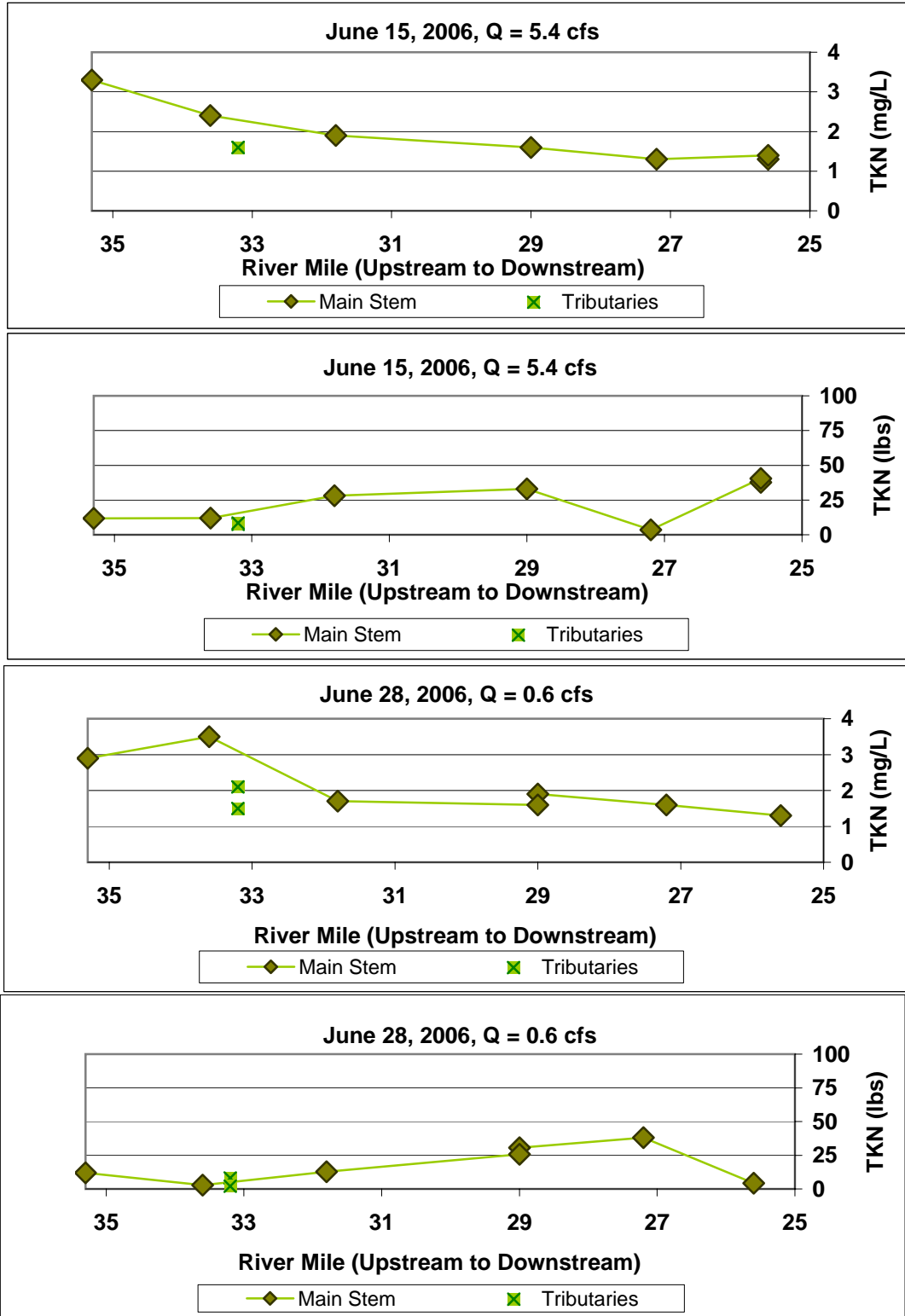
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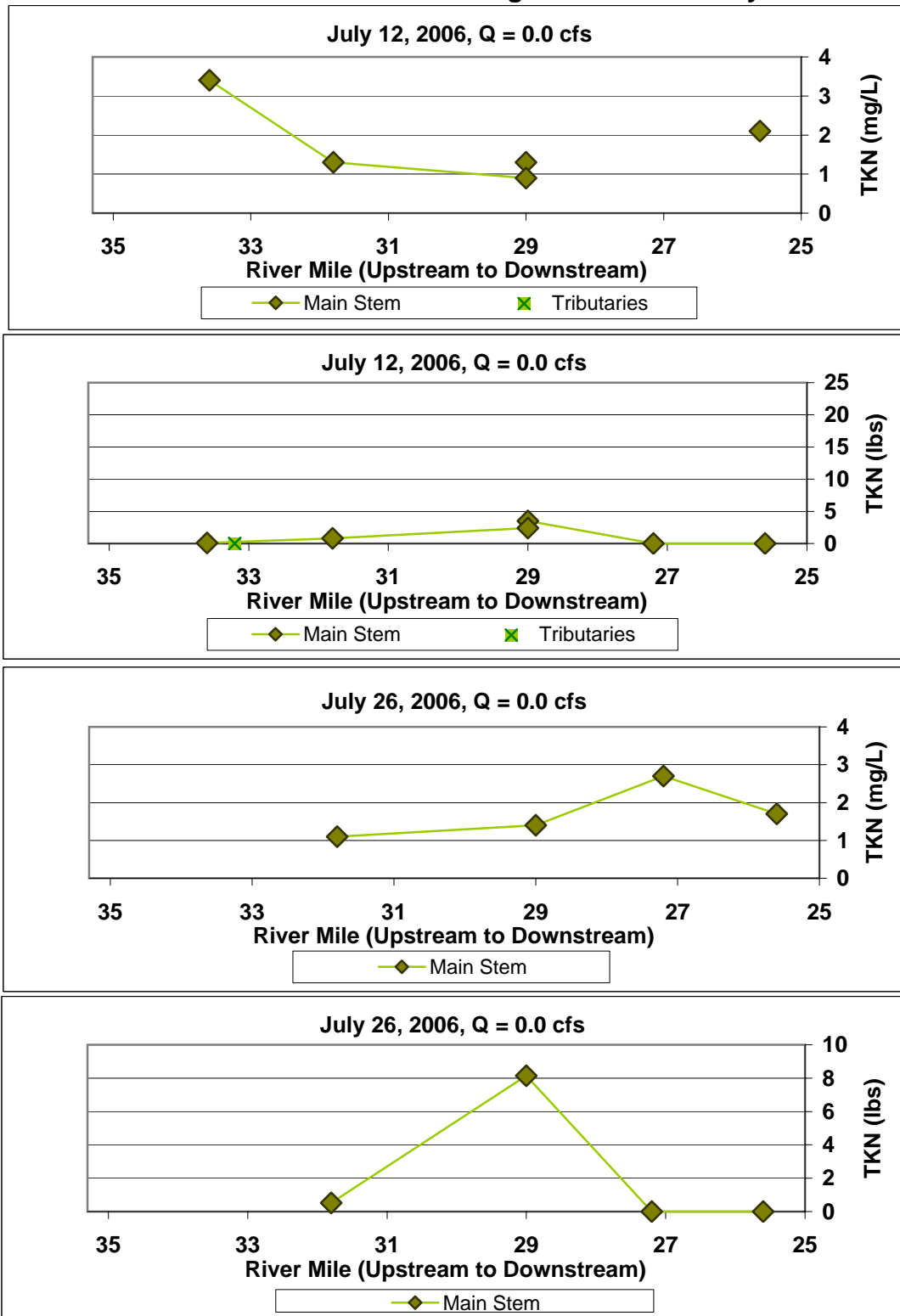




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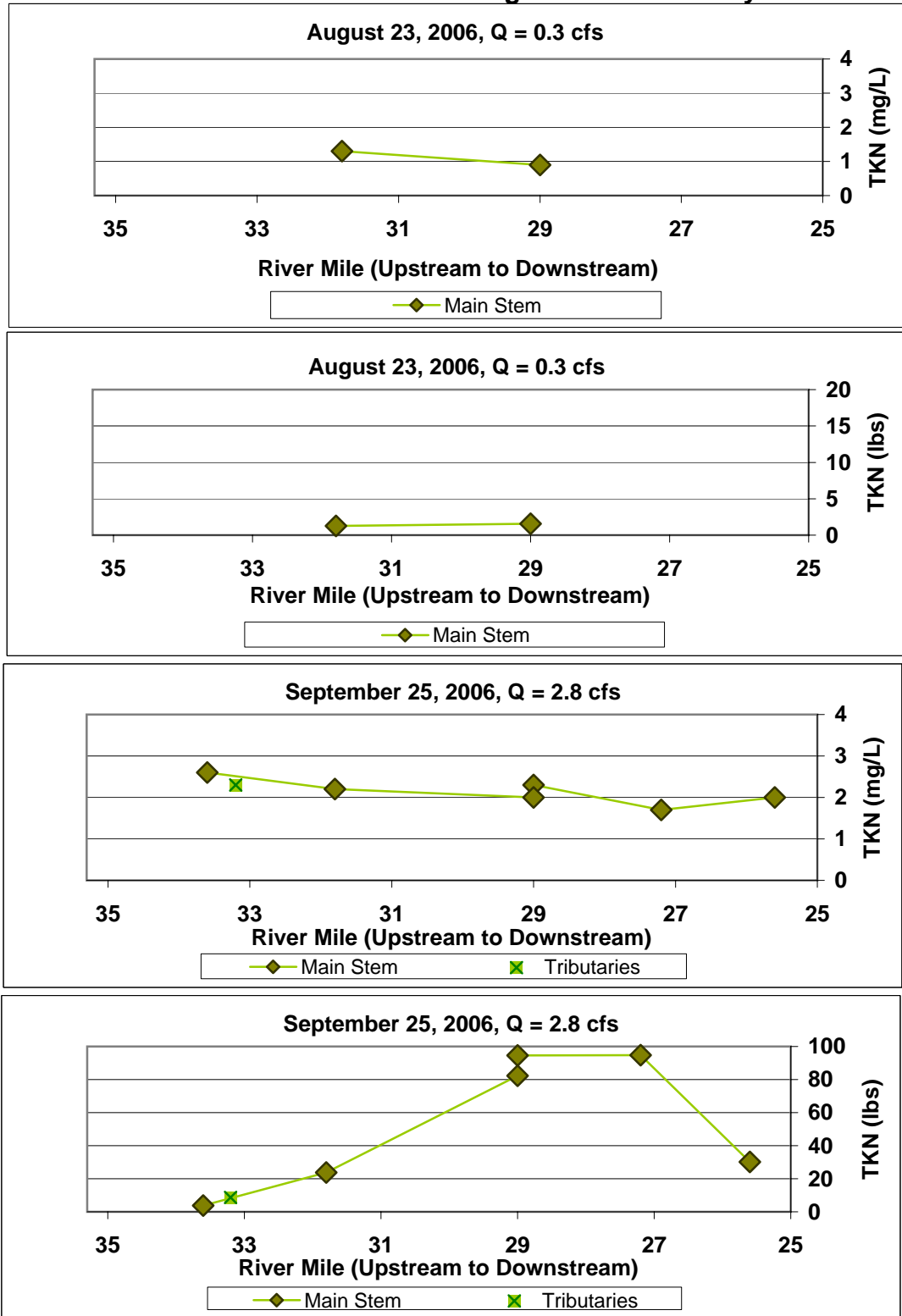
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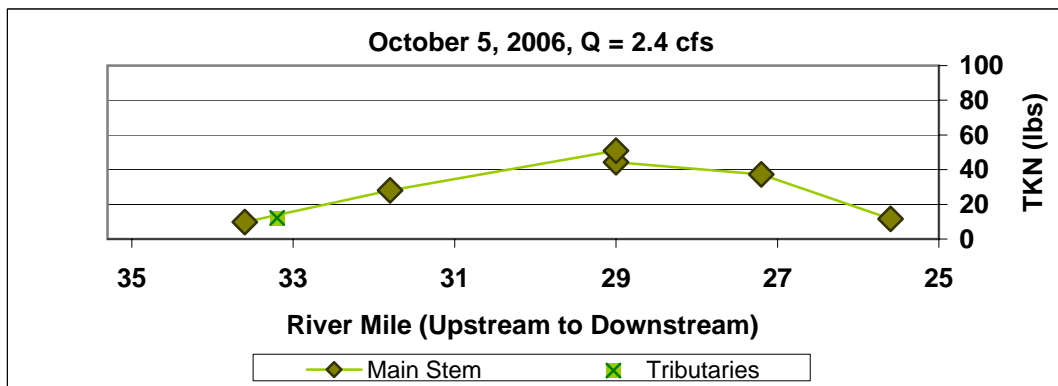
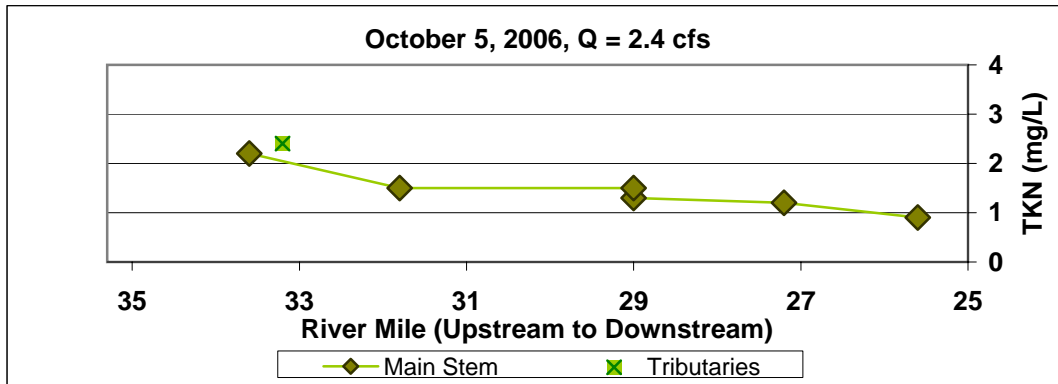
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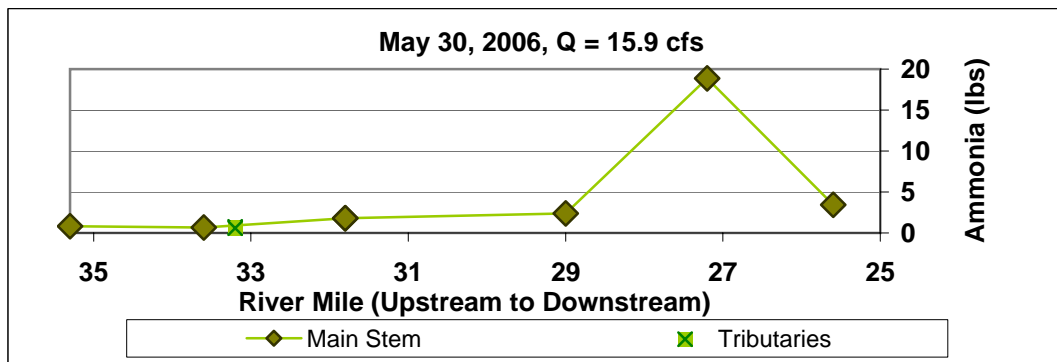
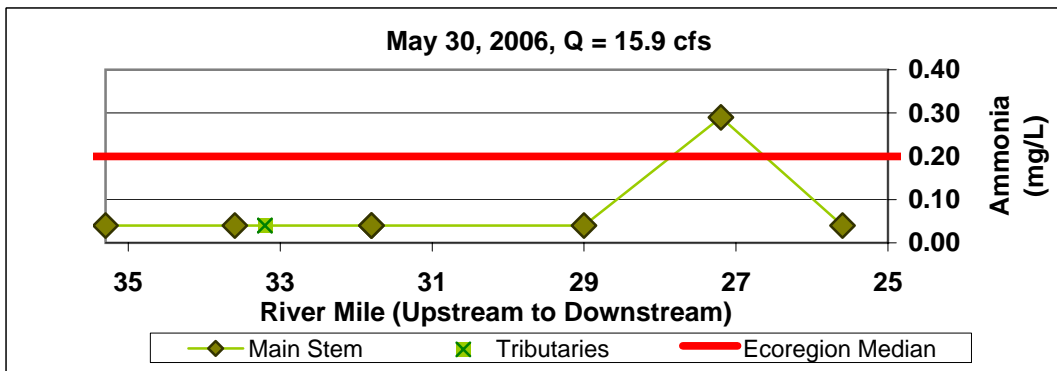
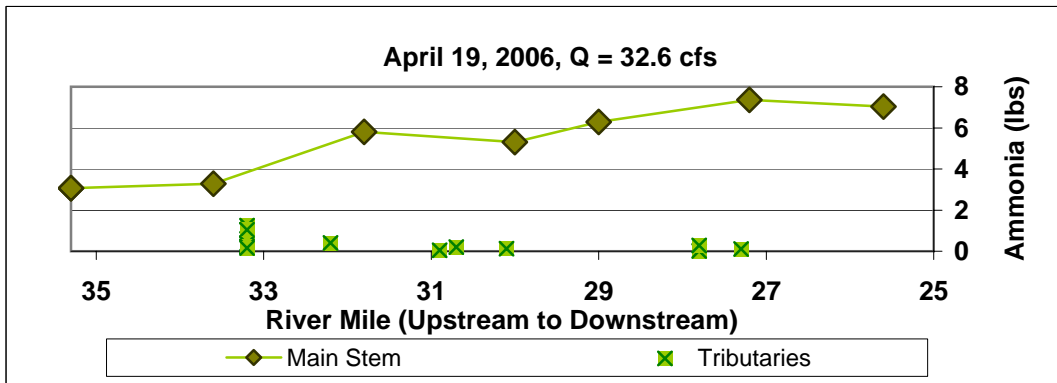
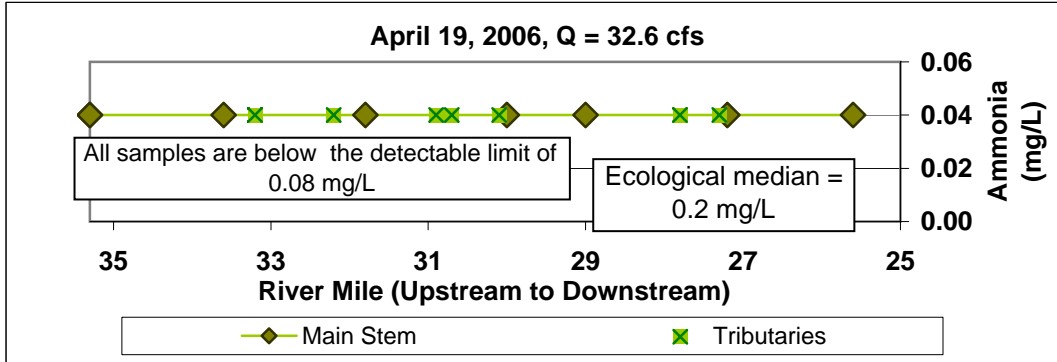
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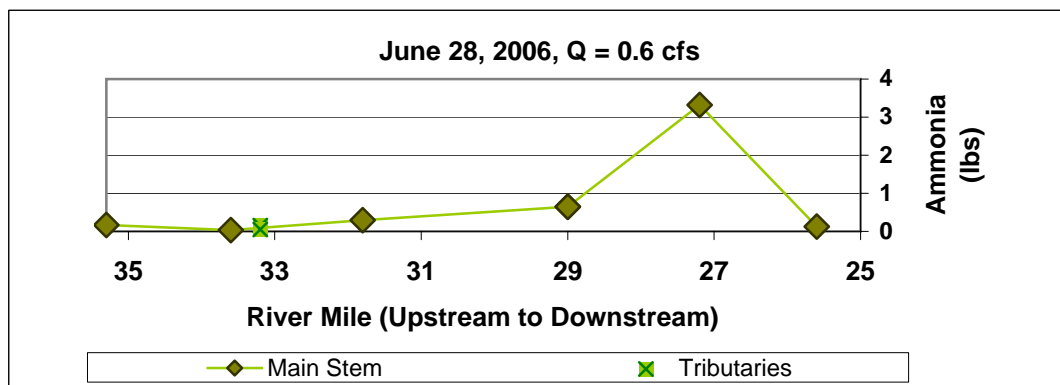
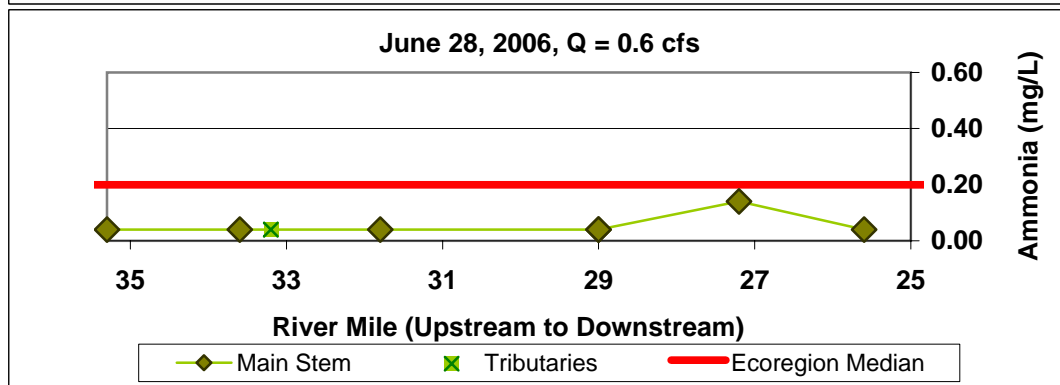
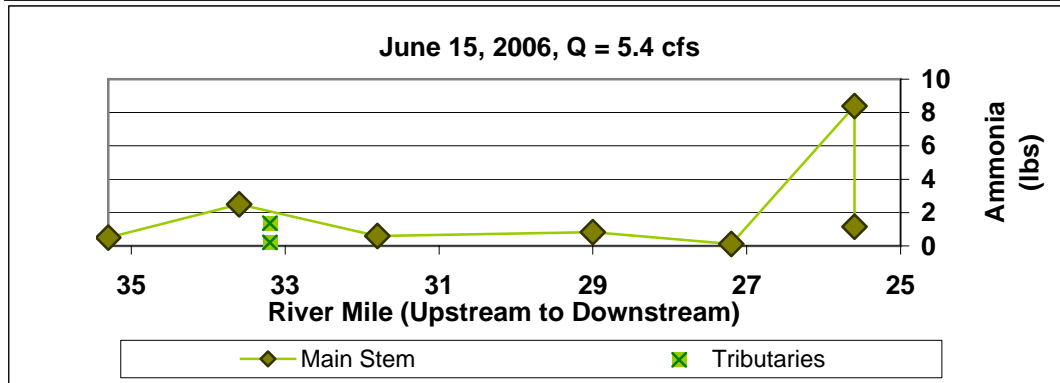
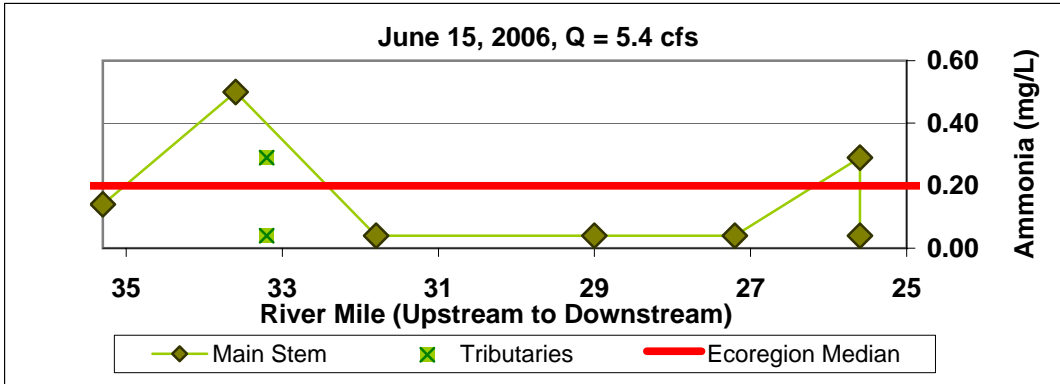
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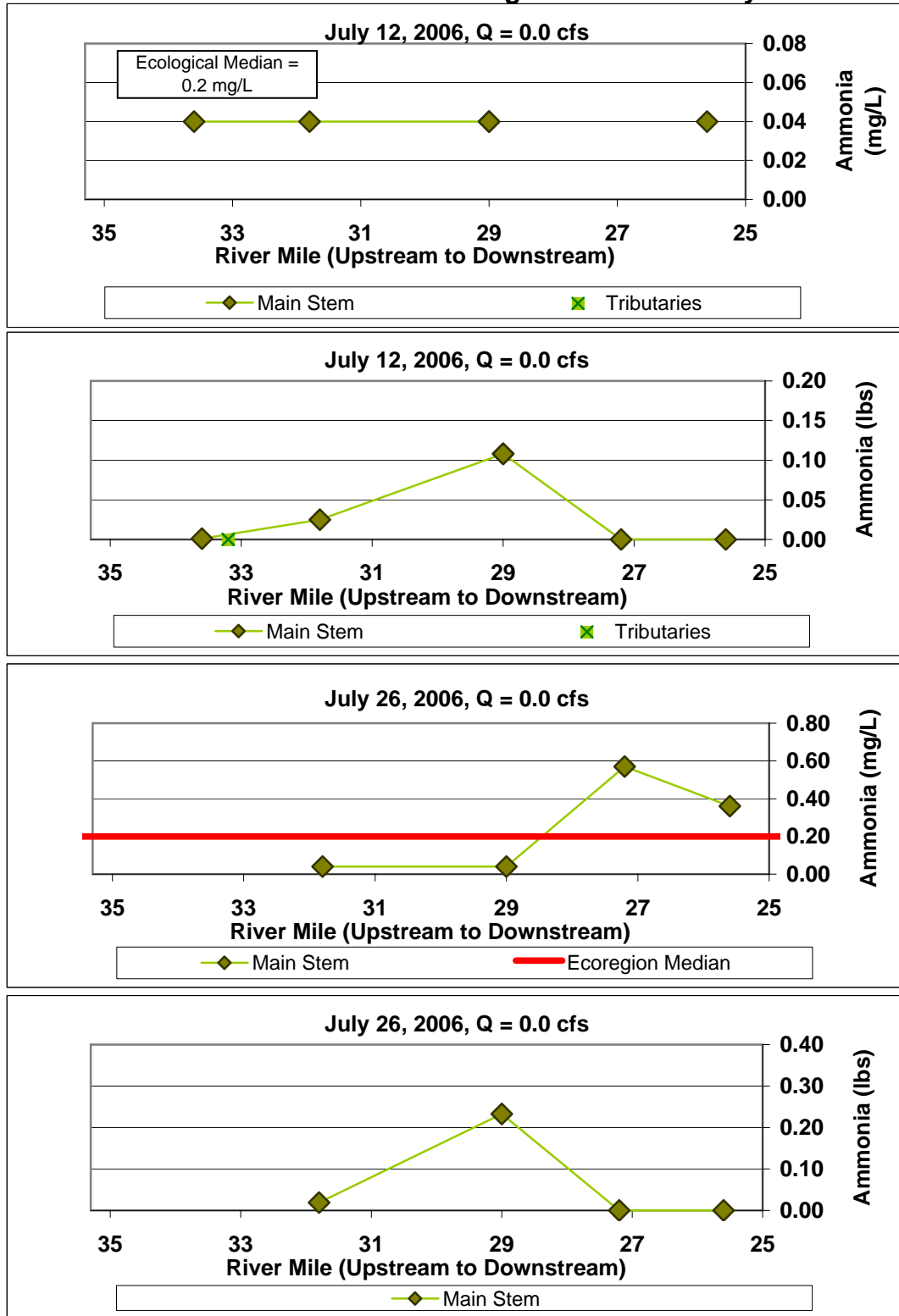
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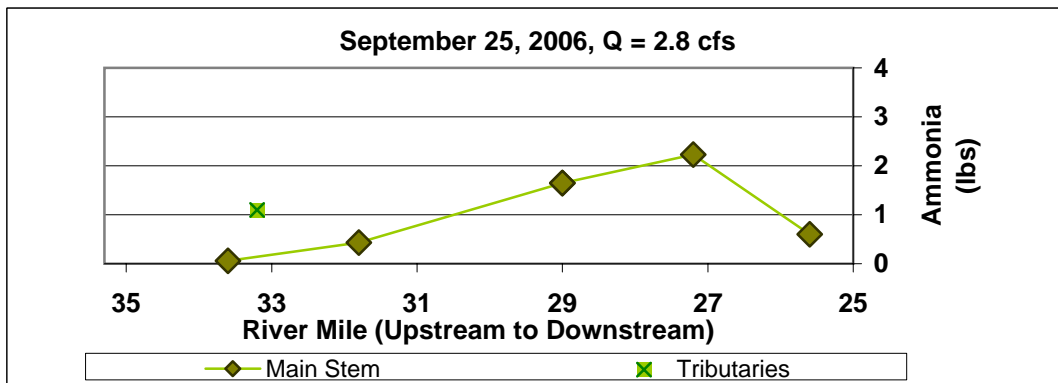
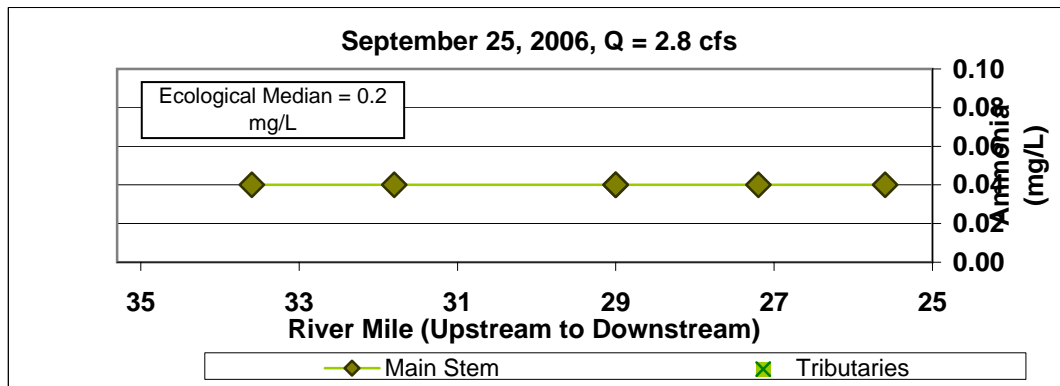
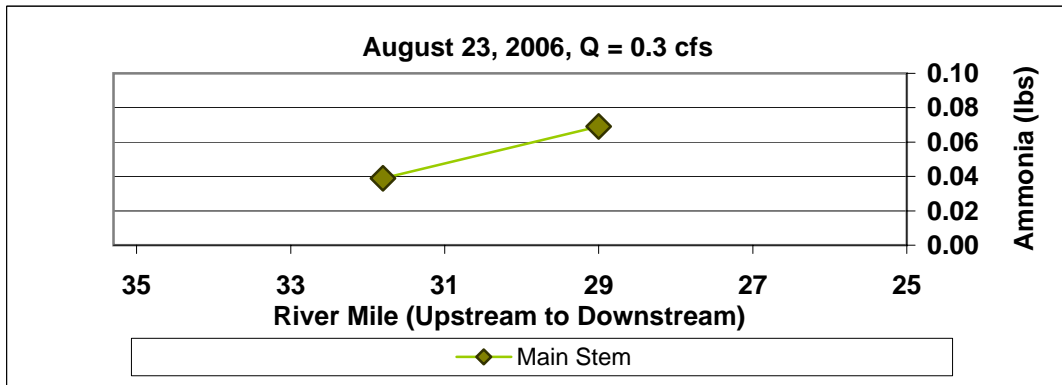
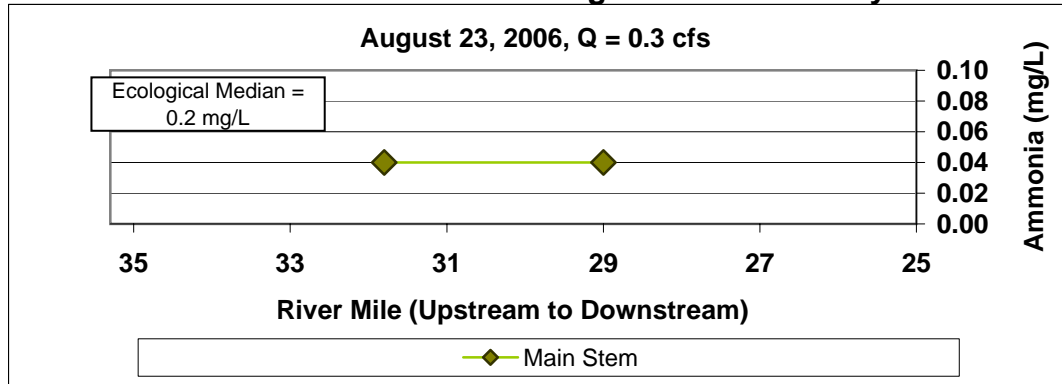
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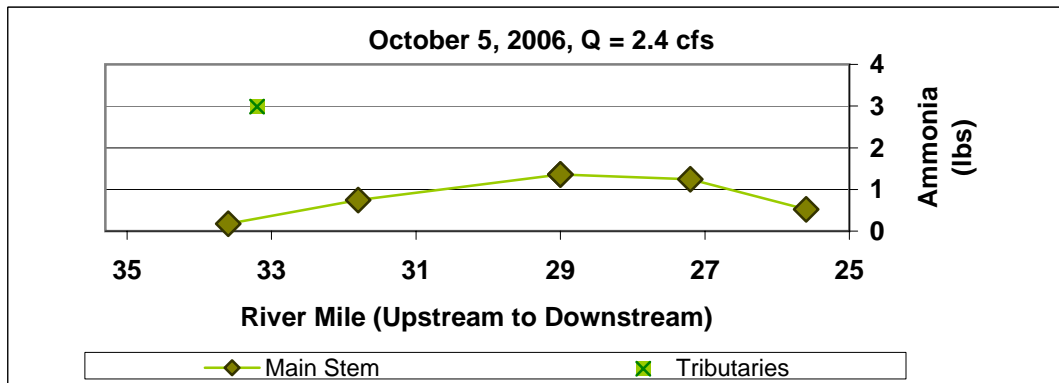
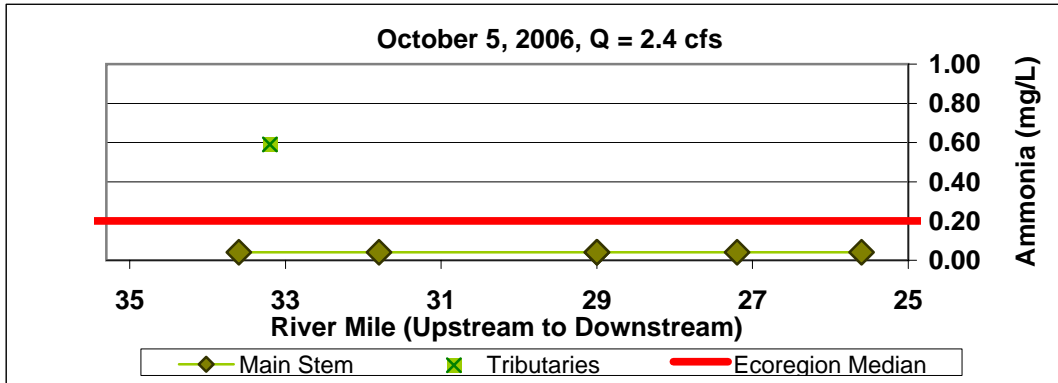
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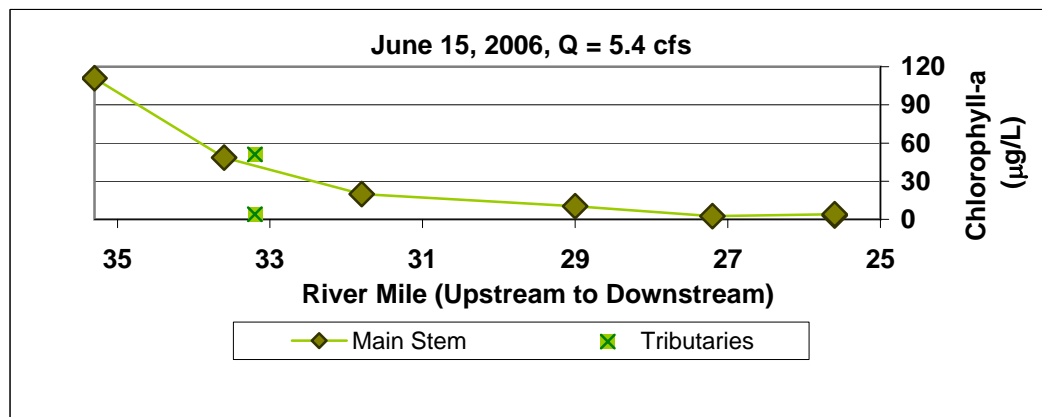
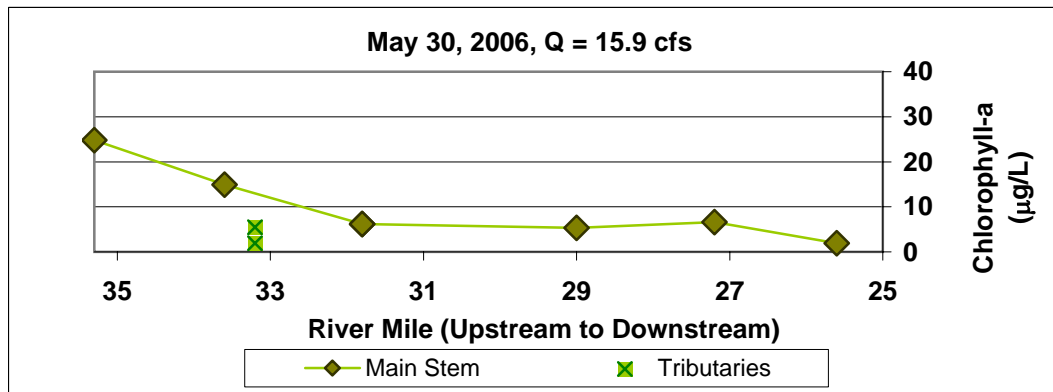
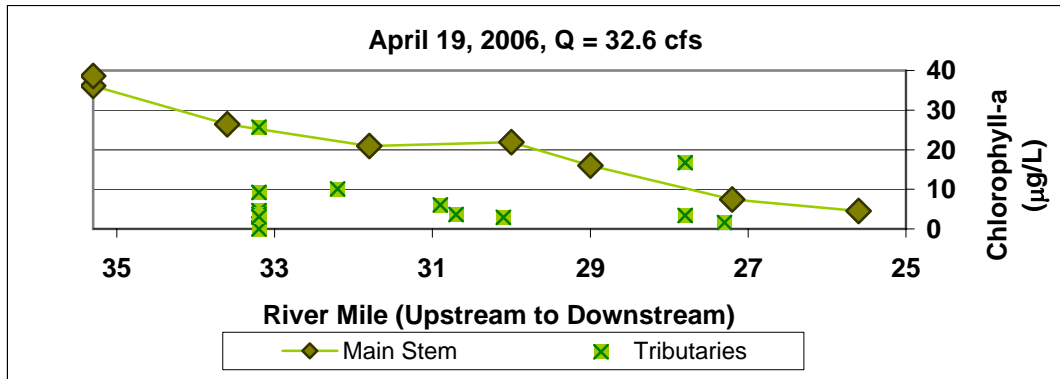




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### Clearwater River Watershed District Clearwater River Bacteria and DO TMDL

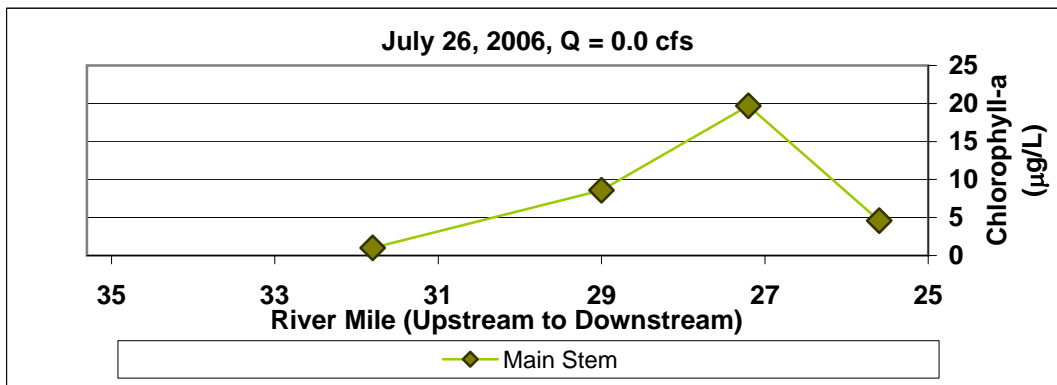
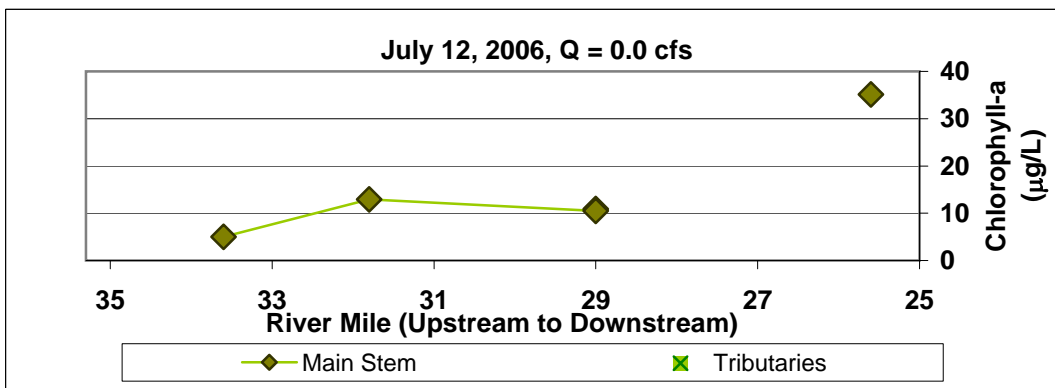
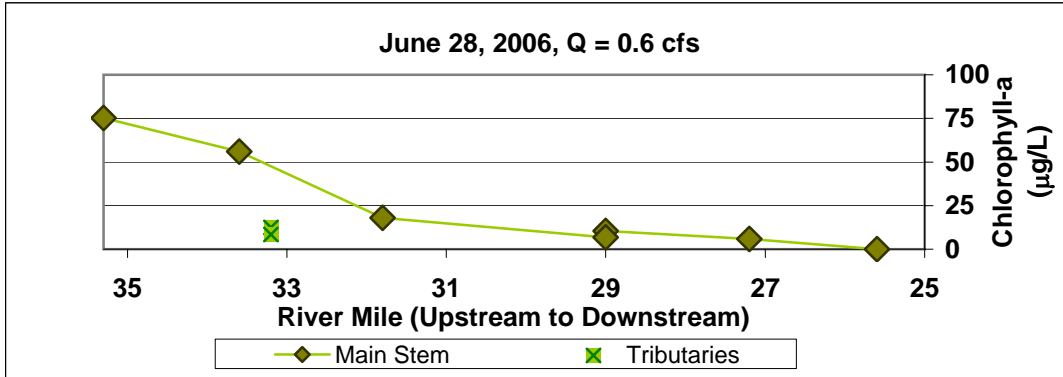
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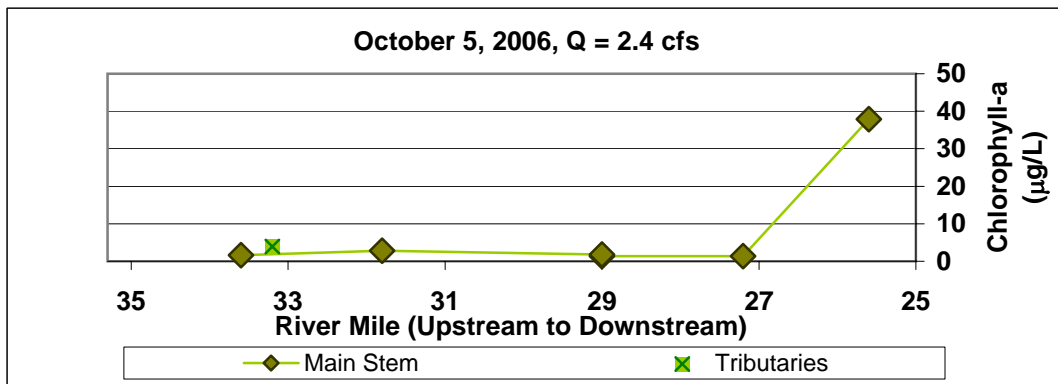
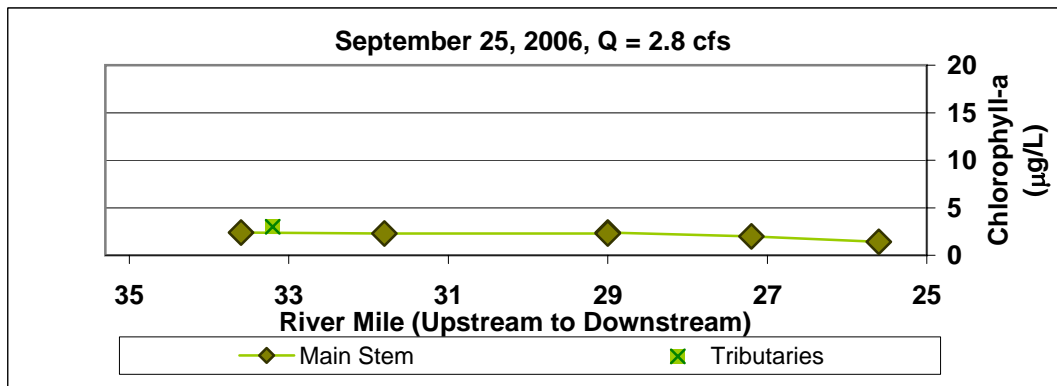
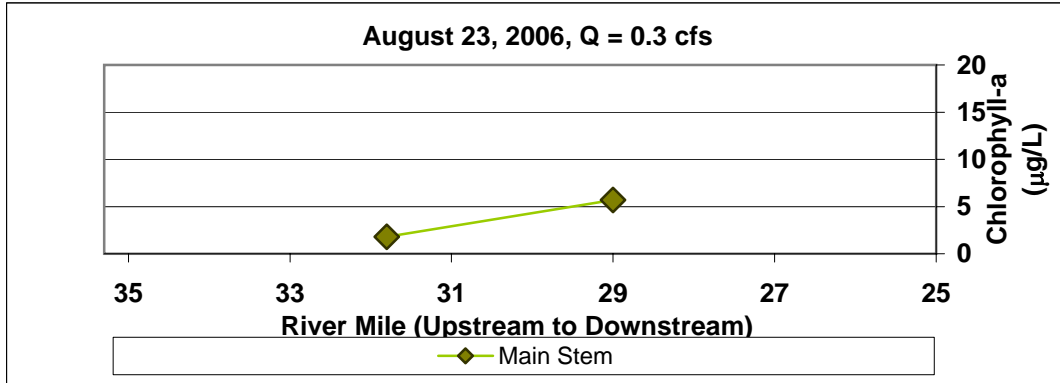
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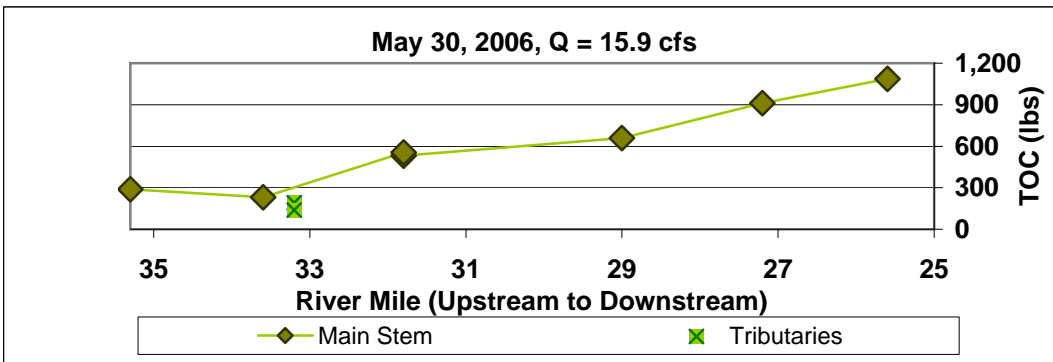
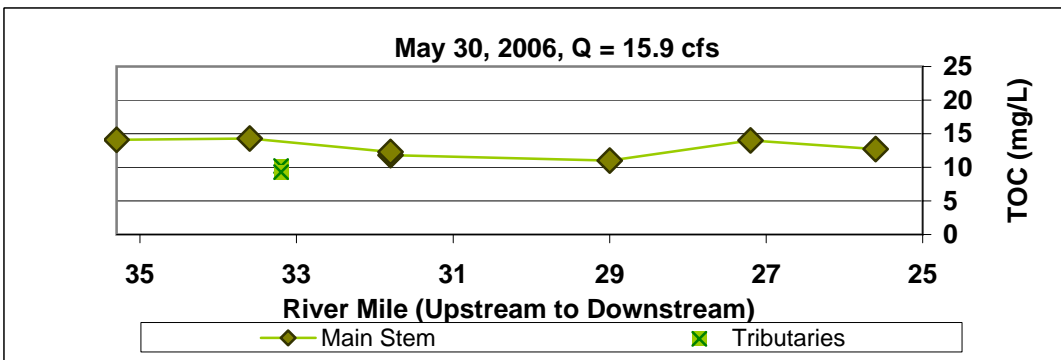
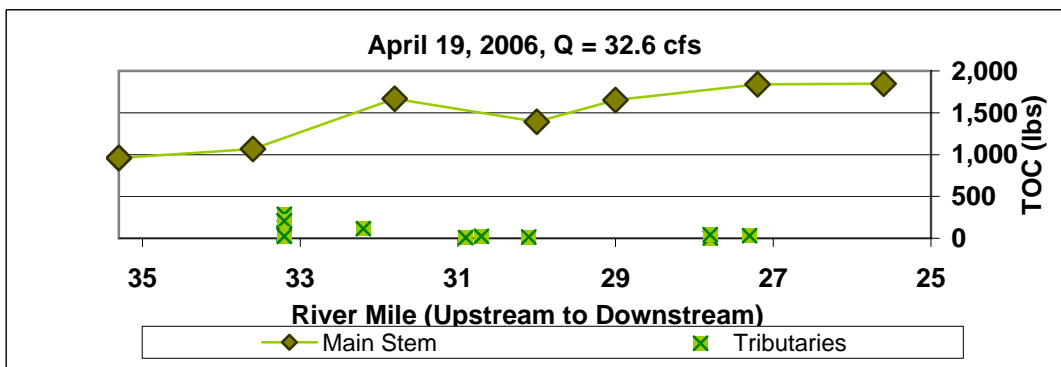
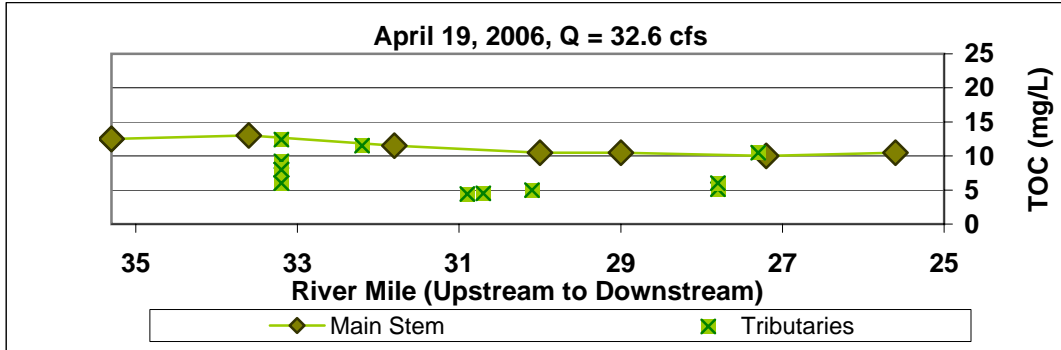
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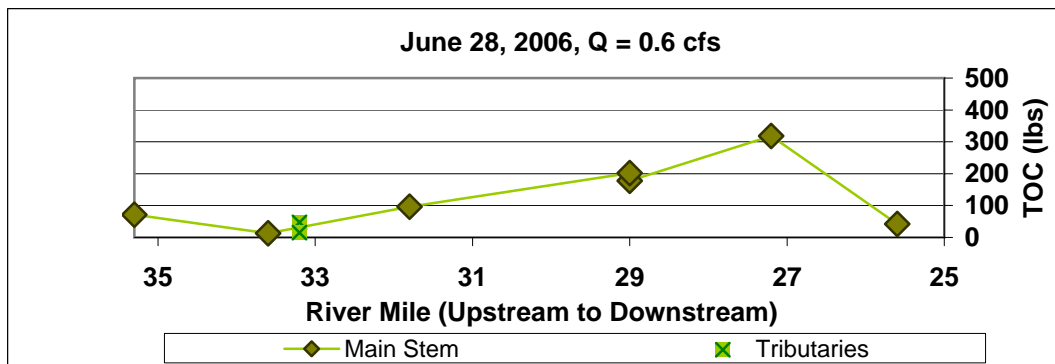
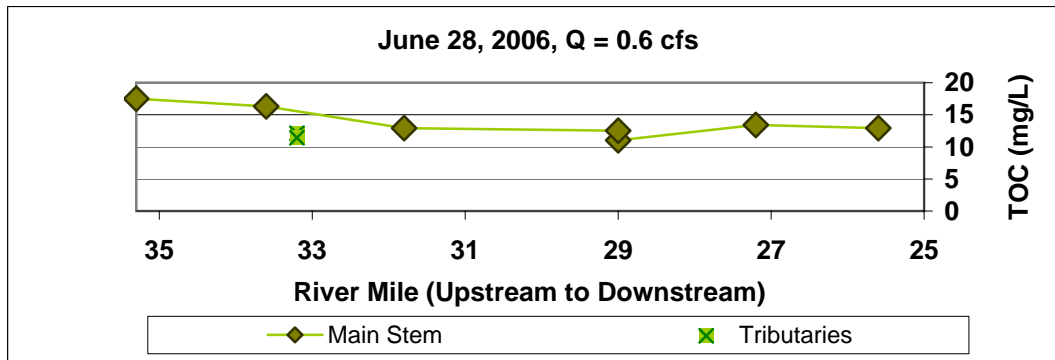
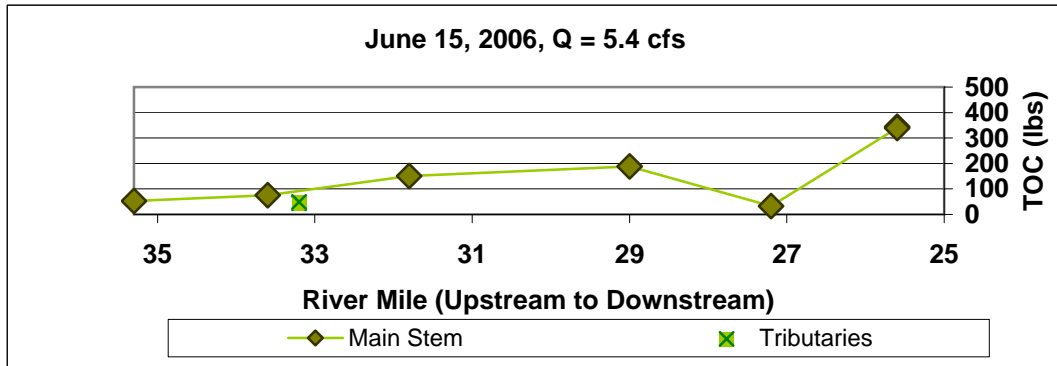
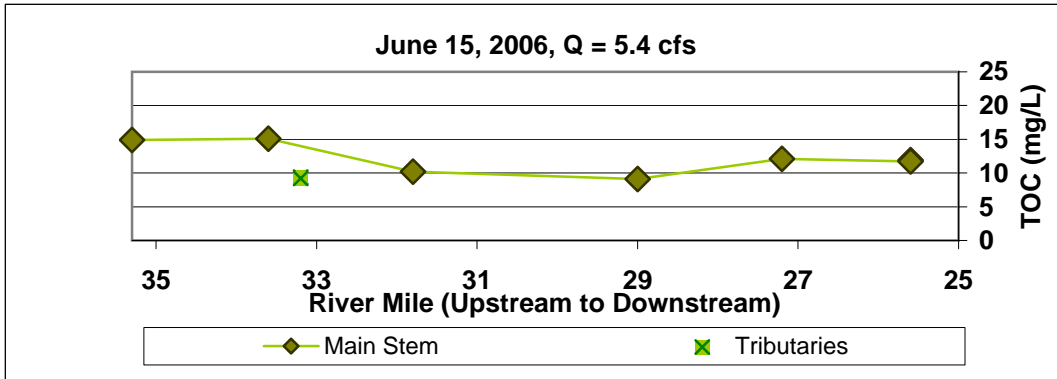
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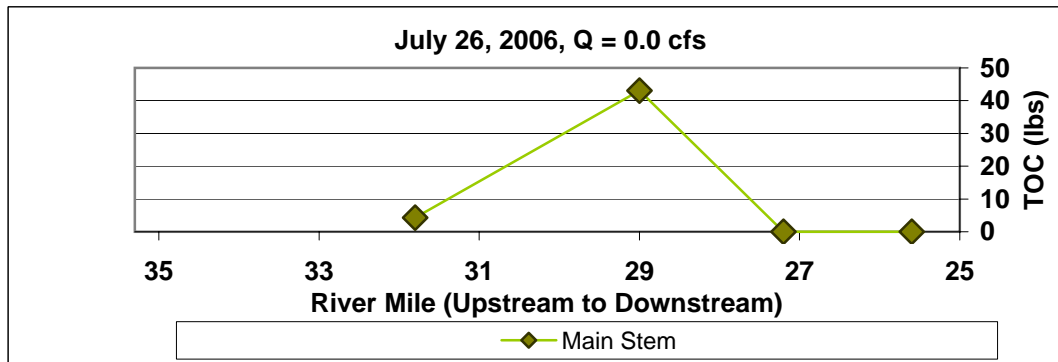
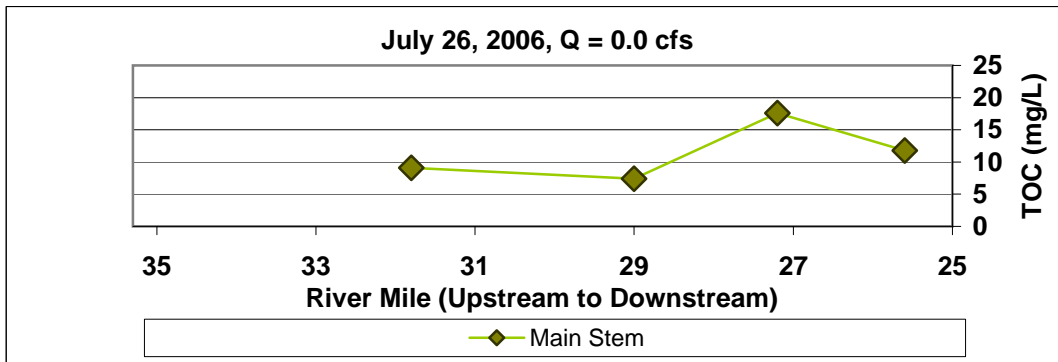
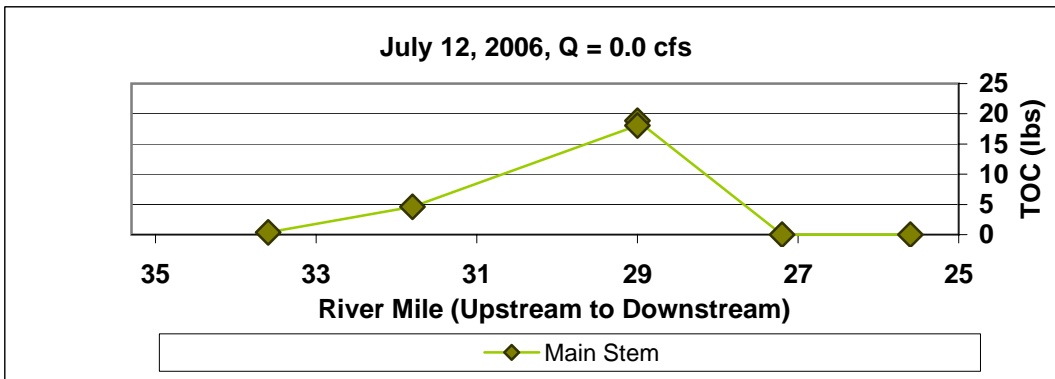
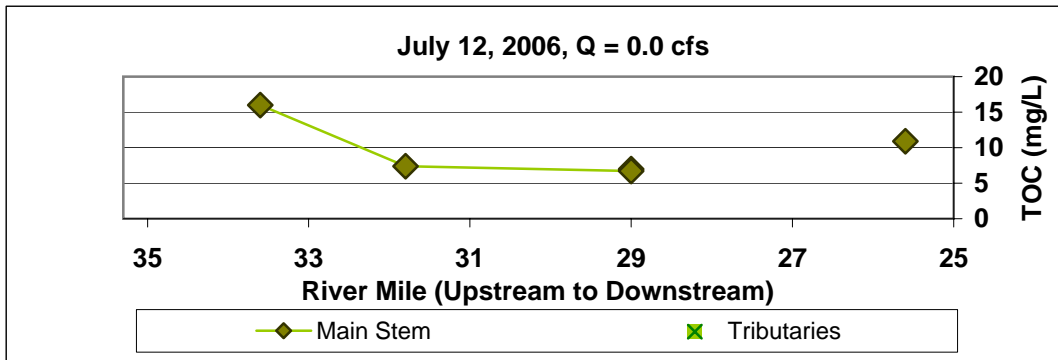
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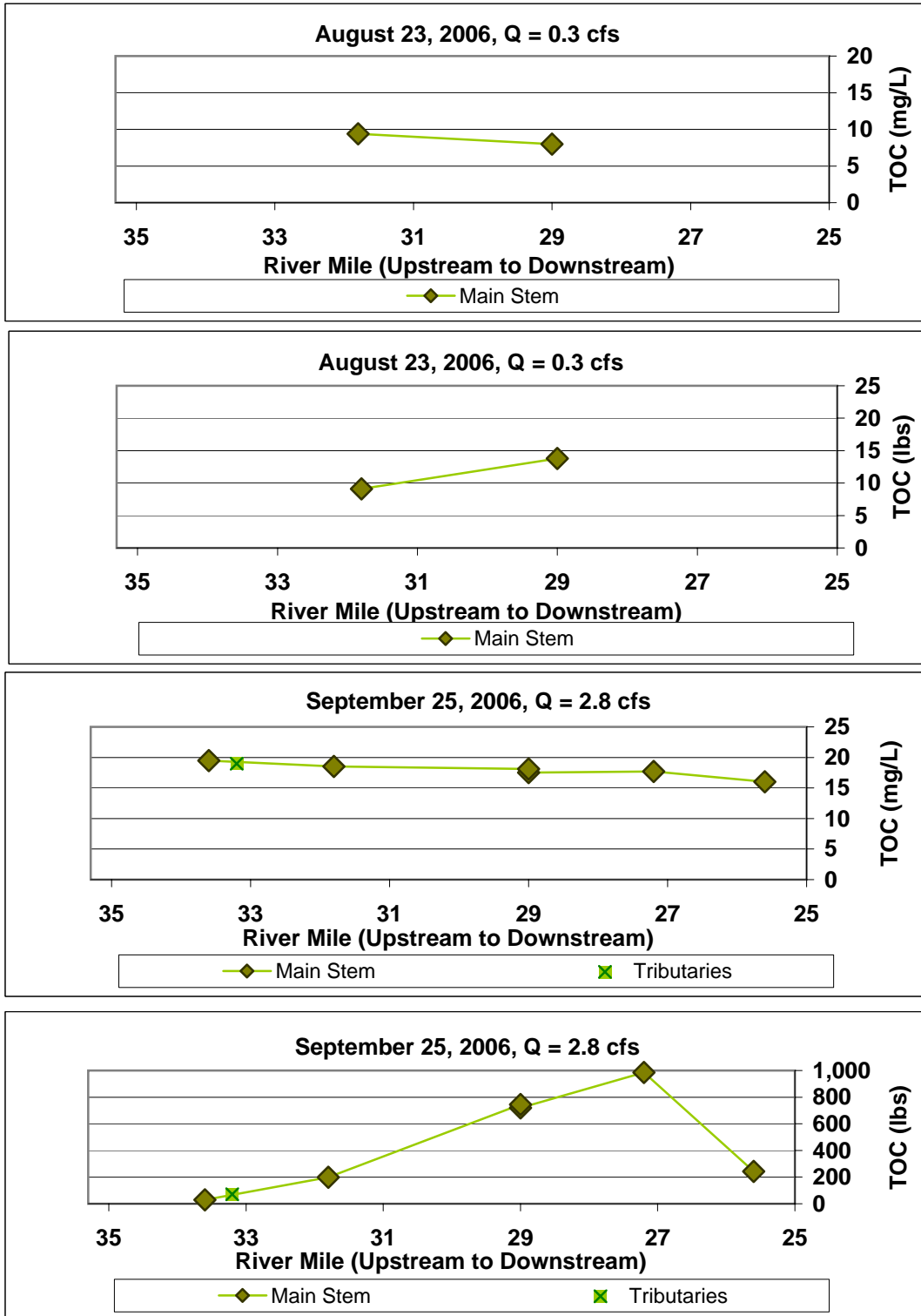
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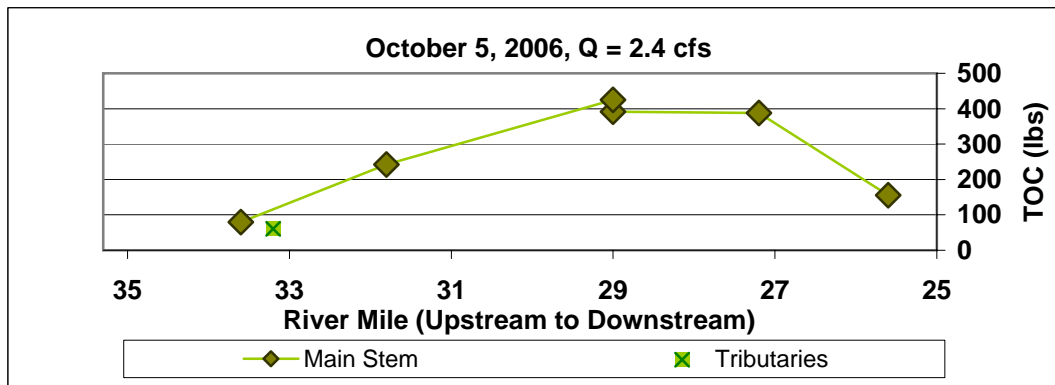
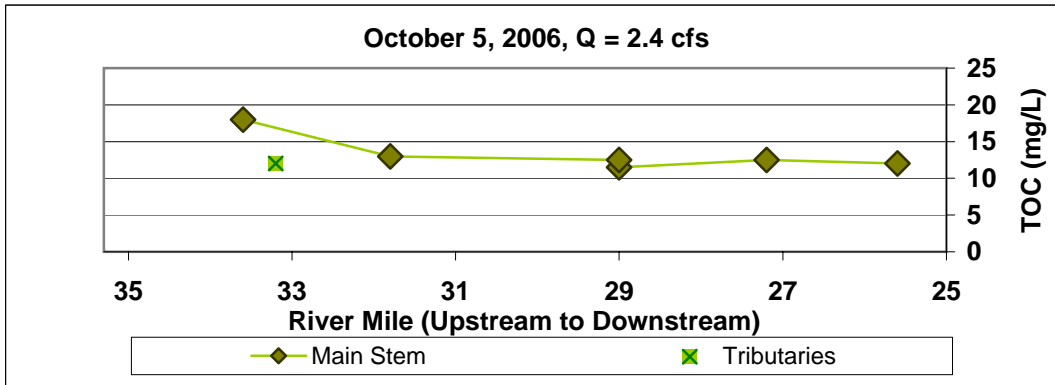
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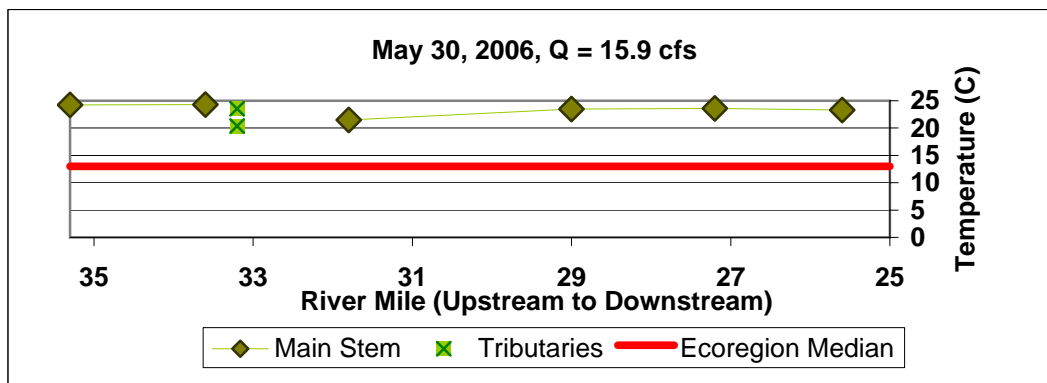
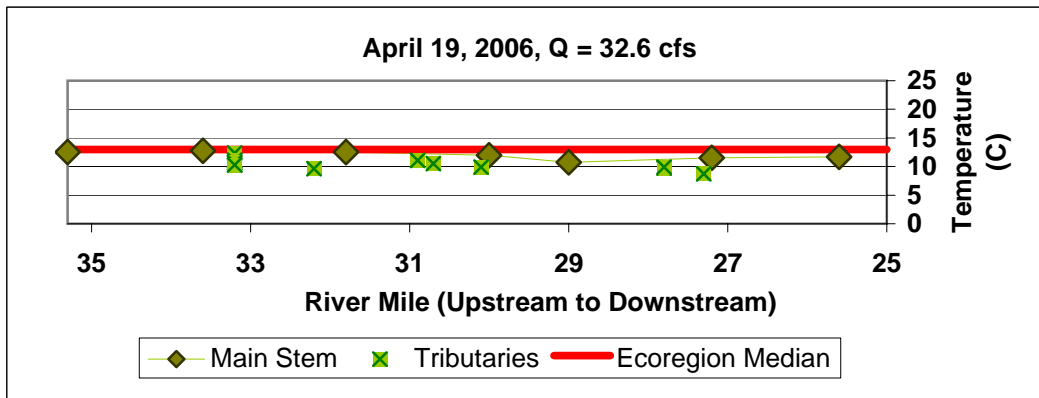
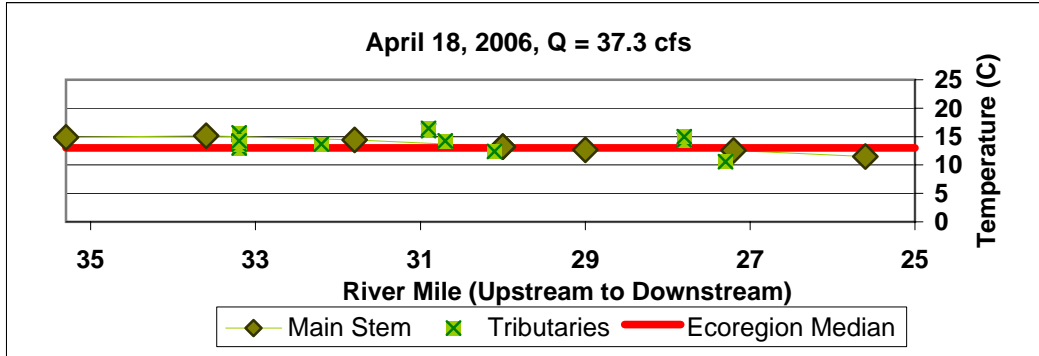




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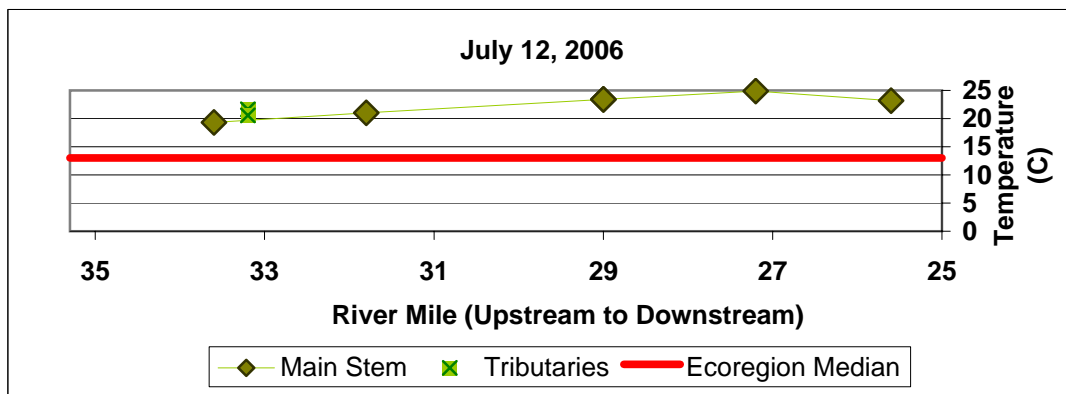
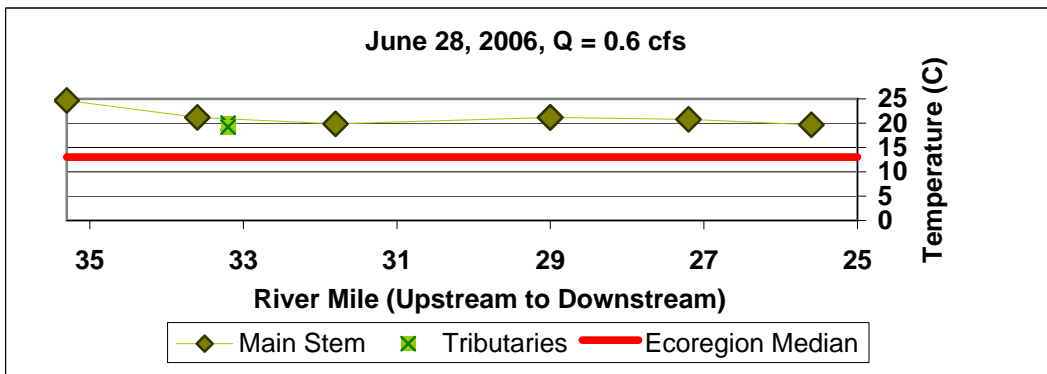
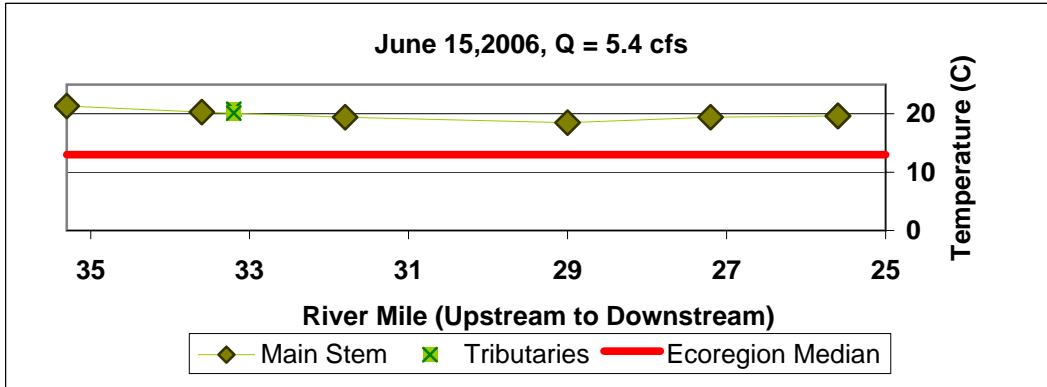
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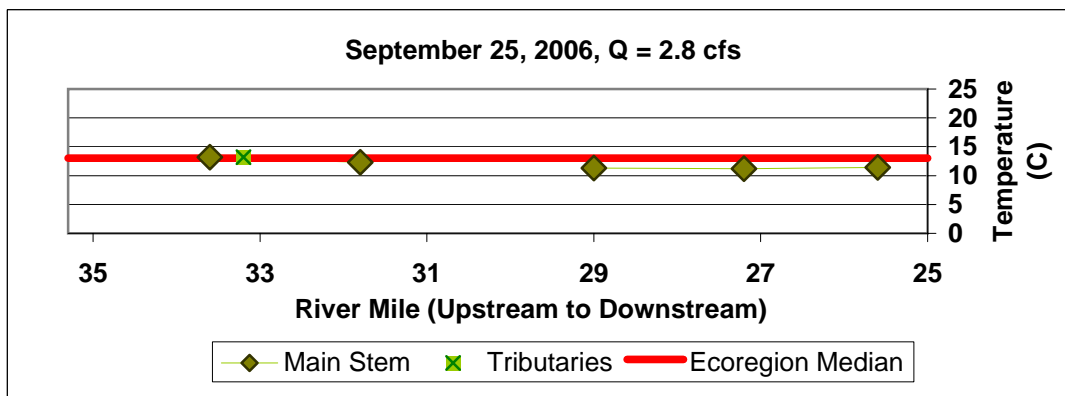
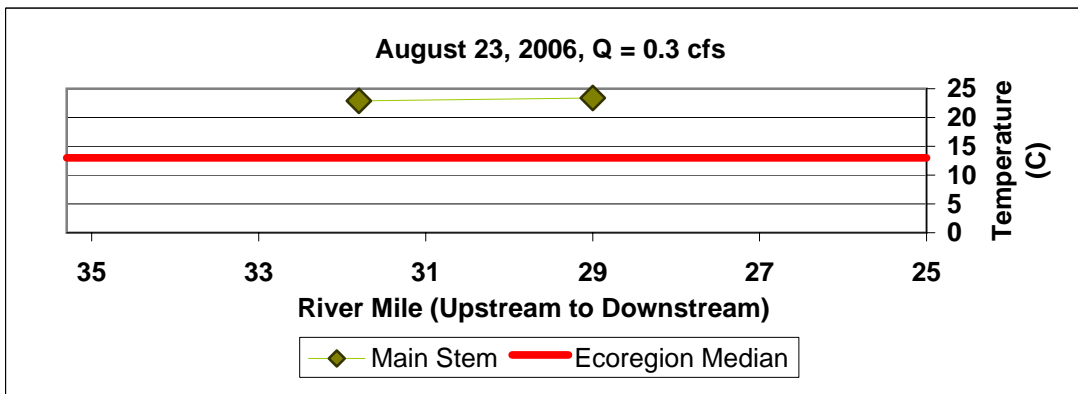
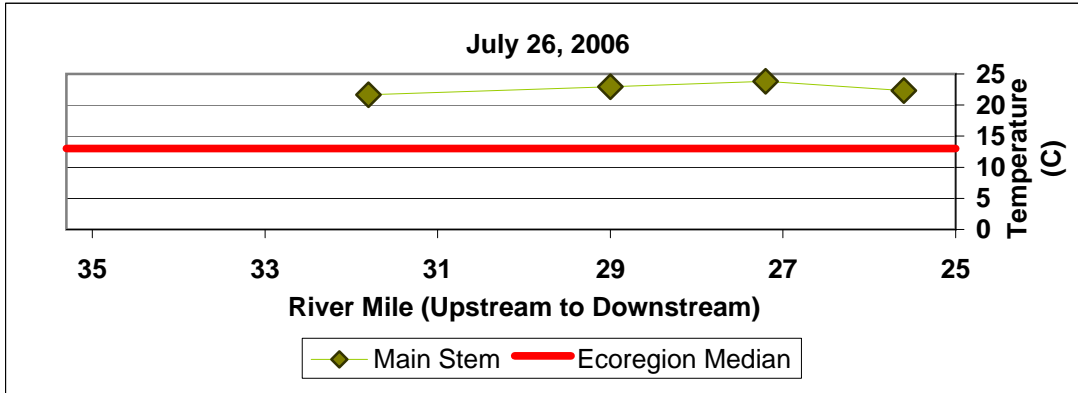
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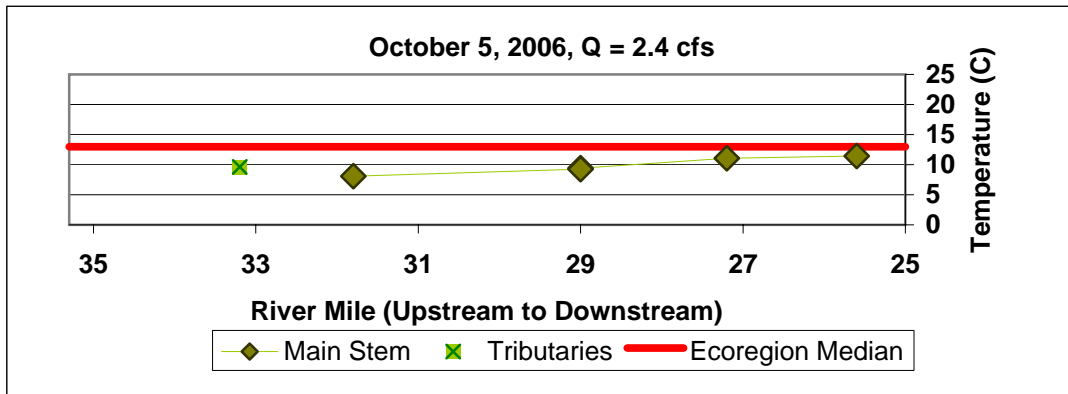
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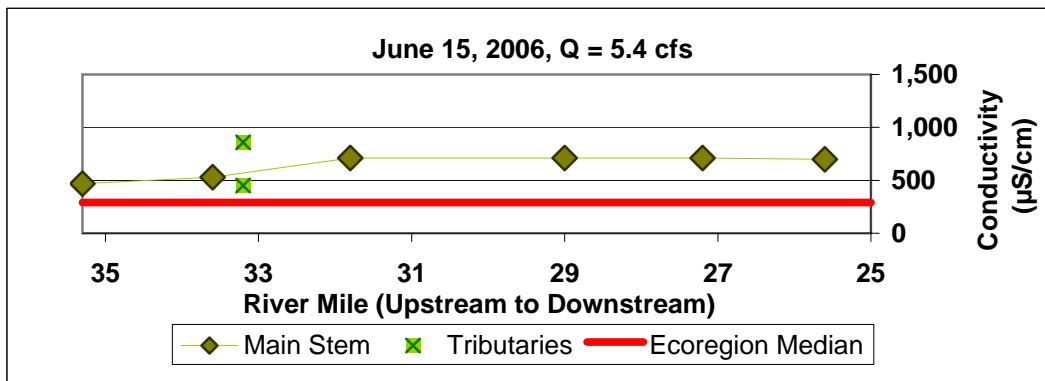
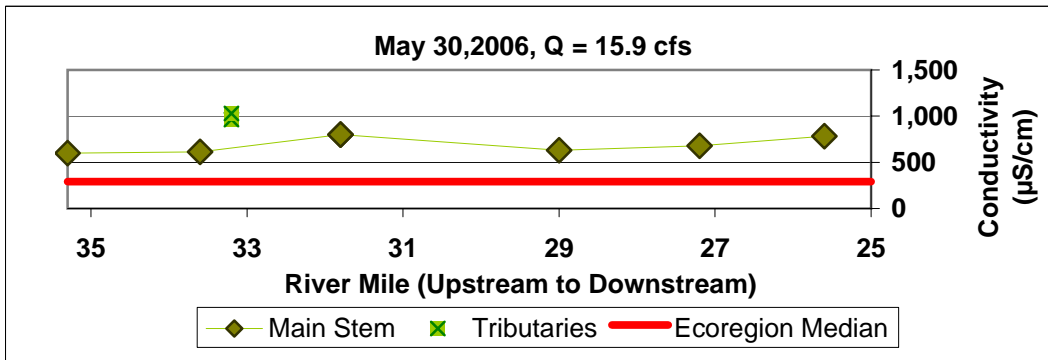
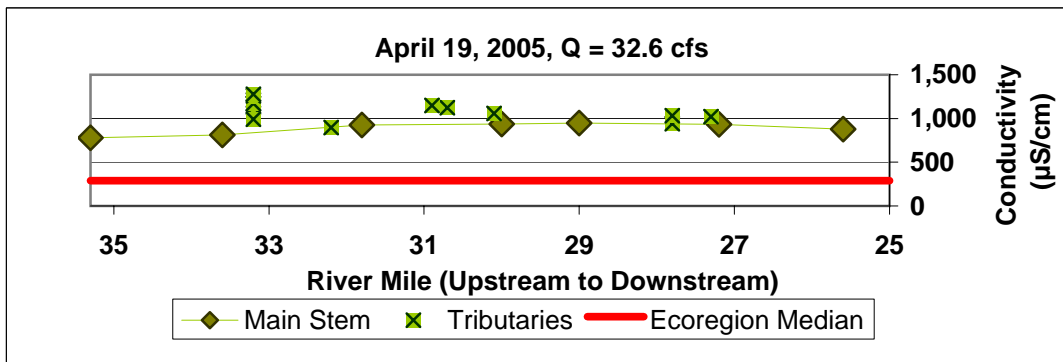
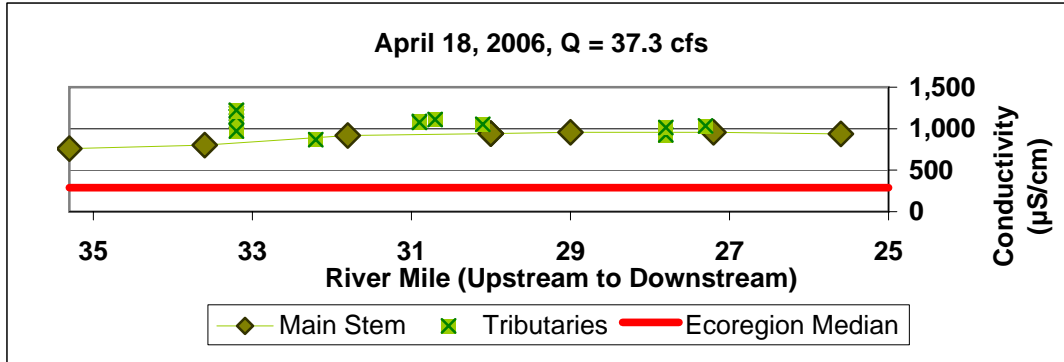
#### 2006 Clearwater River In-stream Loading and Water Quality Profiles



## Appendix B

### Clearwater River Watershed District Clearwater River Bacteria and DO TMDL

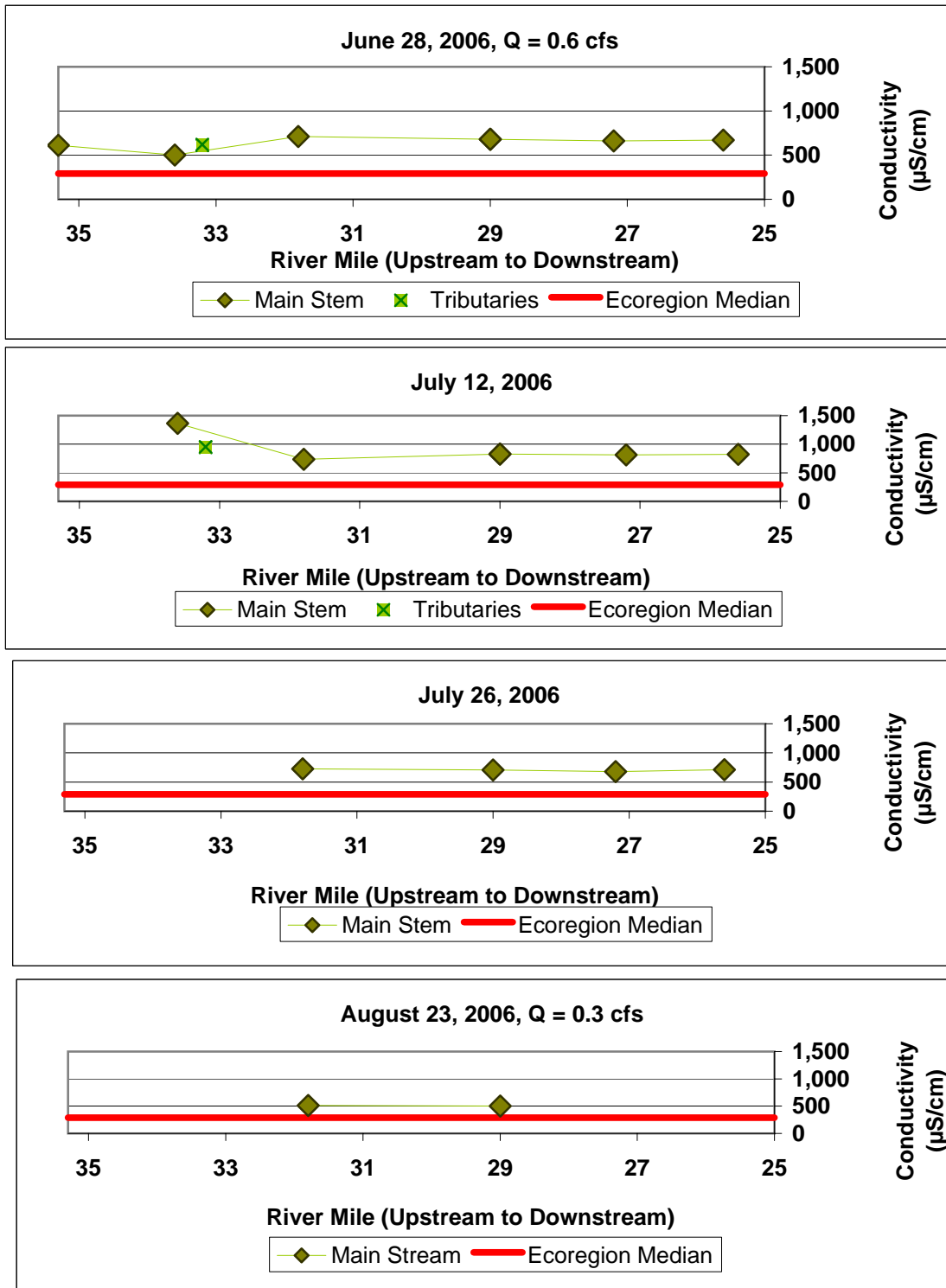
#### 2006 Clearwater River In-stream Loading and Water Quality Profiles



## Appendix B

### Clearwater River Watershed District Clearwater River Bacteria and DO TMDL

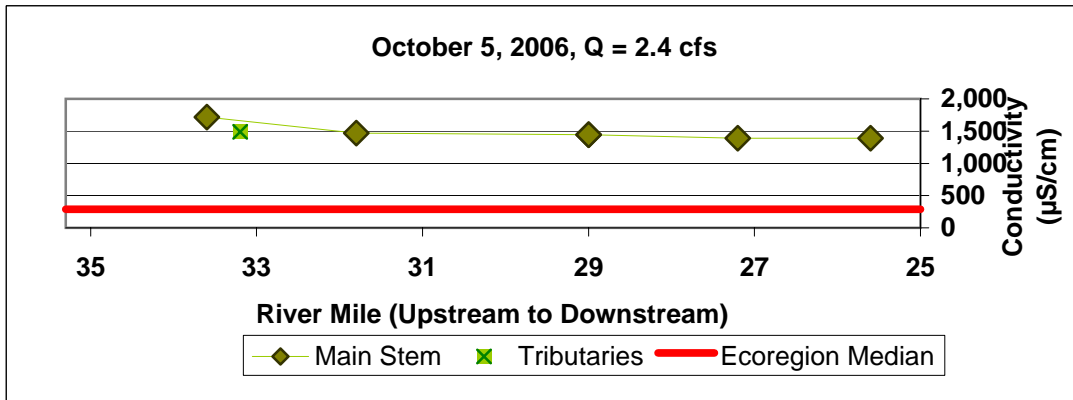
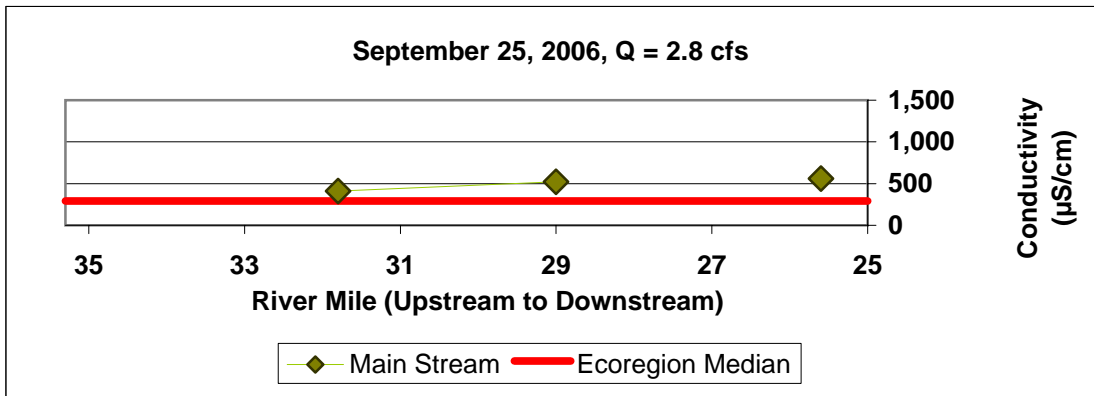
#### 2006 Clearwater River In-stream Loading and Water Quality Profiles



## Appendix B

### Clearwater River Watershed District Clearwater River Bacteria and DO TMDL

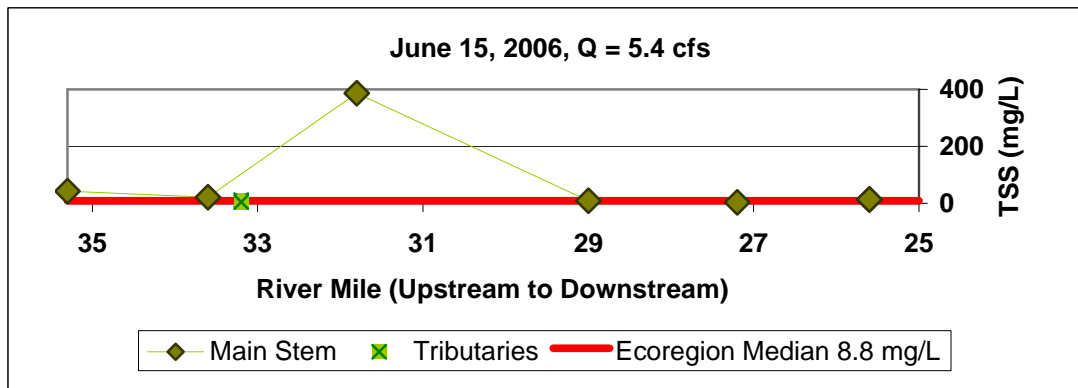
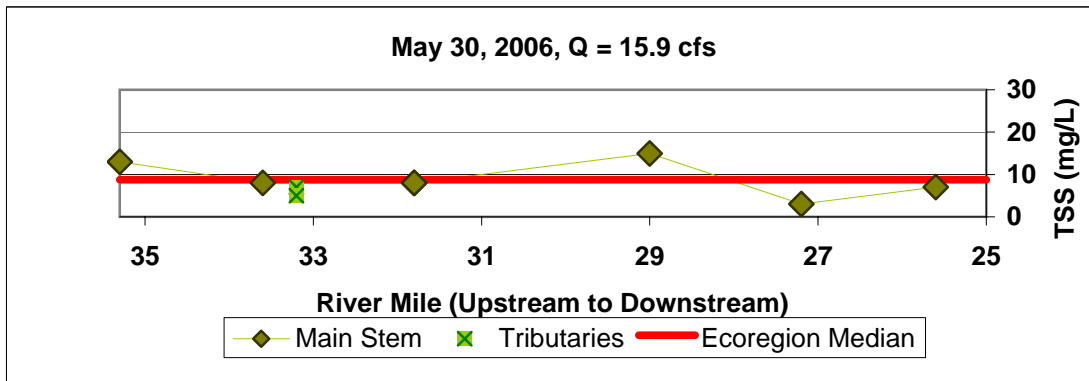
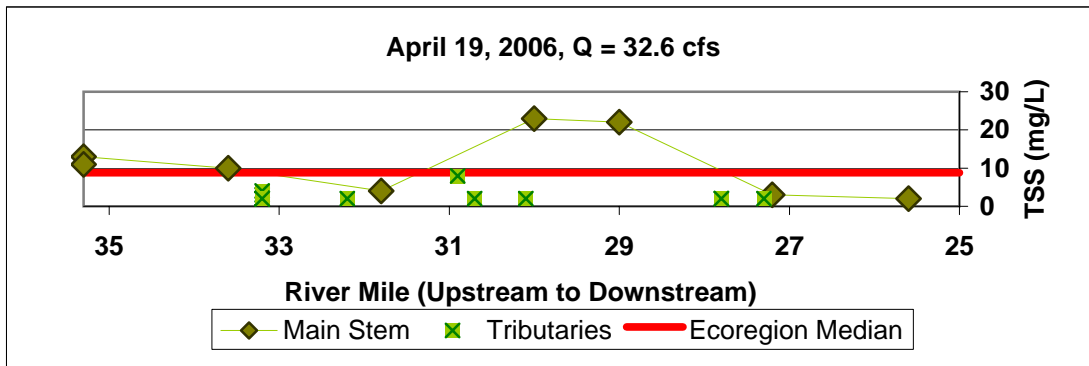
#### 2006 Clearwater River In-stream Loading and Water Quality Profiles



## Appendix B

### Clearwater River Watershed District Clearwater River Bacteria and DO TMDL

#### 2006 Clearwater River In-stream Loading and Water Quality Profiles

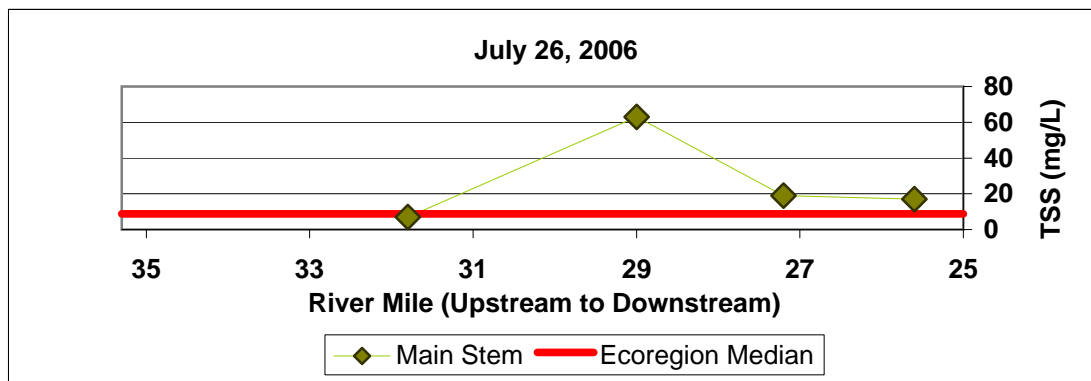
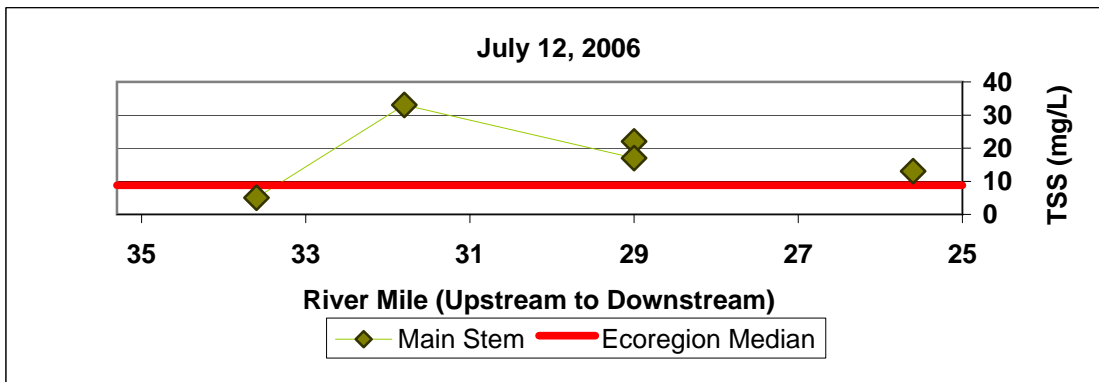
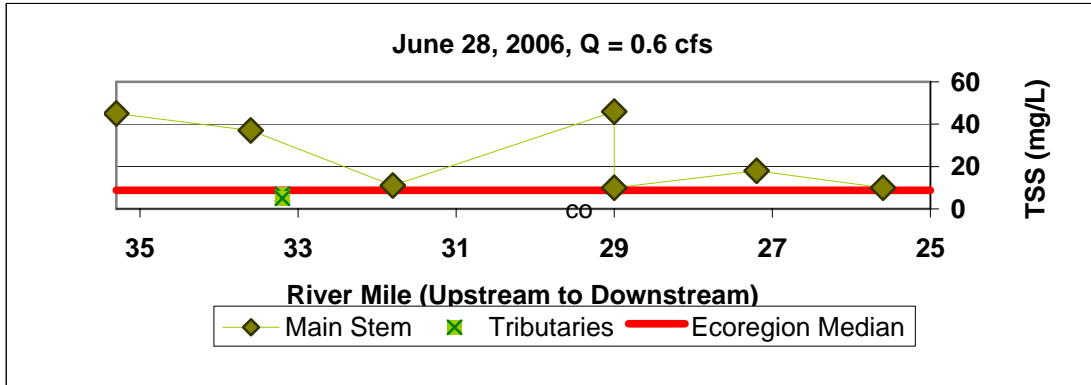




## Appendix B

### Clearwater River Watershed District Clearwater River Bacteria and DO TMDL

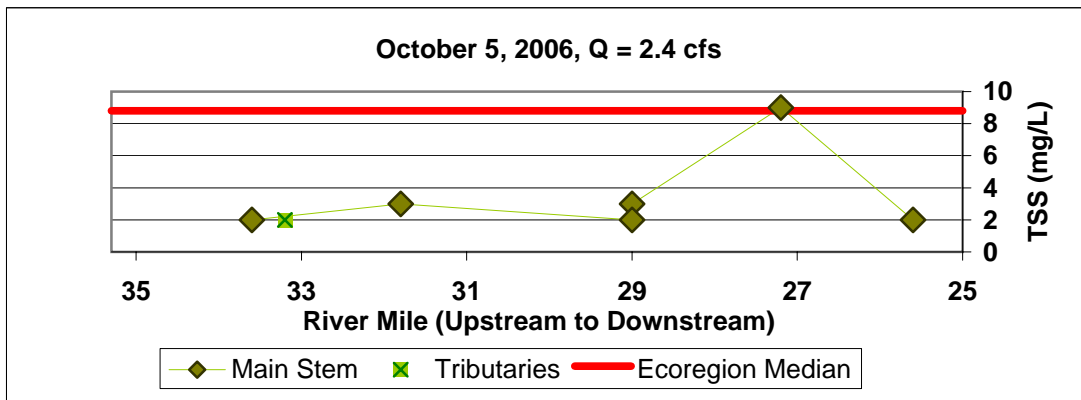
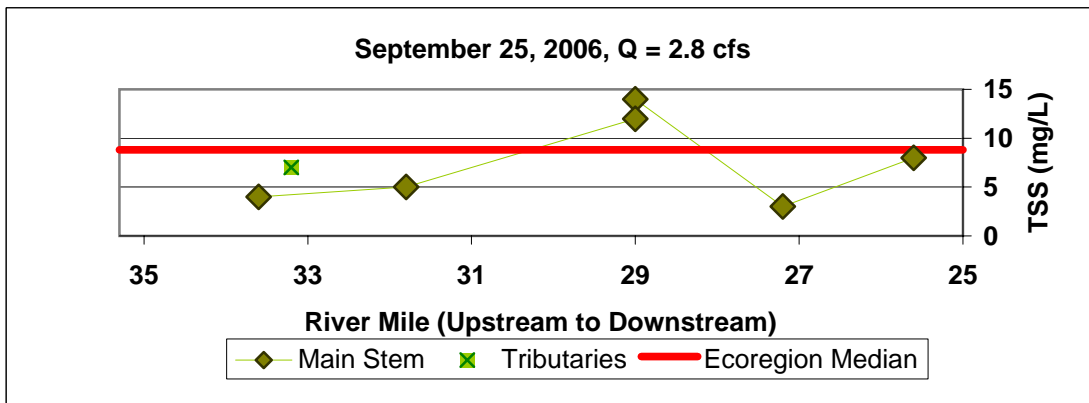
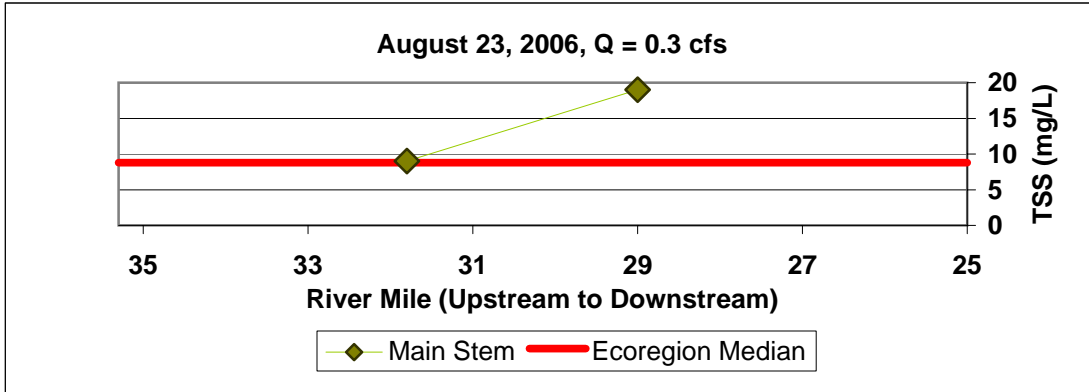
#### 2006 Clearwater River In-stream Loading and Water Quality Profiles



## Appendix B

### Clearwater River Watershed District Clearwater River Bacteria and DO TMDL

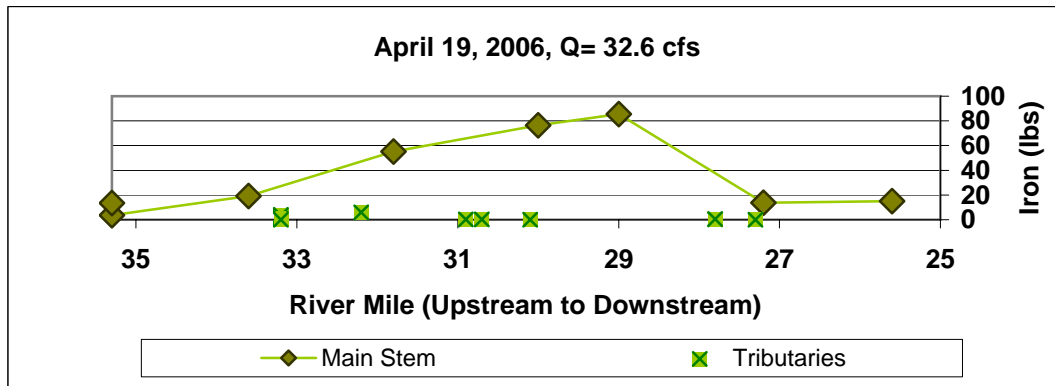
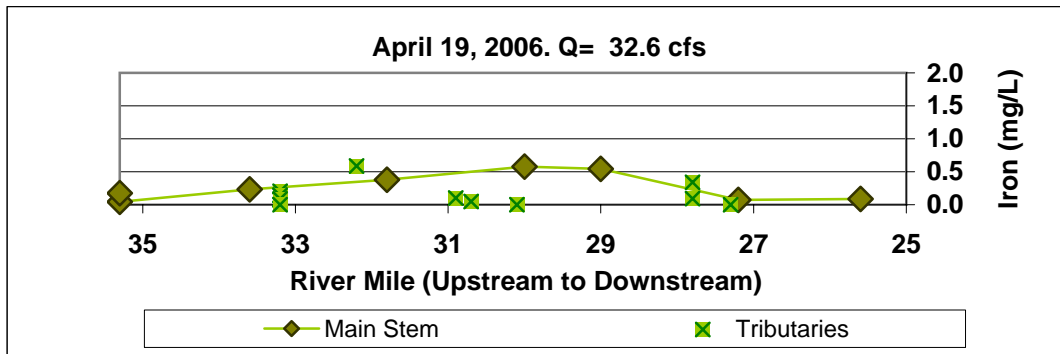
#### 2006 Clearwater River In-stream Loading and Water Quality Profiles



## Appendix B

### Clearwater River Watershed District Clearwater River Bacteria and DO TMDL

#### 2006 Clearwater River In-stream Loading and Water Quality Profiles



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## **Appendix C**

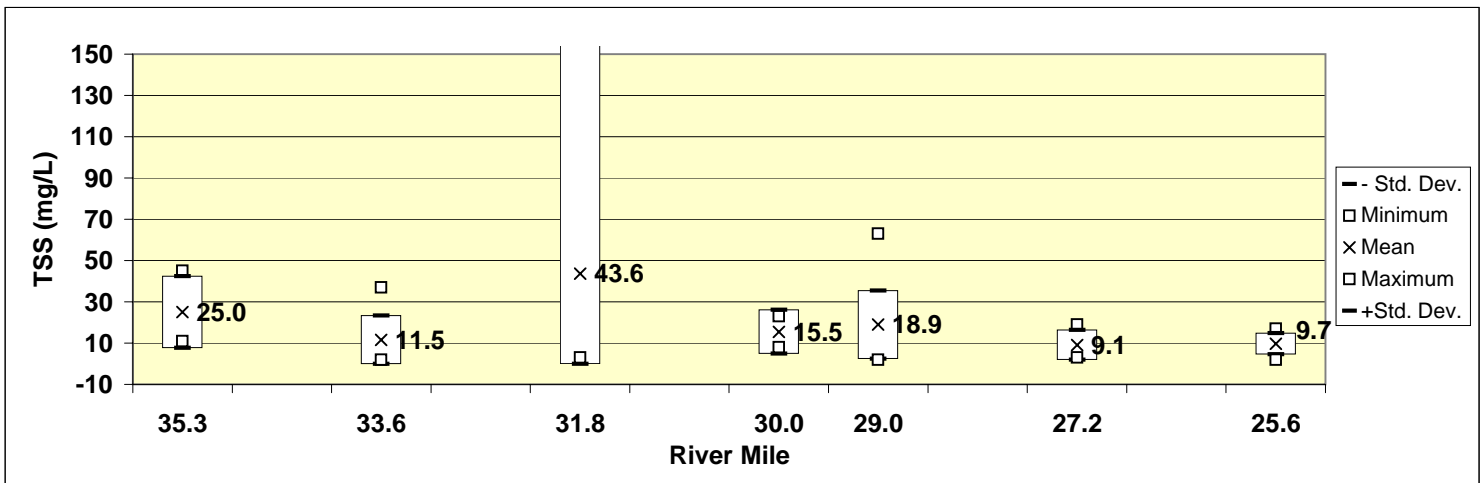
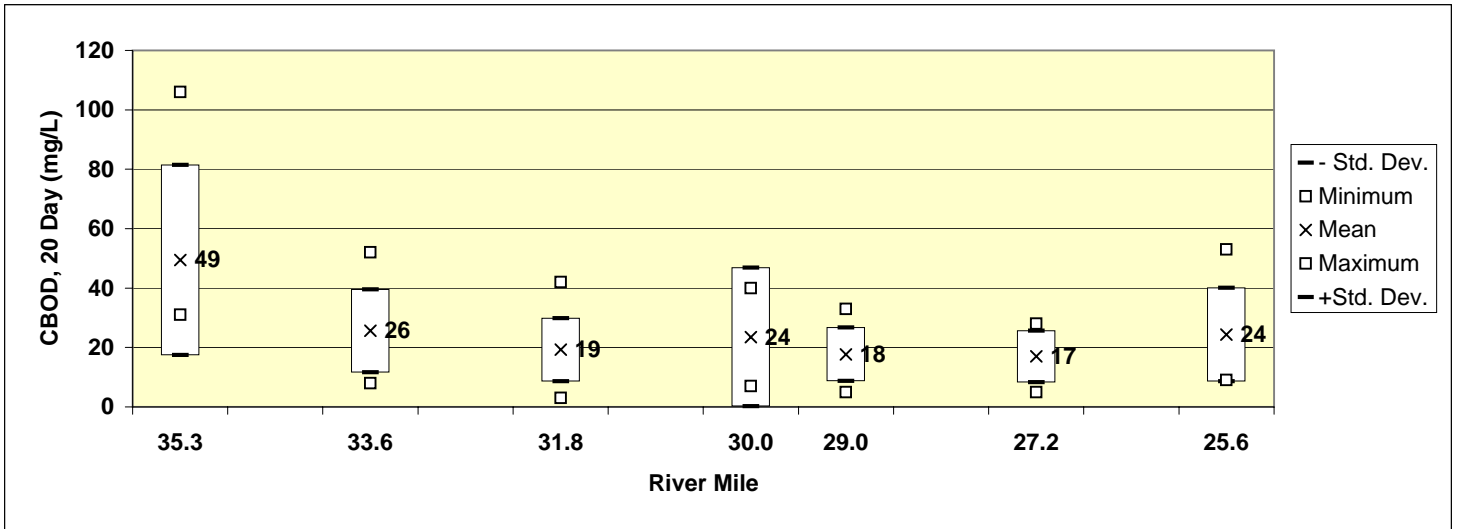
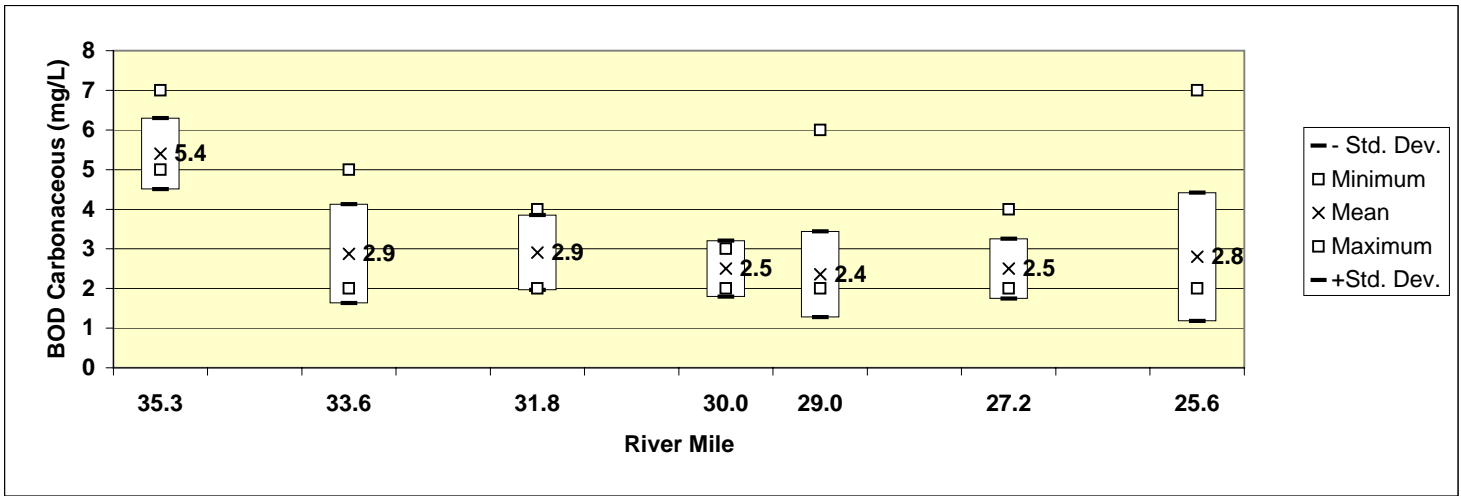
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### **Mean Maximum and Minimum Water Quality Profiles**

Appendix C

Clearwater River Watershed District

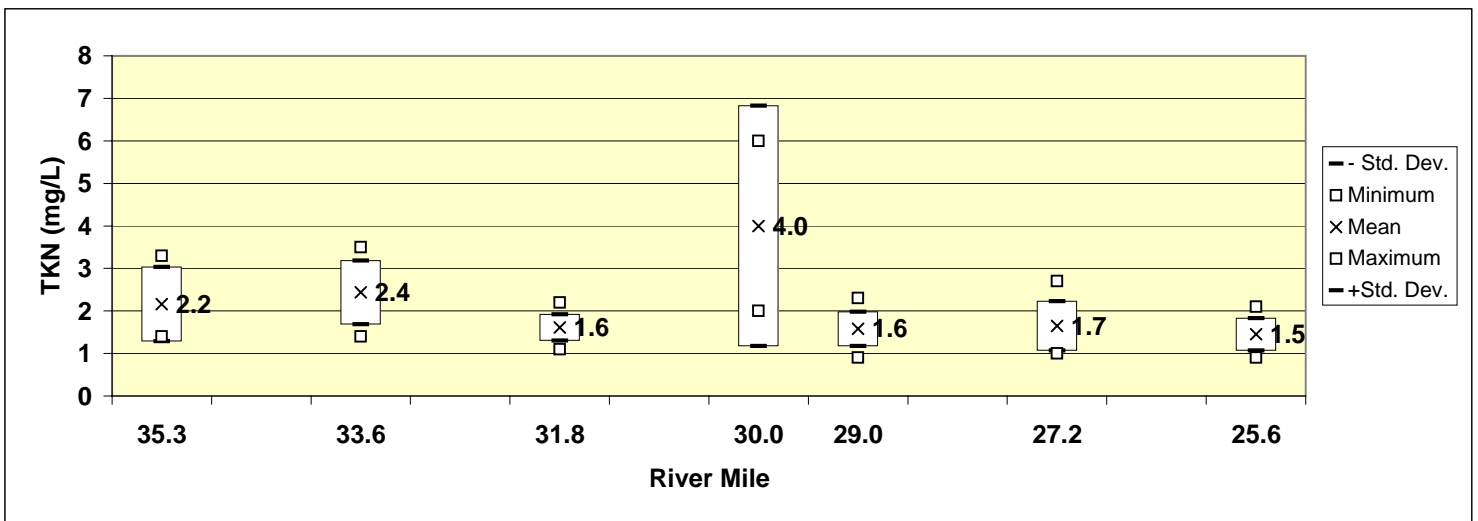
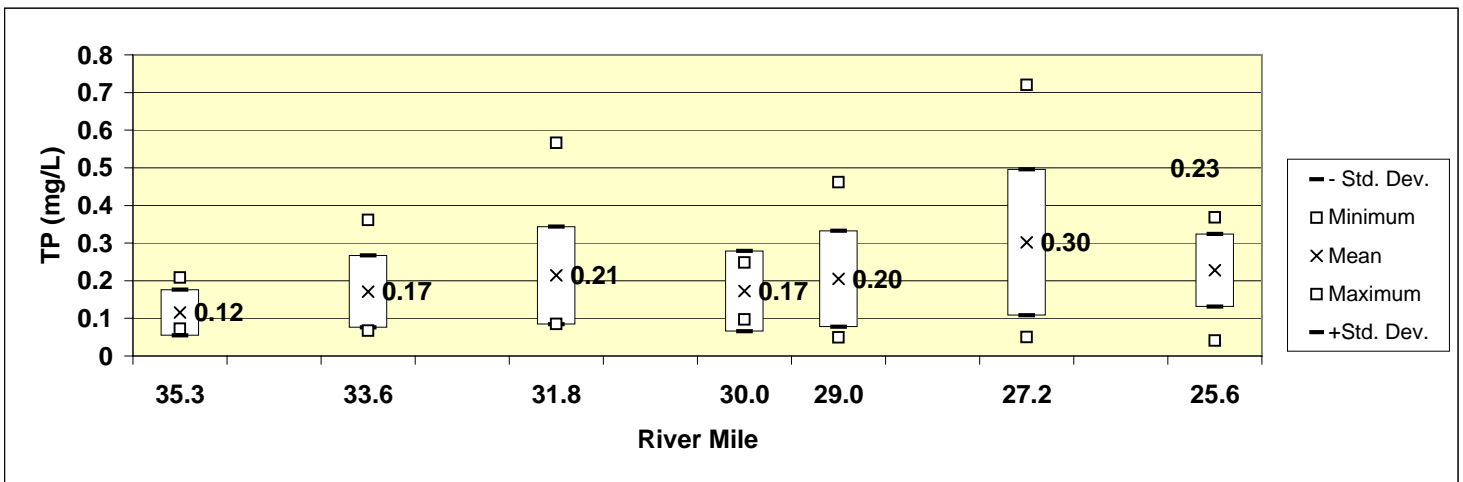
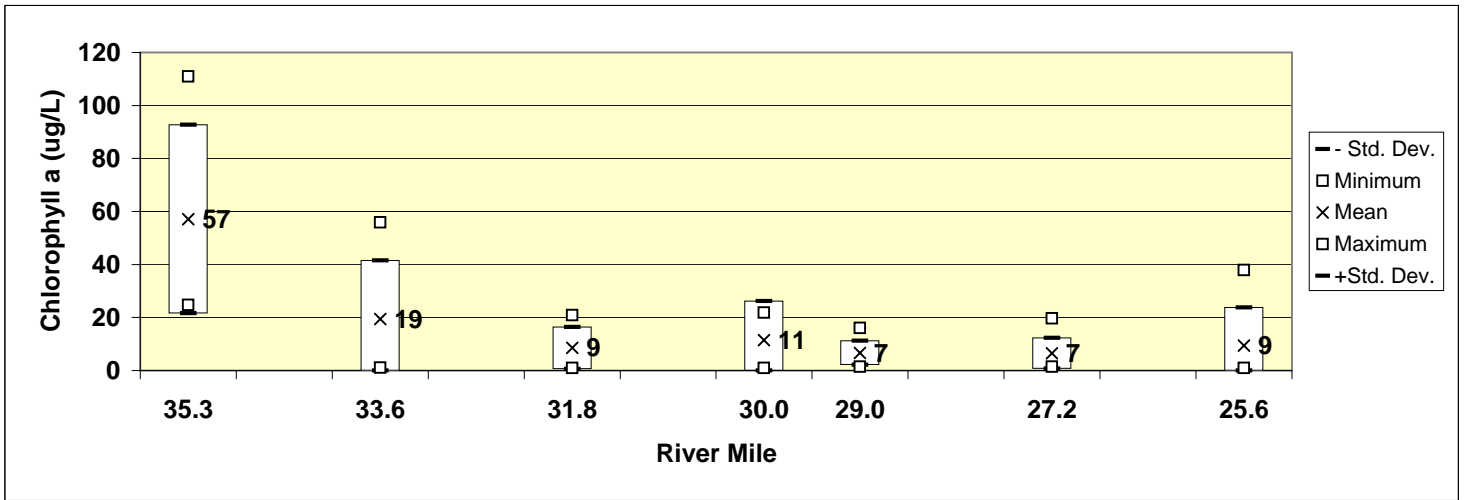
Phase II TMDL Study  
Mean, Max and Min Water Quality Upstream to Downstream



Appendix C

Clearwater River Watershed District

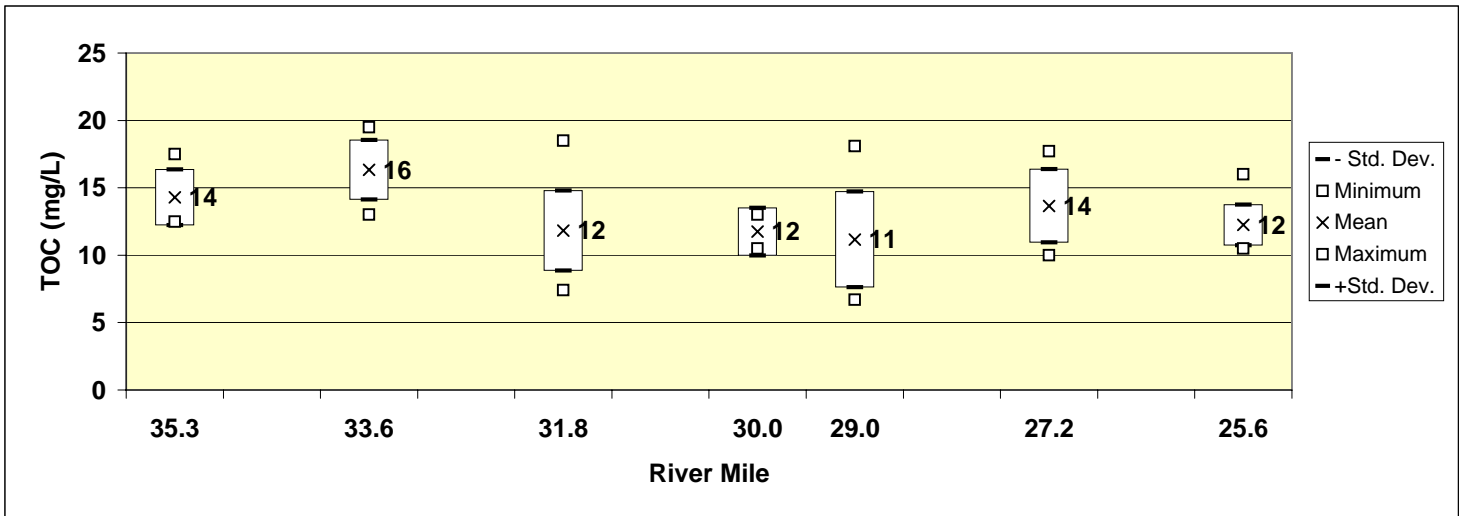
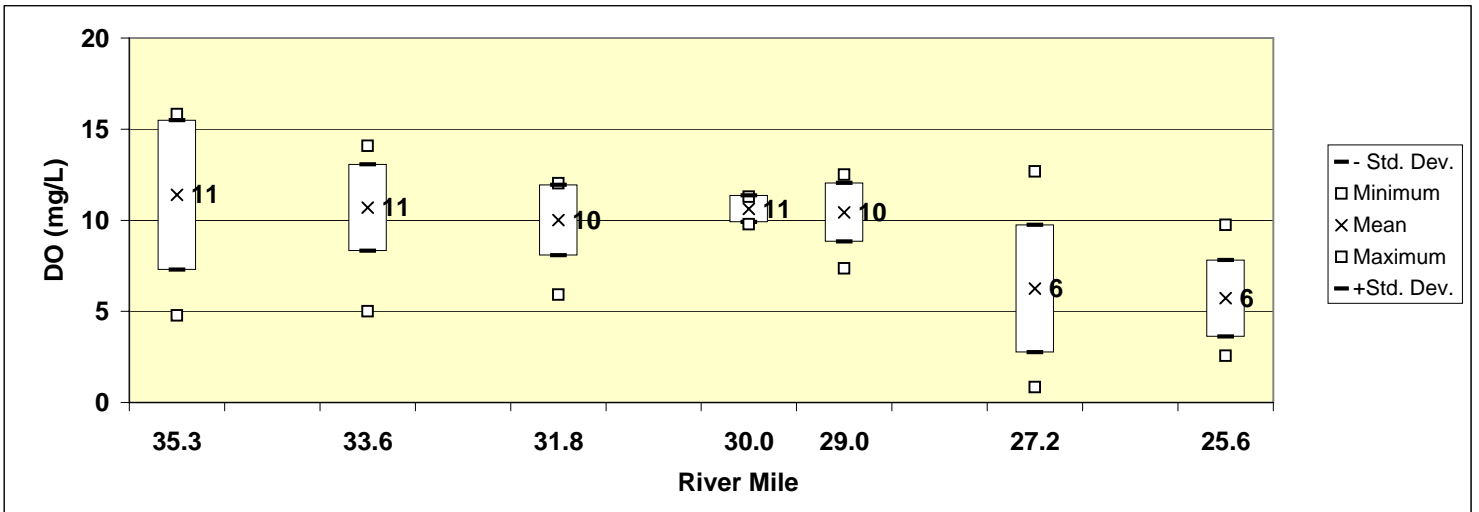
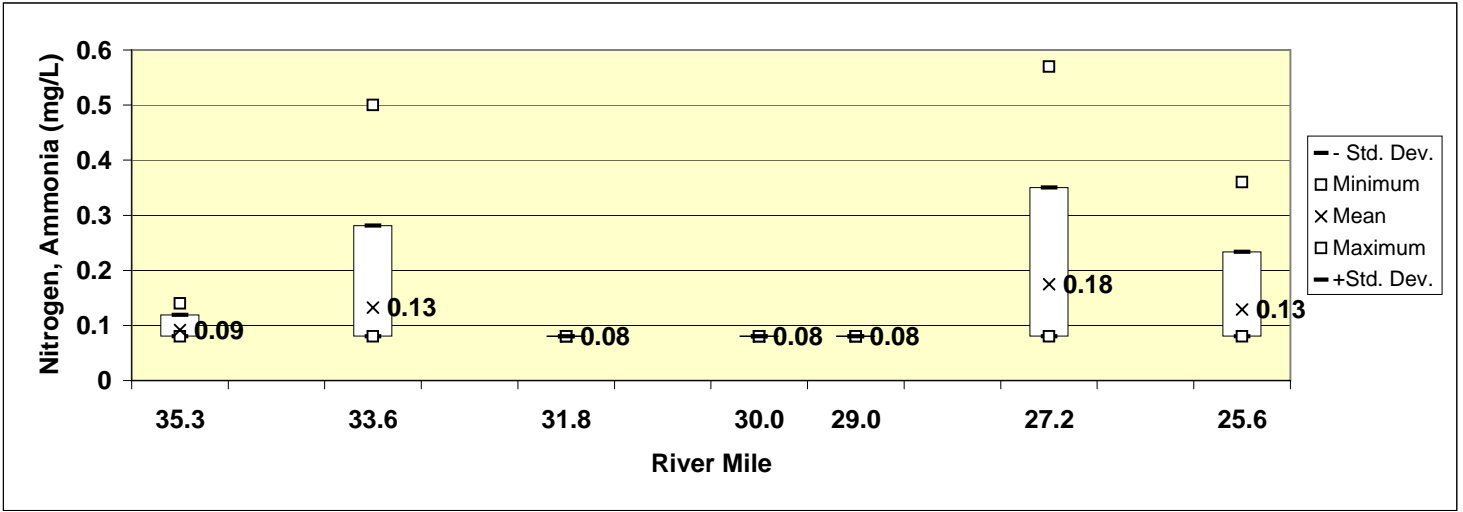
Phase II TMDL Study  
Mean, Max and Min Water Quality Upstream to Downstream



Appendix C

Clearwater River Watershed District

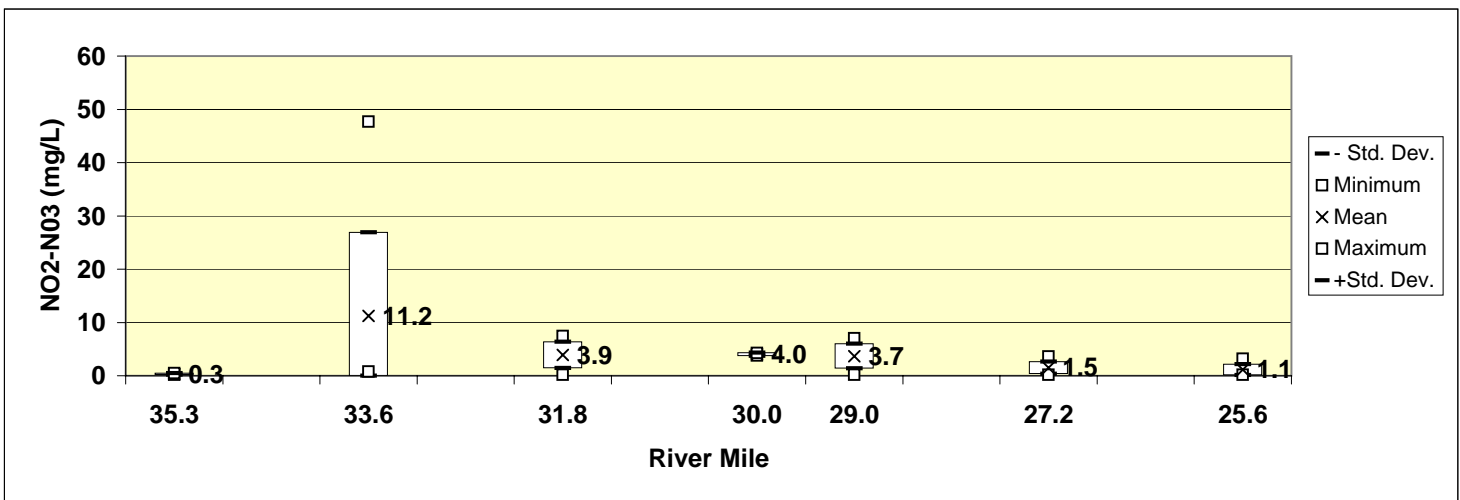
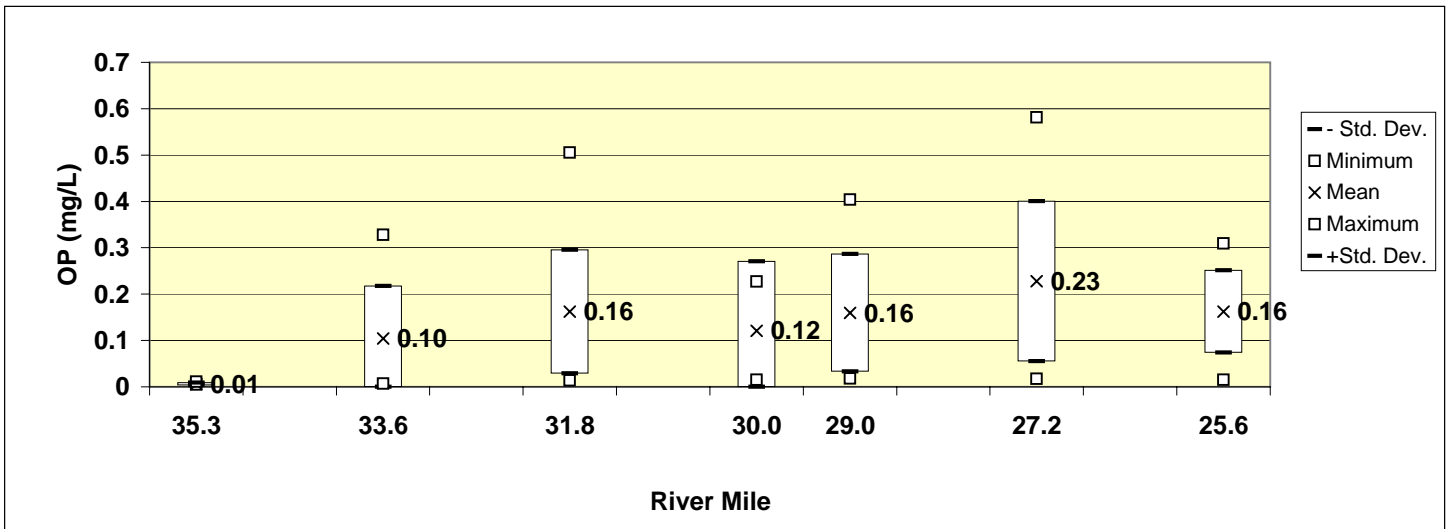
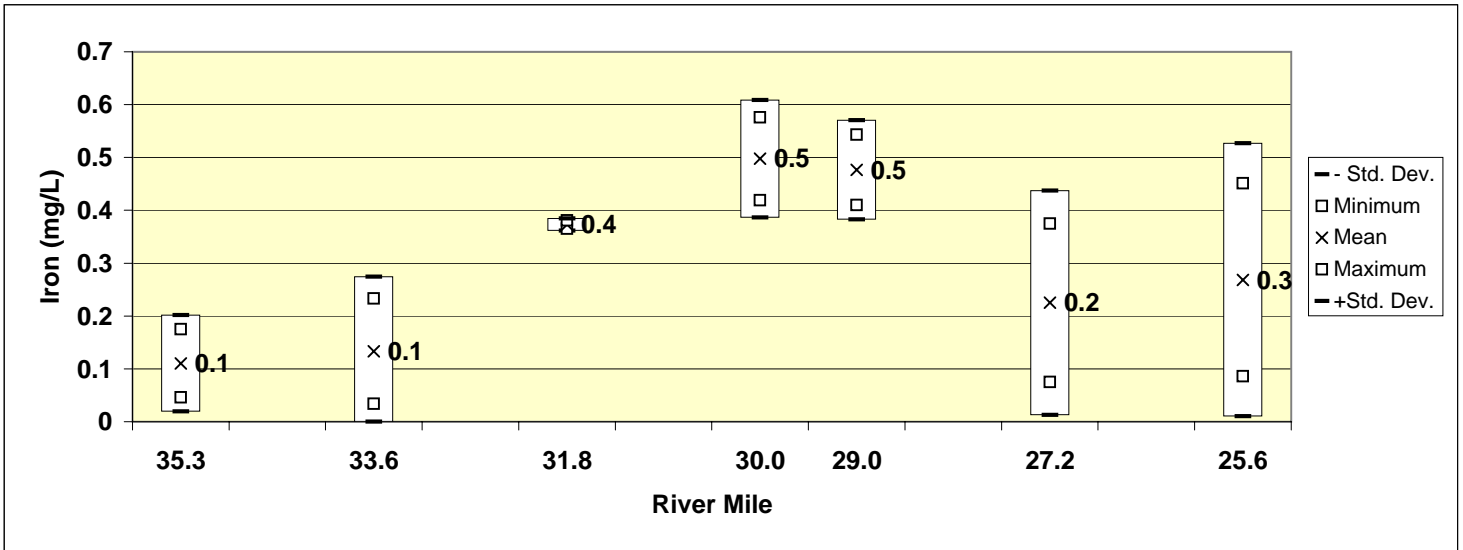
Phase II TMDL Study  
Mean, Max and Min Water Quality Upstream to Downstream



Appendix C

Clearwater River Watershed District

Phase II TMDL Study  
Mean, Max and Min Water Quality Upstream to Downstream

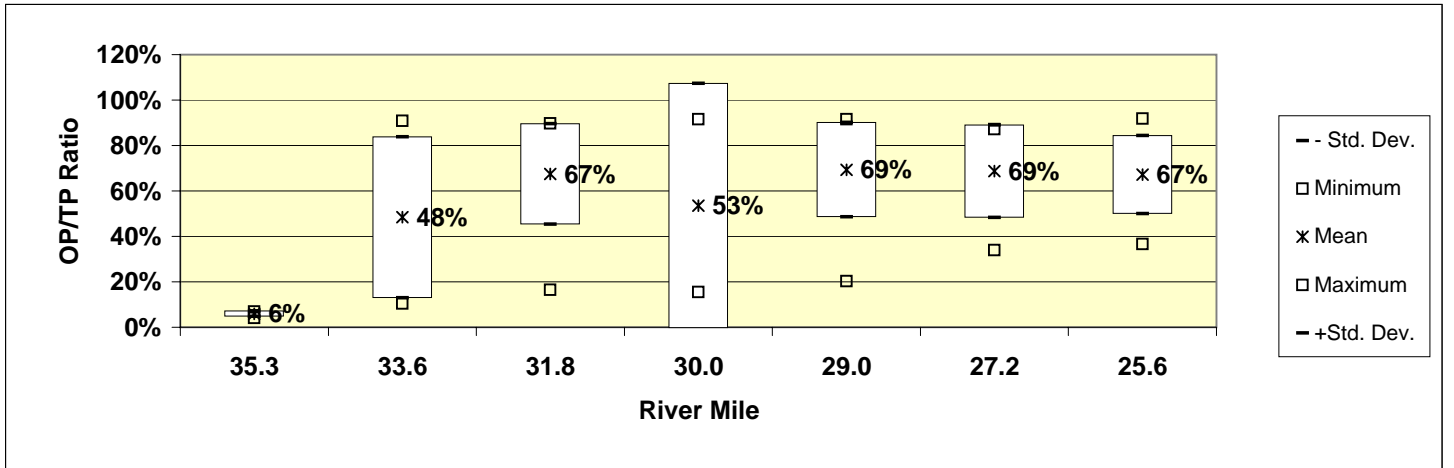
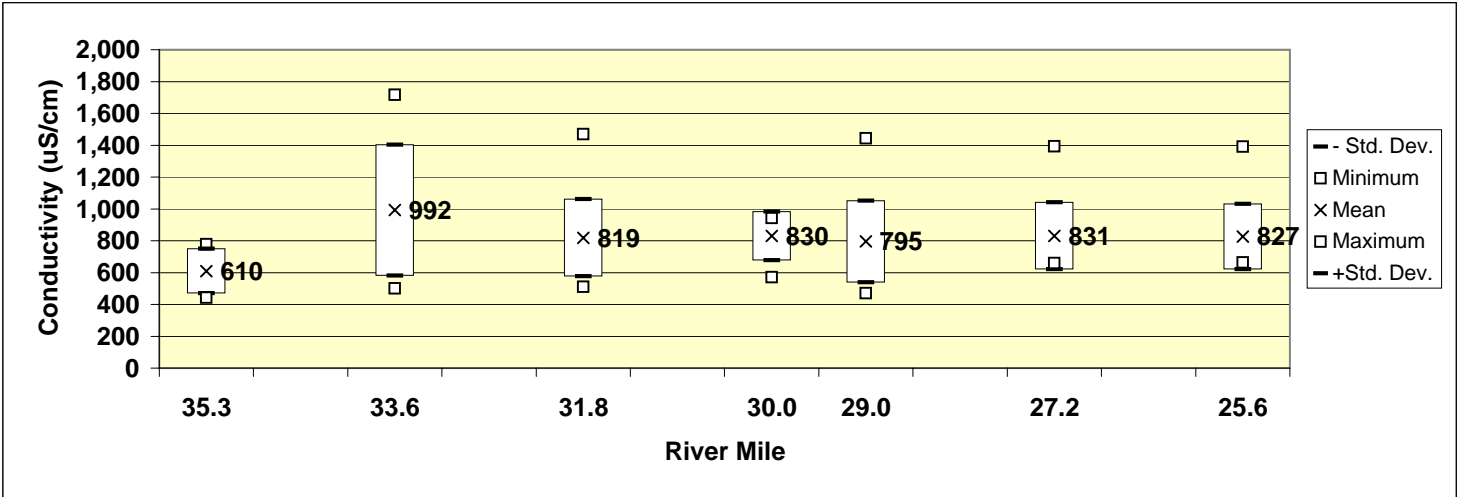




Appendix C

Clearwater River Watershed District

Phase II TMDL Study  
Mean, Max and Min Water Quality Upstream to Downstream



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## **Appendix D**

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### **Field and Laboratory Data Sheets**

# Field Form: 2005 Stream Sampling

Client: CRWD  
 Project No.: 0002-75  
 Date: 8/15/05  
 Sampler(s): WR NC  
 Start Time: \_\_\_\_\_  
 End Time: \_\_\_\_\_  
 Channel Conditions: Flowing  
 COC Number: \_\_\_\_\_

Site Location: TA 33.2  
 Site Description: Tributary @ County Hwy 17 & 380th  
 Weather: 75° Sunny  
 Samples Taken:  Yes  No  
 Sample Time: 8:25  
 DTW Measurement: 5.98

Notes: -very little water in channel

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	15.27	1120	7.59	7.80

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: .005 cfs

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)	1.4	.12	.03					

-DTW point top center of culvert, downstream side

# Field Form: 2005 Stream Sampling

Client: CRWD  
 Project No.: 0002-75  
 Date: 8/15/05  
 Sampler(s): WR NC  
 Start Time: \_\_\_\_\_  
 End Time: \_\_\_\_\_  
 Channel Conditions: Flowing  
 COC Number: \_\_\_\_\_

Site Location: CR 33-6  
 Site Description: Cleanwater  
 Weather: 75° sunny  
 Samples Taken:  Yes  No  
 Sample Time: 8:45  
 DTW Measurement: \_\_\_\_\_

18 depth

Notes: -very little water in channel

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>16.36</u>	<u>1412</u>	<u>10.20</u>	<u>7.77</u>

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: .007 cfs

## Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>	<u>1.9</u>	<u>18</u>	<u>.02</u>					

# Field Form: 2005 Stream Sampling

Client: CRWD 0002-75  
Project No.: 0002-75  
Date: 8/15/05  
Sampler(s): WB NC  
Start Time: \_\_\_\_\_  
End Time: \_\_\_\_\_  
Channel Conditions: Flooding  
COC Number: \_\_\_\_\_

Site Location: CR 31.8  
Site Description: Cleanwater River @ Hwy 17  
Weather: 75° Sunny  
Samples Taken:  Yes  No  
Sample Time: 9:00  
DTW Measurement: 13.82

Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	19.34	572	10.95	7.90

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 0.55 cfs

## Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

- DTW point downstream side of 6th post from right

# Field Form: 2005 Stream Sampling

Client: CRWD  
 Project No.: 0002-75  
 Date: 08/15  
 Sampler(s): WB, NC  
 Start Time: \_\_\_\_\_  
 End Time: \_\_\_\_\_  
 Channel Conditions: \_\_\_\_\_  
 COC Number: \_\_\_\_\_

Site Location: T 30.7  
 Site Description: Tributary @ 365th St  
 Weather: 75°  
 Samples Taken:  Yes  No  
 Sample Time: 9:15  
 DTW Measurement: 2.50

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>16.32</u>	<u>697</u>	<u>9.84</u>	<u>7.95</u>

Notes: -very shallow and very little flow

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: .004 cfs

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>	<u>1.8</u>	<u>.12</u>	<u>.02</u>					

-DTW point top of culvert, downstream

# Field Form: 2005 Stream Sampling

Client: CRWD  
 Project No.: 0002-75  
 Date: 8/15/05  
 Sampler(s): WB/NC  
 Start Time: \_\_\_\_\_  
 End Time: \_\_\_\_\_  
 Channel Conditions: flowing  
 COC Number: \_\_\_\_\_

Site Location: CR 30.0  
 Site Description: Clearwater River @ 65th  
 Weather: 75° Sunny  
 Samples Taken:  Yes  No  
 Sample Time: 9:25  
 DTW Measurement: 9.11

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	16.91	570	11.23	7.98

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 315

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft²)	Discharge (Q, ft³/sec)
				20% Depth	80% Depth			
0, (left side)								

-DTW point top middle, downstream culvert  
 -gauged at downstream end of culvert

# Field Form: 2005 Stream Sampling

Client: CRWD  
Project No.: 0002-75  
Date: 8/15/05  
Sampler(s): WB - NC  
Start Time: \_\_\_\_\_  
End Time: \_\_\_\_\_  
Channel Conditions: Flowing  
COC Number: \_\_\_\_\_

Site Location: CR 29.0  
Site Description: Clearwater River @ 70th St  
Weather: 70° sunny  
Samples Taken: Yes No  
Sample Time: 9:45  
DTW Measurement: 15.44

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>20.00</u>	<u>470</u>	<u>12.32</u>	<u>7.95</u>

Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: 357

## Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>								

- DTW point from top of bridge at 5th post from right on upstream side



# Field Form: 2005 Stream Sampling

Client: CRWD  
 Project No.: 0002-75  
 Date: 8/15/05  
 Sampler(s): WB NC  
 Start Time: 1000  
 End Time: 1010  
 Channel Conditions: flowing  
 COC Number: \_\_\_\_\_

Site Location: TE 27.8  
 Site Description: Tributary @ 350th St  
 Weather: 80°, Sunny  
 Samples Taken:  Yes  No  
 Sample Time: 1005  
 DTW Measurement: 4.21

Notes: - small amount of flow trickling from culvert

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	16.84	630	10.18	7.87

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: .005 cfs

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft²)	Discharge (Q, ft³/sec)
				20% Depth	80% Depth			
0, (left side)								

500 m/s = 3.83 secs

# Field Form: 2005 Stream Sampling

Client: 0002-75  
 Project No.: CRW0  
 Date: 08/15/05  
 Sampler(s): WB NC  
 Start Time: \_\_\_\_\_  
 End Time: \_\_\_\_\_  
 Channel Conditions: Flowing  
 COC Number: \_\_\_\_\_

Site Location: TW 27.8  
 Site Description: Tributary @  
 Weather: 75° Sunny  
 Samples Taken:  Yes  No  
 Sample Time: 10:00  
 DTW Measurement: 8.54

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	16.15	640	11.90	7.94

Notes: -very little flow over culvert

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: 0.017 cfs

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

# Field Form: 2005 Stream Sampling

Client: CRWD  
 Project No.: 0002-75  
 Date: 8/15/05  
 Sampler(s): WB NC  
 Start Time: 10:15  
 End Time: \_\_\_\_\_  
 Channel Conditions: Flowing  
 COC Number: \_\_\_\_\_

Site Location: 27.3  
 Site Description: Tributary @ 353rd St  
 Weather: 70°, Sunny  
 Samples Taken:  Yes  No  
 Sample Time: 10:15  
 DTW Measurement: 5.98

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (µS/cm)	D.O. (mg/l)	pH (S.U.)

Notes: - water trickling out of culvert

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 1,005 cfs

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft²)	Discharge (Q, ft³/sec)
				20% Depth	80% Depth			
0, (left side)								

500ml = 3.7 secs

135ml/sec

-DTW point top middle of culvert, downstream

Field Form: 2005 Stream Sampling

Client: CRWD  
Project No.: 0002-75  
Date: 8/15/05  
Sampler(s): WB NC  
Start Time: 10:45  
End Time: 11:15  
Channel Conditions: No flow  
COC Number: \_\_\_\_\_

Site Location: CR 25.6 (Lk Betsy)  
Site Description: Lk Betsy Autosampler  
Weather: 75° Sunny  
Samples Taken: Yes  No   
Sample Time: \_\_\_\_\_  
DTW Measurement: 23.32

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>16.68</u>	<u>664</u>	<u>4.78</u>	<u>7.65</u>

Notes: - surface covered with pondweed, no flow

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: - .675

Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

YSI Cal DO<sup>90</sup> 115.1 98.0  
DO 9.69 8.26

# Field Form: 2005 Stream Sampling

Client: \_\_\_\_\_  
 Project No.: \_\_\_\_\_  
 Date: 9/26/05  
 Sampler(s): JM, WB  
 Start Time: 15:40  
 End Time: \_\_\_\_\_  
 Channel Conditions: Flowing  
 COC Number: \_\_\_\_\_

Site Location: CA 33.6  
 Site Description: \_\_\_\_\_  
 Weather: 65° / Sunny  
 Samples Taken:  Yes  No  
 Sample Time: 9:15  
 DTW Measurement: 6.22

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	15.35	1095	11.35	7.13

114%

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Stage Ht: \_\_\_\_\_      Rated Flow: \_\_\_\_\_      Gauged Flow: .735cfs

## Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft²)	Discharge (Q, ft³/sec)
				20% Depth	80% Depth			
0, (left side)								

# Field Form: 2005 Stream Sampling

Client: \_\_\_\_\_  
 Project No.: \_\_\_\_\_  
 Date: 9/20/05  
 Sampler(s): W.D., JM  
 Start Time: 15:15  
 End Time: \_\_\_\_\_  
 Channel Conditions: \_\_\_\_\_  
 COC Number: \_\_\_\_\_

Site Location: CA 35.3  
 Site Description: Clear Lk Outlet  
 Weather: 65°, Sunny  
 Samples Taken:  Yes  No  
 Sample Time: 9:05  
 DTW Measurement: 5.64

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>15.85</u>	<u>1112</u>	<u>4.7</u>	<u>7.04</u>

Notes: -very little flow  
trickling  
over outlet  
culvert

*Ken Rosenow*  
*(320) 764-2592*

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>								

# Field Form: 2005 Stream Sampling

Client: \_\_\_\_\_  
 Project No.: 0002-75  
 Date: 9/26/05  
 Sampler(s): WB, JN  
 Start Time: 1645  
 End Time: \_\_\_\_\_  
 Channel Conditions: Flowing  
 COC Number: \_\_\_\_\_

Site Location: \_\_\_\_\_  
 Site Description: TD 33.2  
 Weather: 65°, Sunny  
 Samples Taken:  Yes  No  
 Sample Time: ~~8:00~~ 8:30  
 DTW Measurement: ~~4.75~~ 4.31

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>15.13</u>	<u>997</u>	<u>2.51</u>	<u>7.28</u>

25.1%

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 987 cfs

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>								

# Field Form: 2005 Stream Sampling

Client: \_\_\_\_\_  
 Project No.: \_\_\_\_\_  
 Date: 9/26/05  
 Sampler(s): WB JM  
 Start Time: 10:30  
 End Time: \_\_\_\_\_  
 Channel Conditions: Flowing  
 COC Number: \_\_\_\_\_

Site Location: TF 33.2  
 Site Description: \_\_\_\_\_  
 Weather: 65° Sunny  
 Samples Taken:  Yes  No  
 Sample Time: 8:40  
 DTW Measurement: 4.65

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	14.57	1054	2.26	<del>7.06</del>

22.4%

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 0.448 cfs

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								



# Field Form: 2005 Stream Sampling

Client: \_\_\_\_\_  
 Project No.: \_\_\_\_\_  
 Date: 9/20/05  
 Sampler(s): WB JM  
 Start Time: 1615  
 End Time: \_\_\_\_\_  
 Channel Conditions: Flowing  
 COC Number: \_\_\_\_\_

Site Location: TC 33.2  
 Site Description: \_\_\_\_\_  
 Weather: 65° Sunny  
 Samples Taken: Yes No  
 Sample Time: 3:50  
 DTW Measurement: 4.08

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	14.97	944	7.14	7.30

71.0%

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 2.24 cfs

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

# Field Form: 2005 Stream Sampling

Client: \_\_\_\_\_  
 Project No.: \_\_\_\_\_  
 Date: 9/26/05  
 Sampler(s): WB, JM  
 Start Time: 1550  
 End Time: \_\_\_\_\_  
 Channel Conditions: flowing  
 COC Number: \_\_\_\_\_

Site Location: TA 33.2  
 Site Description: \_\_\_\_\_  
 Weather: 05° Sunny  
 Samples Taken:  Yes  No  
 Sample Time: 8:55  
 DTW Measurement: 5.57

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	17.34	1117	4.66	7.21

90.5%

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: 2.437 cfs

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

# Field Form: 2005 Stream Sampling

Client: \_\_\_\_\_  
 Project No.: \_\_\_\_\_  
 Date: 9/26/05  
 Sampler(s): WRB, JM  
 Start Time: 1600  
 End Time: \_\_\_\_\_  
 Channel Conditions: Flowing  
 COC Number: \_\_\_\_\_

Site Location: T B 33.2  
 Site Description: \_\_\_\_\_  
 Weather: 05° Sunny  
 Samples Taken:  Yes  No  
 Sample Time: 9:00  
 DTW Measurement: 6.96

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	14.91	954	7.76	7.09

76.9%

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 0.624 cfs

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft²)	Discharge (Q, ft³/sec)
				20% Depth	80% Depth			
0, (left side)								

# Field Form: 2005 Stream Sampling

Client: \_\_\_\_\_  
Project No.: \_\_\_\_\_  
Date: 9/26/05  
Sampler(s): WB, JM  
Start Time: 1500  
End Time: \_\_\_\_\_  
Channel Conditions: flowing  
COC Number: \_\_\_\_\_

Site Location: T 32.2  
Site Description: \_\_\_\_\_  
Weather: 65° S-11M  
Samples Taken:  Yes  No  
Sample Time: 9:20  
DTW Measurement: 2.98

Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>15.06</u>	<u>600</u>	<u>6.13</u>	<u>7.14</u>

60.990

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: 2.929 cfs

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>								

# Field Form: 2005 Stream Sampling

Client: \_\_\_\_\_  
 Project No.: \_\_\_\_\_  
 Date: 9/20/05  
 Sampler(s): JM, WB  
 Start Time: 14:30  
 End Time: flooding  
 Channel Conditions: \_\_\_\_\_  
 COC Number: \_\_\_\_\_

Site Location: CA 31.8  
 Site Description: \_\_\_\_\_  
 Weather: 050 Sunny  
 Samples Taken:  Yes  No  
 Sample Time: 9:40  
 DTW Measurement: 12.92

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	15.03	56.6	10.46	7.20

104.1

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: 9.013 cfs

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

Field Form: 2005 Stream Sampling

Client: \_\_\_\_\_  
Project No.: \_\_\_\_\_  
Date: 9/26/05  
Sampler(s): WB, JM  
Start Time: 1450  
End Time: \_\_\_\_\_  
Channel Conditions: Flowing  
COC Number: \_\_\_\_\_

Site Location: TA 30.9  
Site Description: \_\_\_\_\_  
Weather: 050 Sunny  
Samples Taken: Yes No  
Sample Time: 9:30  
DTW Measurement: 3.65

Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>16.26</u>	<u>556</u>	<u>9.61</u>	<u>7.25</u>

96.2%

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: .148

Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft²)	Discharge (Q, ft³/sec)
				20% Depth	80% Depth			
0, (left side)								

## Field Form: 2005 Stream Sampling

Client: \_\_\_\_\_  
 Project No.: \_\_\_\_\_  
 Date: 9/26/05  
 Sampler(s): WB JAM  
 Start Time: 14:45  
 End Time: \_\_\_\_\_  
 Channel Conditions: Stagnant  
 COC Number: \_\_\_\_\_

Site Location: \_\_\_\_\_  
 Site Description: T B 30.9  
 Weather: 65° Sunny  
 Samples Taken:  Yes  No  
 Sample Time: 9:35  
 DTW Measurement: 1.71

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>17.71</u>	<u>610</u>	<u>6.50</u>	<u>7.28</u>

66.4

Notes: -very little flow in culvert

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>								

# Field Form: 2005 Stream Sampling

Client: \_\_\_\_\_  
 Project No.: \_\_\_\_\_  
 Date: 9/26/05  
 Sampler(s): WB JM  
 Start Time: 1815  
 End Time: \_\_\_\_\_  
 Channel Conditions: Flowing  
 COC Number: \_\_\_\_\_

Site Location: T 30.7  
 Site Description: \_\_\_\_\_  
 Weather: 65° Sunny  
 Samples Taken: Yes No  
 Sample Time: 9:45  
 DTW Measurement: 2.41

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	14.59	769	10.11	7.19

99.790

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 0.104 cfs

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								



# Field Form: 2005 Stream Sampling

Client: \_\_\_\_\_  
 Project No.: \_\_\_\_\_  
 Date: 9/26/05  
 Sampler(s): W.B. JM  
 Start Time: 1405  
 End Time: \_\_\_\_\_  
 Channel Conditions: Flowing  
 COC Number: \_\_\_\_\_

Site Location: \_\_\_\_\_  
 Site Description: T 30.1  
 Weather: 65° Sunny  
 Samples Taken:  Yes  No  
 Sample Time: 9:50  
 DTW Measurement: 5.66

Notes: \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	14.56	796	10.77	7.14

106.190

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: 0.241 cfs

## Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft²)	Discharge (Q, ft³/sec)
				20% Depth	80% Depth			
0, (left side)								

# Field Form: 2005 Stream Sampling

Client: \_\_\_\_\_  
 Project No.: \_\_\_\_\_  
 Date: 9/20/05  
 Sampler(s): WB, JM  
 Start Time: 13:45  
 End Time: \_\_\_\_\_  
 Channel Conditions: Flowing  
 COC Number: \_\_\_\_\_

Site Location: \_\_\_\_\_  
 Site Description: CR 30.0  
 Weather: 050 Sunny  
 Samples Taken:  Yes  No  
 Sample Time: \_\_\_\_\_  
 DTW Measurement: 8.15

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	14.49	636	9.91	7.01

97.4%

Notes: FD 1  
= Duplicate  
Sample taken

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: 9.636 cfs

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

# Field Form: 2005 Stream Sampling

Client: \_\_\_\_\_  
 Project No.: \_\_\_\_\_  
 Date: 9/26/05  
 Sampler(s): WB, JM  
 Start Time: 13:30  
 End Time: \_\_\_\_\_  
 Channel Conditions: Flowing  
 COC Number: \_\_\_\_\_

Site Location: \_\_\_\_\_  
 Site Description: CA 29.0  
 Weather: 65° Sunny  
 Samples Taken:  Yes  No  
 Sample Time: 10:00  
 DTW Measurement: 14.59

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>14.42</u>	<u>523</u>	<u>10.14</u>	<u>7.16</u>

99.390

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 10.888 cfs

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

+ Recalibrated D.O on YSI

# Field Form: 2005 Stream Sampling

Client: \_\_\_\_\_  
 Project No.: \_\_\_\_\_  
 Date: 9/20/05  
 Sampler(s): JM, WB  
 Start Time: 13:15  
 End Time: \_\_\_\_\_  
 Channel Conditions: Flowing  
 COC Number: \_\_\_\_\_

Site Location: \_\_\_\_\_  
 Site Description: TW 27.45  
 Weather: 05° Sunny  
 Samples Taken:  Yes  No  
 Sample Time: 10:10  
 DTW Measurement: 8.24

Notes: Water is clear

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>15.27</u>	<u>786</u>	<u>10.43</u>	<u>7.23</u>

104.2%

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 1.075

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>								

# Field Form: 2005 Stream Sampling

Client: \_\_\_\_\_  
 Project No.: \_\_\_\_\_  
 Date: 9/20/05  
 Sampler(s): WB, JM  
 Start Time: 1305  
 End Time: \_\_\_\_\_  
 Channel Conditions: flowing  
 COC Number: \_\_\_\_\_

Site Location: \_\_\_\_\_  
 Site Description: TE 22.9  
 Weather: 65° Sunny  
 Samples Taken:  Yes  No  
 Sample Time: 10:15  
 DTW Measurement: 4.14

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	13.08	646	9.66	7.07

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: 1013 cfs

## Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								
			3.1 sec to fill 1000mL bottle					

3.3  
 3.2  
 2.8  
 ---  
 9.3  
 3.1  
 by

# Field Form: 2005 Stream Sampling

Client: \_\_\_\_\_  
 Project No.: \_\_\_\_\_  
 Date: 9/26/05  
 Sampler(s): WB, JM  
 Start Time: 12:45  
 End Time: flowing  
 Channel Conditions: \_\_\_\_\_  
 COC Number: \_\_\_\_\_

Site Location: T 27.3  
 Site Description: ~~MANA~~ Tributary @  
 Weather: 65° Sunny  
 Samples Taken: Yes  No   
 Sample Time: 10:20  
 DTW Measurement: 5.96

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	12.57	664	8.82	6.97
			67.170	

Notes: channel choked with vegetation, water is clear

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

# Field Form: 2005 Stream Sampling

Client: \_\_\_\_\_  
 Project No.: \_\_\_\_\_  
 Date: 9/26/05  
 Sampler(s): WB JM  
 Start Time: 12:20  
 End Time: \_\_\_\_\_  
 Channel Conditions: Flowing  
 COC Number: \_\_\_\_\_

Site Location: MA 29.6 CR 27.2  
 Site Description: State Hwy 15  
 Weather: 65° Sunny  
 Samples Taken:  Yes  No  
 Sample Time: 10:25  
 DTW Measurement: 4.58  
 # FD 2

Notes: -Water is flowing, north culvert blocked by cattail logs

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	15.22	705	<del>6.79</del> 6.79	6.72

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 10.976cfs

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

# Field Form: 2005 Stream Sampling

Client: \_\_\_\_\_  
 Project No.: 0002-75  
 Date: 9/26/05  
 Sampler(s): WB JM  
 Start Time: 10:30  
 End Time: \_\_\_\_\_  
 Channel Conditions: flowing  
 COC Number: \_\_\_\_\_

Site Location: CR25.6  
 Site Description: \_\_\_\_\_  
 Weather: 60° Sunny  
 Samples Taken:  Yes  No  
 Sample Time: 10:30  
 DTW Measurement: 22.74

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	14.29	769	4.28	6.63

4.31 mg/l

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: ~~\_\_\_\_\_~~

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								



## Field Form: 2005 Stream Sampling

Client: CRWD  
 Project No.: \_\_\_\_\_  
 Date: 9/27/05  
 Sampler(s): GN/WB  
 Start Time: 1354  
 End Time: 1406  
 Channel Conditions: Flowing  
 COC Number: 1

Site Location: CR 33.6  
 Site Description: \_\_\_\_\_  
 Weather: clear 78°, 15 mph  
 Samples Taken:  Yes  No  
 Sample Time: 1355  
 DTW Measurement: 6.26

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
CR33.6	14.67	1080	11.62	6.94

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: ~~16270~~  
1454

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								
							Ent WB	
							11/11/05	

# Field Form: 2005 Stream Sampling

Client: <u>CRWD</u>	Site Location: <u>TD33.2</u>
Project No.: _____	Site Description: _____
Date: <u>9/27/05</u>	Weather: <u>Clear, 78°</u>
Sampler(s): <u>GN/W3</u>	Samples Taken: <input checked="" type="radio"/> Yes <input type="radio"/> No
Start Time: <u>14:40</u>	Sample Time: <u>1445</u>
End Time: <u>14:55</u>	
Channel Conditions: <u>Flowing</u>	DTW Measurement: <u>4.32</u>
COC Number: _____	

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
TD33.2	14.55	1024	9.71	7.32

Stage Ht: \_\_\_\_\_      Rated Flow: \_\_\_\_\_      Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								
							Ent WB 11/11/05	

# Field Form: 2005 Stream Sampling

Client: CRWD  
 Project No.: \_\_\_\_\_  
 Date: 9/27/05  
 Sampler(s): G. Nash / W. Boll  
 Start Time: 14:52  
 End Time: 15:05  
 Channel Conditions: Flowing  
 COC Number: \_\_\_\_\_

Site Location: TF33.2  
 Site Description: \_\_\_\_\_  
 Weather: Clear 78°  
 Samples Taken: Yes No  
 Sample Time: 1455  
 DTW Measurement: 4.66

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
<u>TF33.2</u>	<u>14.20</u>	<u>1063</u>	<u>5.63</u>	<u>6.81</u>

Notes: very little flow

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>								

Ent. WB 11/11/05

# Field Form: 2005 Stream Sampling

Client: CRWD

Project No.: \_\_\_\_\_

Date: 9/27/05

Sampler(s): WB/6N

Start Time: 15:08

End Time: 15:22

Channel Conditions: Flowing

COC Number: \_\_\_\_\_

Site Location: TC33.2

Site Description: \_\_\_\_\_

Weather: Clear 78° 15mph

Samples Taken:  Yes  No

Sample Time: 15:08

DTW Measurement: 4.04

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
TC33.2	15.05	957	10.64	7.10

Notes: Blind Dup:  
FDA #  
1509

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

Ent.  
WB  
11/11/05

## Field Form: 2005 Stream Sampling

Client: CRWD  
 Project No.: \_\_\_\_\_  
 Date: 9/27/05  
 Sampler(s): GM/WB  
 Start Time: 1525  
 End Time: 1530  
 Channel Conditions: Flowing  
 COC Number: \_\_\_\_\_

Site Location: TA33.2  
 Site Description: \_\_\_\_\_  
 Weather: Clear 80°  
 Samples Taken:  Yes  No  
 Sample Time: 1529  
 DTW Measurement: 5.59

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
<u>TA33.2</u>	<u>15.12</u>	<u>975</u>	<u>8.56</u>	<u>6.99</u>

Stage Ht: \_\_\_\_\_      Rated Flow: \_\_\_\_\_      Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft²)	Discharge (Q, ft³/sec)
				20% Depth	80% Depth			
0, (left side)								

ENT  
 WB  
 11/11/05

## Field Form: 2005 Stream Sampling

Client: CRWD  
 Project No.: \_\_\_\_\_  
 Date: 9/27/05  
 Sampler(s): GN/WB  
 Start Time: 1535  
 End Time: 15:47  
 Channel Conditions: Flowing  
 COC Number: \_\_\_\_\_

Site Location: TB33.2  
 Site Description: \_\_\_\_\_  
 Weather: Clear 80°  
 Samples Taken:  Yes  No  
 Sample Time: 1540  
 DTW Measurement: 7.03

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
TB33.2	17.42	1029	11.43	7.06

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

ENT  
WB  
11/11/06

# Field Form: 2005 Stream Sampling

Client: CRWD  
 Project No.: \_\_\_\_\_  
 Date: 9/27/05  
 Sampler(s): WB/BN  
 Start Time: 1552  
 End Time: 1600  
 Channel Conditions: Flowing  
 COC Number: \_\_\_\_\_

Site Location: T32.2  
 Site Description: \_\_\_\_\_  
 Weather: Clear 80°F 7-15 mph  
 Samples Taken:  Yes  No  
 Sample Time: 1535  
 DTW Measurement: 3.08

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
<u>T32.2</u>	<u>16.05</u>	<u>619</u>	<u>8.18</u>	<u>7.01</u>

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

*Ent*  
*WB*  
*11/11/05*

## Field Form: 2005 Stream Sampling

Client: CRWD  
 Project No.: \_\_\_\_\_  
 Date: 9/27/05  
 Sampler(s): WB/BN  
 Start Time: 1330  
 End Time: 1350  
 Channel Conditions: Flowing  
 COC Number: \_\_\_\_\_

Site Location: CR31.8  
 Site Description: \_\_\_\_\_  
 Weather: clear  
 Samples Taken:  Yes  No  
 Sample Time: 1335  
 \_\_\_\_\_ (UBOD)  
 DTW Measurement: 12.99

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
<u>CR31.8</u>	<u>15.08</u>	<u>880</u>	<u>9.90</u>	<u>7.19</u>

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 6.770

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft²)	Discharge (Q, ft³/sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>								

ENT  
 WB  
 11/11/05



**Field Form: 2005 Stream Sampling**

Client: CRUD  
Project No.: \_\_\_\_\_  
Date: 9/27/05  
Sampler(s): WB/64  
Start Time: 1605  
End Time: 1615  
Channel Conditions: Flowing  
COC Number: \_\_\_\_\_

Site Location: T30.9  
Site Description: \_\_\_\_\_  
Weather: Clear 80°  
Samples Taken:  Yes  No  
Sample Time: 1610  
DTW Measurement: 3.60

Notes: \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
<del>T610</del>	17.08	888	10.12	7.10

T30.9

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

**Stream Gauging Data**

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

*Ent.*  
*WB*  
*11/11/05*

# Field Form: 2005 Stream Sampling

Client: CRWD Site Location: T# 30.7  
 Project No.: \_\_\_\_\_ Site Description: \_\_\_\_\_  
 Date: 9/27/05 Weather: Clear 75  
 Sampler(s): GN/WB Samples Taken:  Yes No  
 Start Time: 1315 Sample Time: 13:17  
 End Time: 1327  
 Channel Conditions: Flowing DTW Measurement: 2.42  
 COC Number: \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	15.02	869	9.13	7.24

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

## Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

Ent  
WB  
11/11/05

### Field Form: 2005 Stream Sampling

Client: CRWD

Project No.: \_\_\_\_\_

Date: 9/27/05

Sampler(s): WB/EN

Start Time: 1305

End Time: 13:10

Channel Conditions: Flowing

COC Number: \_\_\_\_\_

Site Location: T30.1

Site Description: \_\_\_\_\_

Weather: \_\_\_\_\_

Samples Taken: (Yes) No

Sample Time: 1308

DTW Measurement: 5.64

Notes: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
<u>T30.1</u>	<u>14.83</u>	<u>803</u>	<u>9.46</u>	<u>7.21</u>

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

#### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft²)	Discharge (Q, ft³/sec)
				20% Depth	80% Depth			
0, (left side)								

Ent  
WB  
11/11/05

# Field Form: 2005 Stream Sampling

Client: CRWD  
 Project No.: \_\_\_\_\_  
 Date: 9/27/05  
 Sampler(s): G. Nash/W. Beall  
 Start Time: 12:55  
 End Time: 13:03  
 Channel Conditions: Flowing  
 COC Number: \_\_\_\_\_

Site Location: CR30  
 Site Description: \_\_\_\_\_  
 Weather: clear 75°, 10mph  
 Samples Taken:  Yes  No  
 Sample Time: 13:00  
 DTW Measurement: 8.72

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>13.98</u>	<u>865</u>	<u>9.78</u>	<u>6.98</u>

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 8.818 cfs

## Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>								

Ent WB  
11/11/05

# Field Form: 2005 Stream Sampling

Client: CRWD

Site Location: CR29

Project No.: \_\_\_\_\_

Site Description: \_\_\_\_\_

Date: 9/27/05

Weather: \_\_\_\_\_

Sampler(s): 6-Nash/W. Roll

Samples Taken: \_\_\_\_\_ Yes \_\_\_\_\_ No

Start Time: 12:10

Sample Time: 12:10

End Time: 12:50

Channel Conditions: Flowing

DTW Measurement: 14.69

COC Number: \_\_\_\_\_

Notes: \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
<u>CR29</u>	<u>13.71</u>	<u>850</u>	<u>10.18</u>	<u>6.82</u>

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: 9.682

## Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>								
							<u>Ent</u>	
							<u>W/B</u>	
							<u>11/11/02</u>	

## Field Form: 2005 Stream Sampling

Client: CRWD  
 Project No.: \_\_\_\_\_  
 Date: 9/27  
 Sampler(s): GN/WB  
 Start Time: 1630 1630  
 End Time: 1645  
 Channel Conditions: Flowing  
 COC Number: \_\_\_\_\_

Site Location: TW27.8  
 Site Description: \_\_\_\_\_  
 Weather: \_\_\_\_\_  
 Samples Taken: Yes No  
 Sample Time: 1635  
 DTW Measurement: 8.23 8.23

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
TW27.8	16.69	796	9.3 <del>9.3</del>	7.20
			9.23	

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft²)	Discharge (Q, ft³/sec)
				20% Depth	80% Depth			
0, (left side)								

Ent  
WB  
11/11/05

### Field Form: 2005 Stream Sampling

Client: CRWD  
 Project No.: \_\_\_\_\_  
 Date: 2/27/05  
 Sampler(s): GN/WB  
 Start Time: 1647  
 End Time: 1700  
 Channel Conditions: Flowing  
 COC Number: \_\_\_\_\_

TE27.8

Site Location: TE27.8  
 Site Description: \_\_\_\_\_  
 Weather: Clear 78°  
 Samples Taken:  Yes  No  
 Sample Time: 1650  
 DTW Measurement: 4.12

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
TE27.8	16.25	662	9.05	7.15

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

#### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft²)	Discharge (Q, ft³/sec)
				20% Depth	80% Depth			
0, (left side)								

Ent  
WB  
11/11/05

# Field Form: 2005 Stream Sampling

Client: CRWD Site Location: T27.3  
 Project No.: \_\_\_\_\_ Site Description: \_\_\_\_\_  
 Date: 9/27 Weather: Clear 78°  
 Sampler(s): GN/WB Samples Taken: Yes No  
 Start Time: 1703 Sample Time: 17:05  
 End Time: 17:10  
 Channel Conditions: Flowing DTW Measurement: 6.01  
 COC Number: \_\_\_\_\_

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
T27.3	13.58	706	8.29	6.93

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								



## Field Form: 2005 Stream Sampling

Client: CRWD  
 Project No.: \_\_\_\_\_  
 Date: 9/27/05  
 Sampler(s): G. Nash/w. Roll  
 Start Time: 11:20  
 End Time: \_\_\_\_\_  
 Channel Conditions: Flowing  
 COC Number: \_\_\_\_\_

Site Location: CR 27.2  
 Site Description: \_\_\_\_\_  
 Weather: Clear 75°F, 5 MPH  
 Samples Taken: (Yes) No  
 Sample Time: 11:20  
 DTW Measurement: 4.52

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
CR27.2	<del>14.5</del>	<del>806</del>	5.61	<del>7.01</del>

14.06
788
6.67

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 8.193

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft²)	Discharge (Q, ft³/sec)
				20% Depth	80% Depth			
0, (left side)								
							Ent WB 11/11/05	



## Field Form: 2006 Stream Sampling

Client: CRWD

Site Location: CR 35.3

Project No.: 0002-75

Site Description: \_\_\_\_\_

Date: 04/18/06

Weather: Sunny 65°F, Windy

Sampler(s): WB, JM

Samples Taken: (Yes) No

Start Time: 15:20

Sample Time: 8:54

End Time: \_\_\_\_\_

Channel Conditions: flowing

DTW Measurement: 5.04

COC Number: \_\_\_\_\_

Notes: \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>14.66</u>	<u>756</u>	<u>15.82</u>	<u>6.61</u>

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: 13.996

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>								

# Field Form: 2006 Stream Sampling

Client: CRWD Site Location: CR33, b  
 Project No.: 0002-75 Site Description: \_\_\_\_\_  
 Date: 04/08/06 Weather: Sunny 05°F, Windy  
 Sampler(s): WB, JM Samples Taken:  Yes  No  
 Start Time: 15:40 Sample Time: 9:03  
 End Time: \_\_\_\_\_  
 Channel Conditions: Flowing DTW Measurement: 5:45  
 COC Number: \_\_\_\_\_

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	15.13	660	11.24	6.33

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 16.213

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

# Field Form: 2006 Stream Sampling

Client: CRWD Site Location: TE 33.2  
 Project No.: 0002-75 Site Description: \_\_\_\_\_  
 Date: 04/19/06 Weather: Sunny 69°F, Windy  
 Sampler(s): WB, JM Samples Taken:  Yes  No  
 Start Time: 16:45 Sample Time: 6:20  
 End Time: \_\_\_\_\_  
 Channel Conditions: Flowing DTW Measurement: 2.14  
 COC Number: \_\_\_\_\_

Notes: check DO calibration at end of sampling

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>13.06</u>	<u>970</u>	<u>17.14</u>	<u>6.25</u>

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 1.055 cfs

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>								

## Field Form: 2006 Stream Sampling

Client: <u>CRWD</u>	Site Location: <u>TD 33.2</u>
Project No.: <u>0002-75</u>	Site Description: _____
Date: <u>04/18/06</u>	Weather: <u>Sunny 65°F, Windy</u>
Sampler(s): <u>WB, JM</u>	Samples Taken: <u>(Yes)</u> No
Start Time: <u>16:30</u>	Sample Time: <u>06:25</u>
End Time: _____	_____
Channel Conditions: <u>Flowing</u>	DTW Measurement: <u>4.25</u>
COC Number: _____	_____

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>14.15</u>	<u>1214</u>	<u>13.43</u>	<u>6.33</u>

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 1.71

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

# Field Form: 2006 Stream Sampling

Client:	CRWD	Site Location:	TF33.2
Project No.:	0002-75	Site Description:	
Date:	04/18/06	Weather:	Sunny 65°F, Windy
Sampler(s):	WB, JM	Samples Taken:	Yes <input checked="" type="radio"/> No <input type="radio"/>
Start Time:	10:25	Sample Time:	4:30
End Time:			
Channel Conditions:	Flowing	DTW Measurement:	4.62
COC Number:			

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	17.27	1224	<del>13.49</del>	7.96

13.49

Stage Ht: \_\_\_\_\_
Rated Flow: \_\_\_\_\_
Gauged Flow: 0.740

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft²)	Discharge (Q, ft³/sec)
				20% Depth	80% Depth			
0, (left side)								

## Field Form: 2006 Stream Sampling

Client: CRWD

Project No.: 0002-75

Date: 04/19/06

Sampler(s): WB, JM

Start Time: 16:15

End Time: \_\_\_\_\_

Channel Conditions: flowing

COC Number: \_\_\_\_\_

Site Location: TC 33.2

Site Description: \_\_\_\_\_

Weather: Sunny 65°F

Samples Taken:  Yes  No

Sample Time: 8:40

DTW Measurement: FDI

DTW Measurement: 3.67

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	14.05	1146	11.21	8.25

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: 4.802 cfs

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft²)	Discharge (Q, ft³/sec)
				20% Depth	80% Depth			
0, (left side)								



# Field Form: 2006 Stream Sampling

Client: CRWD

Site Location: TA 33.2

Project No.: 0002-75

Site Description: \_\_\_\_\_

Date: 04/15/06

Weather: Sunny 65°F, Windy

Sampler(s): WB, JM

Samples Taken:  Yes  No

Start Time: 16:00

Sample Time: 8:42

End Time: \_\_\_\_\_

Channel Conditions: Flowing

DTW Measurement: 5.52

COC Number: \_\_\_\_\_

Notes: \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>13.06</u>	<u>1162</u>	<u>12.27</u>	<u>8.03</u>

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: 1.079

## Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft²)	Discharge (Q, ft³/sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>								

# Field Form: 2006 Stream Sampling

Client: CRWD Site Location: T B 33.2  
 Project No.: 0002-75 Site Description: \_\_\_\_\_  
 Date: 04/18/06 Weather: Sunny 65°F, Windy  
 Sampler(s): WB, JM Samples Taken:  Yes  No  
 Start Time: 1350 Sample Time: 05:45  
 End Time: \_\_\_\_\_  
 Channel Conditions: Flowing DTW Measurement: 6.64  
 COC Number: \_\_\_\_\_

Notes: checked calibration  
of DO. Spans 0/9  
(95.0% 8.82 mg/L)

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	15.64	1095	17.36	6.54

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 5.792

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

## Field Form: 2006 Stream Sampling

Client: CRWD

Project No.: 0002-75

Date: 04/08/06

Sampler(s): WB, JM

Start Time: \_\_\_\_\_

End Time: \_\_\_\_\_

Channel Conditions: Flowing

COC Number: \_\_\_\_\_

Site Location: T 32.2

Site Description: \_\_\_\_\_

Weather: Sunny 65°F Windy

Samples Taken:  Yes  No

Sample Time: 09:10

DTW Measurement: 3.02

Notes: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>13.64</u>	<u>467</u>	<u>11.93</u>	<u>5.16</u>

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 1.845

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>								

# Field Form: 2006 Stream Sampling

Client: CRWD Site Location: CA 3/1.45  
 Project No.: 0002-75 Site Description: \_\_\_\_\_  
 Date: 04/19/05 Weather: Sunny 65°F, Windy  
 Sampler(s): WB, JM Samples Taken: (Yes) No  
 Start Time: 14:30 Sample Time: 09:20  
 End Time: \_\_\_\_\_  
 Channel Conditions: Flowing DTW Measurement: 12.25  
 COC Number: \_\_\_\_\_

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	14.34	919	11.56	8.36

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 27.467

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

# Field Form: 2006 Stream Sampling

Client:	CRWD	Site Location:	TB 30.9
Project No.:	0002-75	Site Description:	
Date:	04/19/06	Weather:	Sunny 65°F, Windy
Sampler(s):	WB, JM	Samples Taken:	<input checked="" type="radio"/> Yes <input type="radio"/> No
Start Time:	1500	Sample Time:	9:15
End Time:			
Channel Conditions:		DTW Measurement:	1.44
COC Number:			

Notes: did not gauge flow

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	16.44	1075	12.55	6.22

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

## Field Form: 2006 Stream Sampling

Client: CRWD

Site Location: TA 30.9

Project No.: 0002-75

Site Description: \_\_\_\_\_

Date: 04/18/06

Weather: Sunny 65°F, Windy

Sampler(s): WB, JM

Samples Taken:  Yes  No

Start Time: 14:50

Sample Time: 0918

End Time: \_\_\_\_\_

Channel Conditions: Flowing

DTW Measurement: 3.56

COC Number: \_\_\_\_\_

Notes: \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	16.06	1046	12.46	8.36

126.6%

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: 0.252

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

## Field Form: 2006 Stream Sampling

Client: CRWD

Site Location: ~~T~~ T 30.7

Project No.: 0002-75

Site Description: \_\_\_\_\_

Date: 04/19/06

Weather: Sunny 65°F, Windy

Sampler(s): WB, JM

Samples Taken:  Yes  No

Start Time: 1417

Sample Time: 9:30

End Time: \_\_\_\_\_

Channel Conditions: Flowing

DTW Measurement: 2.42

COC Number: \_\_\_\_\_

Notes: \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	14.22	1112	10.27	6.41

(d.d. 4%)

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: 0.393

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

## Field Form: 2006 Stream Sampling

Client: CRWD

Site Location: T 30.1

Project No.: 0002-75

Site Description: \_\_\_\_\_

Date: 04/19/06

Weather: Sunny 65°F, Windy

Sampler(s): WB, JM

Samples Taken:  Yes  No

Start Time: 1400

Sample Time: 09:32

End Time: \_\_\_\_\_

Channel Conditions: Flowing

DTW Measurement: 5.05

COC Number: \_\_\_\_\_

Notes: \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	12.36	1052	10.59	9.33

99.4%

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: 0.565

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								



# Field Form: 2006 Stream Sampling

Client: <u>CRWD</u>	Site Location: <u>CR30.0</u>
Project No.: <u>0002-75</u>	Site Description: _____
Date: <u>04/16/06</u>	Weather: <u>Sunny 65°F, Windy</u>
Sampler(s): <u>WB, JM</u>	Samples Taken: <input checked="" type="radio"/> Yes <input type="radio"/> No
Start Time: <u>1355</u>	Sample Time: <u>9:35</u>
End Time: _____	<u>FD2</u>
Channel Conditions: <u>Flowing</u>	DTW Measurement: <u>7.36</u>
COC Number: _____	

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>13.21</u>	<u>942</u>	<u>11.29</u>	<u>6.27</u>

Stage Ht: \_\_\_\_\_ Rated Flow: 107.970 Gauged Flow: 266.117

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>								

## Field Form: 2006 Stream Sampling

Client: CRWD Site Location: CA 29.0

Project No.: 0002-75 Site Description: \_\_\_\_\_

Date: 04/19/06 Weather: Sunny 65°F, Windy

Sampler(s): WB, JM Samples Taken: (Yes) No

Start Time: 13:20 Sample Time: 9:42

End Time: \_\_\_\_\_

Channel Conditions: Flowing DTW Measurement: 14.06

COC Number: \_\_\_\_\_

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	12.67	956	11.00	6.27

104.696

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 29.328

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

## Field Form: 2006 Stream Sampling

Client:	CRWD	Site Location:	TW 27.98
Project No.:	0002-75	Site Description:	
Date:	04/19/06	Weather:	Sunny, 65° Windy
Sampler(s):	WB, JM	Samples Taken:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Start Time:	13:10	Sample Time:	9:48
End Time:			
Channel Conditions:	flowing	DTW Measurement:	8.29
COC Number:			

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	14.96	1013	11.61	6.76
			115.490	

Notes: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 1.264

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

# Field Form: 2006 Stream Sampling

Client: CRWD

Site Location: TE 27.6

Project No.: 0002-75

Site Description: \_\_\_\_\_

Date: 04/18/00

Weather: 9-amy 05<sup>0</sup>, Windy

Sampler(s): WB, JM

Samples Taken:  Yes  No

Start Time: 13:00

Sample Time: 9:52

End Time: \_\_\_\_\_

Channel Conditions: Flowing

DTW Measurement: 4.15

COC Number: \_\_\_\_\_

Notes: Very shallow, narrow channel

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>14.39</u>	<u>924</u>	<u>11.53</u>	<u>8.19</u>

113.1%

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: 0.107

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>								

# Field Form: 2006 Stream Sampling

Client: <u>CRWD</u>	Site Location: <u>T27.3</u>
Project No.: <u>0002-75</u>	Site Description: _____
Date: <u>04/19/06</u>	Weather: <u>65°; Sunny; Windy</u>
Sampler(s): <u>WB, JM</u>	Samples Taken: <input checked="" type="radio"/> Yes <input type="radio"/> No
Start Time: <u>1250</u>	Sample Time: <u>9:57</u>
End Time: _____	_____
Channel Conditions: <u>Flowing</u>	DTW Measurement: <u>5.96</u>
COC Number: _____	_____

Notes: Water very clear  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>10.56</u>	<u>1032</u>	<u>14.09</u>	<u>7.91</u>

99.7%

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 0.536 cfs

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft²)	Discharge (Q, ft³/sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>								

## Field Form: 2006 Stream Sampling

Client: CRWD

Site Location: CR 27.2

Project No.: 0002-75

Site Description: \_\_\_\_\_

Date: 8/15/06

Weather: 65° Sunny, Windy

Sampler(s): WB, JM

Samples Taken:  Yes  No

Start Time: 12:00

Sample Time: 10:00

End Time: \_\_\_\_\_

Channel Conditions: Flowing

DTW Measurement: 3.95

COC Number: \_\_\_\_\_

Notes: \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>12.54</u>	<u>956</u>	<u>10.20</u>	<u>7.99</u>

96.10%

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: 36.119

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>								

# Field Form: 2006 Stream Sampling

Client: CRWD

Project No.: 0002-75

Date: 4/18/06

Sampler(s): WB, JM

Start Time: 10:00

End Time: \_\_\_\_\_

Channel Conditions: flowing

COC Number: \_\_\_\_\_

Site Location: CR 25.6

Site Description: Lake Betsy

Weather: 60° Sunny, Windy

Samples Taken: Yes No

Sample Time: 10:10

DTW Measurement: 22.36

Notes: - water is flowing, clear

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>11.47</u>	<u>938</u>	<u>7.34</u>	<u>7.83</u>

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: 37.339

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft²)	Discharge (Q, ft³/sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>								

## Field Form: 2006 Stream Sampling

Client: <u>CRWD</u>	Site Location: <u>CR 35.3</u>
Project No.: <u>0002-75</u>	Site Description: _____
Date: <u>4/19/06</u>	Weather: _____
Sampler(s): <u>WB, JM</u>	Samples Taken: <input checked="" type="radio"/> Yes <input type="radio"/> No
Start Time: <u>11:25</u>	Sample Time: <u>11:30</u>
End Time: _____	<u>Duplicate "FD1"</u>
Channel Conditions: _____	DTW Measurement: <u>5.11</u>
COC Number: _____	

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>12.52</u>	<u>778</u>	<u>13.32</u>	<u>8.56</u>

Notes: → Pumped dye  
 @ 1150  
 - 2002 of dye

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 14,210

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								



# Field Form: 2006 Stream Sampling

Client: CRWD Site Location: CR 33.6  
 Project No.: 0002-75 Site Description: \_\_\_\_\_  
 Date: 04/19/06 Weather: Cloudy, 55°F Windy  
 Sampler(s): WB, JM Samples Taken: Yes No  
 Start Time: 1410 Sample Time: 14:20  
 End Time: \_\_\_\_\_  
 Channel Conditions: Flowing DTW Measurement: 5.49  
 COC Number: \_\_\_\_\_

Notes: \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>12.77</u>	<u>451</u>	<u>11.13</u>	<u>4.34</u>

→ collected UBOD Sample

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: ~~\_\_\_\_\_~~  
15.212

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

# Field Form: 2006 Stream Sampling

Client: CRWD Site Location: T B 33.2  
 Project No.: 0002-75 Site Description: \_\_\_\_\_  
 Date: 4/19/06 Weather: \_\_\_\_\_  
 Sampler(s): WB, JM Samples Taken:  Yes  No  
 Start Time: \_\_\_\_\_ Sample Time: 14:40  
 End Time: \_\_\_\_\_  
 Channel Conditions: \_\_\_\_\_ DTW Measurement: 6.69  
 COC Number: \_\_\_\_\_

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	12.37	1131	16.24	6.46

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

## Field Form: 2006 Stream Sampling

Client: <u>CRWD</u>	Site Location: <u>TA 33.2</u>
Project No.: <u>0002-75</u>	Site Description: _____
Date: <u>02/19/06</u>	Weather: <u>Cloudy 55°F, Windy</u>
Sampler(s): <u>WB, JM</u>	Samples Taken: <input checked="" type="radio"/> Yes <input type="radio"/> No
Start Time: <u>1445</u>	Sample Time: <u>14:50</u>
End Time: _____	
Channel Conditions: <u>Flowing</u>	DTW Measurement: <u>5.56</u>
COC Number: _____	

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	10.73	1710	11.55	7.96

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

# Field Form: 2006 Stream Sampling

Client: CRWD

Site Location: ~~AAA~~ TC 33.2

Project No.: 0002-75

Site Description: \_\_\_\_\_

Date: 4/19/06

Weather: \_\_\_\_\_

Sampler(s): WB, JM

Samples Taken:  Yes  No

Start Time: \_\_\_\_\_

Sample Time: 15:35

End Time: \_\_\_\_\_

FD 2

Channel Conditions: \_\_\_\_\_

DTW Measurement: 3.96

COC Number: \_\_\_\_\_

Notes: \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>11.10</u>	<u>1169</u>	<u>11.69</u>	<u>8.22</u>

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

### Field Form: 2006 Stream Sampling

Client: CRWD

Site Location: 4/19/06 T F 33.2

Project No.: 0002-75

Site Description: \_\_\_\_\_

Date: 4/19/06

Weather: \_\_\_\_\_

Sampler(s): WB, JM

Samples Taken:  Yes  No

Start Time: \_\_\_\_\_

Sample Time: 16:05

End Time: \_\_\_\_\_

Channel Conditions: \_\_\_\_\_

DTW Measurement: 4.62

COC Number: \_\_\_\_\_

Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>10.30</u>	<u>1278</u>	<u>11.66</u>	<u>8.03</u>

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: \_\_\_\_\_

#### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>								

## Field Form: 2006 Stream Sampling

Client: CRWD

Site Location: TE 33:2

Project No.: 0002-75

Site Description: \_\_\_\_\_

Date: 4/19/06

Weather: \_\_\_\_\_

Sampler(s): WB, JM

Samples Taken:  Yes  No

Start Time: \_\_\_\_\_

Sample Time: 16:20

End Time: \_\_\_\_\_

Channel Conditions: \_\_\_\_\_

DTW Measurement: 2.22

COC Number: \_\_\_\_\_

Notes: \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>10.71</u>	<u>992</u>	<u>14.52</u>	<u>8.23</u>

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

## Field Form: 2006 Stream Sampling

Client: CRWD

Site Location: TD33.2

Project No.: 0002-75

Site Description: \_\_\_\_\_

Date: 4/19/06

Weather: \_\_\_\_\_

Sampler(s): WB, JM

Samples Taken: Yes No

Start Time: \_\_\_\_\_

Sample Time: 16:30

End Time: \_\_\_\_\_

Channel Conditions: \_\_\_\_\_

DTW Measurement: 4.28

COC Number: \_\_\_\_\_

Notes: \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>10.67</u>	<u>1259</u>	<u>13.40</u>	<u>8.28</u>

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

## Field Form: 2006 Stream Sampling

Client: CRWD

Site Location: T 32.2

Project No.: 0002-75

Site Description: \_\_\_\_\_

Date: 4/19/06

Weather: \_\_\_\_\_

Sampler(s): WB, JM

Samples Taken: Yes  No

Start Time: 11:10

Sample Time: 11:15

End Time: \_\_\_\_\_

Channel Conditions: Flowing

DTW Measurement: 3.01

COC Number: \_\_\_\_\_

Notes: \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>9.63</u>	<u>897</u>	<u>12.42</u>	<u>8.12</u>

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>								



# Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: 0002-75  
 Date: 4/19/06  
 Sampler(s): WB, JM  
 Start Time: \_\_\_\_\_  
 End Time: \_\_\_\_\_  
 Channel Conditions: \_\_\_\_\_  
 COC Number: \_\_\_\_\_

Site Location: CR 31.8  
 Site Description: Dye Sampling  
 Weather: \_\_\_\_\_  
 Samples Taken: Yes No  
 Sample Time: \_\_\_\_\_  
 DTW Measurement: \_\_\_\_\_

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

Dye Samples

### Stream Gauging Data

Distance from Initial Point (ft)	Time (hr:min)	Concentration (mg/l)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth		
0, (left side)	1400	0.672					<del>###</del>
	1500	0.667					<del>###</del>
	1515	0.643					<del>###</del>
	1530	0.631					<del>###</del>
	1545	0.609					<del>###</del>
	1600	0.774					<del>###</del>
Blank @ 1610 =		0.303					<del>###</del>
	1615	0.7	Faint Dye Visible				
	1620	43.7	Dye Visible				
	1625	605.0	Dye Strong color in entire channel/stream				
	1630	Over?? 133	Dye Bright red in entire channel				
	* 1645	173	Dye Very Bright hard to see btm of channel				
	1700	65.4	Dye does not seem as bright				
	1735	15.3	Dye not visible to naked eye				

Blank @ 1625 = 0.300

\* = by 1640 almost could not see btm of stream, dye very bright-red

# Field Form: 2006 Stream Sampling

Client: CRWD Site Location: TA 30.9  
 Project No.: 0002-75 Site Description: \_\_\_\_\_  
 Date: 4/19/06 Weather: \_\_\_\_\_  
 Sampler(s): WB, JM Samples Taken: Yes No  
 Start Time: 10:50 Sample Time: 10:55  
 End Time: \_\_\_\_\_  
 Channel Conditions: flowing DTW Measurement: ~~3.10~~ 3.59  
 COC Number: \_\_\_\_\_

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>11.06</u>	<u>1147</u>	<u>12.23</u>	<u>8.31</u>

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>								

## Field Form: 2006 Stream Sampling

Client: CRWD

Site Location: CR 31.8

Project No.: 0002-75

Site Description: \_\_\_\_\_

Date: 4/19/06

Weather: Overcast 55°F, Windy

Sampler(s): WB, JM

Samples Taken:  Yes  No

Start Time: 1350

Sample Time: 14:00

End Time: \_\_\_\_\_

Channel Conditions: Flowing

DTW Measurement: 12.49

COC Number: \_\_\_\_\_

Notes: \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	12.53	925	11.74	6.34

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: 26.87

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

## Field Form: 2006 Stream Sampling

Client:	CRWD	Site Location:	T 30.7
Project No.:	0002-75	Site Description:	
Date:	4/19/06	Weather:	
Sampler(s):	WB, JM	Samples Taken:	Yes <input checked="" type="radio"/> No <input type="radio"/>
Start Time:		Sample Time:	13:50
End Time:		DTW Measurement:	2.46
Channel Conditions:			
COC Number:			

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	10.49	1125	11.41	8.45

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

# Field Form: 2006 Stream Sampling

Client: CRWD Site Location: T 30.1

---

Project No.: 0002-75 Site Description: \_\_\_\_\_

Date: 4/19/06 Weather: \_\_\_\_\_

Sampler(s): WB, JM Samples Taken:  Yes  No

Start Time: \_\_\_\_\_ Sample Time: 13:40

End Time: \_\_\_\_\_

Channel Conditions: flowing DTW Measurement: 5.63

COC Number: \_\_\_\_\_

Notes: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>9.89</u>	<u>1059</u>	<u>11.01</u>	<u>8.38</u>

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>								

## Field Form: 2006 Stream Sampling

Client: CRWD Site Location: CR 30.0  
 Project No.: 0002-75 Site Description: \_\_\_\_\_  
 Date: 4/19/06 Weather: \_\_\_\_\_  
 Sampler(s): WB, JM Samples Taken:  Yes  No  
 Start Time: \_\_\_\_\_ Sample Time: 13:25  
 End Time: \_\_\_\_\_ DTW Measurement: 7.43  
 Channel Conditions: \_\_\_\_\_  
 COC Number: \_\_\_\_\_

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>11.97</u>	<u>937</u>	<u>10.95</u>	<u>8.37</u>

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 24.578

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (f/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

# Field Form: 2006 Stream Sampling

Client:	CRWD	Site Location:	CR29.0
Project No.:	0002-75	Site Description:	
Date:	04/19/06	Weather:	
Sampler(s):	WB, JM	Samples Taken:	Yes      No
Start Time:	1715	Sample Time:	
End Time:			
Channel Conditions:	Flowing	DTW Measurement:	
COC Number:			

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

Dye Samples

### Stream Gauging Data

Distance from Initial Point (ft)	<del>Width (ft)</del> Time	<del>Depth (ft)</del> Concentration	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								
Blank	1720	1.15		* no dye visible in stream				
#	1600	1.37						
	1700	1.44						
	1720	1.44						
→ reset timer to collect 1 sample every 20 min; start at 1730								
	* 1730:	not visible @ CR29.0						

# Field Form: 2006 Stream Sampling

Client: CRWD Site Location: CR 29.0  
 Project No.: 0002-75 Site Description: \_\_\_\_\_  
 Date: 4/19/06 Weather: Sunny 55°F, Breezy  
 Sampler(s): WB, JM Samples Taken: Yes No  
 Start Time: 10:25 Sample Time: 10:30  
 End Time: \_\_\_\_\_  
 Channel Conditions: Flowing DTW Measurement: 14.18  
 COC Number: \_\_\_\_\_

Notes: 1035 dumped dye; dosed 24oz.  
 => collected BOD

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	10.74	94%	11.19	6.79

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 29.147

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								
-set ISCO to sample every 20 min Starting at 17:10								



## Field Form: 2006 Stream Sampling

Client: CRWD Site Location: TF 27.8  
 Project No.: 0002-75 Site Description: \_\_\_\_\_  
 Date: 04/18/06 Weather: Sunny 55°F, Breezy  
 Sampler(s): WB, JM Samples Taken:  Yes  No  
 Start Time: 0955 Sample Time: 10:00  
 End Time: \_\_\_\_\_  
 Channel Conditions: Flowing DTW Measurement: 4.13  
 COC Number: \_\_\_\_\_

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
9.75	941	12.87	8.09	

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

## Field Form: 2006 Stream Sampling

Client: <u>CRWD</u>	Site Location: <u>TW 27.6</u>
Project No.: <u>0002-75</u>	Site Description: _____
Date: <u>04/19/06</u>	Weather: <u>Sunny 55°F, Breezy</u>
Sampler(s): <u>WB, JM</u>	Samples Taken: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Start Time: <u><del>10:15</del> 10:05</u>	Sample Time: <u>10:15</u>
End Time: _____	
Channel Conditions: _____	DTW Measurement: <u>9.28</u>
COC Number: _____	

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	9.90	1031	11.83	8.28

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

## Field Form: 2006 Stream Sampling

Client: CRWD Site Location: T27.3  
 Project No.: 0002-75 Site Description: \_\_\_\_\_  
 Date: 04/19/06 Weather: Cloudy 65°F Breezy  
 Sampler(s): WB, JM Samples Taken:  Yes  No  
 Start Time: 0940 Sample Time: 0945  
 End Time: \_\_\_\_\_  
 Channel Conditions: Flowing DTW Measurement: 6.02  
 COC Number: \_\_\_\_\_

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>66.71</u>	<u>1019</u>	<u>9.87</u>	<u>7.67</u>

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>								

# Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: 0002-75  
 Date: 04/06  
 Sampler(s): WB, JM  
 Start Time: 0900  
 End Time: \_\_\_\_\_  
 Channel Conditions: flowing  
 COC Number: \_\_\_\_\_

Site Location: CR 27.2  
 Site Description: \_\_\_\_\_  
 Weather: Sunny 50°F, Breezy  
 Samples Taken:  Yes  No  
 Sample Time: 0910  
 DTW Measurement: 3.97

Notes: Dumped Dye @ 9:10  
1 1/2 cups of dye  
1202.

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	11.50	934	6.43	7.60

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: 34.103

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								
*Reset ISCO @ 13:00 to sample at 30 minute intervals								
			Time	Concentration				
			1305	1.19				
			1335	0.546				
			1405	0.551				
			1435	0.546				
			1505	0.529				
			1535					
			1605	0.525				
			1635					
			1705	0.514				

→ reset isco @ 1635 to collect 1 sample every 1 hr

# Field Form: 2006 Stream Sampling

Client: CRWD Site Location: CR25.6  
 Project No.: 0002-75 Site Description: \_\_\_\_\_  
 Date: 04/19/06 Weather: Sunny, 50°F, light breeze  
 Sampler(s): WB, JM Samples Taken: (Yes) No  
 Start Time: 0600 Sample Time: 0605  
 End Time: \_\_\_\_\_  
 Channel Conditions: flowing DTW Measurement: 22.51  
 COC Number: \_\_\_\_\_

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	11.70	979	7.75	7.54

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 32.624

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft²)	Discharge (Q, ft³/sec)
				20% Depth	80% Depth			
0, (left side)								
* * * * *; had meter on "median" getting very "high" for all other samples.								
-Set ISCO to sample every 20 minutes starting at 8:50								
		Backband 10:00	1.32			Backband 12:45	0.993	* * * * *
		Backband 11:10	1.35					
Reset ISCO to sample every 30 minutes starting @ 13:00								
Time	<del>Concentration</del>			Time	<del>Concentration</del>			Time Concentration
1330		5.64		1300		1.44		1800 1.98
1430		28.3		1400		22.8		
1530		12.3		1500		20.5		
1630		4.20		1600		6.65		
1730		2.34		1700		3.04		

→ reset 1900 to start sampling @ 1640, collecting samples every 1hr. March 27, 2002

## Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: \_\_\_\_\_  
 Date: 5/17  
 Sampler(s): \_\_\_\_\_  
 Start Time: \_\_\_\_\_  
 End Time: \_\_\_\_\_  
 Channel Conditions: \_\_\_\_\_  
 COC Number: \_\_\_\_\_

Site Location: South Clear Lake  
 Site Description: \_\_\_\_\_  
 Weather: \_\_\_\_\_  
 Samples Taken: Yes  No \_\_\_\_\_  
 Sample Time: \_\_\_\_\_  
 DTW Measurement: \_\_\_\_\_

Notes: \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>14.5</u>	<u>460</u>	<u>12.8</u>	<u>510</u>

BM 3<sup>#9</sup>

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: 1.44

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side) 1	<u>3'</u>	<u>1'1"</u>	<u>12</u>			<u>30"</u>		
2		<u>1.1</u>	<u>19</u>					
3		<u>1.1</u>	<u>14</u>					

5-17

Field Form: 2006 Stream Sampling

Client: CRWD

Site Location: North Clear Lake

Project No.:

Site Description: V notch

Date:

Weather:

Sampler(s):

Samples Taken: Yes  No

Start Time:

Sample Time:

End Time:

Channel Conditions:

DTW Measurement:

COC Number:

Notes:

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	14.2	440	4.1	6.60

Stage Ht:

Rated Flow:

Gauged Flow: 2.87 cfs

Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)	3'	1.60		21		30°		
2				27				
3				22				

## Field Form: 2006 Stream Sampling

Client: CRWD

Project No.: \_\_\_\_\_

Date: 5/17/06

Sampler(s): \_\_\_\_\_

Start Time: \_\_\_\_\_

End Time: \_\_\_\_\_

Channel Conditions: \_\_\_\_\_

COC Number: \_\_\_\_\_

Site Location: CR 10.5

Site Description: \_\_\_\_\_

Weather: \_\_\_\_\_

Samples Taken: Yes  No

Sample Time: 800

DTW Measurement: \_\_\_\_\_

Notes: S.G. 12.10

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
<u>1</u>	<u>15.5</u>	<u>420</u>	<u>14.7</u>	<u>540</u>

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: 15.60

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side) 0</u>		<u>1</u>	<u>3</u>	<u>30 sec</u>				
<u>1</u>		<u>2</u>	<u>3</u>					
<u>2</u>		<u>3.2</u>	<u>6</u>					
<u>3</u>		<u>3.5</u>	<u>6</u>					
<u>4</u>		<u>4.2</u>	<u>12</u>					
<u>5</u>		<u>5.1</u>	<u>18</u>					
<u>6</u>		<u>5.2</u>	<u>20</u>					
<u>7</u>		<u>5.0</u>	<u>21</u>					
<u>8</u>		<u>3.0</u>	<u>14</u>					
<u>9</u>		<u>2.5</u>	<u>3</u>					
<u>10</u>		<u>1.0</u>	<u>1</u>					



## Field Form: 2006 Stream Sampling

Client:	CRWD	Site Location:	WROZ
Project No.:		Site Description:	
Date:	51706	Weather:	
Sampler(s):		Samples Taken:	Yes      No
Start Time:		Sample Time:	
End Time:			
Channel Conditions:		DTW Measurement:	12.6
COC Number:			

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
2	13.2	850	12.9	6.10

Stage Ht: \_\_\_\_\_      Rated Flow: \_\_\_\_\_      Gauged Flow: RM 12.6  
8.13 cfs

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)	10'	1.33		5	10	3.0		
2		1.33		20				
4		1.33		24				
6		1.33		18				
8		1.33		19				
10		1.33		18				
				7				

### Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: 0002-75  
 Date: 5/30/06  
 Sampler(s): WB  
 Start Time: 1420  
 End Time: \_\_\_\_\_  
 Channel Conditions: Flowing  
 COC Number: \_\_\_\_\_

Site Location: CR35.3  
 Site Description: Clear Lk Outlet  
 Weather: \_\_\_\_\_  
 Samples Taken: Yes No  
 Sample Time: 1425  
 DTW Measurement: 5.35'

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>24.22</u>	<u>599</u>	<u>11.73</u>	<u>8.82</u>

Gauged Flow: 3.798

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_

#### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft²)	Discharge (Q, ft³/sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>								

Ent 10/10/06

## Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: 0002-75  
 Date: 5/30/06  
 Sampler(s): WB  
 Start Time: 1400  
 End Time: ~~1400~~ 1420  
 Channel Conditions: flowing  
 COC Number: \_\_\_\_\_

Site Location: CR 33.6  
 Site Description: \_\_\_\_\_  
 Weather: 80°  
 Samples Taken:  Yes  No  
 Sample Time: 1405  
 DTW Measurement: 5.84

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	24.30	614	14.08	8.89

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 3.00

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft²)	Discharge (Q, ft³/sec)
				20% Depth	80% Depth			
0, (left side)	0.5	0.60	1.41				.300	.423
1	1	0.60	1.50				.60	<del>1.300</del> .900
2	1	0.60	1.17				.60	<del>1.300</del> .700
3	1	0.50	0.77				.50	<del>1.300</del> .385
4	1	0.46	0.82				.46	<del>1.300</del> .392
5	1	0.26	0.82				.26	.213
6	1	0.12	0.04				.12	.004
<del>7</del> ↓		↓	↓					
8 ↓	3.5	0	0				0	0

Ent  
10/10/06

### Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: 0002-75  
 Date: 5/30/06  
 Sampler(s): WB  
 Start Time: 14:45  
 End Time: \_\_\_\_\_  
 Channel Conditions: Flowing  
 COC Number: \_\_\_\_\_

Site Location: TC 33.2  
 Site Description: \_\_\_\_\_  
 Weather: \_\_\_\_\_  
 Samples Taken:  Yes  No  
 Sample Time: 14:50  
 DTW Measurement: 4.04

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	20.37	1028	11.13	8.27

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 2.757

#### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

# Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: 0002-75  
 Date: 5/30/06  
 Sampler(s): WB  
 Start Time: 15:05  
 End Time: \_\_\_\_\_  
 Channel Conditions: \_\_\_\_\_  
 COC Number: \_\_\_\_\_

Site Location: TB 33.2  
 Site Description: \_\_\_\_\_  
 Weather: \_\_\_\_\_  
 Samples Taken: Yes No  
 Sample Time: 15:10  
 DTW Measurement: 6.94

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>23.5</u>	<u>964</u>	<u>2016</u>	<u>8.63</u>

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 3.472

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft²)	Discharge (Q, ft³/sec)
				20% Depth	80% Depth			
0, (left side)								

Ent WB  
10/10/06

### Field Form: 2006 Stream Sampling

FD1

CR31.8

Client: CRWD  
 Project No.: 0002-75  
 Date: 5/30/06  
 Sampler(s): WB  
 Start Time: 13:20  
 End Time: 13:45  
 Channel Conditions: Flowing  
 COC Number: \_\_\_\_\_

Site Location: \_\_\_\_\_  
 Site Description: \_\_\_\_\_  
 Weather: 80° Sunny  
 Samples Taken:  Yes  No  
 Sample Time: 13:25  
 DTW Measurement: 12.98

Notes: -Duplicate taken

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>21.49</u>	<u>801</u>	<u>10.60</u>	<u>8.40</u>

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 8.356

#### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

Ent 10/10/06  
WB

## Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: 0002-75  
 Date: 5/30/06  
 Sampler(s): WB  
 Start Time: 12:50  
 End Time: 13:10  
 Channel Conditions: Flowing  
 COC Number: \_\_\_\_\_

Site Location: CR 29.0  
 Site Description: \_\_\_\_\_  
 Weather: \_\_\_\_\_  
 Samples Taken: Yes No  
 Sample Time: 12:55  
 DTW Measurement: 14.54

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	23.5	630	10.2	8.96

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 11.092

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

Ent 10/10/06  
WB

### Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: 0002-75  
 Date: 5/30/06  
 Sampler(s): WB  
 Start Time: 12:20  
 End Time: \_\_\_\_\_  
 Channel Conditions: Very little flow  
 COC Number: \_\_\_\_\_

Site Location: CR 27.2  
 Site Description: \_\_\_\_\_  
 Weather: \_\_\_\_\_  
 Samples Taken: Yes No  
 Sample Time: 12:25  
5.06  
 DTW Measurement: 3.66 - upstream

Notes: Curly leaf pondweed very thick in channel

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	23.6	680	8.00	8.24

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 12.058

#### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

*Ent WB  
10/10/06*



# Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: 0002-75  
 Date: 5/30/06  
 Sampler(s): WB  
 Start Time: 11:50  
 End Time: 12:15  
 Channel Conditions: Very little flow  
 COC Number: \_\_\_\_\_

Site Location: CR 25.6  
 Site Description: Lake Betsy Access  
 Weather: \_\_\_\_\_  
 Samples Taken:  Yes  No  
 Sample Time: 11:55  
 DTW Measurement: 21.58

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters <sup>100</sup>				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	7.20	8.47		
	23.32	782	7.56	8.02

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 15.862

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

Ent WB  
10/10/06

## Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: 0002-75  
 Date: 5/30/06  
 Sampler(s): WB  
 Start Time: 11:00  
 End Time: \_\_\_\_\_  
 Channel Conditions: Very little flow  
 COC Number: \_\_\_\_\_

Site Location: CR 19.8  
 Site Description: Clearwater River @ Hwy 55  
 Weather: 75° Sunny  
 Samples Taken:  Yes  No  
 Sample Time: 11:15

DTW Measurement: 11.70

Notes: - Top middle of bridge  
downs from positive side

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>22.30</u>	<u>7.74</u>	<u>9.87</u>	<u>8.36</u>

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>								

## Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: \_\_\_\_\_  
 Date: 6-15-06  
 Sampler(s): WB, KW  
 Start Time: 11:40  
 End Time: \_\_\_\_\_  
 Channel Conditions: \_\_\_\_\_  
 COC Number: \_\_\_\_\_

Site Location: CR 35.3  
 Site Description: \_\_\_\_\_  
 Weather: \_\_\_\_\_  
 Samples Taken:  Yes  No  
 Sample Time: 11:50  
 DTW Measurement: 5.68

Notes: -water is green

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	21.3	4.70		8.99

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 0.661

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

Ent 10/10/06

# Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: \_\_\_\_\_  
 Date: 6/15/06  
 Sampler(s): WB, KW  
 Start Time: 11:00  
 End Time: \_\_\_\_\_  
 Channel Conditions: \_\_\_\_\_  
 COC Number: \_\_\_\_\_

Site Location: CR 33.6  
 Site Description: \_\_\_\_\_  
 Weather: \_\_\_\_\_  
 Samples Taken: Yes No  
 Sample Time: 11:15  
 DTW Measurement: 6.06

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>20.3</u>	<u>530</u>	<u>9.0</u>	<u>8.72</u>

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 0.925

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>								

*Ent WB 10/10/06*

## Field Form: 2006 Stream Sampling

Client: CRWD

Project No.: \_\_\_\_\_

Date: 6/15/06

Sampler(s): WB, KW

Start Time: \_\_\_\_\_

End Time: \_\_\_\_\_

Channel Conditions: \_\_\_\_\_

COC Number: \_\_\_\_\_

Site Location: TC 33.2

Site Description: \_\_\_\_\_

Weather: 75°, Partly Cloudy

Samples Taken:  Yes  No

Sample Time: 12:10

DTW Measurement: 4.28

Notes: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>20.1</u>	<u>450</u>	<u>9.8</u>	<u>8.91</u>

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 0.982

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

Ent WB 10/10/06

# Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: \_\_\_\_\_  
 Date: 6/15/06  
 Sampler(s): WB, KW  
 Start Time: 11:35  
 End Time: \_\_\_\_\_  
 Channel Conditions: \_\_\_\_\_  
 COC Number: \_\_\_\_\_

Site Location: TB 33.2  
 Site Description: \_\_\_\_\_  
 Weather: \_\_\_\_\_  
 Samples Taken:  Yes  No  
 Sample Time: 11:30  
 DTW Measurement: 7.28

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	20.8	860	8.8	8.67

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: 0.874

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

Ent WB 10/10/06

## Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: \_\_\_\_\_  
 Date: 6/15/06  
 Sampler(s): WB/KW  
 Start Time: 10:30  
 End Time: \_\_\_\_\_  
 Channel Conditions: \_\_\_\_\_  
 COC Number: \_\_\_\_\_

Site Location: CR31-8  
 Site Description: \_\_\_\_\_  
 Weather: 75° Partly Cloudy  
 Samples Taken:  Yes  No  
 Sample Time: 10:40  
 DTW Measurement: 13.34

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>19.4</u>	<u>710</u>	<u>8.4</u>	<u>8.19</u>

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 2.745

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>								

WB 10/10/06

## Field Form: 2006 Stream Sampling

Client: CRWD

Project No.: \_\_\_\_\_

Date: 6/15/06

Sampler(s): WB, KW

Start Time: 10:05

End Time: \_\_\_\_\_

Channel Conditions: \_\_\_\_\_

COC Number: \_\_\_\_\_

Site Location: CR29.0

Site Description: \_\_\_\_\_

Weather: \_\_\_\_\_

Samples Taken:  Yes  No

Sample Time: 10:15

DTW Measurement: 14.89

Notes: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>18.5</u>	<u>710</u>	<u>10.2</u>	<u>9.00</u>

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: 3.826

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>								



# Field Form: 2006 Stream Sampling

Client: CRWD

Site Location: CR 27.2

Project No.: \_\_\_\_\_

Site Description: \_\_\_\_\_

Date: 6/15/06

Weather: \_\_\_\_\_

Sampler(s): WB, KW

Samples Taken:  Yes  No

Start Time: 9:40

Sample Time: 9:50

End Time: \_\_\_\_\_

Channel Conditions: Very little flow

DTW Measurement: 5.98

COC Number: \_\_\_\_\_

Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>19.4</u>	<u>7.10</u>	<u>2.8</u>	<u>8.28</u>

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: ~~11.088~~ 0

## Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>								

WB 10/10/06

# Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: \_\_\_\_\_  
 Date: 6/15/06  
 Sampler(s): WB, KW  
 Start Time: 9:05  
 End Time: 9:30  
 Channel Conditions: flowing in center of channel  
 COC Number: \_\_\_\_\_

Site Location: CR 25.6  
 Site Description: Lk Betsy access  
 Weather: 70°, Cloudy  
 Samples Taken:  Yes  No  
 Sample Time: 9:15  
 DTW Measurement: 23' 1" 23.08

Notes: Duplicate (FDI) taken

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	19.6	700	4.8	8.42

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: ~~10.7~~ 5.367 cfs

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

Ent WB 10/10/06

## Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: \_\_\_\_\_  
 Date: 6/15/06  
 Sampler(s): \_\_\_\_\_  
 Start Time: \_\_\_\_\_  
 End Time: \_\_\_\_\_  
 Channel Conditions: \_\_\_\_\_  
 COC Number: \_\_\_\_\_

Site Location: CR 19, 8  
 Site Description: Hwy 55  
 Weather: \_\_\_\_\_  
 Samples Taken:  Yes  No  
 Sample Time: 12:40  
 DTW Measurement: 1202

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>23.8</u>	<u>—</u>	<u>6.7</u>	<u>8.56</u>

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

WB 10/10/06 Entered SWR 8/24/06

## Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: \_\_\_\_\_  
 Date: 62806  
 Sampler(s): KW  
 Start Time: 1220  
 End Time: \_\_\_\_\_  
 Channel Conditions: \_\_\_\_\_  
 COC Number: \_\_\_\_\_

Site Location: \_\_\_\_\_  
 Site Description: CR 35.3  
 Weather: \_\_\_\_\_  
 Samples Taken: Yes  No  
 Sample Time: \_\_\_\_\_  
 DTW Measurement: \_\_\_\_\_

Notes: BM 5.7

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
CR 35.3	24.7	610	11.3	6.93

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: 0.76 cfs

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)	7'	.40	4	30				
		.50	3					
		.50	12					
		.55	3					
		.45	1					

# Field Form: 2006 Stream Sampling

Client: CRWD

Project No.: \_\_\_\_\_

Date: 6 28 06

Sampler(s): \_\_\_\_\_

Start Time: 1109

End Time: \_\_\_\_\_

Channel Conditions: \_\_\_\_\_

COC Number: \_\_\_\_\_

Site Location: CR33.6

Site Description: \_\_\_\_\_

Weather: \_\_\_\_\_

Samples Taken: Yes  No

Sample Time: \_\_\_\_\_

DTW Measurement: \_\_\_\_\_

Notes:

BM 6.4

\_\_\_\_\_

\_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
<u>CR33.6</u>	<u>21.2</u>	<u>500</u>	<del>6.5</del>	<u>6.85</u>

11.2

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: 0.15 cfs

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>	<u>8.0</u>	<u>2</u>	<u>0.16</u>	<u>0</u>	<u>30</u>			
		<u>2</u>	<u>0.16</u>	<u>1</u>				
		<u>4</u>	<u>0.33</u>	<u>3</u>				
		<u>6</u>	<u>0.50</u>	<u>2</u>				

# Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: \_\_\_\_\_  
 Date: 62806  
 Sampler(s): \_\_\_\_\_  
 Start Time: 1240  
 End Time: \_\_\_\_\_  
 Channel Conditions: \_\_\_\_\_  
 COC Number: \_\_\_\_\_

Site Location: \_\_\_\_\_  
 Site Description: TBC 33.2  
 Weather: \_\_\_\_\_  
 Samples Taken: Yes No  
 Sample Time: \_\_\_\_\_  
 DTW Measurement: \_\_\_\_\_

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
<u>TBC 33.2</u>	<u>19.2</u>	<u>420</u>	<u>12.2</u>	<u>6.73</u>

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: 0.25 cfs

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>	<u>6'</u>	<u>.30</u>	<u>2</u>	<u>30°</u>				
		<u>.52</u>	<u>4</u>					
		<u>.41</u>	<u>1</u>					

## Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: \_\_\_\_\_  
 Date: 6/28/06  
 Sampler(s): KW  
 Start Time: 1150  
 End Time: \_\_\_\_\_  
 Channel Conditions: \_\_\_\_\_  
 COC Number: \_\_\_\_\_

Site Location: TB 33.2  
 Site Description: \_\_\_\_\_  
 Weather: \_\_\_\_\_  
 Samples Taken: Yes  No   
 Sample Time: \_\_\_\_\_  
 DTW Measurement: \_\_\_\_\_

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
TB 33.2	6.2	610	11.9	6.91

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 0.72 cfs

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)	12'	0.40	1	30°				
		.55	2					
		.50	8					
		.30	9					
		.25	4					
		.20	1					

## Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: \_\_\_\_\_  
 Date: 6 28 06  
 Sampler(s): Kw  
 Start Time: 1040  
 End Time: \_\_\_\_\_  
 Channel Conditions: \_\_\_\_\_  
 COC Number: \_\_\_\_\_

Site Location: \_\_\_\_\_  
 Site Description: CR 31.8  
 Weather: \_\_\_\_\_  
 Samples Taken: Yes  No   
 Sample Time: 1040  
 DTW Measurement: \_\_\_\_\_

Notes: BM 13.8

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
<u>CR 31.8</u>	<u>19.9</u>	<u>7.10</u>	<u>10.6</u>	<u>6.87</u>

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 1.38 cfs

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>	<u>10<sup>ft</sup></u>	<u>.50</u>	<u>5</u>	<u>30<sup>o</sup></u>				
		<u>.50</u>	<u>10</u>					
		<u>5.5</u>	<u>5.5</u>					
		<u>.60</u>	<u>5</u>					
		<u>4.5</u>	<u>3</u>					
		<u>3.0</u>	<u>1</u>					



## Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: \_\_\_\_\_  
 Date: 8/28/06  
 Sampler(s): K. Webb  
 Start Time: 10:20  
 End Time: \_\_\_\_\_  
 Channel Conditions: \_\_\_\_\_  
 COC Number: \_\_\_\_\_

Site Location: \_\_\_\_\_  
 Site Description: CR 29.0  
 Weather: Sunny 75°  
 Samples Taken: Yes  No   
 Sample Time: \_\_\_\_\_  
 DTW Measurement: \_\_\_\_\_

Notes: BM 15.4  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
<u>CR29.0</u>	<u>20.2</u>	<u>680</u>	<u>9.9</u>	<u>7.56</u>

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 2.99 cfs

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>	<u>10'</u>	<u>0.5</u>	<u>15</u>	<u>30°</u>				
		<u>0.8</u>	<u>16</u>					
		<u>0.5</u>	<u>18</u>					
		<u>0.8</u>	<u>15</u>					
		<u>0.4</u>	<u>11</u>					

## Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: \_\_\_\_\_  
 Date: 62806  
 Sampler(s): \_\_\_\_\_  
 Start Time: 940  
 End Time: \_\_\_\_\_  
 Channel Conditions: \_\_\_\_\_  
 COC Number: \_\_\_\_\_

Site Location: CR 27.2  
 Site Description: \_\_\_\_\_  
 Weather: Sunny  
 Samples Taken: Yes  No \_\_\_\_\_  
 Sample Time: \_\_\_\_\_  
 DTW Measurement: \_\_\_\_\_

Notes: Bm 6.80  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
<u>CR27.2</u>	<u>20.8</u>	<u>660</u>	<u>6.8</u>	<u>8.29</u>

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>	<u>To weedy</u>							

# Field Form: 2006 Stream Sampling

Client: CRWD

Project No.: \_\_\_\_\_

Date: 6 28 06

Sampler(s): KW

Start Time: \_\_\_\_\_

End Time: \_\_\_\_\_

Channel Conditions: \_\_\_\_\_

COC Number: \_\_\_\_\_

Site Location: CR25.6

Site Description: \_\_\_\_\_

Weather: Sunny 75°

Samples Taken: Yes  No

Sample Time: 900

DTW Measurement: \_\_\_\_\_

Notes: BM 23.2

\_\_\_\_\_

\_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
<u>CR25.6</u>	<u>19.7</u>	<u>670</u>	<u>4.2</u>	<u>8.44</u>

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: Not Gauged

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>		<u>NO BOOTS</u>						

### Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: \_\_\_\_\_  
 Date: 6/28/06  
 Sampler(s): \_\_\_\_\_  
 Start Time: 1:10  
 End Time: \_\_\_\_\_  
 Channel Conditions: \_\_\_\_\_  
 COC Number: \_\_\_\_\_

Site Location: \_\_\_\_\_  
 Site Description: HWP 55  
 Weather: \_\_\_\_\_  
 Samples Taken: Yes No  
 Sample Time: \_\_\_\_\_  
 DTW Measurement: \_\_\_\_\_

Notes: BM 12.2  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
<u>HWP 55</u>	<u>21.4</u>	<u>510</u>	<u>11.4</u>	<u>6.68</u>

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

#### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>								

Ent  
WD

## Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: 0002-75  
 Date: 12-Jul-06  
 Sampler(s): WB  
 Start Time: 10:00  
 End Time: 10:05  
 Channel Conditions: No Water in Channel  
 COC Number: \_\_\_\_\_

Site Location: CR 35.3  
 Site Description: Clear Lake Outlet  
 Weather: \_\_\_\_\_  
 Samples Taken: Yes  No   
 Sample Time: —  
 DTW Measurement: —

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

*Ent WSD  
10/10/06*

## Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: 0002-75  
 Date: 12-Jul-06  
 Sampler(s): WB  
 Start Time: 10:05  
 End Time: 10:20  
 Channel Conditions: Flowing  
 COC Number: \_\_\_\_\_

Site Location: CR 33.6  
 Site Description: \_\_\_\_\_  
 Weather: Sunny  
 Samples Taken:  Yes  No  
 Sample Time: 10:15  
 DTW Measurement: 0.11

Notes: - Very small amount of flow in channel

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>19.31</u>	<u>1363</u>	<u>5.01</u>	<u>7.19</u>

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: ≈ 0.004 cfs

*WB*  
*10/10/06*

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

*WB 10/10/06*

### Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: 0002-75  
 Date: 12-Jul-06  
 Sampler(s): WB  
 Start Time: 9:30  
 End Time: 9:35  
 Channel Conditions: Not flowing  
 COC Number: \_\_\_\_\_

Site Location: TC 33.2  
 Site Description: \_\_\_\_\_  
 Weather: 75°, ~~Cloud~~ Sunny  
 Samples Taken: Yes  No   
 Sample Time: \_\_\_\_\_  
 DTW Measurement: 4.52

Notes: Water is  
Stagnant  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>20.55</u>	<u>954</u>	<u>5.90</u>	<u>7.52</u>

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

#### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>								

Ent WB  
10/10/06

## Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: 0002-75  
 Date: 12-Jul-06  
 Sampler(s): WB  
 Start Time: 9:45  
 End Time: 9:50  
 Channel Conditions: No Flow  
 COC Number: \_\_\_\_\_

Site Location: TB 33.2  
 Site Description: \_\_\_\_\_  
 Weather: \_\_\_\_\_  
 Samples Taken: Yes  No   
 Sample Time: \_\_\_\_\_  
 DTW Measurement: 7.56

Notes: -very little water in channel

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>21.67</u>	<u>942</u>	<u>5.07</u>	<u>7.86</u>

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

*Ent WB  
TMD 10/10/06*



# Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: 0002-75  
 Date: 12-Jul-06  
 Sampler(s): WB  
 Start Time: 10:35  
 End Time: 10:55  
 Channel Conditions: flowing  
 COC Number: \_\_\_\_\_

Site Location: CR 31.8  
 Site Description: \_\_\_\_\_  
 Weather: 80° Sunny  
 Samples Taken:  Yes  No  
 Sample Time: 10:45  
 DTW Measurement: 13.78

*-Bubbler is below water line*

Notes: very little water in channel

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>21.03</u>	<u>736</u>	<u>5.91</u>	<u>7.90</u>

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: 0.116 cfs

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>								

*Ent WB 10/10/06*

## Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: 0002-75  
 Date: 12-Jul-06  
 Sampler(s): WB  
 Start Time: 11:00  
 End Time: 11:25  
 Channel Conditions: flowing  
 COC Number: \_\_\_\_\_

Site Location: CR 29.0  
 Site Description: \_\_\_\_\_  
 Weather: 80°, Sunny  
 Samples Taken:  Yes  No  
 Sample Time: 11:10 FDI  
 DTW Measurement: 15.38

Notes: -very little flow in channel

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>23.42</u>	<u>826</u>	<u>7.81</u>	<u>8.11</u>

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: ≈ 0.50 cfs

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>								

Exit WB  
10/10/06

# Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: 0002-75  
 Date: 12-Jul-06  
 Sampler(s): WB  
 Start Time: 11:40  
 End Time: 11:50  
 Channel Conditions: No Flow  
 COC Number: \_\_\_\_\_

Site Location: ~~CR27.2~~ CR27.2  
 Site Description: \_\_\_\_\_  
 Weather: 80°, Sunny  
 Samples Taken: Yes  No   
 Sample Time: \_\_\_\_\_  
 DTW Measurement: 6.85 us  
5.35 ds

Notes: - Channel is  
 not flowing  
 - duckweed on  
 surface and  
 choked with veg.

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>24.89</u>	<u>811</u>	<u>0.84</u>	<u>7.77</u>

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>								

Ent WB  
 10/10/06

## Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: 0002-75  
 Date: 12-Jul-06  
 Sampler(s): WB  
 Start Time: 12:00  
 End Time: 12:30  
 Channel Conditions: flowing  
 COC Number: \_\_\_\_\_

Site Location: CR 25.6  
 Site Description: \_\_\_\_\_  
 Weather: 80°, Sunny  
 Samples Taken:  Yes  No  
 Sample Time: 12:10  
 DTW Measurement: 23.65

Notes: -very little flow backflow from lake

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>23.21</u>	<u>822</u>	<u>4.48</u>	<u>7.79</u>

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: -0.

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>								

Ent WB  
10/10/06

## Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: 0002-75  
 Date: 12-Jul-06  
 Sampler(s): WB  
 Start Time: 12:45  
 End Time: 13:05  
 Channel Conditions: Flowing  
 COC Number: \_\_\_\_\_

Site Location: CR 19.8  
 Site Description: Hwy 55  
 Weather: \_\_\_\_\_  
 Samples Taken:  Yes  No  
 Sample Time: 12:50  
 DTW Measurement: 12.10

Notes: - very little flow  
- thick vegetation in channel

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>24.46</u>	<u>637</u>	<u>4.78</u>	<u>8.06</u>

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

## Field Form: 2006 Stream Sampling

Client: CRWD

Project No.: \_\_\_\_\_

Date: 7/3/06

Sampler(s): \_\_\_\_\_

Start Time: 100

End Time: \_\_\_\_\_

Channel Conditions: \_\_\_\_\_

COC Number: \_\_\_\_\_

Site Location: South Clear Lake  
Nessler

Site Description: \_\_\_\_\_

Weather: \_\_\_\_\_

Samples Taken:  Yes  No

Sample Time: \_\_\_\_\_

DTW Measurement: \_\_\_\_\_

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
1	28.0	410	15.2	6.30

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: 0.02 cfs

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)	<del>0.5</del> 1'0"	<del>0.5</del> 2"	5"		30 sec			

## Field Form: 2006 Stream Sampling

Client: CRWD

Project No.: \_\_\_\_\_

Date: 8/3/06

Sampler(s): \_\_\_\_\_

Start Time: \_\_\_\_\_

End Time: \_\_\_\_\_

Channel Conditions: \_\_\_\_\_

COC Number: \_\_\_\_\_

Site Location: North Clear Lake

Site Description: INLET at V NOTCH

Weather: \_\_\_\_\_

Samples Taken: Yes  No

Sample Time: \_\_\_\_\_

DTW Measurement: \_\_\_\_\_

Notes: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
1				

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

Dry

## Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: \_\_\_\_\_  
 Date: 7 13 06  
 Sampler(s): \_\_\_\_\_  
 Start Time: 430  
 End Time: \_\_\_\_\_  
 Channel Conditions: \_\_\_\_\_  
 COC Number: \_\_\_\_\_

Site Location: CR105  
 Site Description: \_\_\_\_\_  
 Weather: \_\_\_\_\_  
 Samples Taken: Yes  No   
 Sample Time: \_\_\_\_\_  
 DTW Measurement: \_\_\_\_\_

Notes: \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
<u>6</u>	<u>30.9</u>	<u>410</u>	<u>169</u>	<u>4.94</u>

SG 10:85

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>								

To weedy To Flow Reed



## Field Form: 2006 Stream Sampling

Client: CRWD

Project No.: \_\_\_\_\_

Date: 7 13 06

Sampler(s): \_\_\_\_\_

Start Time: 400

End Time: \_\_\_\_\_

Channel Conditions: \_\_\_\_\_

COC Number: \_\_\_\_\_

Site Location: WR02

Site Description: \_\_\_\_\_

Weather: \_\_\_\_\_

Samples Taken: Yes  No

Sample Time: \_\_\_\_\_

DTW Measurement: \_\_\_\_\_

Notes: B.M 13.6

\_\_\_\_\_

\_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
<u>5</u>	<u>28.5</u>	<u>420</u>	<u>14.2</u>	<u>5.10</u>

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: 0.34 cfs

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>	<u>10'</u>	<u>4" .33</u>		<u>2</u>		<u>30</u>		
<u>2</u>		<u>.33</u>		<u>3</u>				
<u>4</u>		<u>.33</u>		<u>2</u>				
<u>6</u>		<u>.33</u>		<u>2</u>				
<u>8</u>		<u>.33</u>		<u>2</u>				
<u>10</u>		<u>.33</u>		<u>1</u>				

## Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: 0002-75  
 Date: 7/26/06  
 Sampler(s): MLC  
 Start Time: 12:05  
 End Time: ✓  
 Channel Conditions: \_\_\_\_\_  
 COC Number: \_\_\_\_\_

Site Location: R-35.3  
 Site Description: \_\_\_\_\_  
 Weather: 80°  
 Samples Taken: Yes  No   
 Sample Time: \_\_\_\_\_  
 DTW Measurement: no water

Notes: no water at all - Dg

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
/				

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

# Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: 0002-75  
 Date: 8-26-06  
 Sampler(s): ML  
 Start Time: 1150  
 End Time: —  
 Channel Conditions: \_\_\_\_\_  
 COC Number: \_\_\_\_\_

Site Location: 33.6  
 Site Description: \_\_\_\_\_  
 Weather: Sun 89°  
 Samples Taken: Yes  No   
 Sample Time: —  
 DTW Measurement: no water

Notes: Test a couple  
separate pool of  
water.

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

## Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: 0002-75  
 Date: 7.26.06  
 Sampler(s): NLC  
 Start Time: \_\_\_\_\_  
 End Time: \_\_\_\_\_  
 Channel Conditions: \_\_\_\_\_  
 COC Number: \_\_\_\_\_

Site Location: TC 33.2  
 Site Description: \_\_\_\_\_  
 Weather: 88°  
 Samples Taken: Yes  No   
 Sample Time: \_\_\_\_\_  
 DTW Measurement: 6.9

Notes: Veg in Area  
water on no flow -  
no sample taken  
b/c no flow.  
Stagnant

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

# Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: 0002-75  
 Date: 7.26-04  
 Sampler(s): WVO  
 Start Time: 12:00  
 End Time: —  
 Channel Conditions: dry  
 COC Number: —

Site Location: TB 33.2  
 Site Description: Dry stream  
 Weather: 83°  
 Samples Taken: Yes  No   
 Sample Time: —  
 DTW Measurement: no current cause no flow.

Notes: Just a pool  
of non-flowing  
water, both ways  
up/down stream. Rec  
is no water at all

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)

Stage Ht: —      Rated Flow: —      Gauged Flow: —

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft²)	Discharge (Q, ft³/sec)
				20% Depth	80% Depth			
0, (left side)								

## Field Form: 2006 Stream Sampling

Client: CRWD Site Location: PR 31.8  
 Project No.: 0002-75 Site Description: \_\_\_\_\_  
 Date: 7.26.06 Weather: sun 90°  
 Sampler(s): NIC Samples Taken:  Yes  No  
 Start Time: \_\_\_\_\_ Sample Time: 11:30  
 End Time: \_\_\_\_\_  
 Channel Conditions: flow (sm amount) DTW Measurement: 13.76  
 COC Number: \_\_\_\_\_

Notes: low flow  
out flow

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
31.8	21.65	727	6.98	8.14

Stage Ht: 17.76 Rated Flow: \_\_\_\_\_ Gauged Flow: 0.087

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

# Field Form: 2006 Stream Sampling

Client: CRWD Site Location: CR. 29.0  
 Project No.: 0002-75 Site Description: \_\_\_\_\_  
 Date: 7.26.06 Weather: Sunny 85°  
 Sampler(s): NIL Samples Taken:  Yes No  
 Start Time: \_\_\_\_\_ Sample Time: 1040  
 End Time: \_\_\_\_\_  
 Channel Conditions: clearing flow DTW Measurement: 15.46  
 COC Number: \_\_\_\_\_

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
CR 29.0	22.96	708	7.36	8.11

Stage Ht: 15.46 Rated Flow: \_\_\_\_\_ Gauged Flow: 1.078

## Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

## Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: 0002-75  
 Date: 7-26-06  
 Sampler(s): NIL  
 Start Time: 1000  
 End Time: 1225  
 Channel Conditions: W  
 COC Number: \_\_\_\_\_

Site Location: CR 27.2  
 Site Description: murky sky water ~  
 Weather: 82° sunny  
 Samples Taken: (Yes) No  
 Sample Time: 1015  
 DTW Measurement: 5.48 6.98 us

Notes: stagnant water  
lots of water  
but no flow  
up stagnant

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>23.81</u>	<u>678</u>	<u>1.85</u>	<u>7.34</u>

Stage Ht: 5.48      Rated Flow: \_\_\_\_\_      Gauged Flow: no flow

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>								



## Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: 0002-75  
 Date: 7-21-06  
 Sampler(s): NLC  
 Start Time: 9:15  
 End Time: 9:45  
 Channel Conditions: flowing  
 COC Number: \_\_\_\_\_

Site Location: CR 25.6  
 Site Description: \_\_\_\_\_  
 Weather: Sunny 80°  
 Samples Taken:  Yes  No  
 Sample Time: 4:30  
 DTW Measurement: 22.95

Notes: water not flowing  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
CR 25.6	22.30	710	2.56	7.99

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: no flow/shydet

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

## Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: \_\_\_\_\_  
 Date: 82304  
 Sampler(s): \_\_\_\_\_  
 Start Time: 1235  
 End Time: \_\_\_\_\_  
 Channel Conditions: \_\_\_\_\_  
 COC Number: \_\_\_\_\_

Site Location: CR 31.8  
 Site Description: \_\_\_\_\_  
 Weather: \_\_\_\_\_  
 Samples Taken: Yes  No \_\_\_\_\_  
 Sample Time: \_\_\_\_\_  
 DTW Measurement: \_\_\_\_\_

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
2	22.09	510	11	6.64

Stage Ht: BM 13.9

Rated Flow: \_\_\_\_\_

Gauged Flow: 0.18 cfs

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)	8'	2' 0.16	1			3.0'		
2		3" 0.25	3					
4		2" 0.16	5					
6		2" 0.16	3					
8		1" 0.08	1					

# Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: \_\_\_\_\_  
 Date: 8/23/06  
 Sampler(s): Ken Witten  
 Start Time: 10:30  
 End Time: \_\_\_\_\_  
 Channel Conditions: \_\_\_\_\_  
 COC Number: \_\_\_\_\_

Site Location: CR 29.0  
 Site Description: \_\_\_\_\_  
 Weather: \_\_\_\_\_  
 Samples Taken: Yes  No   
 Sample Time: \_\_\_\_\_  
 DTW Measurement: \_\_\_\_\_

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
1	23.4	500	12.5	6.30

Stage Ht: BM 15.7      Rated Flow: \_\_\_\_\_      Gauged Flow: 0.32 cfs

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								
0	6'	2'	0.16	1.	30"			
2		3'	0.25	2				
4		6'	0.50	2				
6		5'	0.42	1				

## Field Form: 2006 Stream Sampling

Client: CRWD

Project No.: \_\_\_\_\_

Date: 82806

Sampler(s): \_\_\_\_\_

Start Time: \_\_\_\_\_

End Time: \_\_\_\_\_

Channel Conditions: \_\_\_\_\_

COC Number: \_\_\_\_\_

Site Location: South Clear Lake

Site Description: Inlet at Nessler

Weather: \_\_\_\_\_

Samples Taken: Yes  No

Sample Time: \_\_\_\_\_

DTW Measurement: \_\_\_\_\_

Notes: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

## Field Form: 2006 Stream Sampling

Client: CRWD

Project No.: \_\_\_\_\_

Date: 8/28/06

Sampler(s): \_\_\_\_\_

Start Time: \_\_\_\_\_

End Time: \_\_\_\_\_

Channel Conditions: \_\_\_\_\_

COC Number: \_\_\_\_\_

Site Location: North Clear Lake

Site Description: Inlet at V Notch

Weather: \_\_\_\_\_

Samples Taken: Yes No

Sample Time: \_\_\_\_\_

DTW Measurement: \_\_\_\_\_

Notes: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

## Field Form: 2006 Stream Sampling

Client: CRWD

Project No.: \_\_\_\_\_

Date: 8 28 06

Sampler(s): \_\_\_\_\_

Start Time: 11 45

End Time: \_\_\_\_\_

Channel Conditions: \_\_\_\_\_

COC Number: \_\_\_\_\_

Site Location: CR10.5

Site Description: \_\_\_\_\_

Weather: \_\_\_\_\_

Samples Taken: Yes  No

Sample Time: \_\_\_\_\_

DTW Measurement: \_\_\_\_\_

Notes: SG 10.95

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
<u>2</u>	<u>22.5</u>	<u>40.2</u>	<u>9.2</u>	<u>6.10</u>

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>								

# Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: \_\_\_\_\_  
 Date: 3/27/06  
 Sampler(s): Km Witt  
 Start Time: 1100  
 End Time: \_\_\_\_\_  
 Channel Conditions: \_\_\_\_\_  
 COC Number: \_\_\_\_\_

Site Location: WRO.2  
 Site Description: \_\_\_\_\_  
 Weather: \_\_\_\_\_  
 Samples Taken: Yes  No   
 Sample Time: \_\_\_\_\_  
 DTW Measurement: \_\_\_\_\_

Notes: BM 13.7

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
1	18.2	970	8.2	6.11

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: 0.23 cfs

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side) 2	10'	0.3"	3			30°		
3			2					
4			1					
5			3					
6			2					
7			2					
8			2					
9			1					
10			0					

# Field Form: 2006 Stream Sampling

Client: CRWD

Project No.: \_\_\_\_\_

Date: 9/25/06

Sampler(s): KW

Start Time: 9:00

End Time: \_\_\_\_\_

Channel Conditions: \_\_\_\_\_

COC Number: \_\_\_\_\_

Site Location: CR 25.6

Site Description: \_\_\_\_\_

Weather: Sunny 52°

Samples Taken: Yes  No

Sample Time: \_\_\_\_\_

DTW Measurement: \_\_\_\_\_

Notes: BM 22'9

\_\_\_\_\_

\_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
1	11.4	560	6.2	5.81

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								
		NO BOOTS						



## Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: @  
 Date: 92506  
 Sampler(s): KW  
 Start Time: \_\_\_\_\_  
 End Time: \_\_\_\_\_  
 Channel Conditions: \_\_\_\_\_  
 COC Number: \_\_\_\_\_

Site Location: \_\_\_\_\_  
 Site Description: CR 27.2  
 Weather: \_\_\_\_\_  
 Samples Taken: Yes  No   
 Sample Time: 10:00  
 DTW Measurement: \_\_\_\_\_

Notes: BM 6'0

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
<u>2</u>	<u>11.2</u>		<u>7.5</u>	<u>5.61</u>

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 10.33

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft²)	Discharge (Q, ft³/sec)
				20% Depth	80% Depth			
0, (left side)	<u>20'</u>	<u>4'0</u>				<u>30</u>		
<u>1</u>	<u>2</u>		<u>2</u>					
<u>2</u>	<u>4</u>		<u>3</u>					
<u>3</u>	<u>6</u>		<u>4</u>					
<u>4</u>	<u>8</u>		<u>4</u>					
<u>5</u>	<u>10</u>		<u>5</u>					
<u>6</u>	<u>12</u>		<u>2</u>					
<u>7</u>	<u>14</u>		<u>2</u>					
<u>8</u>	<u>16</u>		<u>1</u>					
<u>9</u>	<u>18</u>		<u>5</u>					
<u>10</u>	<u>20</u>		<u>7</u>					

} Mtd slowing flow

## Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: \_\_\_\_\_  
 Date: 9.25.06  
 Sampler(s): KW  
 Start Time: \_\_\_\_\_  
 End Time: \_\_\_\_\_  
 Channel Conditions: \_\_\_\_\_  
 COC Number: \_\_\_\_\_

Site Location: \_\_\_\_\_  
 Site Description: CR29.0  
 Weather: \_\_\_\_\_  
 Samples Taken: Yes  No \_\_\_\_\_  
 Sample Time: \_\_\_\_\_  
 DTW Measurement: F.T.

Notes: BM 14.7

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
<u>3</u>	<u>11.3</u>	<u>520</u>	<u>10.2</u>	<u>5.67</u>

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 7.63

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft²)	Discharge (Q, ft³/sec)
				20% Depth	80% Depth			
<u>2 0, (left side)</u>	<u>14"</u>	<u>0.6"</u>	<u>2</u>			<u>30</u>		
<u>4</u>		<u>1.3</u>	<u>8</u>					
<u>6</u>		<u>1.6</u>	<u>10</u>					
<u>8</u>		<u>1.9</u>	<u>17</u>					
<u>10</u>		<u>1.8</u>	<u>15</u>					
<u>12</u>		<u>1.1</u>	<u>10</u>					
<u>14</u>		<u>0.5</u>	<u>9</u>					

## Field Form: 2006 Stream Sampling

Client: CRWD

Project No.: \_\_\_\_\_

Date: 9/25/06

Sampler(s): KW

Start Time: 1140

End Time: \_\_\_\_\_

Channel Conditions: \_\_\_\_\_

COC Number: \_\_\_\_\_

Site Location: \_\_\_\_\_

Site Description: CR 31.8

Weather: \_\_\_\_\_

Samples Taken: Yes  No

Sample Time: \_\_\_\_\_

DTW Measurement: \_\_\_\_\_

Notes: BM 13.2

\_\_\_\_\_

\_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
<u>4</u>	<u>12.3</u>	<u>410</u>	<u>10.2</u>	<u>566</u>

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 2.00

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>	<u>12'</u>	<u>3.25</u>	<u>2</u>			<u>30</u>		
<u>4</u>		<u>5.42</u>	<u>11</u>					
<u>6</u>		<u>9.75</u>	<u>15</u>					
<u>8</u>		<u>9.75</u>	<u>12</u>					
<u>10</u>		<u>4.33</u>	<u>9</u>					
<u>12</u>		<u>2.17</u>	<u>2</u>					

# Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: \_\_\_\_\_  
 Date: 9 25 06  
 Sampler(s): KW  
 Start Time: 12 30  
 End Time: \_\_\_\_\_  
 Channel Conditions: \_\_\_\_\_  
 COC Number: \_\_\_\_\_

Site Location: \_\_\_\_\_  
 Site Description: TB 33.2  
 Weather: \_\_\_\_\_  
 Samples Taken: Yes  No   
 Sample Time: \_\_\_\_\_  
 DTW Measurement: \_\_\_\_\_

Notes: BM 7'  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
<u>5</u>	<u>13.2</u>		<u>5.5</u>	<u>5.69</u>

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: 0.70

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>	<u>9'</u>	<u>0.7</u>	<u>0.1</u>			<u>30</u>		
<u>3</u>		<u>0.5</u>	<u>0.3</u>					
<u>5</u>		<u>0.8</u>	<u>0.5</u>					
<u>7</u>		<u>0.8</u>	<u>0.3</u>					
<u>9</u>		<u>0.5</u>	<u>0.2</u>					

## Field Form: 2006 Stream Sampling

Client: CRWD

Project No.: \_\_\_\_\_

Date: 9 25 06

Sampler(s): KW

Start Time: 1:00

End Time: \_\_\_\_\_

Channel Conditions: \_\_\_\_\_

COC Number: \_\_\_\_\_

Site Location: \_\_\_\_\_

Site Description: CR 33.6

Weather: \_\_\_\_\_

Samples Taken: Yes  No

Sample Time: \_\_\_\_\_

DTW Measurement: \_\_\_\_\_

Notes: BM 6'3

\_\_\_\_\_

\_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
<u>6</u>	<u>13.1</u>		<u>8.6</u>	

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 0.27

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)	<u>6'</u>	<u>0.2</u>	<u>1</u>			<u>30</u>		
		<u>0.4</u>	<u>4</u>					
		<u>0.3</u>	<u>6</u>					
		<u>0.2</u>	<u>5</u>					

9-25

### Field Form: 2006 Stream Sampling

Client: CRWD

Site Location: \_\_\_\_\_

Project No.: \_\_\_\_\_

Site Description: CR 35.3

Date: \_\_\_\_\_

Weather: \_\_\_\_\_

Sampler(s): \_\_\_\_\_

Samples Taken: Yes No

Start Time: \_\_\_\_\_

Sample Time: \_\_\_\_\_

End Time: \_\_\_\_\_

Channel Conditions: \_\_\_\_\_

DTW Measurement: \_\_\_\_\_

COC Number: \_\_\_\_\_

Notes: \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: \_\_\_\_\_

#### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft²)	Discharge (Q, ft³/sec)
				20% Depth	80% Depth			
0, (left side)								
		<i>No Flow</i>						

9-25

### Field Form: 2006 Stream Sampling

Client: CRWD

Project No.: \_\_\_\_\_

Date: \_\_\_\_\_

Sampler(s): \_\_\_\_\_

Start Time: \_\_\_\_\_

End Time: \_\_\_\_\_

Channel Conditions: \_\_\_\_\_

COC Number: \_\_\_\_\_

Site Location: \_\_\_\_\_

Site Description: TC 33.2

Weather: \_\_\_\_\_

Samples Taken: Yes No

Sample Time: \_\_\_\_\_

DTW Measurement: \_\_\_\_\_

Notes: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

#### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

## Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: \_\_\_\_\_  
 Date: 9/25/06  
 Sampler(s): \_\_\_\_\_  
 Start Time: 200  
 End Time: \_\_\_\_\_  
 Channel Conditions: \_\_\_\_\_  
 COC Number: \_\_\_\_\_

Site Location: \_\_\_\_\_  
 Site Description: CR 19.8  
 Weather: \_\_\_\_\_  
 Samples Taken: Yes No  
 Sample Time: \_\_\_\_\_  
 DTW Measurement: \_\_\_\_\_

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
<u>7</u>	<u>14.2</u>		<u>10.2</u>	

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>								



## Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: 0002-75  
 Date: 10/05/06  
 Sampler(s): WB, RL  
 Start Time: 9:55  
 End Time: \_\_\_\_\_  
 Channel Conditions: Flowing  
 COC Number: \_\_\_\_\_

Site Location: CR33.6  
 Site Description: \_\_\_\_\_  
 Weather: 45°, Sunny  
 Samples Taken:  Yes  No  
 Sample Time: 10:00  
 DTW Measurement: 6.12

Notes: some flow in channel water is clear

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	8.07	171.6	12.09	7.42

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 0.8163

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

## Field Form: 2006 Stream Sampling

Client: CRWD

Project No.: 0002-75

Date: 10/05/06

Sampler(s): WB, RL

Start Time: 9:30

End Time: \_\_\_\_\_

Channel Conditions: \_\_\_\_\_

COC Number: \_\_\_\_\_

Site Location: TB 33.2

Site Description: \_\_\_\_\_

Weather: \_\_\_\_\_

Samples Taken:  Yes  No

Sample Time: 9:40

DTW Measurement: 7.10

Notes: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
FB 33.2	9.63	1487	7.86	<del>8.46</del>

7.32

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: 0.9376

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

ENT WB 10/12/06

# Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: 0002-75  
 Date: 10/05/06  
 Sampler(s): \_\_\_\_\_  
 Start Time: \_\_\_\_\_  
 End Time: \_\_\_\_\_  
 Channel Conditions: \_\_\_\_\_  
 COC Number: \_\_\_\_\_

Site Location: CR 31.8  
 Site Description: \_\_\_\_\_  
 Weather: 50° Sunny  
 Samples Taken: Yes No  
 Sample Time: 10:30  
 DTW Measurement: 13.18

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	9.23	1469	12.02	7.70

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 3.4590

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

# Field Form: 2006 Stream Sampling

Client: CRWD  
 Project No.: 0002-75  
 Date: 10/05/06  
 Sampler(s): \_\_\_\_\_  
 Start Time: 10:45  
 End Time: \_\_\_\_\_  
 Channel Conditions: Flowing  
 COC Number: \_\_\_\_\_

Site Location: CR 29.0  
 Site Description: \_\_\_\_\_  
 Weather: \_\_\_\_\_  
 Samples Taken: Yes No  
 Sample Time: 10:50  
 DTW Measurement: 14.72

Notes: Water is clear  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	9.39	1444	11.83	7.88

Took Duplicate sample FD-1

Stage Ht: \_\_\_\_\_

Rated Flow: \_\_\_\_\_

Gauged Flow: 6.3038

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

Ent WB 10/12/06

## Field Form: 2006 Stream Sampling

Client:	CRWD	Site Location:	
Project No.:	0002-75	Site Description:	CR 27.2
Date:	10/05/06	Weather:	
Sampler(s):	RL, WB	Samples Taken:	<input checked="" type="radio"/> Yes <input type="radio"/> No
Start Time:	11:10	Sample Time:	11:15
End Time:			
Channel Conditions:		DTW Measurement:	@ 36 (us)
COC Number:			

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	11.07	1392	12.68	7.88

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 5.7513

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

WB 10/12/06

## Field Form: 2006 Stream Sampling

Client: CRWD Site Location: \_\_\_\_\_  
 Project No.: 0002-75 Site Description: CR 25.6  
 Date: 10/05/06 Weather: \_\_\_\_\_  
 Sampler(s): RL, WB Samples Taken: Yes No  
 Start Time: 11:35 Sample Time: 11:40  
 End Time: \_\_\_\_\_  
 Channel Conditions: \_\_\_\_\_ DTW Measurement: 22.78  
 COC Number: \_\_\_\_\_

Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>11.45</u>	<u>1390</u>	<u>9.75</u>	<u>7.83</u>

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: 2,4084

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
0, (left side)								

Ent WB 10/12/06

# Field Form: 2006 Stream Sampling

Client: CRWD  
Project No.: 0002-75  
Date: 10/05/06  
Sampler(s): WB, RL  
Start Time: 12:00  
End Time: \_\_\_\_\_  
Channel Conditions: flowing  
COC Number: \_\_\_\_\_

Site Location: CR 55  
Site Description: \_\_\_\_\_  
Weather: \_\_\_\_\_  
Samples Taken: (Yes) No  
Sample Time: \_\_\_\_\_  
DTW Measurement: 12.07

Notes: Very little flow

Field Parameters				
Sample I.D.	Temp. (°C)	Cond. (mS/cm)	D.O. (mg/l)	pH (S.U.)
	<u>11.68</u>	<u>997</u>	<u>11.61</u>	<u>8.15</u>

Stage Ht: \_\_\_\_\_ Rated Flow: \_\_\_\_\_ Gauged Flow: \_\_\_\_\_

### Stream Gauging Data

Distance from Initial Point (ft)	Width (ft)	Depth (ft)	Velocity (60% Depth)	Velocity		Average Velocity (ft/sec)	Area (ft <sup>2</sup> )	Discharge (Q, ft <sup>3</sup> /sec)
				20% Depth	80% Depth			
<u>0, (left side)</u>								

Ent WB



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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 18 Aug 05  
Lab Number: 05-A28603  
Work Order #: 12-8543  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 15 Aug 05 8:45  
Date Received: 15 Aug 05 13:40

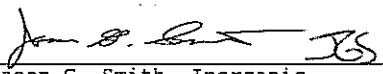
Project Number: 0002-75  
Sample Description: CR 33.6

Chain of Custody Number: 100207  
Temp at Receipt: 2.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	170	CFU/100 mL	10.	SM 9222D 18th Ed	15 Aug 05 14:15	VRK

CFU = Colony Forming Units

Approved by:

  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WN/DW # R-040 IA LAB #: 132

MVTL guarantees the accuracy of the analysis done on the sample submitted for testing. It is not possible for MVTL to guarantee that a test result obtained on a particular sample will be the same on any other sample unless all conditions affecting the sample are the same, including sampling by MVTL. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.

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WENCK ASSOCIATES INC  
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MAPLE PLAIN MN 55359-9000

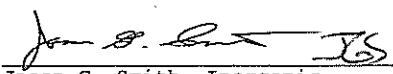
Report Date: 18 Aug 05  
Lab Number: 05-A28602  
Work Order #: 12-8543  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 15 Aug 05 8:25  
Date Received: 15 Aug 05 13:40

Project Number: 0002-75  
Sample Description: TA 33.2

Chain of Custody Number: 100207  
Temp at Receipt: 2.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	200	CFU/100 mL	10.	SM 9222D 18th Ed	15 Aug 05 14:15	VRK

CFU = Colony Forming Units

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

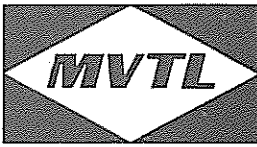
Reporting Limit

Elevated "Less Than Result" (<): # = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity \* = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND NW/DW # R-040 IA LAB #: 132

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MAPLE PLAIN MN 55359-9000

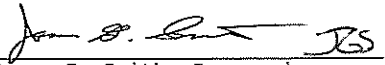
Report Date: 18 Aug 05  
Lab Number: 05-A28604  
Work Order #: 12-8543  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 15 Aug 05 9:00  
Date Received: 15 Aug 05 13:40

Project Number: 0002-75  
Sample Description: CR 31.8

Chain of Custody Number: 100207  
Temp at Receipt: 2.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	290	CFU/100 mL	10.	SM 9222D 18th Ed	15 Aug 05 14:15	VRK

CFU = Colony Forming Units

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 18 Aug 05  
Lab Number: 05-A28605  
Work Order #: 12-8543  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 15 Aug 05 9:15  
Date Received: 15 Aug 05 13:40

Project Number: 0002-75  
Sample Description: T 30.7

Chain of Custody Number: 100207  
Temp at Receipt: 2.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	160	CFU/100 mL	10.	SM 9222D 18th Ed	15 Aug 05 14:15	VRK

CFU = Colony Forming Units

Approved by: Jason G. Smith  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132

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MAPLE PLAIN MN 55359-9000

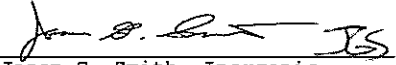
Report Date: 18 Aug 05  
Lab Number: 05-A28606  
Work Order #: 12-8543  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 15 Aug 05 9:25  
Date Received: 15 Aug 05 13:40

Project Number: 0002-75  
Sample Description: CR 30.0

Chain of Custody Number: 100207  
Temp at Receipt: 2.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	730	CFU/100 mL	10.	SM 9222D 18th Ed	15 Aug 05 14:15	VRK

CFU = Colony Forming Units

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WH/DW # R-040 IA LAB #: 132

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

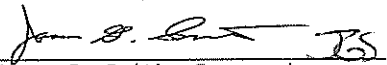
Report Date: 18 Aug 05  
Lab Number: 05-A28607  
Work Order #: 12-8543  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 15 Aug 05 9:45  
Date Received: 15 Aug 05 13:40

Project Number: 0002-75  
Sample Description: CR 29.0

Chain of Custody Number: 100207  
Temp at Receipt: 2.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	2000	CFU/100 mL	10.	SM 9222D 18th Ed	15 Aug 05 14:15	VRK

CFU = Colony Forming Units

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447600 ND MICRO # 1013-M ND WN/DW # R-040 IA LAB #: 132

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MAPLE PLAIN MN 55359-9000

Report Date: 18 Aug 05
Lab Number: 05-A28608
Work Order #:12-8543
Account #: 013173
Sample Matrix: SURFACE WATER
Date Sampled: 15 Aug 05 10:00
Date Received: 15 Aug 05 13:40

Project Number: 0002-75
Sample Description: TW 27.8

Chain of Custody Number: 100207
Temp at Receipt: 2.0C

Table with 6 columns: As Received Result, Method RL, Method Reference, Date Analyzed, Analyst. Row 1: Fecal Coliform, MF, 120, CFU/100 mL, 10., SM 9222D 18th Ed, 15 Aug 05 14:15, VRK

CFU = Colony Forming Units

Approved by: [Signature]
Jason G. Smith, Inorganic
Laboratory Manager New Ulm, MN

Reporting Limit

Abbreviated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND NW/DW # R-040 IA LAB #: 132

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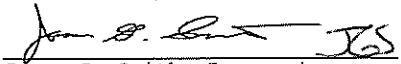
Report Date: 18 Aug 05  
Lab Number: 05-A28609  
Work Order #: 12-8543  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 15 Aug 05 10:05  
Date Received: 15 Aug 05 13:40

Project Number: 0002-75  
Sample Description: TE 27.8

Chain of Custody Number: 100207  
Temp at Receipt: 2.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	640	CFU/100 mL	10.	SM 9222D 18th Ed	15 Aug 05 14:15	VRK

CFU = Colony Forming Units

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND NW/DW # R-040 IA LAB #: 132

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MAPLE PLAIN MN 55359-9000

Report Date: 18 Aug 05  
Lab Number: 05-A28610  
Work Order #: 12-8543  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 15 Aug 05 10:15  
Date Received: 15 Aug 05 13:40

Project Number: 0002-75  
Sample Description: T 27.3

Chain of Custody Number: 100207  
Temp at Receipt: 2.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	80	CFU/100 mL	10.	SM 9222D 18th Ed	15 Aug 05 14:15	VRK

CFU = Colony Forming Units

Approved by: Jason G. Smith  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132

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## PRELIMINARY REPORT

WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 27 Sep 05  
Lab Number: 05-A33906  
Work Order #: 12-10060  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 26 Sep 05 9:05  
Date Received: 26 Sep 05 13:18

Sample Description: CR 35.3

Temp at Receipt: 4.0C

	As Received Result	Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	7000	CFU/100 mL	10.	SM 9222D 18th Ed	26 Sep 05 14:30 VRK

CFU = Colony Forming Units

\* Holding time Exceeded

RL = Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132



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PRELIMINARY REPORT

WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 27 Sep 05  
Lab Number: 05-A33907  
Work Order #: 12-10060  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 26 Sep 05 9:15  
Date Received: 26 Sep 05 13:18

Sample Description: CR 33.6

Temp at Receipt: 4.0C

	As Received Result	Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	500	CFU/100 mL	10.	SM 9222D 18th Ed	26 Sep 05 14:30 VRK

CFU = Colony Forming Units

\* Holding time Exceeded

RL = Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132



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## PRELIMINARY REPORT

WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 27 Sep 05  
Lab Number: 05-A33901  
Work Order #: 12-10060  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 26 Sep 05 8:30  
Date Received: 26 Sep 05 13:18

Sample Description: TD 33.2

Temp at Receipt: 4.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	40000	CFU/100 mL	10.	SM 9222D 18th Ed	26 Sep 05 14:30	VRK

CFU = Colony Forming Units

\* Holding time Exceeded

RL = Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447660 ND MICRO # 1013-M ND WQ/DW # R-040 IA LAB #: 132



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**PRELIMINARY REPORT**

WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 27 Sep 05  
Lab Number: 05-A33902  
Work Order #: 12-10060  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 26 Sep 05 8:40  
Date Received: 26 Sep 05 13:18

Sample Description: TF 33.2

Temp at Receipt: 4.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	28000	CFU/100 mL	10.	SM 9222D 18th Ed	26 Sep 05 14:30	VRK

CFU = Colony Forming Units

\* Holding time Exceeded

RL = Reporting Limit

Elevated "Less Than Result" (<): 0 = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447660 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132



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PRELIMINARY REPORT

WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 27 Sep 05  
Lab Number: 05-A33903  
Work Order #: 12-10060  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 26 Sep 05 8:50  
Date Received: 26 Sep 05 13:18

Sample Description: TC 33.2

Temp at Receipt: 4.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	1300	CFU/100 mL	10.	SM 9222D 18th Ed	26 Sep 05 14:30	VRK

CFU = Colony Forming Units

\* Holding time Exceeded

RL = Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132



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PRELIMINARY REPORT

WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 27 Sep 05  
Lab Number: 05-A33904  
Work Order #: 12-10060  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 26 Sep 05 8:55  
Date Received: 26 Sep 05 13:18

Sample Description: TA 33.2

Temp at Receipt: 4.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	4400	CFU/100 mL	10.	SM 9222D 18th Ed	26 Sep 05 14:30	VRK

CFU = Colony Forming Units

\* Holding time Exceeded

RL = Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132



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PRELIMINARY REPORT

WES BOLL  
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MAPLE PLAIN MN 55359-9000

Report Date: 27 Sep 05  
Lab Number: 05-A33905  
Work Order #: 12-10060  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 26 Sep 05 9:00  
Date Received: 26 Sep 05 13:18

Sample Description: TB 33.2

Temp at Receipt: 4.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	> 60000	CFU/100 mL	10.	SM 9222D 18th Ed	26 Sep 05 14:30	VRK

CFU = Colony Forming Units

\* Holding time Exceeded

RL = Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132



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PRELIMINARY REPORT

WES BOLL  
WENCK ASSOCIATES INC  
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MAPLE PLAIN MN 55359-9000

Report Date: 27 Sep 05  
Lab Number: 05-A33908  
Work Order #: 12-10060  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 26 Sep 05 9:20  
Date Received: 26 Sep 05 13:18

Sample Description: T 32.2

Temp at Receipt: 4.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	580	CFU/100 mL	10.	SM 9222D 18th Ed	26 Sep 05 14:30	VRK

CFU = Colony Forming Units

\* Holding time Exceeded

RL = Reporting Limit

Elevated "Less Than Result" (<): # = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132





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**PRELIMINARY REPORT**

WES BOLL  
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MAPLE PLAIN MN 55359-9000

Report Date: 27 Sep 05  
Lab Number: 05-A33891  
Work Order #: 12-10060  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 26 Sep 05 9:40  
Date Received: 26 Sep 05 13:18

Sample Description: CR 31.8

Temp at Receipt: 4.0C

	As Received Result	Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	7000	CFU/100 mL	10.	SM 9222D 18th Ed	26 Sep 05 14:30 VRK

CFU = Colony Forming Units

\* Holding time Exceeded

RL = Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WH/DW # R-040 IA LAB #: 132



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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 27 Sep 05  
Lab Number: 05-A33909  
Work Order #: 12-10060  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 26 Sep 05 9:30  
Date Received: 26 Sep 05 13:18

Sample Description: TA 30.9

Temp at Receipt: 4.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	> 60000	CFU/100 mL	10.	SM 9222D 18th Ed	26 Sep 05 14:30	VRK
CFU = Colony Forming Units			* Holding time Exceeded			

RL = Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132



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PRELIMINARY REPORT

WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 27 Sep 05  
Lab Number: 05-A33910  
Work Order #: 12-10060  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 26 Sep 05 9:35  
Date Received: 26 Sep 05 13:18

Sample Description: TB 30.9

Temp at Receipt: 4.0C

	As Received Result	Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	240	CFU/100 mL	10.	SM 9222D 18th Ed	26 Sep 05 14:30 VRK

CFU = Colony Forming Units

\* Holding time Exceeded

RL = Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND RW/DW # R-040 IA LAB #: 132



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PRELIMINARY REPORT

WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 27 Sep 05  
Lab Number: 05-A33892  
Work Order #: 12-10060  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 26 Sep 05 9:45  
Date Received: 26 Sep 05 13:18

Sample Description: T 30.7

Temp at Receipt: 4.0C

	As Received Result	Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	2100	CFU/100 mL	10.	SM 9222D 18th Ed	26 Sep 05 14:30 VRK
CFU = Colony Forming Units					
* Holding time Exceeded					

RL = Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-H ND WW/DW # R-040 IA LAB #: 132



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PRELIMINARY REPORT

WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 27 Sep 05  
Lab Number: 05-A33893  
Work Order #: 12-10060  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 26 Sep 05 9:50  
Date Received: 26 Sep 05 13:18

Sample Description: T 30.1

Temp at Receipt: 4.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	2100	CFU/100 mL	10.	SM 9222D 18th Ed	26 Sep 05 14:30	VRK
CFU = Colony Forming Units						
* Holding time Exceeded						

RL = Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132



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PRELIMINARY REPORT

WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 27 Sep 05  
Lab Number: 05-A33894  
Work Order #: 12-10060  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 26 Sep 05 9:55  
Date Received: 26 Sep 05 13:18

Sample Description: CR 30

Temp at Receipt: 4.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	> 60000	CFU/100 mL	10.	SM 9222D 18th Ed	26 Sep 05 14:30	VRK

CFU = Colony Forming Units

\* Holding time Exceeded

RL = Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WR/DW # R-040 IA LAB #: 132



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## PRELIMINARY REPORT

WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 27 Sep 05  
Lab Number: 05-A33895  
Work Order #: 12-10060  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 26 Sep 05 10:00  
Date Received: 26 Sep 05 13:18

Sample Description: CR 29

Temp at Receipt: 4.0C

	As Received Result	Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	> 60000	CFU/100 mL	10.	SM 9222D 18th Ed	26 Sep 05 14:30 VRK

CFU = Colony Forming Units

\* Holding time Exceeded

RL = Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447660 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132



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PRELIMINARY REPORT

WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 27 Sep 05  
Lab Number: 05-A33896  
Work Order #: 12-10060  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 26 Sep 05 10:10  
Date Received: 26 Sep 05 13:18

Sample Description: TW 27.8

Temp at Receipt: 4.0C

	As Received Result	Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	2000	CFU/100 mL	10.	SM 9222D 18th Ed	26 Sep 05 14:30 VRK
CFU = Colony Forming Units		* Holding time Exceeded			

RL = Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447660 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132





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PRELIMINARY REPORT

WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 27 Sep 05  
Lab Number: 05-A33897  
Work Order #: 12-10060  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 26 Sep 05 10:15  
Date Received: 26 Sep 05 13:18

Sample Description: TE 27.8

Temp at Receipt: 4.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	1600	CFU/100 mL	10.	SM 9222D 18th Ed	26 Sep 05 14:30	VRK

CFU = Colony Forming Units

\* Holding time Exceeded

RL = Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447600 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132



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PRELIMINARY REPORT

WES BOLL  
WENCK ASSOCIATES INC  
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MAPLE PLAIN MN 55359-9000

Report Date: 27 Sep 05  
Lab Number: 05-A33898  
Work Order #: 12-10060  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 26 Sep 05 10:20  
Date Received: 26 Sep 05 13:18

Sample Description: T 27.3

Temp at Receipt: 4.0C

	As Received Result	Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	230	CFU/100 mL	10.	SM 9222D 18th Ed	26 Sep 05 14:30 VRK

CFU = Colony Forming Units

\* Holding time Exceeded

RL = Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-H ND WW/DW # R-040 IA LAB #: 132



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PRELIMINARY REPORT

WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 27 Sep 05  
Lab Number: 05-A33899  
Work Order #: 12-10060  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 26 Sep 05 10:25  
Date Received: 26 Sep 05 13:18

Sample Description: CR 27.2

Temp at Receipt: 4.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	290	CFU/100 mL	10.	SM 9222D 18th Ed	26 Sep 05 14:30	VRK
CFU = Colony Forming Units			* Holding time Exceeded			

RL = Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447600 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132



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## PRELIMINARY REPORT

WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 27 Sep 05  
Lab Number: 05-A33911  
Work Order #: 12-10060  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 26 Sep 05 10:30  
Date Received: 26 Sep 05 13:18

Sample Description: CR 25.6

Temp at Receipt: 4.0C

	As Received Result	Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	820	CFU/100 mL	10.	SM 9222D 18th Ed	26 Sep 05 14:30 VRK
CFU = Colony Forming Units					
* Holding time Exceeded					

RL = Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WH/DW # R-040 IA LAB #: 132



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PRELIMINARY REPORT

WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 27 Sep 05  
Lab Number: 05-A33900  
Work Order #: 12-10060  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 26 Sep 05  
Date Received: 26 Sep 05 13:18

Sample Description: FD 1

Temp at Receipt: 4.0C

	As Received Result	Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	* > 60000	CFU/100 mL	10.	SM 9222D 18th Ed	26 Sep 05 14:30 VRK

CFU = Colony Forming Units

\* Holding time Exceeded

\*\* No collection time supplied by the client.

RL = Reporting Limit

Elevated "Less Than Result" (<): @ \* Due to sample matrix # = Due to sample concentration  
! \* Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447660 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132

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## PRELIMINARY REPORT

WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 27 Sep 05  
Lab Number: 05-A33912  
Work Order #: 12-10060  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 26 Sep 05  
Date Received: 26 Sep 05 13:18

Sample Description: FD 2

Temp at Receipt: 4.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	* 300	CFU/100 mL	10.	SM 9222D 18th Ed	26 Sep 05 14:30	VRK

CFU = Colony Forming Units

\* Holding time Exceeded

\*\* No collection time supplied by the client.

RL = Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447660 ND MICRO # 1013-M ND WA/DW # R-040 IA LAB #: 132



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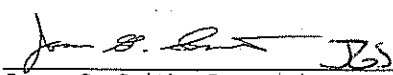
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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 8 Nov 05  
Lab Number: 05-A34338  
Work Order #: 12-10060  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 27 Sep 05 13:55  
Date Received: 28 Sep 05 10:30  
PO #: 0002-75  
Chain of Custody Number: 100208  
Temp at Receipt: 2.0C

Sample Description: CR 33.6

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					4 Oct 05	AKF
Water Digestions					3 Oct 05	JMS
BOD, Carbonaceous	< 2	mg/L	2	SM 5210B	28 Sep 05 15:57	CJL
CBOD, 20 Day	14	mg/L	2	SM 5210B	28 Sep 05 16:19	CJL
Solids, Total Suspended	5	mg/L	2	SM 2540D	28 Sep 05 16:00	RMV
Carbon, Total Organic	18.5	mg/L	0.5	415.1	6 Oct 05 8:00	Bis
Chlorophyll a	1.1	mg/cubic m	1.0	10200H	30 Sep 05 7:28	JD
Nitrogen Total, Calculat	9.5	mg/L	NA	Calc	6 Oct 05 6:15	Calculated
Chloride	34.7	mg/L	3.0	325.2	29 Sep 05 11:20	DAP
Nitrate+Nitrite	7.10	mg/L as N	0.20	353.2	3 Oct 05 13:13	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	4 Oct 05 15:55	TAM
Phosphorus, Total	0.170	mg/L	0.005	EPA 365.1	4 Oct 05 10:38	DAP
Phosphorus, Ortho	0.151	mg/L	0.005	EPA 365.1	28 Sep 05 17:32	DAP
Nitrogen, Total Kjeldahl	2.4	mg/L	0.1	SM 4500NorgB/NH3 E	6 Oct 05 6:15	RSL
Iron	0.034	mg/L	0.010	6010	5 Oct 05 13:06	TB

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Ent WB  
11/11/05

Reporting Limit

Unstated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND HW/DW # R-040 IA LAB #: 132

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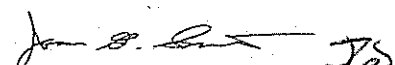
WES BOLL  
 WENCK ASSOCIATES INC  
 1800 PIONEER CRK CTR  
 MAPLE PLAIN MN 55359-9000

Report Date: 8 Nov 05  
 Lab Number: 05-A34345  
 Work Order #: 12-10060  
 Account #: 013173  
 Sample Matrix: SURFACE WATER  
 Date Sampled: 27 Sep 05 15:08  
 Date Received: 28 Sep 05 10:30  
 PO #: 0002-75  
 Chain of Custody Number: 100208  
 Temp at Receipt: 2.0C

Sample Description: TC 33.2

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					4 Oct 05	AKF
Water Digestions					3 Oct 05	JMS
BOD, Carbonaceous	2	mg/L	2	SM 5210B	28 Sep 05 16:10	CJL
CBOD, 20 Day	11	mg/L	2	SM 5210B	28 Sep 05 16:19	CJL
Solids, Total Suspended	2	mg/L	2	SM 2540D	28 Sep 05 17:00	RMV
Carbon, Total Organic	11.0	mg/L	0.5	415.1	6 Oct 05 8:00	Bis
Chlorophyll a	2.8	mg/cubic m	1.0	10200H	30 Sep 05 7:28	JD
Nitrogen Total, Calculat	9.0	mg/L	NA	Calc	6 Oct 05 14:00	Calculated
Chloride	49.6	mg/L	3.0	325.2	29 Sep 05 11:31	DAP
Nitrate+Nitrite	7.69	mg/L as N	0.20	353.2	3 Oct 05 13:13	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	6 Oct 05 13:00	TAM
Phosphorus, Total	0.257	mg/L	0.005	EPA 365.1	4 Oct 05 10:39	DAP
Phosphorus, Ortho	0.249	mg/L	0.005	EPA 365.1	28 Sep 05 17:32	DAP
Nitrogen, Total Kjeldahl	1.3	mg/L	0.1	SM 4500NorgB/NH3 E	6 Oct 05 14:00	TAM
Iron	0.113	mg/L	0.010	6010	5 Oct 05 13:43	TB

Approved by:

  
 Jason G. Smith, Inorganic  
 Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): # = Due to sample matrix # = Due to sample concentration  
 ! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WR/DW # R-040 IA LAB #: 132

Ent.  
 WB  
 11/11/05

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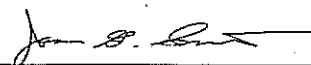
WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 8 Nov 05  
Lab Number: 05-A34344  
Work Order #: 12-10060  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 27 Sep 05 15:40  
Date Received: 28 Sep 05 10:30  
PO #: 0002-75  
Chain of Custody Number: 100208  
Temp at Receipt: 2.0C

Sample Description: TB 33.2

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					4 Oct 05	AKF
Water Digestions					3 Oct 05	JMS
BOD, Carbonaceous	3	mg/L	2	SM 5210B	28 Sep 05 16:10	CJL
CBOD, 20 Day	15	mg/L	2	SM 5210B	28 Sep 05 16:19	CJL
Solids, Total Suspended	7	mg/L	2	SM 2540D	28 Sep 05 16:00	RMV
Carbon, Total Organic	11.5	mg/L	0.5	415.1	6 Oct 05 8:00	Bis
Chlorophyll a	31.6	mg/cubic m	1.0	10200H	30 Sep 05 7:28	JD
Nitrogen Total, Calculat	7.6	mg/L	NA	Calc	6 Oct 05 14:00	Calculated
Chloride	63.1	mg/L	3.0	325.2	29 Sep 05 11:31	DAP
Nitrate+Nitrite	5.66	mg/L as N	0.20	353.2	3 Oct 05 13:13	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	6 Oct 05 13:00	TAM
Phosphorus, Total	0.345	mg/L	0.005	EPA 365.1	4 Oct 05 10:39	DAP
Phosphorus, Ortho	0.322	mg/L	0.005	EPA 365.1	28 Sep 05 17:32	DAP
Nitrogen, Total Kjeldahl	1.9	mg/L	0.1	SM 4500NorgB/NH3 E	6 Oct 05 14:00	TAM
Iron	0.206	mg/L	0.010	6010	5 Oct 05 13:43	TB

Approved by:

  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

WB  
11/11/05

Reporting Limit

Unrated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND HW/DW # R-040 IA LAB #: 132

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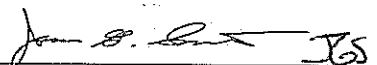
WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 8 Nov 05  
Lab Number: 05-A34343  
Work Order #: 12-10060  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 27 Sep 05 15:29  
Date Received: 28 Sep 05 10:30  
PO #: 0002-75  
Chain of Custody Number: 100208  
Temp at Receipt: 2.0C

Sample Description: TA 33.2

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					4 Oct 05	AKF
Water Digestions					3 Oct 05	JMS
BOD, Carbonaceous	< 2	mg/L	2	SM 5210B	28 Sep 05 16:10	CJL
CBOD, 20 Day	4	mg/L	2	SM 5210B	28 Sep 05 16:19	CJL
Solids, Total Suspended	< 2	mg/L	2	SM 2540D	28 Sep 05 16:00	RMV
Carbon, Total Organic	15.5	mg/L	0.5	415.1	6 Oct 05 8:00	Bis
Chlorophyll a	2.1	mg/cubic m	1.0	10200H	30 Sep 05 7:28	JD
Nitrogen Total, Calculat	12.3	mg/L	NA	Calc	6 Oct 05 14:00	Calculated
Chloride	49.5	mg/L	3.0	325.2	29 Sep 05 11:31	DAP
Nitrate+Nitrite	10.3	mg/L as N	0.20	353.2	3 Oct 05 13:13	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	4 Oct 05 15:55	TAM
Phosphorus, Total	0.311	mg/L	0.005	EPA 365.1	4 Oct 05 10:39	DAP
Phosphorus, Ortho	0.300	mg/L	0.005	EPA 365.1	28 Sep 05 17:32	DAP
Nitrogen, Total Kjeldahl	2.0	mg/L	0.1	SM 4500NorgB/NH3 E	6 Oct 05 14:00	TAM
Iron	0.057	mg/L	0.010	6010	5 Oct 05 13:43	TB

Approved by:

  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Loss Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132

Ent  
WB  
11/11/05

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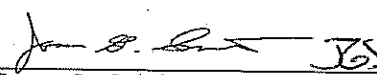
Page: 1 of 1

WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 8 Nov 05  
Lab Number: 05-A34339  
Work Order #: 12-10060  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 27 Sep 05 14:55  
Date Received: 28 Sep 05 10:30  
PO #: 0002-75  
Chain of Custody Number: 100208  
Temp at Receipt: 2.0C

Sample Description: TF 33.2

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					4 Oct 05	AKF
Water Digestions					3 Oct 05	JMS
BOD, Carbonaceous	< 2	mg/L	2	SM 5210B	28 Sep 05 15:57	CJL
CBOD, 20 Day	2	mg/L	2	SM 5210B	28 Sep 05 16:19	CJL
Solids, Total Suspended	5	mg/L	2	SM 2540D	28 Sep 05 16:00	RMV
Carbon, Total Organic	8.0	mg/L	0.5	415.1	6 Oct 05 8:00	Bis
Chlorophyll a	< 1	mg/cubic m	1.0	10200H	30 Sep 05 7:28	JD
Nitrogen Total, Calculat	18.2	mg/L	NA	Calc	6 Oct 05 6:15	Calculated
Chloride	49.2	mg/L	3.0	325.2	29 Sep 05 11:20	DAP
Nitrate+Nitrite	16.5	mg/L as N	0.20	353.2	3 Oct 05 13:13	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	4 Oct 05 15:55	TAM
Phosphorus, Total	0.206	mg/L	0.005	EPA 365.1	4 Oct 05 10:39	DAP
Phosphorus, Ortho	0.203	mg/L	0.005	EPA 365.1	28 Sep 05 17:32	DAP
Nitrogen, Total Kjeldahl	1.7	mg/L	0.1	SM 4500NorgB/NH3 E	6 Oct 05 6:15	RSL
Iron	0.035	mg/L	0.010	6010	5 Oct 05 13:06	TB

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Ent  
WB  
11/11/05

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132

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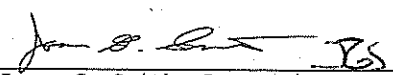
Page: 1 of 1

WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 8 Nov 05  
Lab Number: 05-A34340  
Work Order #: 12-10060  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 27 Sep 05 14:45  
Date Received: 28 Sep 05 10:30  
PO #: 0002-75  
Chain of Custody Number: 100208  
Temp at Receipt: 2.0C

Sample Description: TD 33.2

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					4 Oct 05	AKF
Water Digestions					3 Oct 05	JMS
BOD, Carbonaceous	< 2	mg/L	2	SM 5210B	28 Sep 05 16:10	CJL
CBOD, 20 Day	14	mg/L	2	SM 5210B	28 Sep 05 16:19	CJL
Solids, Total Suspended	7	mg/L	2	SM 2540D	28 Sep 05 16:00	RMV
Carbon, Total Organic	10.0	mg/L	0.5	415.1	6 Oct 05 8:00	Bis
Chlorophyll a	< 1	mg/cubic m	1.0	10200H	30 Sep 05 7:28	JD
Nitrogen Total, Calculat	14.0	mg/L	NA	Calc	6 Oct 05 14:00	Calculated
Chloride	51.5	mg/L	3.0	325.2	29 Sep 05 11:20	DAP
Nitrate+Nitrite	12.1	mg/L as N	0.20	353.2	3 Oct 05 13:13	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	4 Oct 05 15:55	TAM
Phosphorus, Total	0.283	mg/L	0.005	EPA 365.1	4 Oct 05 10:39	DAP
Phosphorus, Ortho	0.277	mg/L	0.005	EPA 365.1	28 Sep 05 17:32	DAP
Nitrogen, Total Kjeldahl	1.9	mg/L	0.1	SM 4500NorgB/NH3 E	6 Oct 05 14:00	TAM
Iron	0.080	mg/L	0.010	6010	5 Oct 05 13:06	TB

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Ent.  
WB  
11/11/05

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132

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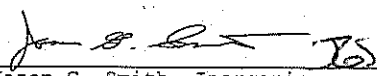
WES BOLL  
 WENCK ASSOCIATES INC  
 1800 PIONEER CRK CTR  
 MAPLE PLAIN MN 55359-9000

Report Date: 8 Nov 05  
 Lab Number: 05-A34342  
 Work Order #: 12-10060  
 Account #: 013173  
 Sample Matrix: SURFACE WATER  
 Date Sampled: 27 Sep 05 15:55  
 Date Received: 28 Sep 05 10:30  
 PO #: 0002-75  
 Chain of Custody Number: 100208  
 Temp at Receipt: 2.0C

Sample Description: T 32.2

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					4 Oct 05	AKF
Water Digestions					3 Oct 05	JMS
BOD, Carbonaceous	5	mg/L	2	SM 5210B	28 Sep 05 16:10	CJL
CBOD, 20 Day	36	mg/L	2	SM 5210B	28 Sep 05 16:19	CJL
Solids, Total Suspended	10	mg/L	2	SM 2540D	28 Sep 05 16:00	RMV
Carbon, Total Organic	18.5	mg/L	0.5	415.1	6 Oct 05 8:00	Bis
Chlorophyll a	14.6	mg/cubic m	1.0	10200H	30 Sep 05 7:28	JD
Nitrogen Total, Calculat	3.8	mg/L	NA	Calc	6 Oct 05 14:00	Calculated
Chloride	13.5	mg/L	3.0	325.2	29 Sep 05 11:31	DAP
Nitrate+Nitrite	2.11	mg/L as N	0.20	353.2	3 Oct 05 13:13	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	4 Oct 05 15:55	TAM
Phosphorus, Total	0.174	mg/L	0.005	EPA 365.1	4 Oct 05 10:39	DAP
Phosphorus, Ortho	0.117	mg/L	0.005	EPA 365.1	28 Sep 05 17:32	DAP
Nitrogen, Total Kjeldahl	1.7	mg/L	0.1	SM 4500NorgB/NH3 E	6 Oct 05 14:00	TAM
Iron	1.180	mg/L	0.010	6010	5 Oct 05 13:43	TB

Approved by:

  
 Jason G. Smith, Inorganic  
 Laboratory Manager New Ulm, MN

Reporting Limit

Estimated "Less Than Result" (<): @ = Due to sample matrix  
 ! = Due to sample quantity

# = Due to sample concentration  
 + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132

Ent.  
 WB  
 11/11/05

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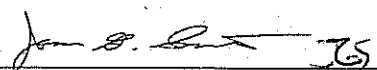
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 WENCK ASSOCIATES INC  
 1800 PIONEER CRK CTR  
 MAPLE PLAIN MN 55359-9000

Report Date: 8 Nov 05  
 Lab Number: 05-A34337  
 Work Order #: 12-10060  
 Account #: 013173  
 Sample Matrix: SURFACE WATER  
 Date Sampled: 27 Sep 05 13:35  
 Date Received: 28 Sep 05 10:30  
 PO #: 0002-75  
 Chain of Custody Number: 100208  
 Temp at Receipt: 2.0C

Sample Description: CR 31.8

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					4 Oct 05	AKF
Water Digestions					3 Oct 05	JMS
BOD, Carbonaceous	< 2	mg/L	2	SM 5210B	28 Sep 05 15:57	CJL
CBOD, 40 Day	7	mg/L	2	SM 5210B	29 Sep 05 9:39	RMV
CBOD, 20 Day	13	mg/L	2	SM 5210B	28 Sep 05 16:19	CJL
Solids, Total Suspended	5	mg/L	2	SM 2540D	2 Oct 05 11:40	CJL
Carbon, Total Organic	14.0	mg/L	0.5	415.1	6 Oct 05 8:00	Bis
Chlorophyll a	1.7	mg/cubic m	1.0	10200H	30 Sep 05 7:28	JD
Nitrogen Total, Calculat	5.6	mg/L	NA	Calc	6 Oct 05 6:15	Calculated
Chloride	46.1	mg/L	3.0	325.2	29 Sep 05 11:20	DAP
Nitrate+Nitrite	4.05	mg/L as N	0.20	353.2	3 Oct 05 13:12	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	4 Oct 05 15:55	TAM
Phosphorus, Total	0.261	mg/L	0.005	EPA 365.1	4 Oct 05 10:38	DAP
Phosphorus, Ortho	0.234	mg/L	0.005	EPA 365.1	28 Sep 05 17:30	DAP
Nitrogen, Total Kjeldahl	1.6	mg/L	0.1	SM 4500NorgB/NH3 E	6 Oct 05 6:15	RSL
Solids, Suspended Volatile	5	mg/L	2	SM 2540E	2 Oct 05 11:40	CJL
Oil	0.365	mg/L	0.010	6010	5 Oct 05 13:06	TB

Approved by:

  
 Jason G. Smith, Inorganic  
 Laboratory Manager New Ulm, MN

Ent.  
 WB  
 11/11/05

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
 ! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND HW/DW # R-040 IA LAB #: 132

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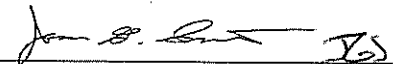
WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 8 Nov 05  
Lab Number: 05-A34341  
Work Order #: 12-10060  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 27 Sep 05 16:10  
Date Received: 28 Sep 05 10:30  
PO #: 0002-75  
Chain of Custody Number: 100208  
Temp at Receipt: 2.0C

Sample Description: T 30.9

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					4 Oct 05	AKF
Water Digestions					3 Oct 05	JMS
BOD, Carbonaceous	2	mg/L	2	SM 5210B	28 Sep 05 16:10	CJL
CBOD, 20 Day	13	mg/L	2	SM 5210B	28 Sep 05 16:19	CJL
Solids, Total Suspended	14	mg/L	2	SM 2540D	2 Oct 05 11:40	CJL
Carbon, Total Organic	4.9	mg/L	0.5	415.1	6 Oct 05 8:00	Bis
Chlorophyll a	5.2	mg/cubic m	1.0	10200H	30 Sep 05 7:28	JD
Nitrogen Total, Calculat	18.7	mg/L	NA	Calc	6 Oct 05 14:00	Calculated
Chloride	41.0	mg/L	3.0	325.2	29 Sep 05 11:31	DAP
Nitrate+Nitrite	17.3	mg/L as N	0.20	353.2	3 Oct 05 13:13	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	4 Oct 05 15:55	TAM
Phosphorus, Total	0.162	mg/L	0.005	EPA 365.1	4 Oct 05 10:39	DAP
Phosphorus, Ortho	0.141	mg/L	0.005	EPA 365.1	28 Sep 05 17:32	DAP
Nitrogen, Total Kjeldahl	1.4	mg/L	0.1	SM 4500NorgB/NH3 E	6 Oct 05 14:00	TAM
Solids, Suspended Volatile	7	mg/L	2	SM 2540E	2 Oct 05 11:40	CJL
on	0.356	mg/L	0.010	6010	5 Oct 05 13:43	TB

Ent  
WB  
11/11/05

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132

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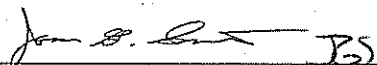
WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 8 Nov 05  
Lab Number: 05-A34336  
Work Order #: 12-10060  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 27 Sep 05 13:17  
Date Received: 28 Sep 05 10:30  
PO #: 0002-75  
Chain of Custody Number: 100208  
Temp at Receipt: 2.0C

Sample Description: T 30.7

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					4 Oct 05	AKF
Water Digestions					3 Oct 05	JMS
BOD, Carbonaceous	< 2	mg/L	2	SM 5210B	28 Sep 05 15:57	CJL
CBOD, 20 Day	14	mg/L	2	SM 5210B	28 Sep 05 16:19	CJL
Solids, Total Suspended	6	mg/L	2	SM 2540D	28 Sep 05 16:00	RMV
Carbon, Total Organic	5.0	mg/L	0.5	415.1	6 Oct 05 8:00	Bis
Chlorophyll a	< 1	mg/cubic m	1.0	10200H	30 Sep 05 7:28	JD
Nitrogen Total, Calculat	16.3	mg/L	NA	Calc	6 Oct 05 6:15	Calculated
Chloride	34.4	mg/L	3.0	325.2	29 Sep 05 11:20	DAP
Nitrate+Nitrite	15.0	mg/L as N	0.20	353.2	3 Oct 05 13:12	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	4 Oct 05 15:55	TAM
Phosphorus, Total	0.226	mg/L	0.005	EPA 365.1	4 Oct 05 10:38	DAP
Phosphorus, Ortho	0.214	mg/L	0.005	EPA 365.1	28 Sep 05 17:30	DAP
Nitrogen, Total Kjeldahl	1.3	mg/L	0.1	SM 4500NorgB/NH3 E	6 Oct 05 6:15	RSL
Iron	0.060	mg/L	0.010	6010	5 Oct 05 13:06	TB

Approved by:

  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

Reported "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 8 Nov 05  
Lab Number: 05-A34335  
Work Order #: 12-10060  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 27 Sep 05 13:08  
Date Received: 28 Sep 05 10:30  
PO #: 0002-75  
Chain of Custody Number: 100208  
Temp at Receipt: 2.0C

Sample Description: T 30.1

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					4 Oct 05	AKF
Water Digestions					3 Oct 05	JMS
BOD, Carbonaceous	< 2	mg/L	2	SM 5210B	28 Sep 05 15:57	CJL
CBOD, 20 Day	9	mg/L	2	SM 5210B	28 Sep 05 16:19	CJL
Solids, Total Suspended	< 2	mg/L	2	SM 2540D	28 Sep 05 16:00	RMV
Carbon, Total Organic	5.0	mg/L	0.5	415.1	6 Oct 05 8:00	Bis
Chlorophyll a	< 1	mg/cubic m	1.0	10200H	30 Sep 05 7:28	JD
Nitrogen Total, Calculat	20.4	mg/L	NA	Calc	6 Oct 05 6:15	Calculated
Chloride	15.3	mg/L	3.0	325.2	29 Sep 05 11:20	DAP
Nitrate+Nitrite	19.1	mg/L as N	0.20	353.2	3 Oct 05 13:12	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	4 Oct 05 15:55	TAM
Phosphorus, Total	0.125	mg/L	0.005	EPA 365.1	4 Oct 05 10:38	DAP
Phosphorus, Ortho	0.111	mg/L	0.005	EPA 365.1	28 Sep 05 17:30	DAP
Nitrogen, Total Kjeldahl	1.3	mg/L	0.1	SM 4500NorgB/NH3 E	6 Oct 05 6:15	RSL
Iron	0.020	mg/L	0.010	6010	5 Oct 05 13:06	TB

Approved by: Jason G. Smith  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Ent WB  
11/11/05

Reporting Limit

Estimated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND NW/DW # R-040 IA LAB #: 132

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 8 Nov 05  
Lab Number: 05-A34334  
Work Order #: 12-10060  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 27 Sep 05 13:00  
Date Received: 28 Sep 05 10:30  
PO #: 0002-75  
Chain of Custody Number: 100208  
Temp at Receipt: 2.0C

Sample Description: CR 30.0

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					4 Oct 05	AKF
Water Digestions					3 Oct 05	JMS
BOD, Carbonaceous	< 2	mg/L	2	SM 5210B	28 Sep 05 15:57	CJL
CBOD, 20 Day	7	mg/L	2	SM 5210B	28 Sep 05 16:19	CJL
Solids, Total Suspended	8	mg/L	2	SM 2540D	28 Sep 05 16:00	RMV
Carbon, Total Organic	13.0	mg/L	0.5	415.1	6 Oct 05 8:00	Bis
Chlorophyll a	< 1	mg/cubic m	1.0	10200H	30 Sep 05 7:28	JD
Nitrogen Total, Calculat	6.2	mg/L	NA	Calc	6 Oct 05 6:15	Calculated
Chloride	42.7	mg/L	3.0	325.2	29 Sep 05 11:20	DAP
Nitrate+Nitrite	4.24	mg/L as N	0.20	353.2	3 Oct 05 13:12	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	4 Oct 05 15:55	TAM
Phosphorus, Total	0.248	mg/L	0.005	EPA 365.1	4 Oct 05 10:38	DAP
Phosphorus, Ortho	0.227	mg/L	0.005	EPA 365.1	28 Sep 05 17:30	DAP
Nitrogen, Total Kjeldahl	2.0	mg/L	0.1	SM 4500NorgB/NH3 E	6 Oct 05 6:15	RSL
Iron	0.419	mg/L	0.010	6010	5 Oct 05 13:06	TB

Approved by: Jason G. Smith  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Ent WB  
11/11/05

Reporting Limit  
"Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 8 Nov 05  
Lab Number: 05-A34333  
Work Order #: 12-10060  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 27 Sep 05 12:10  
Date Received: 28 Sep 05 10:30  
PO #: 0002-75  
Chain of Custody Number: 100208  
Temp at Receipt: 2.0C

Sample Description: CR 29.0

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					4 Oct 05	AKF
Water Digestions					3 Oct 05	JMS
BOD, Carbonaceous	< 2	mg/L	2	SM 5210B	28 Sep 05 15:57	CJL
CBOD, 20 Day	5	mg/L	2	SM 5210B	28 Sep 05 16:19	CJL
Solids, Total Suspended	11	mg/L	2	SM 2540D	28 Sep 05 16:00	RMV
Carbon, Total Organic	13.5	mg/L	0.5	415.1	6 Oct 05 8:00	Bis
Chlorophyll a	1.4	mg/cubic m	1.0	10200H	30 Sep 05 7:28	JD
Nitrogen Total, Calculat	6.2	mg/L	NA	Calc	6 Oct 05 6:15	Calculated
Chloride	37.7	mg/L	3.0	325.2	29 Sep 05 11:20	DAP
Nitrate+Nitrite	4.51	mg/L as N	0.20	353.2	3 Oct 05 13:12	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	4 Oct 05 15:55	TAM
Phosphorus, Total	0.236	mg/L	0.005	EPA 365.1	4 Oct 05 10:38	DAP
Phosphorus, Ortho	0.216	mg/L	0.005	EPA 365.1	28 Sep 05 17:30	DAP
Nitrogen, Total Kjeldahl	1.7	mg/L	0.1	SM 4500NorgB/NH3 E	6 Oct 05 6:15	RSL
Iron	0.410	mg/L	0.010	6010	5 Oct 05 13:06	TB

Approved by:

Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Entered  
WB  
11/11/05

Reporting Limit

ated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 8 Nov 05  
Lab Number: 05-A34348  
Work Order #:12-10060  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 27 Sep 05 16:50  
Date Received: 28 Sep 05 10:30  
PO #: 0002-75  
Chain of Custody Number: 100208  
Temp at Receipt: 2.0C

Sample Description: TE 27.8

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					4 Oct 05	AKF
Water Digestions					3 Oct 05	JMS
BOD, Carbonaceous	4	mg/L	2	SM 5210B	28 Sep 05 16:10	CJL
CBOD, 20 Day	14	mg/L	2	SM 5210B	28 Sep 05 16:19	CJL
Solids, Total Suspended	6	mg/L	2	SM 2540D	28 Sep 05 17:00	RMV
Carbon, Total Organic	5.4	mg/L	0.5	415.1	6 Oct 05 8:00	Bis
Chlorophyll a	< 1	mg/cubic m	1.0	10200H	30 Sep 05 7:28	JD
Nitrogen Total, Calculat	1.9	mg/L	NA	Calc	6 Oct 05 14:00	Calculated
Chloride	22.1	mg/L	3.0	325.2	29 Sep 05 11:31	DAP
Nitrate+Nitrite	1.29	mg/L as N	0.20	353.2	3 Oct 05 13:14	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	6 Oct 05 13:00	TAM
Phosphorus, Total	0.180	mg/L	0.005	EPA 365.1	4 Oct 05 10:39	DAP
Phosphorus, Ortho	0.180	mg/L	0.005	EPA 365.1	28 Sep 05 17:34	DAP
Nitrogen, Total Kjeldahl	0.6	mg/L	0.1	SM 4500NorgB/NH3 E	6 Oct 05 14:00	TAM
Iron	0.454	mg/L	0.010	6010	5 Oct 05 13:43	TB

Ent.  
WB  
11/11/05

Approved by: Jason G. Smith  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

Unstated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132

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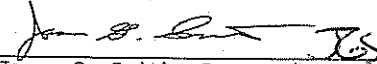
WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 8 Nov 05  
Lab Number: 05-A34349  
Work Order #: 12-10060  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 27 Sep 05 16:35  
Date Received: 28 Sep 05 10:30  
PO #: 0002-75  
Chain of Custody Number: 100208  
Temp at Receipt: 2.0C

Sample Description: TW 27.8

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					4 Oct 05	AKF
Water Digestions					3 Oct 05	JMS
BOD, Carbonaceous	< 2	mg/L	2	SM 5210B	28 Sep 05 16:50	CJL
CBOD, 20 Day	5	mg/L	2	SM 5210B	28 Sep 05 16:19	CJL
Solids, Total Suspended	9	mg/L	2	SM 2540D	28 Sep 05 17:00	RMV
Carbon, Total Organic	7.5	mg/L	0.5	415.1	6 Oct 05 8:00	Bis
Chlorophyll a	1.6	mg/cubic m	1.0	10200H	30 Sep 05 7:28	JD
Nitrogen Total, Calculat	3.3	mg/L	NA	Calc	6 Oct 05 14:00	Calculated
Chloride	24.8	mg/L	3.0	325.2	29 Sep 05 11:31	DAP
Nitrate+Nitrite	2.19	mg/L as N	0.20	353.2	3 Oct 05 13:14	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	6 Oct 05 13:00	TAM
Phosphorus, Total	0.116	mg/L	0.005	EPA 365.1	4 Oct 05 10:40	DAP
Phosphorus, Ortho	0.101	mg/L	0.005	EPA 365.1	28 Sep 05 17:34	DAP
Nitrogen, Total Kjeldahl	1.1	mg/L	0.1	SM 4500NorgB/NH3 E	6 Oct 05 14:00	TAM
Iron	0.221	mg/L	0.010	6010	5 Oct 05 13:43	TB

Ent  
WB  
11/11/05

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit  
"Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447600 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132

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WES BOLL  
 WENCK ASSOCIATES INC  
 1800 PIONEER CRK CTR  
 MAPLE PLAIN MN 55359-9000

Report Date: 8 Nov 05  
 Lab Number: 05-A34347  
 Work Order #: 12-10060  
 Account #: 013173  
 Sample Matrix: SURFACE WATER  
 Date Sampled: 27 Sep 05 17:05  
 Date Received: 28 Sep 05 10:30  
 PO #: 0002-75  
 Chain of Custody Number: 100208  
 Temp at Receipt: 2.0C

Sample Description: T 27.3

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					4 Oct 05	AKF
Water Digestions					3 Oct 05	JMS
BOD, Carbonaceous	< 2	mg/L	2	SM 5210B	28 Sep 05 16:10	CJL
CBOD, 20 Day	5	mg/L	2	SM 5210B	28 Sep 05 16:19	CJL
Solids, Total Suspended	< 2	mg/L	2	SM 2540D	28 Sep 05 17:00	RMV
Carbon, Total Organic	14.5	mg/L	0.5	415.1	6 Oct 05 8:00	Bis
Chlorophyll a	< 1	mg/cubic m	1.0	10200H	30 Sep 05 7:28	JD
Nitrogen Total, Calculat	2.6	mg/L	NA	Calc	6 Oct 05 14:00	Calculated
Chloride	22.6	mg/L	3.0	325.2	29 Sep 05 11:31	DAP
Nitrate+Nitrite	1.30	mg/L as N	0.20	353.2	3 Oct 05 13:13	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	6 Oct 05 13:00	TAM
Phosphorus, Total	0.135	mg/L	0.005	EPA 365.1	4 Oct 05 10:39	DAP
Phosphorus, Ortho	0.117	mg/L	0.005	EPA 365.1	28 Sep 05 17:32	DAP
Nitrogen, Total Kjeldahl	1.3	mg/L	0.1	SM 4500NorgB/NH3 E	6 Oct 05 14:00	TAM
Iron	0.075	mg/L	0.010	6010	5 Oct 05 13:43	TB

Ent.  
 WB  
 11/11/05

Approved by: Jason G. Smith  
 Jason G. Smith, Inorganic  
 Laboratory Manager New Ulm, MN

Reporting Limit

Calculated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
 ! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND HW/DW # R-040 IA LAB #: 132

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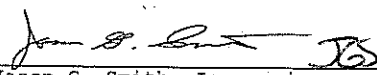
Page: 1 of 1

WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 8 Nov 05  
Lab Number: 05-A34332  
Work Order #:12-10060  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 27 Sep 05 11:20  
Date Received: 28 Sep 05 10:30  
PO #: 0002-75  
Chain of Custody Number: 100208  
Temp at Receipt: 2.0C

Sample Description: CR 27.2

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					4 Oct 05	AKF
Water Digestions					3 Oct 05	JMS
BOD, Carbonaceous	2	mg/L	2	SM 5210B	28 Sep 05 15:57	CJL
CBOD, 20 Day	5	mg/L	2	SM 5210B	28 Sep 05 16:19	CJL
Solids, Total Suspended	15	mg/L	2	SM 2540D	2 Oct 05 11:40	CJL
Carbon, Total Organic	12.0	mg/L	0.5	415.1	6 Oct 05 8:00	Bis
Chlorophyll a	6.7	mg/cubic m	1.0	10200H	30 Sep 05 7:28	JD
Nitrogen Total, Calculat	4.3	mg/L	NA	Calc	6 Oct 05 6:15	Calculated
Chloride	27.2	mg/L	3.0	325.2	29 Sep 05 11:20	DAP
Nitrate+Nitrite	1.97	mg/L as N	0.20	353.2	3 Oct 05 13:12	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	4 Oct 05 15:55	TAM
Phosphorus, Total	0.247	mg/L	0.005	EPA 365.1	4 Oct 05 10:38	DAP
Phosphorus, Ortho	0.191	mg/L	0.005	EPA 365.1	28 Sep 05 17:30	DAP
Nitrogen, Total Kjeldahl	2.3	mg/L	0.1	SM 4500NorgB/NH3 E	6 Oct 05 6:15	RSL
Solids, Suspended Volatile	8	mg/L	2	SM 2540E	2 Oct 05 11:40	CJL
Non	0.375	mg/L	0.010	6010	5 Oct 05 13:06	TB

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Ent  
WB  
11/11/05

Reporting Limit

Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132

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WES BOLL  
 WENCK ASSOCIATES INC  
 1800 PIONEER CRK CTR  
 MAPLE PLAIN MN 55359-9000

Report Date: 8 Nov 05  
 Lab Number: 05-A34331  
 Work Order #: 12-10060  
 Account #: 013173  
 Sample Matrix: SURFACE WATER  
 Date Sampled: 27 Sep 05 10:45  
 Date Received: 28 Sep 05 10:30  
 PO #: 0002-75  
 Chain of Custody Number: 100208  
 Temp at Receipt: 2.0C

Sample Description: CR 25.6

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					4 Oct 05	AKF
Water Digestions					3 Oct 05	JMS
BOD, Carbonaceous	2	mg/L	2	SM 5210B	28 Sep 05 15:57	CJL
CBOD, 40 Day	5	mg/L	2	SM 5210B	29 Sep 05 9:39	RMV
CBOD, 20 Day	11	mg/L	2	SM 5210B	28 Sep 05 16:19	CJL
Solids, Total Suspended	10	mg/L	2	SM 2540D	2 Oct 05 11:40	CJL
Carbon, Total Organic	12.0	mg/L	0.5	415.1	6 Oct 05 8:00	Bis
Chlorophyll a	1.1	mg/cubic m	1.0	10200H	30 Sep 05 7:28	JD
Nitrogen Total, Calculat	3.0	mg/L	NA	Calc	6 Oct 05 6:15	Calculated
Chloride	25.6	mg/L	3.0	325.2	29 Sep 05 11:20	DAP
Nitrate+Nitrite	1.59	mg/L as N	0.20	353.2	3 Oct 05 13:12	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	4 Oct 05 15:55	TAM
Phosphorus, Total	0.208	mg/L	0.005	EPA 365.1	4 Oct 05 10:38	DAP
Phosphorus, Ortho	0.191	mg/L	0.005	EPA 365.1	28 Sep 05 17:30	DAP
Nitrogen, Total Kjeldahl	1.4	mg/L	0.1	SM 4500NorgB/NH3 E	6 Oct 05 6:15	RSL
Solids, Suspended Volatile	7	mg/L	2	SM 2540E	2 Oct 05 11:40	CJL
on	0.451	mg/L	0.010	6010	5 Oct 05 13:06	TB

Approved by:

*Jason G. Smith*  
 Jason G. Smith, Inorganic  
 Laboratory Manager New Ulm, MN

Reporting Limit

Noted "Less Than Result" (<): @ = Due to sample matrix  
 ! = Due to sample quantity

# = Due to sample concentration  
 + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132

*Entered  
 WB  
 11/11/05*

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 8 Nov 05  
Lab Number: 05-A34346  
Work Order #: 12-10060  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 27 Sep 05 15:09  
Date Received: 28 Sep 05 10:30  
PO #: 0002-75  
Chain of Custody Number: 100208  
Temp at Receipt: 2.0C

TC33.2

Sample Description: FD 1

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					4 Oct 05	AKF
Water Digestions					3 Oct 05	JMS
BOD, Carbonaceous	< 2	mg/L	2	SM 5210B	28 Sep 05 16:10	CJL
CBOD, 20 Day	10	mg/L	2	SM 5210B	28 Sep 05 16:19	CJL
Solids, Total Suspended	2	mg/L	2	SM 2540D	28 Sep 05 17:00	RMV
Carbon, Total Organic	11.0	mg/L	0.5	415.1	6 Oct 05 8:00	Bis
Chlorophyll a	2.5	mg/cubic m	1.0	10200H	30 Sep 05 7:28	JD
Nitrogen Total, Calculat	9.0	mg/L	NA	Calc	6 Oct 05 14:00	Calculated
Chloride	48.9	mg/L	3.0	325.2	29 Sep 05 11:31	DAP
Nitrate+Nitrite	7.65	mg/L as N	0.20	353.2	3 Oct 05 13:13	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	6 Oct 05 13:00	TAM
Phosphorus, Total	0.263	mg/L	0.005	EPA 365.1	4 Oct 05 10:39	DAP
Phosphorus, Ortho	0.253	mg/L	0.005	EPA 365.1	28 Sep 05 17:32	DAP
Nitrogen, Total Kjeldahl	1.4	mg/L	0.1	SM 4500NorgB/NH3 E	6 Oct 05 14:00	TAM
Iron	0.115	mg/L	0.010	6010	5 Oct 05 13:43	TB

Approved by:

Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Ent.  
WB  
11/11/05

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity \* = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 22 Apr 06  
Lab Number: 06-A13197  
Work Order #: 12-4490  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 18 Apr 06 10:10  
Date Received: 18 Apr 06 13:00  
PO #: CLEARWATER RIVER TMDL

Project Name: CLEARWATER RIVER TMDL

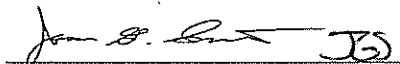
Sample Description: CR 25.6

Temp at Receipt: -1.0C

	As Received Result	Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	36	CFU/100 mL	10.	SM 922D 18th Ed	18 Apr 06 14:15 VRK

CFU = Colony Forming Units

Approved by:

  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 22 Apr 06  
Lab Number: 06-A13199  
Work Order #:12-4490  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 18 Apr 06 9:57  
Date Received: 18 Apr 06 13:00  
PO #: CLEARWATER RIVER TMDL


Project Name: CLEARWATER RIVER TMDL

Sample Description: T 27.3

Temp at Receipt: -1.0C

	As Received Result	Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	< 10	CFU/100 mL	10.	SM 9222D 18th Ed	18 Apr 06 14:15 VRK

CFU = Colony Forming Units

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): # = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447660 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 22 Apr 06  
Lab Number: 06-A13198  
Work Order #: 12-4490  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 18 Apr 06 10:00  
Date Received: 18 Apr 06 13:00  
PO #: CLEARWATER RIVER TMDL

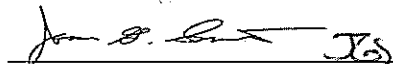
Project Name: CLEARWATER RIVER TMDL

Sample Description: CR 27.2

Temp at Receipt: -1.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	10	CFU/100 mL	10.	SM 9222D 18th Ed	18 Apr 06 14:15	VRK

CFU = Colony Forming Units

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): # = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 22 Apr 06  
Lab Number: 06-A13200  
Work Order #: 12-4490  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 18 Apr 06 9:52  
Date Received: 18 Apr 06 13:00  
PO #: CLEARWATER RIVER TMDL

Project Name: CLEARWATER RIVER TMDL

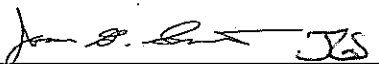
Sample Description: TE 27.8

Temp at Receipt: -1.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	10	CFU/100 mL	10.	SM 9222D 18th Ed	18 Apr 06 14:15	VRK

CFU = Colony Forming Units

Approved by:

  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 22 Apr 06  
Lab Number: 06-A13201  
Work Order #:12-4490  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 18 Apr 06 9:48  
Date Received: 18 Apr 06 13:00  
PO #: CLEARWATER RIVER TMDL

Project Name: CLEARWATER RIVER TMDL

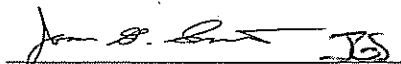
Sample Description: TW 27.8

Temp at Receipt: -1.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	100	CFU/100 mL	10.	SM 9222D 18th Ed	18 Apr 06 14:15	VRK

CFU = Colony Forming Units

Approved by:

  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): # = Due to sample matrix  
! = Due to sample quantity # = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 HD MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK. CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 22 Apr 06  
Lab Number: 06-A13202  
Work Order #: 12-4490  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 18 Apr 06 9:42  
Date Received: 18 Apr 06 13:00  
PO #: CLEARWATER RIVER TMDL

Project Name: CLEARWATER RIVER TMDL

Sample Description: CR 29.0

Temp at Receipt: -1.0C

	As Received Result	Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	18	CFU/100 mL	10.	SM 9222D 18th Ed	18 Apr 06 14:15 VRK

CFU = Colony Forming Units

Approved by: Jason G. Smith  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND NW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 22 Apr 06  
Lab Number: 06-A13203  
Work Order #: 12-4490  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 18 Apr 06 9:35  
Date Received: 18 Apr 06 13:00  
PO #: CLEARWATER RIVER TMDL

Project Name: CLEARWATER RIVER TMDL

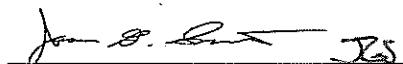
Sample Description: CR 30.0

Temp at Receipt: -1.0C

	As Received Result	Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	220	CFU/100 mL	10.	SM 9222D 18th Ed	18 Apr 06 14:15 VRK

CFU = Colony Forming Units

Approved by:

  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 22 Apr 06  
Lab Number: 06-A13204  
Work Order #: 12-4490  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 18 Apr 06 9:32  
Date Received: 18 Apr 06 13:00  
PO #: CLEARWATER RIVER TMDL

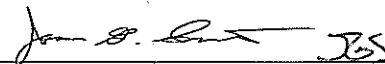
Project Name: CLEARWATER RIVER TMDL

Sample Description: T 30.1

Temp at Receipt: -1.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	< 10	CFU/100 mL	10.	SM 9222D 18th Ed	18 Apr 06 14:15	VRK

CFU = Colony Forming Units

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

- Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 22 Apr 06  
Lab Number: 06-A13207  
Work Order #: 12-4490  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 18 Apr 06 9:30  
Date Received: 18 Apr 06 13:00  
PO #: CLEARWATER RIVER TMDL

Project Name: CLEARWATER RIVER TMDL

Sample Description: T 30.7

Temp at Receipt: -1.0C

	As Received Result	Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	54	CFU/100 mL	10.	SM 9222D 18th Ed	18 Apr 06 14:15 VRK

CFU = Colony Forming Units

Approved by: Jason G. Smith  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

= Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
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MAPLE PLAIN MN 55359-9000

Report Date: 22 Apr 06  
Lab Number: 06-A13205  
Work Order #: 12-4490  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 18 Apr 06 9:18  
Date Received: 18 Apr 06 13:00  
PO #: CLEARWATER RIVER TMDL

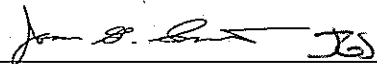
Project Name: CLEARWATER RIVER TMDL

Sample Description: TA 30.9

Temp at Receipt: -1.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	900	CFU/100 mL	10.	SM 9222D 18th Ed	18 Apr 06 14:15	VRK

CFU = Colony Forming Units

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
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MAPLE PLAIN MN 55359-9000

Report Date: 22 Apr 06  
Lab Number: 06-A13206  
Work Order #: 12-4490  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 18 Apr 06 9:15  
Date Received: 18 Apr 06 13:00  
PO #: CLEARWATER RIVER TMDL


Project Name: CLEARWATER RIVER TMDL

Sample Description: TB 30.9

Temp at Receipt: -1.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	< 10	CFU/100 mL	10.	SM 9222D 18th Ed	18 Apr 06 14:15	VRK

CFU = Colony Forming Units

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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MAPLE PLAIN MN 55359-9000

Report Date: 22 Apr 06  
Lab Number: 06-A13208  
Work Order #: 12-4490  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 18 Apr 06 9:20  
Date Received: 18 Apr 06 13:00  
PO #: CLEARWATER RIVER TMDL

Project Name: CLEARWATER RIVER TMDL

Sample Description: CR 31.8

Temp at Receipt: -1.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	30	CFU/100 mL	10.	SM 9222D 18th Ed	18 Apr 06 14:15	VRK

CFU = Colony Forming Units

Approved by: Jason G. Smith  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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Report Date: 22 Apr 06  
Lab Number: 06-A13209  
Work Order #: 12-4490  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 18 Apr 06 9:10  
Date Received: 18 Apr 06 13:00  
PO #: CLEARWATER RIVER TMDL

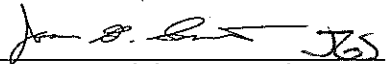
Project Name: CLEARWATER RIVER TMDL

Sample Description: T 32.2

Temp at Receipt: -1.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	20	CFU/100 mL	10.	SM 9222D 18th Ed	18 Apr 06 14:15	VRK

CFU = Colony Forming Units

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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MAPLE PLAIN MN 55359-9000

Report Date: 22 Apr 06  
Lab Number: 06-A13216  
Work Order #: 12-4490  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 18 Apr 06 8:30  
Date Received: 18 Apr 06 13:00  
PO #: CLEARWATER RIVER TMDL

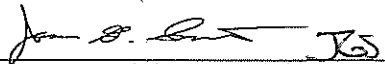
Project Name: CLEARWATER RIVER TMDL

Sample Description: TF 33.2

Temp at Receipt: -1.0C

	As Received Result	Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	< 10	CFU/100 mL	10.	SM 9222D 18th Ed	18 Apr 06 14:15 VRK

CFU = Colony Forming Units

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WN/DW # R-040 IA LAB #: 132 IA LAB #: 022

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Report Date: 22 Apr 06  
Lab Number: 06-A13215  
Work Order #:12-4490  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 18 Apr 06 8:20  
Date Received: 18 Apr 06 13:00  
PO #: CLEARWATER RIVER TMDL

Project Name: CLEARWATER RIVER TMDL

Sample Description: TE 33.2

Temp at Receipt: -1.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	20	CFU/100 mL	10.	SM 9222D 18th Ed	18 Apr 06 14:15	VRK

CFU = Colony Forming Units

Approved by:

*Jason G. Smith*  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
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MAPLE PLAIN MN 55359-9000

Report Date: 22 Apr 06  
Lab Number: 06-A13214  
Work Order #: 12-4490  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 18 Apr 06 8:25  
Date Received: 18 Apr 06 13:00  
PO #: CLEARWATER RIVER TMDL

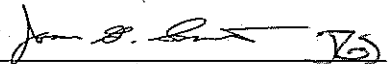
Project Name: CLEARWATER RIVER TMDL

Sample Description: TD 33.2

Temp at Receipt: -1.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	80	CFU/100 mL	10.	SM 9222D 18th Ed	18 Apr 06 14:15	VRK

CFU = Colony Forming Units

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
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1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 22 Apr 06  
Lab Number: 06-A13213  
Work Order #:12-4490  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 18 Apr 06 8:40  
Date Received: 18 Apr 06 13:00  
PO #: CLEARWATER RIVER TMDL

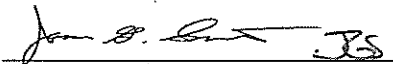
Project Name: CLEARWATER RIVER TMDL

Sample Description: TC 33.2

Temp at Receipt: -1.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	64	CFU/100 mL	10.	SM 9222D 18th Ed	18 Apr 06 14:15	VRK

CFU = Colony Forming Units

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
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Report Date: 22 Apr 06  
Lab Number: 06-A13212  
Work Order #: 12-4490  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 18 Apr 06 8:45  
Date Received: 18 Apr 06 13:00  
PO #: CLEARWATER RIVER TMDL

Project Name: CLEARWATER RIVER TMDL

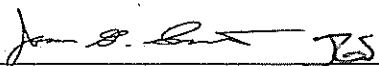
Sample Description: TB 33.2

Temp at Receipt: -1.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	45	CFU/100 mL	10.	SM 9222D 18th Ed	18 Apr 06 14:15	VRK

CFU = Colony Forming Units

Approved by:

  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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MAPLE PLAIN MN 55359-9000

Report Date: 22 Apr 06
Lab Number: 06-A13211
Work Order #:12-4490
Account #: 013173
Sample Matrix: SURFACE WATER
Date Sampled: 18 Apr 06 8:42
Date Received: 18 Apr 06 13:00
PO #: CLEARWATER RIVER TMDL

Project Name: CLEARWATER RIVER TMDL

Sample Description: TA 33.2

Temp at Receipt: -1.0C

Table with 6 columns: As Received Result, Method RL, Method Reference, Date Analyzed, Analyst. Row 1: Fecal Coliform, MF, 10, CFU/100 mL, 10., SM 9222D 18th Ed, 18 Apr 06 14:15, VRK

CFU = Colony Forming Units

Approved by: [Signature]
Jason G. Smith, Inorganic
Laboratory Manager New Ulm, MN

= Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 22 Apr 06  
Lab Number: 06-A13210  
Work Order #: 12-4490  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 18 Apr 06 9:03  
Date Received: 18 Apr 06 13:00  
PO #: CLEARWATER RIVER TMDL

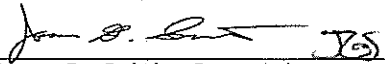
Project Name: CLEARWATER RIVER TMDL

Sample Description: CR 33.6

Temp at Receipt: -1.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	10	CFU/100 mL	10.	SM 9222D 18th Ed	18 Apr 06 14:15	VRK

CFU = Colony Forming Units

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

\* Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 22 Apr 06  
Lab Number: 06-A13217  
Work Order #: 12-4490  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 18 Apr 06 8:54  
Date Received: 18 Apr 06 13:00  
PO #: CLEARWATER RIVER TMDL

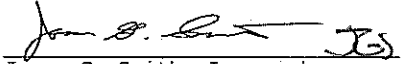
Project Name: CLEARWATER RIVER TMDL

Sample Description: CR 35.3

Temp at Receipt: -1.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	< 10	CFU/100 mL	10.	SM 9222D 18th Ed	18 Apr 06 14:15	VRK

CFU = Colony Forming Units

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 22 Apr 06  
Lab Number: 06-A13218  
Work Order #:12-4490  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 18 Apr 06  
Date Received: 18 Apr 06 13:00  
PO #: CLEARWATER RIVER TMDL

Project Name: CLEARWATER RIVER TMDL

Sample Description: FD 1

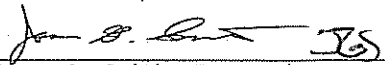
Temp at Receipt: -1.0C

	As Received Result	Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	* 27	CFU/100 mL	10.	SM 9222D 18th Ed	18 Apr 06 14:15 VRK

CFU = Colony Forming Units

\* Holding time Exceeded

\*\* No collection time supplied by the client.

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

= Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
\* = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 22 Apr 06  
Lab Number: 06-A13219  
Work Order #: 12-4490  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 18 Apr 06  
Date Received: 18 Apr 06 13:00  
PO #: CLEARWATER RIVER TMDL

Project Name: CLEARWATER RIVER TMDL

Sample Description: FD 2

Temp at Receipt: -1.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Fecal Coliform, MF	* 200	CFU/100 mL	10.	SM 9222D 18th Ed	18 Apr 06 14:15	VRK

CFU = Colony Forming Units

\* Holding time Exceeded

\*\* No collection time supplied by the client.

Approved by: Jason G. Smith  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): # = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447690 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
 WENCK ASSOCIATES INC  
 1800 PIONEER CRK CTR  
 MAPLE PLAIN MN 55359-9000

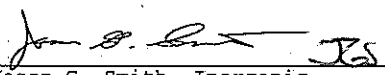
Report Date: 30 May 06  
 Lab Number: 06-A13643  
 Work Order #: 12-4607  
 Account #: 013173  
 Sample Matrix: SURFACE WATER  
 Date Sampled: 19 Apr 06 11:30  
 Date Received: 19 Apr 06 18:53  
 PO #: CLEARWATER RIVER

Project Name: CLEARWATER RIVER

Sample Description: CR 35.3

Temp at Receipt: 3.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					24 Apr 06	DAP
Water Digestions					24 Apr 06	TB
BOD, Carbonaceous	5	mg/L	2	SM 5210B	20 Apr 06 10:30	RMV
CBOD, 20 Day	35	mg/L	2	SM 5210B	20 Apr 06 12:04	RMV
Solids, Total Suspended	13	mg/L	2	USGS I-3765-85	20 Apr 06 16:40	CJL
Carbon, Total Organic	12.5	mg/L	0.5	415.1	27 Apr 06 8:15	Bis
Chlorophyll a	36.1	mg/cubic m	1.0	10200H	24 Apr 06 8:27	JD
Nitrogen Total, Calculat	2.0	mg/L	NA	Calc	21 Apr 06 17:19	Calculated
Nitrate+Nitrite	0.47	mg/L as N	0.20	353.2	21 Apr 06 17:19	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	20 Apr 06 14:10	TAM
Phosphorus, Total	0.072	mg/L	0.005	EPA 365.1	25 Apr 06 11:01	DAP
Phosphorus, Ortho	0.005	mg/L	0.005	EPA 365.1	20 Apr 06 8:54	DAP
Nitrogen, Total Kjeldahl	1.5	mg/L	0.1	SM 4500NorgB/NH3 E	21 Apr 06 14:05	RSL
Solids, Suspended Volatile	7	mg/L	2	EPA 160.4	20 Apr 06 16:40	CJL
Iron	0.046	mg/L	0.010	6010	27 Apr 06 10:58	CJR

Approved by:   
 Jason G. Smith, Inorganic  
 Laboratory Manager New Ulm, MN

MC  
8-29-06

= Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
 ! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 HI LAB # 999447600 ND MICRO # 1013-M ND WH/DH # R-040 IA LAB #: 132 IA LAB #: 022

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MAPLE PLAIN MN 55359-9000

Report Date: 30 May 06  
Lab Number: 06-A13638  
Work Order #: 12-4607  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 19 Apr 06 14:20  
Date Received: 19 Apr 06 18:53  
PO #: CLEARWATER RIVER

Project Name: CLEARWATER RIVER

Sample Description: CR 33.6

Temp at Receipt: 3.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					24 Apr 06	DAP
Water Digestions					24 Apr 06	TB
BOD, Carbonaceous	4	mg/L	2	SM 5210B	20 Apr 06 10:30	RMV
CBOD, 40 Day	89	mg/L	2	SM 5210B	20 Apr 06 11:24	CJL
CBOD, 20 Day	52	mg/L	2	SM 5210B	20 Apr 06 12:04	RMV
Solids, Total Suspended	10	mg/L	2	USGS I-3765-85	20 Apr 06 16:40	CJL
Carbon, Total Organic	13.0	mg/L	0.5	415.1	27 Apr 06 8:15	Bis
Chlorophyll a	26.4	mg/cubic m	1.0	10200H	24 Apr 06 8:27	JD
Nitrogen Total, Calculat	2.4	mg/L	NA	Calc	21 Apr 06 17:18	Calculated
Nitrate+Nitrite	0.96	mg/L as N	0.20	353.2	21 Apr 06 17:18	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	21 Apr 06 7:55	RSL
Phosphorus, Total	0.067	mg/L	0.005	EPA 365.1	25 Apr 06 11:00	DAP
Phosphorus, Ortho	0.007	mg/L	0.005	EPA 365.1	20 Apr 06 8:54	DAP
Nitrogen, Total Kjeldahl	1.4	mg/L	0.1	SM 4500NorgB/NH3 E	20 Apr 06 7:30	RSL
Solids, Suspended Volatile	4	mg/L	2	EPA 160.4	20 Apr 06 16:40	CJL
Iron	0.233	mg/L	0.010	6010	27 Apr 06 10:58	CJR

Approved by: Jason G. Smith  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

MV  
5-24-06

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND HW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
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MAPLE PLAIN MN 55359-9000

Report Date: 30 May 06  
Lab Number: 06-A13656  
Work Order #: 12-4607  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 19 Apr 06 16:20  
Date Received: 19 Apr 06 18:53  
PO #: CLEARWATER RIVER

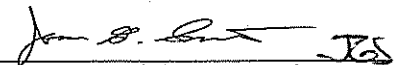
Project Name: CLEARWATER RIVER

Sample Description: TE 33.2

Temp at Receipt: 3.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					24 Apr 06	DAP
Water Digestions					24 Apr 06	TB
BOD, Carbonaceous	< 2	mg/L	2	SM 5210B	20 Apr 06 10:57	RMV
CBOD, 20 Day	12	mg/L	2	SM 5210B	20 Apr 06 12:04	RMV
Solids, Total Suspended	< 2	mg/L	2	USGS I-3765-85	20 Apr 06 9:25	RMV
Carbon, Total Organic	8.0	mg/L	0.5	415.1	27 Apr 06 8:15	Bis
Chlorophyll a	3.1	mg/cubic m	1.0	10200H	24 Apr 06 8:27	JD
Nitrogen Total, Calculat	7.0	mg/L	NA	Calc	21 Apr 06 17:20	Calculated
Nitrate+Nitrite	5.39	mg/L as N	0.20	353.2	21 Apr 06 17:20	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	25 Apr 06 14:05	TAM
Phosphorus, Total	0.081	mg/L	0.005	EPA 365.1	25 Apr 06 11:02	DAP
Phosphorus, Ortho	0.046	mg/L	0.005	EPA 365.1	20 Apr 06 8:55	DAP
Nitrogen, Total Kjeldahl	1.6	mg/L	0.1	SM 4500NorgB/NH3 E	21 Apr 06 14:05	RSL
Iron	0.087	mg/L	0.010	6010	27 Apr 06 12:10	CJR

Approved by:

  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

*Handwritten initials and date: JCS 02-25-06*

Reporting Limit

Rated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 30 May 06  
Lab Number: 06-A13657  
Work Order #: 12-4607  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 19 Apr 06 16:05  
Date Received: 19 Apr 06 18:53  
PO #: CLEARWATER RIVER

Project Name: CLEARWATER RIVER

Sample Description: TF 33.2

Temp at Receipt: 3.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					24 Apr 06	DAP
Water Digestions					24 Apr 06	TB
BOD, Carbonaceous	< 2	mg/L	2	SM 5210B	20 Apr 06 10:57	RMV
CBOD, 20 Day	14	mg/L	2	SM 5210B	20 Apr 06 12:04	RMV
Solids, Total Suspended	< 2	mg/L	2	USGS I-3765-85	20 Apr 06 9:25	RMV
Carbon, Total Organic	6.0	mg/L	0.5	415.1	27 Apr 06 8:15	Bis
Chlorophyll a	9.2	mg/cubic m	1.0	10200H	24 Apr 06 8:27	JD
Nitrogen Total, Calculat	21.2	mg/L	NA	Calc	21 Apr 06 17:20	Calculated
Nitrate+Nitrite	20.2	mg/L as N	0.20	353.2	21 Apr 06 17:20	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	25 Apr 06 14:05	TAM
Phosphorus, Total	0.055	mg/L	0.005	EPA 365.1	25 Apr 06 11:02	DAP
Phosphorus, Ortho	0.047	mg/L	0.005	EPA 365.1	20 Apr 06 8:56	DAP
Nitrogen, Total Kjeldahl	1.0	mg/L	0.1	SM 4500NorgB/NH3 E	21 Apr 06 14:05	RSL
Iron	< 0.01	mg/L	0.01	6010	27 Apr 06 12:10	CJR

*NC 8-29-06*

Approved by: Jason G. Smith  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

= Reporting Limit

Invated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447690 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 30 May 06  
Lab Number: 06-A13652  
Work Order #:12-4607  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 19 Apr 06 15:35  
Date Received: 19 Apr 06 18:53  
PO #: CLEARWATER RIVER

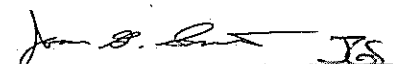
Project Name: CLEARWATER RIVER

Sample Description: TC 33.2

Temp at Receipt: 3.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					24 Apr 06	DAP
Water Digestions					24 Apr 06	TB
BOD, Carbonaceous	2	mg/L	2	SM 5210B	20 Apr 06 10:57	RMV
CBOD, 20 Day	15	mg/L	2	SM 5210B	20 Apr 06 12:04	RMV
Solids, Total Suspended	2	mg/L	2	USGS I-3765-85	20 Apr 06 9:25	RMV
Carbon, Total Organic	8.0	mg/L	0.5	415.1	27 Apr 06 8:15	Bis
Chlorophyll a	3.0	mg/cubic m	1.0	10200H	24 Apr 06 8:27	JD
Nitrogen Total, Calculat	12.7	mg/L	NA	Calc	21 Apr 06 17:20	Calculated
Nitrate+Nitrite	11.4	mg/L as N	0.20	353.2	21 Apr 06 17:20	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	25 Apr 06 11:35	TAM
Phosphorus, Total	0.170	mg/L	0.005	EPA 365.1	25 Apr 06 11:02	DAP
Phosphorus, Ortho	0.120	mg/L	0.005	EPA 365.1	20 Apr 06 8:55	DAP
Nitrogen, Total Kjeldahl	1.3	mg/L	0.1	SM 4500NorgB/NH3 E	21 Apr 06 14:05	RSL
Iron	0.142	mg/L	0.010	6010	27 Apr 06 11:30	CJR

Approved by:

  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

*Handwritten note:*  
MVT  
8-25-06

RL = Reporting Limit

Reported "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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1411 S. 12th St. ~ Bismarck, ND 58502 ~ 800-279-6885 ~ Fax 701-258-9724  
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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

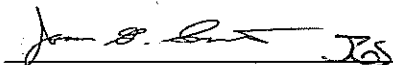
Report Date: 30 May 06  
Lab Number: 06-A13653  
Work Order #:12-4607  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 19 Apr 06 16:30  
Date Received: 19 Apr 06 18:53  
PO #: CLEARWATER RIVER

Project Name: CLEARWATER RIVER

Sample Description: TD 33.2

Temp at Receipt: 3.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					24 Apr 06	DAP
Water Digestions					24 Apr 06	TB
BOD, Carbonaceous	< 2	mg/L	2	SM 5210B	20 Apr 06 10:57	RMV
CBOD, 20 Day	13	mg/L	2	SM 5210B	20 Apr 06 12:04	RMV
Solids, Total Suspended	< 2	mg/L	2	USGS I-3765-85	20 Apr 06 9:25	RMV
Carbon, Total Organic	6.0	mg/L	0.5	415.1	27 Apr 06 8:15	Bis
Chlorophyll a	< 1	mg/cubic m	1.0	10200H	24 Apr 06 8:27	JD
Nitrogen Total, Calculat	20.7	mg/L	NA	Calc	21 Apr 06 17:20	Calculated
Nitrate+Nitrite	19.5	mg/L as N	0.20	353.2	21 Apr 06 17:20	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	25 Apr 06 11:35	TAM
Phosphorus, Total	0.062	mg/L	0.005	EPA 365.1	25 Apr 06 11:02	DAP
Phosphorus, Ortho	0.050	mg/L	0.005	EPA 365.1	20 Apr 06 8:55	DAP
Nitrogen, Total Kjeldahl	1.2	mg/L	0.1	SM 4500NorgB/NH3 E	21 Apr 06 14:05	RSL
Iron	0.076	mg/L	0.010	6010	27 Apr 06 11:30	CJR

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

= Reporting Limit

Reported "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND NW/DW # R-040 IA LAB #: 132 IA LAB #: 022

*Handwritten:* KC  
8-29-06

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WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 30 May 06  
Lab Number: 06-A13588  
Work Order #: 12-4607  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 19 Apr 06 14:40  
Date Received: 19 Apr 06 18:53  
PO #: CLEARWATER RIVER

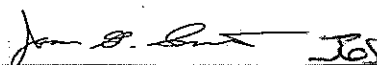
Project Name: CLEARWATER RIVER

Sample Description: TB 33.2

Temp at Receipt: 3.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					24 Apr 06	DAP
Water Digestions					24 Apr 06	TB
BOD, Carbonaceous	2	mg/L	2	SM 5210B	20 Apr 06 10:57	RMV
CBOD, 20 Day	26	mg/L	2	SM 5210B	20 Apr 06 12:04	RMV
Solids, Total Suspended	4	mg/L	2	USGS I-3765-85	20 Apr 06 9:25	RMV
Carbon, Total Organic	9.2	mg/L	0.5	415.1	27 Apr 06 8:15	Bis
Chlorophyll a	25.7	mg/cubic m	1.0	10200H	24 Apr 06 8:27	JD
Nitrogen Total, Calculat	11.5	mg/L	NA	Calc	21 Apr 06 17:18	Calculated
Nitrate+Nitrite	9.94	mg/L as N	0.20	353.2	21 Apr 06 17:18	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	21 Apr 06 7:55	RSL
Phosphorus, Total	0.128	mg/L	0.005	EPA 365.1	25 Apr 06 11:00	DAP
Phosphorus, Ortho	0.087	mg/L	0.005	EPA 365.1	20 Apr 06 8:35	DAP
Nitrogen, Total Kjeldahl	1.6	mg/L	0.1	SM 4500NorgB/NH3 E	20 Apr 06 7:30	RSL
Iron	0.075	mg/L	0.010	6010	27 Apr 06 10:58	CJR

Approved by:

  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

*N/C  
8-28-06*

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447660 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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MAPLE PLAIN MN 55359-9000

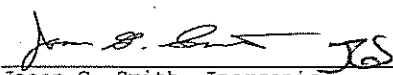
Report Date: 30 May 06  
Lab Number: 06-A13630  
Work Order #: 12-4607  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 19 Apr 06 14:50  
Date Received: 19 Apr 06 18:53  
PO #: CLEARWATER RIVER

Project Name: CLEARWATER RIVER

Sample Description: TA 33.2

Temp at Receipt: 3.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					24 Apr 06	DAP
Water Digestions					24 Apr 06	TB
BOD, Carbonaceous	< 2	mg/L	2	SM 5210B	20 Apr 06 10:30	RMV
CBOD, 20 Day	29	mg/L	2	SM 5210B	20 Apr 06 12:04	RMV
Solids, Total Suspended	3	mg/L	2	USGS I-3765-85	20 Apr 06 9:25	RMV
Carbon, Total Organic	12.4	mg/L	0.5	415.1	27 Apr 06 8:15	Bis
Chlorophyll a	4.6	mg/cubic m	1.0	10200H	24 Apr 06 8:27	JD
Nitrogen Total, Calculat	14.2	mg/L	NA	Calc	21 Apr 06 17:18	Calculated
Nitrate+Nitrite	12.3	mg/L as N	0.20	353.2	21 Apr 06 17:18	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	21 Apr 06 7:55	RSL
Phosphorus, Total	0.111	mg/L	0.005	EPA 365.1	25 Apr 06 11:00	DAP
Phosphorus, Ortho	0.075	mg/L	0.005	EPA 365.1	20 Apr 06 8:54	DAP
Nitrogen, Total Kjeldahl	1.9	mg/L	0.1	SM 4500NorgB/NH3 E	20 Apr 06 7:30	RSL
Iron	0.202	mg/L	0.010	6010	27 Apr 06 10:58	CJR

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

NC  
5-24-06

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
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 1800 PIONEER CRK CTR  
 MAPLE PLAIN MN 55359-9000

Report Date: 30 May 06  
 Lab Number: 06-A13644  
 Work Order #: 12-4607  
 Account #: 013173  
 Sample Matrix: SURFACE WATER  
 Date Sampled: 19 Apr 06 11:15  
 Date Received: 19 Apr 06 18:53  
 PO #: CLEARWATER RIVER

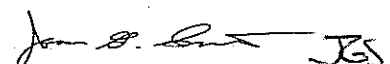
Project Name: CLEARWATER RIVER

Sample Description: T 32.2

Temp at Receipt: 3.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					24 Apr 06	DAP
Water Digestions					24 Apr 06	TB
BOD, Carbonaceous	< 2	mg/L	2	SM 5210B	20 Apr 06 10:30	RMV
CBOD, 20 Day	53	mg/L	2	SM 5210B	20 Apr 06 12:04	RMV
Solids, Total Suspended	< 2	mg/L	2	USGS I-3765-85	20 Apr 06 9:25	RMV
Carbon, Total Organic	11.5	mg/L	0.5	415.1	27 Apr 06 8:15	Bis
Chlorophyll a	10.1	mg/cubic m	1.0	10200H	24 Apr 06 8:27	JD
Nitrogen Total, Calculat	2.5	mg/L	NA	Calc	21 Apr 06 17:19	Calculated
Nitrate+Nitrite	2.43	mg/L as N	0.20	353.2	21 Apr 06 17:19	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	20 Apr 06 14:10	TAM
Phosphorus, Total	0.113	mg/L	0.005	EPA 365.1	25 Apr 06 11:01	DAP
Phosphorus, Ortho	0.065	mg/L	0.005	EPA 365.1	20 Apr 06 8:54	DAP
Nitrogen, Total Kjeldahl	0.1	mg/L	0.1	SM 4500NorgB/NH3 E	21 Apr 06 14:05	RSL
Iron	0.586	mg/L	0.010	6010	27 Apr 06 10:58	CJR

Approved by:

  
 Jason G. Smith, Inorganic  
 Laboratory Manager New Ulm, MN

MC  
8-29-04

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
 ! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 30 May 06  
Lab Number: 06-A13639  
Work Order #:12-4607  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 19 Apr 06 14:00  
Date Received: 19 Apr 06 18:53  
PO #: CLEARWATER RIVER

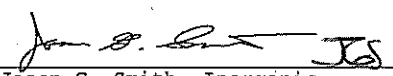
Project Name: CLEARWATER RIVER

Sample Description: CR 31.8

Temp at Receipt: 3.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					24 Apr 06	DAP
Water Digestions					24 Apr 06	TB
BOD, Carbonaceous	3	mg/L	2	SM 5210B	20 Apr 06 10:30	RMV
CBOD, 20 Day	8	mg/L	2	SM 5210B	20 Apr 06 12:04	RMV
Solids, Total Suspended	14	mg/L	2	USGS I-3765-85	20 Apr 06 16:40	CJL
Carbon, Total Organic	11.5	mg/L	0.5	415.1	27 Apr 06 8:15	Bis
Chlorophyll a	20.9	mg/cubic m	1.0	10200H	24 Apr 06 8:27	JD
Nitrogen Total, Calculat	5.2	mg/L	NA	Calc	21 Apr 06 17:19	Calculated
Nitrate+Nitrite	3.57	mg/L as N	0.20	353.2	21 Apr 06 17:19	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	21 Apr 06 7:55	RSL
Phosphorus, Total	0.085	mg/L	0.005	EPA 365.1	25 Apr 06 11:00	DAP
Phosphorus, Ortho	0.014	mg/L	0.005	EPA 365.1	20 Apr 06 8:54	DAP
Nitrogen, Total Kjeldahl	1.6	mg/L	0.1	SM 4500NorgB/NH3 E	20 Apr 06 7:30	RSL
Solids, Suspended Volatile	4	mg/L	2	EPA 160.4	20 Apr 06 16:40	CJL
Iron	0.381	mg/L	0.010	6010	27 Apr 06 10:58	CJR

Approved by:

  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

*Handwritten:* NUC 9-29-06

\* Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WR/DW # R-040 IA LAB #: 132 IA LAB #: 022

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MAPLE PLAIN MN 55359-9000

Report Date: 30 May 06  
Lab Number: 06-A13645  
Work Order #: 12-4607  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 19 Apr 06 10:55  
Date Received: 19 Apr 06 18:53  
PO #: CLEARWATER RIVER

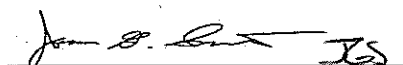
Project Name: CLEARWATER RIVER

Sample Description: TA 30.9

Temp at Receipt: 3.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					24 Apr 06	DAP
Water Digestions					24 Apr 06	TB
BOD, Carbonaceous	< 2	mg/L	2	SM 5210B	20 Apr 06 10:30	RMV
CBOD, 20 Day	12	mg/L	2	SM 5210B	20 Apr 06 12:04	RMV
Solids, Total Suspended	8	mg/L	2	USGS I-3765-85	20 Apr 06 9:25	RMV
Carbon, Total Organic	4.4	mg/L	0.5	415.1	27 Apr 06 8:15	Bis
Chlorophyll a	6.1	mg/cubic m	1.0	10200H	24 Apr 06 8:27	JD
Nitrogen Total, Calculat	19.4	mg/L	NA	Calc	21 Apr 06 17:19	Calculated
Nitrate+Nitrite	18.1	mg/L as N	0.20	353.2	21 Apr 06 17:19	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	25 Apr 06 11:35	TAM
Phosphorus, Total	0.059	mg/L	0.005	EPA 365.1	25 Apr 06 11:01	DAP
Phosphorus, Ortho	0.041	mg/L	0.005	EPA 365.1	20 Apr 06 8:54	DAP
Nitrogen, Total Kjeldahl	1.3	mg/L	0.1	SM 4500NorgB/NH3 E	21 Apr 06 14:05	RSL
Iron	0.103	mg/L	0.010	6010	1 May 06 14:03	CJR

Approved by:

  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

WV  
8-29-06

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 30 May 06  
Lab Number: 06-A13640  
Work Order #:12-4607  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 19 Apr 06 13:50  
Date Received: 19 Apr 06 18:53  
PO #: CLEARWATER RIVER

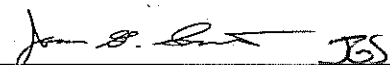
Project Name: CLEARWATER RIVER

Sample Description: T 30.7

Temp at Receipt: 3.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					24 Apr 06	DAP
Water Digestions					24 Apr 06	TB
BOD, Carbonaceous	< 2	mg/L	2	SM 5210B	20 Apr 06 10:30	RMV
CBOD, 20 Day	14	mg/L	2	SM 5210B	20 Apr 06 12:04	RMV
Solids, Total Suspended	< 2	mg/L	2	USGS I-3765-85	20 Apr 06 9:25	RMV
Carbon, Total Organic	4.5	mg/L	0.5	415.1	27 Apr 06 8:15	Bis
Chlorophyll a	3.6	mg/cubic m	1.0	10200H	24 Apr 06 8:27	JD
Nitrogen Total, Calculat	17.8	mg/L	NA	Calc	21 Apr 06 17:19	Calculated
Nitrate+Nitrite	16.9	mg/L as N	0.20	353.2	21 Apr 06 17:19	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	21 Apr 06 7:55	RSL
Phosphorus, Total	0.091	mg/L	0.005	EPA 365.1	25 Apr 06 11:00	DAP
Phosphorus, Ortho	0.078	mg/L	0.005	EPA 365.1	20 Apr 06 8:54	DAP
Nitrogen, Total Kjeldahl	0.9	mg/L	0.1	SM 4500NorgB/NH3 E	20 Apr 06 7:30	RSL
Iron	0.049	mg/L	0.010	6010	27 Apr 06 10:58	CJR

Approved by:

  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

= Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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 MAPLE PLAIN MN 55359-9000

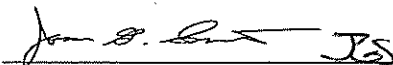
Report Date: 30 May 06  
 Lab Number: 06-A13641  
 Work Order #: 12-4607  
 Account #: 013173  
 Sample Matrix: SURFACE WATER  
 Date Sampled: 19 Apr 06 13:40  
 Date Received: 19 Apr 06 18:53  
 PO #: CLEARWATER RIVER

Project Name: CLEARWATER RIVER

Sample Description: T 30.1

Temp at Receipt: 3.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					24 Apr 06	DAP
Water Digestions					24 Apr 06	TB
BOD, Carbonaceous	< 2	mg/L	2	SM 5210B	20 Apr 06 10:30	RMV
CBOD, 20 Day	9	mg/L	2	SM 5210B	20 Apr 06 12:04	RMV
Solids, Total Suspended	2	mg/L	2	USGS I-3765-85	20 Apr 06 9:25	RMV
Carbon, Total Organic	5.0	mg/L	0.5	415.1	27 Apr 06 8:15	Bis
Chlorophyll a	2.9	mg/cubic m	1.0	10200H	24 Apr 06 8:27	JD
Nitrogen Total, Calculat	17.1	mg/L	NA	Calc	21 Apr 06 17:19	Calculated
Nitrate+Nitrite	16.2	mg/L as N	0.20	353.2	21 Apr 06 17:19	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	20 Apr 06 14:10	TAM
Phosphorus, Total	0.091	mg/L	0.005	EPA 365.1	25 Apr 06 11:00	DAP
Phosphorus, Ortho	0.079	mg/L	0.005	EPA 365.1	20 Apr 06 8:54	DAP
Nitrogen, Total Kjeldahl	0.9	mg/L	0.1	SM 4500NorgB/NH3 E	20 Apr 06 7:30	RSL
Iron	< 0.01	mg/L	0.01	6010	27 Apr 06 10:58	CJR

Approved by:   
 Jason G. Smith, Inorganic  
 Laboratory Manager New Ulm, MN

*Handwritten initials and date: MS 027-06*

= Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
 ! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 30 May 06  
Lab Number: 06-A13642  
Work Order #:12-4607  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 19 Apr 06 13:25  
Date Received: 19 Apr 06 18:53  
PO #: CLEARWATER RIVER

Project Name: CLEARWATER RIVER

Sample Description: CR 30.0

Temp at Receipt: 3.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					24 Apr 06	DAP
Water Digestions					24 Apr 06	TB
BOD, Carbonaceous	3	mg/L	2	SM 5210B	20 Apr 06 10:30	RMV
CBOD, 20 Day	40	mg/L	2	SM 5210B	20 Apr 06 12:04	RMV
Solids, Total Suspended	23	mg/L	2	USGS I-3765-85	20 Apr 06 16:40	CJL
Carbon, Total Organic	10.5	mg/L	0.5	415.1	27 Apr 06 8:15	Bis
Chlorophyll a	21.9	mg/cubic m	1.0	10200H	24 Apr 06 8:27	JD
Nitrogen Total, Calculat	5.4	mg/L	NA	Calc	21 Apr 06 17:19	Calculated
Nitrate+Nitrite	3.81	mg/L as N	0.20	353.2	21 Apr 06 17:19	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	20 Apr 06 14:10	TAM
Phosphorus, Total	0.097	mg/L	0.005	EPA 365.1	25 Apr 06 11:01	DAP
Phosphorus, Ortho	0.015	mg/L	0.005	EPA 365.1	20 Apr 06 8:54	DAP
Nitrogen, Total Kjeldahl	1.6	mg/L	0.1	SM 4500NorgB/NH3 E	21 Apr 06 14:05	RSL
Solids, Suspended Volatile	6	mg/L	2	EPA 160.4	20 Apr 06 16:40	CJL
on	0.576	mg/L	0.010	6010	27 Apr 06 10:58	CJR

Approved by:

*Jason G. Smith*  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

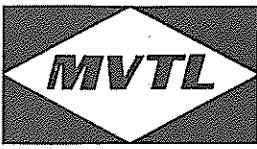
Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

MVT L guarantees the accuracy of the analysis done on the sample submitted for testing. It is not possible for MVT L to guarantee that a test result obtained on a particular sample will be the same on any other sample unless all conditions affecting the sample are the same, including sampling by MVT L. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 30 May 06  
Lab Number: 06-A13646  
Work Order #:12-4607  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 19 Apr 06 10:30  
Date Received: 19 Apr 06 18:53  
PO #: CLEARWATER RIVER

Project Name: CLEARWATER RIVER

Sample Description: CR 29.0

Temp at Receipt: 3.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					24 Apr 06	DAP
Water Digestions					24 Apr 06	TB
BOD, Carbonaceous	2	mg/L	2	SM 5210B	20 Apr 06 10:30	RMV
CBOD, 40 Day	123	mg/L	2	SM 5210B	20 Apr 06 11:24	CJL
CBOD, 20 Day	31	mg/L	2	SM 5210B	20 Apr 06 12:04	RMV
Solids, Total Suspended	22	mg/L	2	USGS I-3765-85	20 Apr 06 16:40	CJL
Carbon, Total Organic	10.5	mg/L	0.5	415.1	27 Apr 06 8:15	Bis
Chlorophyll a	16.0	mg/cubic m	1.0	10200H	24 Apr 06 8:27	JD
Nitrogen Total, Calculat	6.0	mg/L	NA	Calc	21 Apr 06 17:19	Calculated
Nitrate+Nitrite	4.00	mg/L as N	0.20	353.2	21 Apr 06 17:19	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	25 Apr 06 11:35	TAM
Phosphorus, Total	0.089	mg/L	0.005	EPA 365.1	25 Apr 06 11:01	DAP
Phosphorus, Ortho	0.018	mg/L	0.005	EPA 365.1	20 Apr 06 8:54	DAP
Nitrogen, Total Kjeldahl	2.0	mg/L	0.1	SM 4500NorgB/NH3 E	21 Apr 06 14:05	RSL
Solids, Suspended Volatile	3	mg/L	2	EPA 160.4	20 Apr 06 16:40	CJL
on	0.543	mg/L	0.010	6010	27 Apr 06 11:30	CJR

Approved by:

Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

*MV  
9-29-06*

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000


Report Date: 30 May 06  
Lab Number: 06-A13647  
Work Order #:12-4607  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 19 Apr 06 10:15  
Date Received: 19 Apr 06 18:53  
PO #: CLEARWATER RIVER

Project Name: CLEARWATER RIVER

Sample Description: TW 27.8

Temp at Receipt: 3.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					24 Apr 06	DAP
Water Digestions					24 Apr 06	TB
BOD, Carbonaceous	< 2	mg/L	2	SM 5210B	20 Apr 06 10:57	RMV
CBOD, 20 Day	21	mg/L	2	SM 5210B	20 Apr 06 12:04	RMV
Solids, Total Suspended	< 2	mg/L	2	USGS I-3765-85	20 Apr 06 9:25	RMV
Carbon, Total Organic	6.0	mg/L	0.5	415.1	27 Apr 06 8:15	Bis
Chlorophyll a	3.4	mg/cubic m	1.0	10200H	24 Apr 06 8:27	JD
Nitrogen Total, Calculat	4.8	mg/L	NA	Calc	21 Apr 06 17:19	Calculated
Nitrate+Nitrite	3.78	mg/L as N	0.20	353.2	21 Apr 06 17:19	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	25 Apr 06 11:35	TAM
Phosphorus, Total	0.041	mg/L	0.005	EPA 365.1	25 Apr 06 11:01	DAP
Phosphorus, Ortho	0.030	mg/L	0.005	EPA 365.1	20 Apr 06 8:55	DAP
Nitrogen, Total Kjeldahl	1.0	mg/L	0.1	SM 4500NorgB/NH3 E	21 Apr 06 14:05	RSL
Iron	0.092	mg/L	0.010	6010	27 Apr 06 11:30	CJR

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

*MV  
8-29-06*

\* Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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MAPLE PLAIN MN 55359-9000

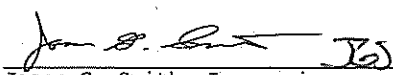
Report Date: 30 May 06  
Lab Number: 06-A13648  
Work Order #:12-4607  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 19 Apr 06 10:00  
Date Received: 19 Apr 06 18:53  
PO #: CLEARWATER RIVER

Project Name: CLEARWATER RIVER

Sample Description: TE 27.8

Temp at Receipt: 3.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					24 Apr 06	DAP
Water Digestions					24 Apr 06	TB
BOD, Carbonaceous	< 2	mg/L	2	SM 5210B	20 Apr 06 10:57	RMV
CBOD, 20 Day	9	mg/L	2	SM 5210B	20 Apr 06 12:04	RMV
Solids, Total Suspended	< 2	mg/L	2	USGS I-3765-85	20 Apr 06 9:25	RMV
Carbon, Total Organic	5.1	mg/L	0.5	415.1	27 Apr 06 8:15	Bis
Chlorophyll a	16.7	mg/cubic m	1.0	10200H	24 Apr 06 8:27	JD
Nitrogen Total, Calculat	2.1	mg/L	NA	Calc	21 Apr 06 17:19	Calculated
Nitrate+Nitrite	1.23	mg/L as N	0.20	353.2	21 Apr 06 17:19	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	25 Apr 06 11:35	TAM
Phosphorus, Total	0.040	mg/L	0.005	EPA 365.1	25 Apr 06 11:01	DAP
Phosphorus, Ortho	0.016	mg/L	0.005	EPA 365.1	20 Apr 06 8:55	DAP
Nitrogen, Total Kjeldahl	0.9	mg/L	0.1	SM 4500NorgB/NH3 E	21 Apr 06 14:05	RSL
Iron	0.338	mg/L	0.010	6010	27 Apr 06 11:30	CJR

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND NH/DW # R-040 IA LAB #: 132 IA LAB #: 022

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MAPLE PLAIN MN 55359-9000

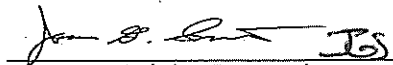
Report Date: 30 May 06  
Lab Number: 06-A13649  
Work Order #: 12-4607  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 19 Apr 06 9:45  
Date Received: 19 Apr 06 18:53  
PO #: CLEARWATER RIVER

Project Name: CLEARWATER RIVER

Sample Description: T 27.3

Temp at Receipt: 3.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					24 Apr 06	DAP
Water Digestions					24 Apr 06	TB
BOD, Carbonaceous	< 2	mg/L	2	SM 5210B	20 Apr 06 10:57	RMV
CBOD, 20 Day	12	mg/L	2	SM 5210B	20 Apr 06 12:04	RMV
Solids, Total Suspended	< 2	mg/L	2	USGS I-3765-85	20 Apr 06 9:25	RMV
Carbon, Total Organic	10.5	mg/L	0.5	415.1	27 Apr 06 8:15	Bis
Chlorophyll a	1.6	mg/cubic m	1.0	10200H	24 Apr 06 8:27	JD
Nitrogen Total, Calculat	1.2	mg/L	NA	Calc	21 Apr 06 17:20	Calculated
Nitrate+Nitrite	0.24	mg/L as N	0.20	353.2	21 Apr 06 17:20	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	25 Apr 06 11:35	TAM
Phosphorus, Total	0.064	mg/L	0.005	EPA 365.1	25 Apr 06 11:01	DAP
Phosphorus, Ortho	0.054	mg/L	0.005	EPA 365.1	20 Apr 06 8:55	DAP
Nitrogen, Total Kjeldahl	1.0	mg/L	0.1	SM 4500NorgB/NH3 E	21 Apr 06 14:05	RSL
Iron	< 0.01	mg/L	0.01	6010	27 Apr 06 11:30	CJR

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

! = Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

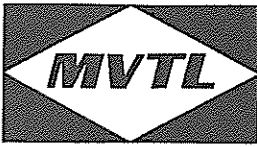
# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

*Handwritten:* MC 8-29-06

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MAPLE PLAIN MN 55359-9000

Report Date: 30 May 06  
Lab Number: 06-A13650  
Work Order #:12-4607  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 19 Apr 06 9:10  
Date Received: 19 Apr 06 18:53  
PO #: CLEARWATER RIVER

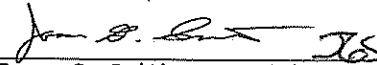
Project Name: CLEARWATER RIVER

Sample Description: CR 27.2

Temp at Receipt: 3.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					24 Apr 06	DAP
Water Digestions					24 Apr 06	TB
BOD, Carbonaceous	< 2	mg/L	2	SM 5210B	20 Apr 06 10:57	RMV
CBOD, 20 Day	12	mg/L	2	SM 5210B	20 Apr 06 12:04	RMV
Solids, Total Suspended	3	mg/L	2	USGS I-3765-85	20 Apr 06 16:40	CJL
Carbon, Total Organic	10.0	mg/L	0.5	415.1	27 Apr 06 8:15	Bis
Chlorophyll a	7.4	mg/cubic m	1.0	10200H	24 Apr 06 8:27	JD
Nitrogen Total, Calculat	3.5	mg/L	NA	Calc	21 Apr 06 17:20	Calculated
Nitrate+Nitrite	2.49	mg/L as N	0.20	353.2	21 Apr 06 17:20	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	25 Apr 06 11:35	TAM
Phosphorus, Total	0.050	mg/L	0.005	EPA 365.1	25 Apr 06 11:01	DAP
Phosphorus, Ortho	0.017	mg/L	0.005	EPA 365.1	20 Apr 06 8:55	DAP
Nitrogen, Total Kjeldahl	1.0	mg/L	0.1	SM 4500NorgB/NH3 E	21 Apr 06 14:05	RSL
Solids, Suspended Volatile	< 2	mg/L	2	EPA 160.4	20 Apr 06 16:40	CJL
Iron	0.075	mg/L	0.010	6010	27 Apr 06 11:30	CJR

Approved by:

  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

= Reporting Limit

.vated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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MAPLE PLAIN MN 55359-9000

Report Date: 30 May 06  
Lab Number: 06-A13651  
Work Order #: 12-4607  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 19 Apr 06 8:05  
Date Received: 19 Apr 06 18:53  
PO #: CLEARWATER RIVER


Project Name: CLEARWATER RIVER

Sample Description: CR 25.6

Temp at Receipt: 3.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					24 Apr 06	DAP
Water Digestions					24 Apr 06	TB
BOD, Carbonaceous	< 2	mg/L	2	SM 5210B	20 Apr 06 10:57	RMV
CBOD, 20 Day	31	mg/L	2	SM 5210B	20 Apr 06 12:04	RMV
Solids, Total Suspended	< 2	mg/L	2	USGS I-3765-85	20 Apr 06 9:25	RMV
Carbon, Total Organic	10.5	mg/L	0.5	415.1	27 Apr 06 8:15	Bis
Chlorophyll a	4.5	mg/cubic m	1.0	10200H	24 Apr 06 8:27	JD
Nitrogen Total, Calculat	3.8	mg/L	NA	Calc	21 Apr 06 17:20	Calculated
Nitrate+Nitrite	2.49	mg/L as N	0.20	353.2	21 Apr 06 17:20	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	25 Apr 06 11:35	TAM
Phosphorus, Total	0.041	mg/L	0.005	EPA 365.1	25 Apr 06 11:01	DAP
Phosphorus, Ortho	0.015	mg/L	0.005	EPA 365.1	20 Apr 06 8:55	DAP
Nitrogen, Total Kjeldahl	1.3	mg/L	0.1	SM 4500NorgB/NH3 E	21 Apr 06 14:05	RSL
Iron	0.086	mg/L	0.010	6010	27 Apr 06 11:30	CJR

Approved by:

  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

\* = Reporting Limit

evated "Less Than Result" (<): # = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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*Handwritten note:*  
MVT  
8-24-06



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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 30 May 06  
Lab Number: 06-A13654  
Work Order #: 12-4607  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 19 Apr 06  
Date Received: 19 Apr 06 18:53  
PO #: CLEARWATER RIVER

Project Name: CLEARWATER RIVER

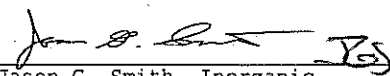
Sample Description: FD 1

Temp at Receipt: 3.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					24 Apr 06	DAP
Water Digestions					24 Apr 06	TB
BOD, Carbonaceous	5	mg/L	2	SM 5210B	20 Apr 06 10:57	RMV
CBOD, 20 Day	43	mg/L	2	SM 5210B	20 Apr 06 12:04	RMV
Solids, Total Suspended	11	mg/L	2	USGS I-3765-85	20 Apr 06 9:25	RMV
Carbon, Total Organic	12.5	mg/L	0.5	415.1	27 Apr 06 8:15	Bis
Chlorophyll a	38.6	mg/cubic m	1.0	10200H	24 Apr 06 8:27	JD
Nitrogen Total, Calculat	2.2	mg/L	NA	Calc	21 Apr 06 17:20	Calculated
Nitrate+Nitrite	0.46	mg/L as N	0.20	353.2	21 Apr 06 17:20	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	25 Apr 06 11:35	TAM
Phosphorus, Total	0.074	mg/L	0.005	EPA 365.1	25 Apr 06 11:02	DAP
Phosphorus, Ortho	0.005	mg/L	0.005	EPA 365.1	20 Apr 06 8:55	DAP
Nitrogen, Total Kjeldahl	1.7	mg/L	0.1	SM 4500NorgB/NH3 E	21 Apr 06 14:05	RSL
Iron	0.175	mg/L	0.010	6010	27 Apr 06 11:30	CJR

\*\* No collection time supplied by the client.

Approved by:

  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

= Reporting Limit

evated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 30 May 06  
Lab Number: 06-A13655  
Work Order #:12-4607  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 19 Apr 06  
Date Received: 19 Apr 06 18:53  
PO #: CLEARWATER RIVER

Project Name: CLEARWATER RIVER

Sample Description: FD 2

Temp at Receipt: 3.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					24 Apr 06	DAP
Water Digestions					24 Apr 06	TB
BOD, Carbonaceous	< 2	mg/L	2	SM 5210B	20 Apr 06 10:57	RMV
CBOD, 20 Day	13	mg/L	2	SM 5210B	20 Apr 06 12:04	RMV
Solids, Total Suspended	2	mg/L	2	USGS I-3765-85	20 Apr 06 9:25	RMV
Carbon, Total Organic	8.0	mg/L	0.5	415.1	27 Apr 06 8:15	Bis
Chlorophyll a	3.7	mg/cubic m	1.0	10200H	24 Apr 06 8:27	JD
Nitrogen Total, Calculat	12.8	mg/L	NA	Calc	21 Apr 06 17:20	Calculated
Nitrate+Nitrite	11.3	mg/L as N	0.20	353.2	21 Apr 06 17:20	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	25 Apr 06 14:05	TAM
Phosphorus, Total	0.165	mg/L	0.005	EPA 365.1	25 Apr 06 11:02	DAP
Phosphorus, Ortho	0.122	mg/L	0.005	EPA 365.1	20 Apr 06 8:55	DAP
Nitrogen, Total Kjeldahl	1.5	mg/L	0.1	SM 4500NorgB/NH3 E	21 Apr 06 14:05	RSL
Iron	0.146	mg/L	0.010	6010	27 Apr 06 12:10	CJR

\*\* No collection time supplied by the client.

Approved by: Jason G. Smith  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

2032-8  
8-22-06

PT = Reporting Limit

Reported "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 21 Jun 06  
Lab Number: 06-A21426  
Work Order #: 12-6363  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 30 May 06 14:25  
Date Received: 30 May 06 18:22  
PO #: CLEARWATER RIVER

Project Name: CLEARWATER RIVER STREAMS

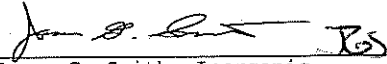
Sample Description: CR 35.3

Temp at Receipt: 4.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					6 Jun 06	DAP
BOD, Carbonaceous	5	mg/L	2	SM 5210B	31 May 06 10:28	CJL
CBOD, 20 Day	32	mg/L	2	SM 5210B	31 May 06 10:43	RMV
Solids, Total Suspended	13	mg/L	2	USGS I-3765-85	31 May 06 10:10	RMV
Carbon, Total Organic	14.1	mg/L	0.5	415.1	6 Jun 06 8:00	Bis
Chlorophyll a	24.8	mg/cubic m	1.0	10200H	2 Jun 06 7:20	JD
Fecal Coliform, MF	70	CFU/100 mL	10.	SM 9222D 18th Ed	30 May 06 19:20	ECH
Chloride	27.3	mg/L	3.0	325.2	5 Jun 06 11:26	RMV
Nitrate+Nitrite	< 0.2	mg/L as N	0.2	353.2	1 Jun 06 15:46	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	1 Jun 06 9:10	RSL
Phosphorus, Total	0.076	mg/L	0.005	EPA 365.1	6 Jun 06 13:02	RMV
Phosphorus, Ortho	< 0.005	mg/L	0.005	EPA 365.1	31 May 06 16:35	DAP
Nitrogen, Total Kjeldahl	1.4	mg/L	0.1	SM 4500NorgB/NH3 E	1 Jun 06 6:45	RSL

U = Colony Forming Units

*WB*  
*10/11/06*

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

= Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 21 Jun 06  
Lab Number: 06-A21425  
Work Order #: 12-6363  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 30 May 06 14:05  
Date Received: 30 May 06 18:22  
PO #: CLEARWATER RIVER

Project Name: CLEARWATER RIVER STREAMS

Sample Description: CR 33.6

Temp at Receipt: 4.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					6 Jun 06	DAP
BOD, Carbonaceous	< 2	mg/L	2	SM 5210B	31 May 06 10:28	CJL
CBOD, 20 Day	17	mg/L	2	SM 5210B	31 May 06 10:43	RMV
Solids, Total Suspended	8	mg/L	2	USGS I-3765-85	31 May 06 8:55	RMV
Carbon, Total Organic	14.3	mg/L	0.5	415.1	6 Jun 06 8:00	Bis
Chlorophyll a	14.9	mg/cubic m	1.0	10200H	2 Jun 06 7:20	JD
Fecal Coliform, MF	190	CFU/100 mL	10.	SM 9222D 18th Ed	30 May 06 19:20	ECH
Chloride	27.9	mg/L	3.0	325.2	5 Jun 06 11:26	RMV
Nitrate+Nitrite	0.77	mg/L as N	0.20	353.2	1 Jun 06 15:46	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	1 Jun 06 9:10	RSL
Phosphorus, Total	0.076	mg/L	0.005	EPA 365.1	6 Jun 06 13:02	RMV
Phosphorus, Ortho	0.011	mg/L	0.005	EPA 365.1	31 May 06 16:35	DAP
Nitrogen, Total Kjeldahl	1.6	mg/L	0.1	SM 4500NorgB/NH3 E	1 Jun 06 6:45	RSL

J = Colony Forming Units

*WB*  
*10/11/06*

Approved by:

*Jason G. Smith*  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

= Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447660 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL
WENCK ASSOCIATES INC
1800 PIONEER CRK CTR
MAPLE PLAIN MN 55359-9000

Report Date: 21 Jun 06
Lab Number: 06-A21427
Work Order #:12-6363
Account #: 013173
Sample Matrix: SURFACE WATER
Date Sampled: 30 May 06 14:50
Date Received: 30 May 06 18:22
PO #: CLEARWATER RIVER

Project Name: CLEARWATER RIVER STREAMS

Sample Description: TC 33.2

Temp at Receipt: 4.0C

Table with 7 columns: As Received Result, Method RL, Method Reference, Date Analyzed, Analyst. Rows include Phosphorus Water Digest, BOD, Carbonaceous, CBOD, 20 Day, Solids, Total Suspended, Carbon, Total Organic, Chlorophyll a, Fecal Coliform, MF, Chloride, Nitrate+Nitrite, Nitrogen, Ammonia, Phosphorus, Total, Phosphorus, Ortho, Nitrogen, Total Kjeldahl.

U = Colony Forming Units

Handwritten notes: WB, 10/11/06

Approved by: Jason G. Smith, Inorganic Laboratory Manager New Ulm, MN

= Reporting Limit

ated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration
! = Due to sample quantity + = Due to extract volume

CAUTION: MN LAB # 027-015-125 WI LAB # 999447660 ND MICRO # 1013-M ND WH/DW # R-040 IA LAB #: 132 IA LAB #: 022

guarantees the accuracy of the analysis done on the sample submitted for testing. It is not possible for MVT L to guarantee that a test result obtained on a particular sample will be the same on any other sample unless conditions affecting the sample are the same, including sampling by MVT L. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 21 Jun 06  
Lab Number: 06-A21428  
Work Order #: 12-6363  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 30 May 06 15:10  
Date Received: 30 May 06 18:22  
PO #: CLEARWATER RIVER

Project Name: CLEARWATER RIVER STREAMS

Sample Description: TB 33.2

Temp at Receipt: 4.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					6 Jun 06	DAP
BOD, Carbonaceous	3	mg/L	2	SM 5210B	31 May 06 10:28	CJL
CBOD, 20 Day	16	mg/L	2	SM 5210B	31 May 06 10:43	RMV
Solids, Total Suspended	7	mg/L	2	USGS I-3765-85	31 May 06 10:10	RMV
Carbon, Total Organic	10.2	mg/L	0.5	415.1	6 Jun 06 8:00	Bis
Chlorophyll a	5.5	mg/cubic m	1.0	10200H	2 Jun 06 7:20	JD
Fecal Coliform, MF	270	CFU/100 mL	10.	SM 9222D 18th Ed	30 May 06 19:20	ECH
Chloride	42.3	mg/L	3.0	325.2	5 Jun 06 11:26	RMV
Nitrate+Nitrite	13.2	mg/L as N	0.20	353.2	1 Jun 06 15:47	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	1 Jun 06 9:10	RSL
Phosphorus, Total	0.185	mg/L	0.005	EPA 365.1	6 Jun 06 13:02	RMV
Phosphorus, Ortho	0.139	mg/L	0.005	EPA 365.1	31 May 06 16:35	DAP
Nitrogen, Total Kjeldahl	1.5	mg/L	0.1	SM 4500NorgB/NH3 E	1 Jun 06 6:45	RSL

J = Colony Forming Units

WB  
10/11/06

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

⊖ = Reporting Limit

Elevated "Less Than Result" (<): ⊖ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447600 ND MICRO # 1013-M ND WW/DN # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 21 Jun 06  
Lab Number: 06-A21423  
Work Order #: 12-6363  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 30 May 06 13:25  
Date Received: 30 May 06 18:22  
PO #: CLEARWATER RIVER

Project Name: CLEARWATER RIVER STREAMS

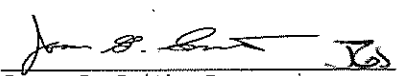
Sample Description: CR 31.8

Temp at Receipt: 4.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					6 Jun 06	DAP
BOD, Carbonaceous	4	mg/L	2	SM 5210B	31 May 06 10:28	CJL
CBOD, 20 Day	23	mg/L	2	SM 5210B	31 May 06 10:43	RMV
Solids, Total Suspended	8	mg/L	2	USGS I-3765-85	31 May 06 8:55	RMV
Carbon, Total Organic	11.8	mg/L	0.5	415.1	6 Jun 06 8:00	Bis
Chlorophyll a	6.2	mg/cubic m	1.0	10200H	2 Jun 06 7:20	JD
Fecal Coliform, MF	3700	CFU/100 mL	10.	SM 9222D 18th Ed	30 May 06 19:20	ECH
Chloride	31.6	mg/L	3.0	325.2	5 Jun 06 11:25	RMV
Nitrate+Nitrite	5.46	mg/L as N	0.20	353.2	1 Jun 06 15:46	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	1 Jun 06 9:10	RSL
Phosphorus, Total	0.145	mg/L	0.005	EPA 365.1	6 Jun 06 13:02	RMV
Phosphorus, Ortho	0.081	mg/L	0.005	EPA 365.1	31 May 06 16:35	DAP
Nitrogen, Total Kjeldahl	1.7	mg/L	0.1	SM 4500NorgB/NH3 E	1 Jun 06 6:45	RSL

! = Colony Forming Units

*WB*  
*10/11/06*

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

= Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL
WENCK ASSOCIATES INC
1800 PIONEER CRK CTR
MAPLE PLAIN MN 55359-9000

Report Date: 21 Jun 06
Lab Number: 06-A21422
Work Order #:12-6363
Account #: 013173
Sample Matrix: SURFACE WATER
Date Sampled: 30 May 06 12:55
Date Received: 30 May 06 18:22
PO #: CLEARWATER RIVER

Project Name: CLEARWATER RIVER STREAMS

Sample Description: CR 29.0

Temp at Receipt: 4.0C

Table with 7 columns: As Received Result, Method RL, Method Reference, Date Analyzed, Analyst. Rows include Phosphorus Water Digest, BOD, CBOD, Solids, Carbon, Chlorophyll a, Fecal Coliform, Chloride, Nitrate+Nitrite, Nitrogen, Phosphorus, and Nitrogen, Total Kjeldahl.

U = Colony Forming Units

\* Holding time Exceeded

WB
10/11/06

Approved by:

Signature of Jason G. Smith
Jason G. Smith, Inorganic
Laboratory Manager New Ulm, MN

= Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix
! = Due to sample quantity

# = Due to sample concentration
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 21 Jun 06  
Lab Number: 06-A21421  
Work Order #: 12-6363  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 30 May 06 12:25  
Date Received: 30 May 06 18:22  
PO #: CLEARWATER RIVER

Project Name: CLEARWATER RIVER STREAMS

Sample Description: CR 27.2

Temp at Receipt: 4.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					6 Jun 06	DAP
BOD, Carbonaceous	4	mg/L	2	SM 5210B	31 May 06 10:28	CJL
CBOD, 20 Day	28	mg/L	2	SM 5210B	31 May 06 10:43	RMV
Solids, Total Suspended	3	mg/L	2	USGS I-3765-85	31 May 06 8:55	RMV
Carbon, Total Organic	14.0	mg/L	0.5	415.1	6 Jun 06 8:00	Bis
Chlorophyll a	6.6	mg/cubic m	1.0	10200H	2 Jun 06 7:20	JD
Fecal Coliform, MF	* 900	CFU/100 mL	10.	SM 9222D 18th Ed	30 May 06 19:20	ECH
Chloride	26.5	mg/L	3.0	325.2	5 Jun 06 11:25	RMV
Nitrate+Nitrite	0.83	mg/L as N	0.20	353.2	1 Jun 06 15:46	DAP
Nitrogen, Ammonia	0.29	mg/L	0.08	4500 NH3 B, E	1 Jun 06 9:10	RSL
Phosphorus, Total	0.267	mg/L	0.005	EPA 365.1	6 Jun 06 13:02	RMV
Phosphorus, Ortho	0.197	mg/L	0.005	EPA 365.1	31 May 06 16:34	DAP
Nitrogen, Total Kjeldahl	1.4	mg/L	0.1	SM 4500NorgB/NH3 E	1 Jun 06 6:45	RSL

J = Colony Forming Units

\* Holding time Exceeded

WB  
10/11/06

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

= Reporting Limit

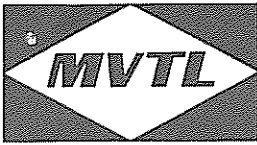
Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 21 Jun 06  
Lab Number: 06-A21420  
Work Order #: 12-6363  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 30 May 06 11:55  
Date Received: 30 May 06 18:22  
PO #: CLEARWATER RIVER

Project Name: CLEARWATER RIVER STREAMS

Sample Description: CR 25.6

Temp at Receipt: 4.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					6 Jun 06	DAP
BOD, Carbonaceous	4	mg/L	2	SM 5210B	31 May 06 10:28	CJL
CBOD, 20 Day	22	mg/L	2	SM 5210B	31 May 06 10:43	RMV
Solids, Total Suspended	7	mg/L	2	USGS I-3765-85	31 May 06 8:55	RMV
Carbon, Total Organic	12.7	mg/L	0.5	415.1	6 Jun 06 8:00	Bis
Chlorophyll a	1.9	mg/cubic m	1.0	10200H	2 Jun 06 7:20	JD
Fecal Coliform, MF	* 190	CFU/100 mL	10.	SM 9222D 18th Ed	30 May 06 19:20	ECH
Chloride	25.3	mg/L	3.0	325.2	5 Jun 06 11:25	RMV
Nitrate+Nitrite	0.77	mg/L as N	0.20	353.2	1 Jun 06 15:46	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	1 Jun 06 9:10	RSL
Phosphorus, Total	0.158	mg/L	0.005	EPA 365.1	6 Jun 06 13:02	RMV
Phosphorus, Ortho	0.111	mg/L	0.005	EPA 365.1	31 May 06 16:34	DAP
Nitrogen, Total Kjeldahl	1.1	mg/L	0.1	SM 4500NorgB/NH3 E	1 Jun 06 6:45	RSL

J = Colony Forming Units

\* Holding time Exceeded

WB  
10/11/06

Approved by: Jason G. Smith  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

= Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL
WENCK ASSOCIATES INC
1800 PIONEER CRK CTR
MAPLE PLAIN MN 55359-9000

Report Date: 21 Jun 06
Lab Number: 06-A21429
Work Order #: 12-6363
Account #: 013173
Sample Matrix: SURFACE WATER
Date Sampled: 30 May 06 11:15
Date Received: 30 May 06 18:22
PO #: CLEARWATER RIVER

Project Name: CLEARWATER RIVER STREAMS

Sample Description: CR 19.8

Temp at Receipt: 4.0C

Table with 6 columns: As Received Result, Method RL, Method Reference, Date Analyzed, Analyst. Rows include Phosphorus Water Digest, BOD, Carbonaceous, CBOD, 20 Day, Solids, Total Suspended, Carbon, Total Organic, Chlorophyll a, Nitrogen Total, Calculat Chloride, Nitrate+Nitrite, Phosphorus, Total, Phosphorus, Ortho, Nitrogen, Total Kjeldahl.

Handwritten notes: NC 8-2006, OF WB

Approved by: [Signature]
Jason G. Smith, Inorganic
Laboratory Manager New Ulm, MN

= Reporting Limit
Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
 WENCK ASSOCIATES INC  
 1800 PIONEER CRK CTR  
 MAPLE PLAIN MN 55359-9000

Report Date: 21 Jun 06  
 Lab Number: 06-A21424  
 Work Order #: 12-6363  
 Account #: 013173  
 Sample Matrix: SURFACE WATER  
 Date Sampled: 30 May 06 13:25  
 Date Received: 30 May 06 18:22  
 PO #: CLEARWATER RIVER

Project Name: CLEARWATER RIVER STREAMS

Sample Description: FD 1

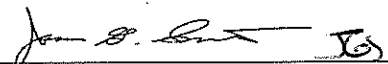
Temp at Receipt: 4.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					6 Jun 06	DAP
BOD, Carbonaceous	4	mg/L	2	SM 5210B	31 May 06 10:28	CJL
CBOD, 20 Day	22	mg/L	2	SM 5210B	31 May 06 10:43	RMV
Solids, Total Suspended	8	mg/L	2	USGS I-3765-85	31 May 06 8:55	RMV
Carbon, Total Organic	12.3	mg/L	0.5	415.1	6 Jun 06 8:00	Bis
Chlorophyll a	6.2	mg/cubic m	1.0	10200H	2 Jun 06 7:20	JD
Fecal Coliform, MF	1400	CFU/100 mL	10.	SM 9222D 18th Ed	30 May 06 19:20	ECH
Chloride	32.1	mg/L	3.0	325.2	5 Jun 06 11:25	RMV
Nitrate+Nitrite	5.46	mg/L as N	0.20	353.2	1 Jun 06 15:46	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	1 Jun 06 9:10	RSL
Phosphorus, Total	0.147	mg/L	0.005	EPA 365.1	6 Jun 06 13:02	RMV
Phosphorus, Ortho	0.081	mg/L	0.005	EPA 365.1	31 May 06 16:35	DAP
Nitrogen, Total Kjeldahl	1.8	mg/L	0.1	SM 4500NorgB/NH3 E	1 Jun 06 6:45	RSL

J = Colony Forming Units

WB  
10/11/06

Approved by:

  
 Jason G. Smith, Inorganic  
 Laboratory Manager New Ulm, MN

. = Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
 ! = Due to sample quantity

# = Due to sample concentration  
 + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WN/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 6 Jul 06  
Lab Number: 06-A24827  
Work Order #: 12-7155  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 15 Jun 06 11:30  
Date Received: 15 Jun 06 16:21  
PO #: CLEARWATER RIVER

Project Name: CLEARWATER RIVER

Sample Description: CR 35.3

Temp at Receipt: 6.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					19 Jun 06	DAP
BOD, Carbonaceous	5	mg/L	2	SM 5210B	16 Jun 06 10:16	AKF
CBOD, 20 Day	106	mg/L	2	SM 5210B	16 Jun 06 10:29	PJB
Solids, Total Suspended	43	mg/L	2	USGS I-3765-85	16 Jun 06 8:30	CJL
Carbon, Total Organic	14.9	mg/L	0.5	415.1	27 Jun 06 8:00	Bis
Chlorophyll a	111	mg/cubic m	1.0	10200H	19 Jun 06 8:41	JD
Fecal Coliform, MF	* 72	CFU/100 mL	10.	SM 9222D 18th Ed	15 Jun 06 17:40	NS
Chloride	33.3	mg/L	3.0	325.2	19 Jun 06 13:30	RMV
Nitrate+Nitrite	< 0.2	mg/L as N	0.2	353.2	23 Jun 06 16:38	RMV
Nitrogen, Ammonia	0.14	mg/L	0.08	4500 NH3 B, E	19 Jun 06 9:40	TAM
Phosphorus, Total	0.208	mg/L	0.005	EPA 365.1	20 Jun 06 11:14	RMV
Phosphorus, Ortho	0.011	mg/L	0.005	EPA 365.1	16 Jun 06 9:49	DAP
Nitrogen, Total Kjeldahl	3.3	mg/L	0.1	SM 4500NorgB/NH3 E	16 Jun 06 9:15	RSL

atch matrix spike duplicate RPD for Ortho-P was outside MVTL 5% limit at 6%.  
ata reported based on all remaining QC acceptable.

CFU = Colony Forming Units

\* Holding time Exceeded

*Ent  
WB  
10/11/06*

Approved by:

*Jason G. Smith*  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

= Reporting Limit

Elevated "Less Than Result" (<): # = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
 WENCK ASSOCIATES INC  
 1800 PIONEER CRK CTR  
 MAPLE PLAIN MN 55359-9000

Report Date: 6 Jul 06  
 Lab Number: 06-A24825  
 Work Order #: 12-7155  
 Account #: 013173  
 Sample Matrix: SURFACE WATER  
 Date Sampled: 15 Jun 06 11:15  
 Date Received: 15 Jun 06 16:21  
 PO #: CLEARWATER RIVER

Project Name: CLEARWATER RIVER

Sample Description: CR 33.6

Temp at Receipt: 6.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					19 Jun 06	DAP
BOD, Carbonaceous	4	mg/L	2	SM 5210B	16 Jun 06 10:16	AKF
CBOD, 20 Day	34	mg/L	2	SM 5210B	16 Jun 06 10:29	PJB
Solids, Total Suspended	21	mg/L	2	USGS I-3765-85	16 Jun 06 8:30	CJL
Carbon, Total Organic	15.1	mg/L	0.5	415.1	27 Jun 06 8:00	Bis
Chlorophyll a	48.6	mg/cubic m	1.0	10200H	19 Jun 06 8:41	JD
Fecal Coliform, MF	* 90	CFU/100 mL	10.	SM 9222D 18th Ed	15 Jun 06 17:40	NS
Chloride	33.1	mg/L	3.0	325.2	19 Jun 06 13:30	RMV
Nitrate+Nitrite	2.98	mg/L as N	0.20	353.2	23 Jun 06 16:38	RMV
Nitrogen, Ammonia	0.50	mg/L	0.08	4500 NH3 B, E	19 Jun 06 9:40	TAM
Phosphorus, Total	0.167	mg/L	0.005	EPA 365.1	20 Jun 06 11:13	RMV
Phosphorus, Ortho	0.049	mg/L	0.005	EPA 365.1	16 Jun 06 9:48	DAP
Nitrogen, Total Kjeldahl	2.4	mg/L	0.1	SM 4500NorgB/NH3 E	16 Jun 06 9:15	RSL

CFU = Colony Forming Units

\* Holding time Exceeded

*WB*  
*10/11/06*

Approved by:

*Jason G. Smith*  
 Jason G. Smith, Inorganic  
 Laboratory Manager New Ulm, MN

\* Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
 ! = Due to sample quantity

# = Due to sample concentration  
 + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL
WENCK ASSOCIATES INC
1800 PIONEER CRK CTR
MAPLE PLAIN MN 55359-9000

Report Date: 6 Jul 06
Lab Number: 06-A24828
Work Order #:12-7155
Account #: 013173
Sample Matrix: SURFACE WATER
Date Sampled: 15 Jun 06 12:10
Date Received: 15 Jun 06 16:21
PO #: CLEARWATER RIVER

Project Name: CLEARWATER RIVER

Sample Description: TC 33.2

Temp at Receipt: 6.0C

Table with 6 columns: As Received Result, Method RL, Method Reference, Date Analyzed, Analyst. Rows include Phosphorus Water Digest, BOD, Carbonaceous, CBOD, 20 Day, Solids, Total Suspended, Carbon, Total Organic, Chlorophyll a, Fecal Coliform, MF, Chloride, Nitrate+Nitrite, Nitrogen, Ammonia, Phosphorus, Total, Phosphorus, Ortho, Nitrogen, Total Kjeldahl.

atch matrix spike duplicate RPD for Ortho-P was outside MVTL 5% limit at 6%.
Data reported based on all remaining QC acceptable.

CFU = Colony Forming Units

WB
10/11/06

Approved by: Jason G. Smith, Inorganic Laboratory Manager New Ulm, MN

Reporting Limit

elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447690 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 6 Jul 06  
Lab Number: 06-A24826  
Work Order #:12-7155  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 15 Jun 06 11:30  
Date Received: 15 Jun 06 16:21  
PO #: CLEARWATER RIVER

Project Name: CLEARWATER RIVER

Sample Description: TB 33.2

Temp at Receipt: 6.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					19 Jun 06	DAP
BOD, Carbonaceous	2	mg/L	2	SM 5210B	16 Jun 06 10:16	AKF
CBOD, 20 Day	24	mg/L	2	SM 5210B	16 Jun 06 10:29	PJB
Solids, Total Suspended	11	mg/L	2	USGS I-3765-85	16 Jun 06 8:30	CJL
Carbon, Total Organic	9.4	mg/L	0.5	415.1	27 Jun 06 8:00	Bis
Chlorophyll a	51.0	mg/cubic m	1.0	10200H	19 Jun 06 8:41	JD
Fecal Coliform, MF	* 390	CFU/100 mL	10.	SM 9222D 18th Ed	15 Jun 06 17:40	NS
Chloride	42.0	mg/L	3.0	325.2	19 Jun 06 13:30	RMV
Nitrate+Nitrite	11.3	mg/L as N	0.20	353.2	23 Jun 06 16:38	RMV
Nitrogen, Ammonia	0.29	mg/L	0.08	4500 NH3 B, E	19 Jun 06 9:40	TAM
Phosphorus, Total	0.173	mg/L	0.005	EPA 365.1	20 Jun 06 11:14	RMV
Phosphorus, Ortho	0.121	mg/L	0.005	EPA 365.1	16 Jun 06 9:49	DAP
Nitrogen, Total Kjeldahl	1.6	mg/L	0.1	SM 4500NorgB/NH3 E	16 Jun 06 9:15	RSL

atch matrix spike duplicate RPD for Ortho-P was outside MVTL 5% limit at 6%.  
ta reported based on all remaining QC acceptable.

CFU = Colony Forming Units

\* Holding time Exceeded

*WB*  
*10/11/06*

Approved by: Jason G. Smith  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 6 Jul 06  
Lab Number: 06-A24824  
Work Order #: 12-7155  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 15 Jun 06 10:40  
Date Received: 15 Jun 06 16:21  
PO #: CLEARWATER RIVER

Project Name: CLEARWATER RIVER

Sample Description: CR 31.8

Temp at Receipt: 6.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					19 Jun 06	DAP
BOD, Carbonaceous	4	mg/L	2	SM 5210B	16 Jun 06 10:16	AKF
CBOD, 20 Day	32	mg/L	2	SM 5210B	16 Jun 06 10:29	PJB
Solids, Total Suspended	387	mg/L	2	USGS I-3765-85	16 Jun 06 8:30	CJL
Carbon, Total Organic	10.2	mg/L	0.5	415.1	27 Jun 06 8:00	Bis
Chlorophyll a	19.9	mg/cubic m	1.0	10200H	19 Jun 06 8:41	JD
Fecal Coliform, MF	* 820	CFU/100 mL	10.	SM 9222D 18th Ed	15 Jun 06 17:40	NS
Chloride	34.1	mg/L	3.0	325.2	19 Jun 06 13:30	RMV
Nitrate+Nitrite	7.44	mg/L as N	0.20	353.2	23 Jun 06 16:38	RMV
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	19 Jun 06 9:40	TAM
Phosphorus, Total	0.116	mg/L	0.005	EPA 365.1	20 Jun 06 11:13	RMV
Phosphorus, Ortho	0.060	mg/L	0.005	EPA 365.1	16 Jun 06 9:48	DAP
Nitrogen, Total Kjeldahl	1.9	mg/L	0.1	SM 4500NorgB/NH3 E	16 Jun 06 9:15	RSL

CFU = Colony Forming Units

\* Holding time Exceeded

WB  
10/11/06

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

\* Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

MVTL guarantees the accuracy of the analysis done on the sample submitted for testing. It is not possible for MVTL to guarantee that a test result obtained on a particular sample will be the same on any other sample unless all conditions affecting the sample are the same, including sampling by MVTL. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.

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WES BOLL
WENCK ASSOCIATES INC
1800 PIONEER CRK CTR
MAPLE PLAIN MN 55359-9000

Report Date: 6 Jul 06
Lab Number: 06-A24823
Work Order #:12-7155
Account #: 013173
Sample Matrix: SURFACE WATER
Date Sampled: 15 Jun 06 10:15
Date Received: 15 Jun 06 16:21
PO #: CLEARWATER RIVER

Project Name: CLEARWATER RIVER

Sample Description: CR 29.0

Temp at Receipt: 6.0C

Table with 6 columns: As Received Result, Method RL, Method Reference, Date Analyzed, and Analyst. Rows include Phosphorus Water Digest, BOD, Carbonaceous, CBOD, 20 Day, Solids, Total Suspended, Carbon, Total Organic, Chlorophyll a, Fecal Coliform, MF, Chloride, Nitrate+Nitrite, Nitrogen, Ammonia, Phosphorus, Total, Phosphorus, Ortho, Nitrogen, Total Kjeldahl.

\*U = Colony Forming Units

\* Holding time Exceeded

Ent:
WB
10/11/06

Approved by:

Jason G. Smith, Inorganic
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix
! = Due to sample quantity

# = Due to sample concentration
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL
WENCK ASSOCIATES INC
1800 PIONEER CRK CTR
MAPLE PLAIN MN 55359-9000

Report Date: 6 Jul 06
Lab Number: 06-A24822
Work Order #:12-7155
Account #: 013173
Sample Matrix: SURFACE WATER
Date Sampled: 15 Jun 06 9:50
Date Received: 15 Jun 06 16:21
PO #: CLEARWATER RIVER

Project Name: CLEARWATER RIVER

Sample Description: CR 27.2

Temp at Receipt: 6.0C

Table with columns: As Received Result, Method RL, Method Reference, Date Analyzed, Analyst. Rows include Phosphorus Water Digest, BOD, Carbonaceous, CBOD, 20 Day, Solids, Total Suspended, Carbon, Total Organic, Chlorophyll a, Fecal Coliform, MF, Chloride, Nitrate+Nitrite, Nitrogen, Ammonia, Phosphorus, Total, Phosphorus, Ortho, Nitrogen, Total Kjeldahl.

FU = Colony Forming Units

\* Holding time Exceeded

WB
10/11/06

Approved by:

Jason G. Smith, Inorganic
Laboratory Manager New Ulm, MN

= Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix
! = Due to sample quantity

# = Due to sample concentration
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447690 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 6 Jul 06  
Lab Number: 06-A24821  
Work Order #:12-7155  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 15 Jun 06 9:15  
Date Received: 15 Jun 06 16:21  
PO #: CLEARWATER RIVER

Project Name: CLEARWATER RIVER

Sample Description: CR 25.6

Temp at Receipt: 6.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					19 Jun 06	DAP
BOD, Carbonaceous	2	mg/L	2	SM 5210B	16 Jun 06 9:47	AKF
CBOD, 20 Day	49	mg/L	2	SM 5210B	16 Jun 06 10:29	PJB
Solids, Total Suspended	14	mg/L	2	USGS I-3765-85	16 Jun 06 7:00	CJL
Carbon, Total Organic	11.9	mg/L	0.5	415.1	27 Jun 06 8:00	Bis
Chlorophyll a	2.9	mg/cubic m	1.0	10200H	19 Jun 06 8:41	JD
Fecal Coliform, MF	* 200	CFU/100 mL	10.	SM 9222D 18th Ed	15 Jun 06 17:40	NS
Chloride	23.6	mg/L	3.0	325.2	19 Jun 06 13:29	RMV
Nitrate+Nitrite	0.78	mg/L as N	0.20	353.2	23 Jun 06 16:38	RMV
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	19 Jun 06 8:40	TAM
Phosphorus, Total	0.184	mg/L	0.005	EPA 365.1	20 Jun 06 11:13	RMV
Phosphorus, Ortho	0.115	mg/L	0.005	EPA 365.1	16 Jun 06 9:48	DAP
Nitrogen, Total Kjeldahl	1.3	mg/L	0.1	SM 4500NorgB/NH3 E	16 Jun 06 9:15	RSL

U = Colony Forming Units

\* Holding time Exceeded

*WB*  
*10/11/06*

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 6 Jul 06  
Lab Number: 06-A24829  
Work Order #: 12-7155  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 15 Jun 06  
Date Received: 15 Jun 06 16:21  
PO #: CLEARWATER RIVER

Project Name: CLEARWATER RIVER

Sample Description: FD 1

Temp at Receipt: 6.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					19 Jun 06	DAP
BOD, Carbonaceous	< 2	mg/L	2	SM 5210B	16 Jun 06 10:16	AKF
CBOD, 20 Day	53	mg/L	2	SM 5210B	16 Jun 06 10:29	PJB
Solids, Total Suspended	14	mg/L	2	USGS I-3765-85	16 Jun 06 8:30	CJL
Carbon, Total Organic	11.7	mg/L	0.5	415.1	27 Jun 06 8:00	Bis
Chlorophyll a	3.9	mg/cubic m	1.0	10200H	19 Jun 06 8:41	JD
Fecal Coliform, MF	* 40	CFU/100 mL	10.	SM 9222D 18th Ed	15 Jun 06 17:40	NS
Chloride	23.7	mg/L	3.0	325.2	19 Jun 06 13:30	RMV
Nitrate+Nitrite	0.76	mg/L as N	0.20	353.2	23 Jun 06 16:39	RMV
Nitrogen, Ammonia	0.29	mg/L	0.08	4500 NH3 B, E	19 Jun 06 9:40	TAM
Phosphorus, Total	0.187	mg/L	0.005	EPA 365.1	20 Jun 06 11:14	RMV
Phosphorus, Ortho	0.114	mg/L	0.005	EPA 365.1	16 Jun 06 9:49	DAP
Nitrogen, Total Kjeldahl	1.4	mg/L	0.1	SM 4500NorgB/NH3 E	16 Jun 06 9:15	RSL

atch matrix spike duplicate RPD for Ortho-P was outside MVTL 5% limit at 6%.  
ata reported based on all remaining QC acceptable.

CFU = Colony Forming Units

\* Holding time Exceeded

\*\* No collection time supplied by the client.

Approved by:

*Jason G. Smith*  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

*Ent:  
WB  
10/11/06*

\* Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WN/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL
WENCK ASSOCIATES INC
1800 PIONEER CRK CTR
MAPLE PLAIN MN 55359-9000

Report Date: 19 Jul 06
Lab Number: 06-A26953
Work Order #:12-7634
Account #: 013173
Sample Matrix: SURFACE WATER
Date Sampled: 28 Jun 06 13:10
Date Received: 28 Jun 06 17:15
PO #: CRWD

Project Name: CRWD

Sample Description: HWY 55

Temp at Receipt: 5.0C

Table with 6 columns: As Received Result, Method RL, Method Reference, Date Analyzed, Analyst. Rows include Phosphorus Water Digest, BOD, Carbonaceous, CBOD, 20 Day, Solids, Total Suspended, Carbon, Total Organic, Chlorophyll a, Fecal Coliform, MF, Chloride, Nitrate+Nitrite, Nitrogen, Ammonia, Phosphorus, Total, Phosphorus, Ortho, Nitrogen, Total Kjeldahl.

U = Colony Forming Units

\* Holding time Exceeded

Approved by: Jason G. Smith, Inorganic Laboratory Manager New Ulm, MN

Handwritten initials and date: JG 8/17/06

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
 WENCK ASSOCIATES INC  
 1800 PIONEER CRK CTR  
 MAPLE PLAIN MN 55359-9000

Report Date: 19 Jul 06  
 Lab Number: 06-A26949  
 Work Order #: 12-7634  
 Account #: 013173  
 Sample Matrix: SURFACE WATER  
 Date Sampled: 28 Jun 06 11:09  
 Date Received: 28 Jun 06 17:15  
 PO #: CRWD

Project Name: CRWD

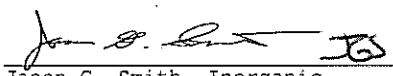
Sample Description: CR 33.6

Temp at Receipt: 5.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					3 Jul 06	RLB
BOD, Carbonaceous	5	mg/L	2	SM 5210B	29 Jun 06 10:38	RMV
CBOD, 20 Day	28	mg/L	2	SM 5210B	29 Jun 06 11:26	PJB
Solids, Total Suspended	37	mg/L	2	USGS I-3765-85	29 Jun 06 12:30	PJB
Carbon, Total Organic	16.3	mg/L	0.5	415.1	3 Jul 06 8:00	Bis
Chlorophyll a	55.9	mg/cubic m	1.0	10200H	30 Jun 06 4:16	JD
Fecal Coliform, MF	* 350	CFU/100 mL	10.	SM 9222D 18th Ed	28 Jun 06 19:50	VRK
Chloride	29.9	mg/L	3.0	325.2	7 Jul 06 13:43	RMV
Nitrate+Nitrite	2.58	mg/L as N	0.20	353.2	30 Jun 06 16:12	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	30 Jun 06 8:45	TAM
Phosphorus, Total	0.189	mg/L	0.005	EPA 365.1	3 Jul 06 13:06	RMV
Phosphorus, Ortho	0.033	mg/L	0.005	EPA 365.1	30 Jun 06 7:44	RMV
Nitrogen, Total Kjeldahl	3.5	mg/L	0.1	SM 4500NorgB/NH3 E	3 Jul 06 10:15	RSL

\*U = Colony Forming Units

\* Holding time Exceeded

Approved by:   
 Jason G. Smith, Inorganic  
 Laboratory Manager New Ulm, MN

Ent 7/21/06  
 WB

\* Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
 ! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 19 Jul 06  
Lab Number: 06-A26952  
Work Order #:12-7634  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 28 Jun 06 12:40  
Date Received: 28 Jun 06 17:15  
PO #: CRWD

Project Name: CRWD

Sample Description: <sup>C</sup> T<sub>E</sub> 33.2

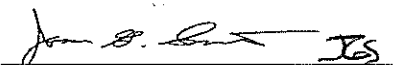
Temp at Receipt: 5.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					3 Jul 06	RLB
BOD, Carbonaceous	< 2	mg/L	2	SM 5210B	29 Jun 06 10:47	RMV
CBOD, 20 Day	14	mg/L	2	SM 5210B	29 Jun 06 11:26	PJB
Solids, Total Suspended	5	mg/L	2	USGS I-3765-85	29 Jun 06 12:30	PJB
Carbon, Total Organic	11.4	mg/L	0.5	415.1	3 Jul 06 8:00	Bis
Chlorophyll a	8.5	mg/cubic m	1.0	10200H	30 Jun 06 4:16	JD
Fecal Coliform, MF	* 600	CFU/100 mL	10.	SM 9222D 18th Ed	28 Jun 06 19:50	VRK
Chloride	43.8	mg/L	3.0	325.2	7 Jul 06 13:43	RMV
Nitrate+Nitrite	11.4	mg/L as N	0.20	353.2	30 Jun 06 16:12	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	5 Jul 06 7:55	TAM
Phosphorus, Total	0.176	mg/L	0.005	EPA 365.1	3 Jul 06 13:07	RMV
Phosphorus, Ortho	0.113	mg/L	0.005	EPA 365.1	30 Jun 06 7:44	RMV
Nitrogen, Total Kjeldahl	1.5	mg/L	0.1	SM 4500NorgB/NH3 E	3 Jul 06 10:15	RSL

U = Colony Forming Units

\* Holding time Exceeded

Approved by:

  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447600 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL
WENCK ASSOCIATES INC
1800 PIONEER CRK CTR
MAPLE PLAIN MN 55359-9000

Report Date: 19 Jul 06
Lab Number: 06-A26950
Work Order #:12-7634
Account #: 013173
Sample Matrix: SURFACE WATER
Date Sampled: 28 Jun 06 11:50
Date Received: 28 Jun 06 17:15
PO #: CRWD

Project Name: CRWD

Sample Description: TB 33.2

Temp at Receipt: 5.0C

Table with columns: As Received Result, Method RL, Method Reference, Date Analyzed, Analyst. Rows include Phosphorus Water Digest, BOD, CBOD, Solids, Carbon, Chlorophyll a, Fecal Coliform, Chloride, Nitrate+Nitrite, Nitrogen, Phosphorus, and Nitrogen.

U = Colony Forming Units

\* Holding time Exceeded

Approved by: Jason G. Smith, Inorganic Laboratory Manager New Ulm, MN

Ent 7/21/06 WB

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 19 Jul 06  
Lab Number: 06-A26951  
Work Order #: 12-7634  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 28 Jun 06 12:20  
Date Received: 28 Jun 06 17:15  
PO #: CRWD

Project Name: CRWD

Sample Description: CR 35.3

Temp at Receipt: 5.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					3 Jul 06	RLB
BOD, Carbonaceous	7	mg/L	2	SM 5210B	29 Jun 06 10:38	RMV
CBOD, 20 Day	31	mg/L	2	SM 5210B	29 Jun 06 11:26	PJB
Solids, Total Suspended	45	mg/L	2	USGS I-3765-85	29 Jun 06 12:30	PJB
Carbon, Total Organic	17.5	mg/L	0.5	415.1	3 Jul 06 8:00	Bis
Chlorophyll a	75.3	mg/cubic m	1.0	10200H	30 Jun 06 4:16	JD
Fecal Coliform, MF	* 150	CFU/100 mL	10.	SM 9222D 18th Ed	28 Jun 06 19:50	VRK
Chloride	27.6	mg/L	3.0	325.2	7 Jul 06 13:43	RMV
Nitrate+Nitrite	< 0.2	mg/L as N	0.2	353.2	30 Jun 06 16:12	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	5 Jul 06 7:55	TAM
Phosphorus, Total	0.146	mg/L	0.005	EPA 365.1	3 Jul 06 13:07	RMV
Phosphorus, Ortho	0.006	mg/L	0.005	EPA 365.1	30 Jun 06 7:44	RMV
Nitrogen, Total Kjeldahl	2.9	mg/L	0.1	SM 4500NorgB/NH3 E	3 Jul 06 10:15	RSL

\*U = Colony Forming Units

\* Holding time Exceeded

*Ent 7/21/06 WB*

Approved by:

*Jason G. Smith*  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 19 Jul 06  
Lab Number: 06-A26948  
Work Order #: 12-7634  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 28 Jun 06 10:40  
Date Received: 28 Jun 06 17:15  
PO #: CRWD

Project Name: CRWD

Sample Description: CR 31.8

Temp at Receipt: 5.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					3 Jul 06	RLB
BOD, Carbonaceous	4	mg/L	2	SM 5210B	29 Jun 06 10:38	RMV
CBOD, 20 Day	21	mg/L	2	SM 5210B	29 Jun 06 11:26	PJB
Solids, Total Suspended	11	mg/L	2	USGS I-3765-85	29 Jun 06 12:30	PJB
Carbon, Total Organic	12.9	mg/L	0.5	415.1	3 Jul 06 8:00	Bis
Chlorophyll a	18.0	mg/cubic m	1.0	10200H	30 Jun 06 4:16	JD
Fecal Coliform, MF	* 540	CFU/100 mL	10.	SM 9222D 18th Ed	28 Jun 06 19:50	VRK
Chloride	32.6	mg/L	3.0	325.2	7 Jul 06 13:41	RMV
Nitrate+Nitrite	5.08	mg/L as N	0.20	353.2	30 Jun 06 16:12	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	30 Jun 06 8:45	TAM
Phosphorus, Total	0.165	mg/L	0.005	EPA 365.1	3 Jul 06 13:06	RMV
Phosphorus, Ortho	0.115	mg/L	0.005	EPA 365.1	30 Jun 06 7:44	RMV
Nitrogen, Total Kjeldahl	1.7	mg/L	0.1	SM 4500NorgB/NH3 E	3 Jul 06 10:15	RSL

'U = Colony Forming Units

\* Holding time Exceeded

Approved by:

Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

*Ent 7/21/06 WB*

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 19 Jul 06  
Lab Number: 06-A26954  
Work Order #: 12-7634  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 28 Jun 06 10:20  
Date Received: 28 Jun 06 17:15  
PO #: CRWD

Project Name: CRWD

Sample Description: CR 29.0 FT

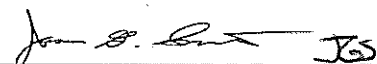
Temp at Receipt: 5.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					3 Jul 06	RLB
BOD, Carbonaceous	2	mg/L	2	SM 5210B	29 Jun 06 10:47	RMV
CBOD, 20 Day	26	mg/L	2	SM 5210B	29 Jun 06 11:26	PJB
Solids, Total Suspended	46	mg/L	2	USGS I-3765-85	29 Jun 06 12:30	PJB
Carbon, Total Organic	12.5	mg/L	0.5	415.1	3 Jul 06 8:00	Bis
Chlorophyll a	6.8	mg/cubic m	1.0	10200H	30 Jun 06 4:16	JD
Fecal Coliform, MF	* 160	CFU/100 mL	10.	SM 9222D 18th Ed	28 Jun 06 19:50	VRK
Chloride	19.9	mg/L	3.0	325.2	7 Jul 06 13:43	RMV
Nitrate+Nitrite	0.21	mg/L as N	0.20	353.2	30 Jun 06 16:14	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	5 Jul 06 7:55	TAM
Phosphorus, Total	0.049	mg/L	0.005	EPA 365.1	3 Jul 06 13:07	RMV
Phosphorus, Ortho	0.022	mg/L	0.005	EPA 365.1	30 Jun 06 7:44	RMV
Nitrogen, Total Kjeldahl	1.6	mg/L	0.1	SM 4500NorgB/NH3 E	3 Jul 06 10:15	RSL

U = Colony Forming Units

\* Holding time Exceeded

Approved by:

  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

*Nic B-000*

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL
WENCK ASSOCIATES INC
1800 PIONEER CRK CTR
MAPLE PLAIN MN 55359-9000

Report Date: 19 Jul 06
Lab Number: 06-A26947
Work Order #:12-7634
Account #: 013173
Sample Matrix: SURFACE WATER
Date Sampled: 28 Jun 06 10:20
Date Received: 28 Jun 06 17:15
PO #: CRWD

Project Name: CRWD

Sample Description: CR 29.0

Temp at Receipt: 5.0C

Table with columns: As Received Result, Method RL, Method Reference, Date Analyzed, Analyst. Rows include Phosphorus Water Digest, BOD, Carbonaceous, CBOD, 20 Day, Solids, Total Suspended, Carbon, Total Organic, Chlorophyll a, Fecal Coliform, MF, Chloride, Nitrate+Nitrite, Nitrogen, Ammonia, Phosphorus, Total, Phosphorus, Ortho, Nitrogen, Total Kjeldahl.

U = Colony Forming Units

\* Holding time Exceeded

Ent 7/21/06 WB

Approved by:

Jason G. Smith, Inorganic Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix ! = Due to sample quantity

# = Due to sample concentration + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
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1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 19 Jul 06  
Lab Number: 06-A26946  
Work Order #: 12-7634  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 28 Jun 06 9:40  
Date Received: 28 Jun 06 17:15  
PO #: CRWD

Project Name: CRWD

Sample Description: CR 27.2

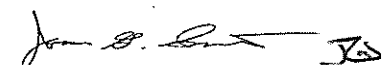
Temp at Receipt: 5.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					3 Jul 06	RLB
BOD, Carbonaceous	2	mg/L	2	SM 5210B	29 Jun 06 10:38	RMV
CBOD, 20 Day	15	mg/L	2	SM 5210B	29 Jun 06 11:26	PJB
Solids, Total Suspended	18	mg/L	2	USGS I-3765-85	29 Jun 06 12:30	PJB
Carbon, Total Organic	13.4	mg/L	0.5	415.1	3 Jul 06 8:00	Bis
Chlorophyll a	5.8	mg/cubic m	1.0	10200H	30 Jun 06 4:16	JD
Fecal Coliform, MF	* 230	CFU/100 mL	10.	SM 9222D 18th Ed	28 Jun 06 19:50	VRK
Chloride	24.1	mg/L	3.0	325.2	7 Jul 06 13:41	RMV
Nitrate+Nitrite	< 0.2	mg/L as N	0.2	353.2	30 Jun 06 16:12	DAP
Nitrogen, Ammonia	0.14	mg/L	0.08	4500 NH3 B, E	30 Jun 06 8:45	TAM
Phosphorus, Total	0.295	mg/L	0.005	EPA 365.1	3 Jul 06 13:06	RMV
Phosphorus, Ortho	0.250	mg/L	0.005	EPA 365.1	30 Jun 06 7:44	RMV
Nitrogen, Total Kjeldahl	1.6	mg/L	0.1	SM 4500NorgB/NH3 E	29 Jun 06 15:45	RSL

U = Colony Forming Units

\* Holding time Exceeded

Approved by:

  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

*Ent 7/21/06 WB*

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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Report Date: 19 Jul 06
Lab Number: 06-A26945
Work Order #:12-7634
Account #: 013173
Sample Matrix: SURFACE WATER
Date Sampled: 28 Jun 06 9:00
Date Received: 28 Jun 06 17:15
PO #: CRWD

Project Name: CRWD

Sample Description: CR 25.6

Temp at Receipt: 5.0C

Table with columns: As Received Result, Method RL, Method Reference, Date Analyzed, Analyst. Rows include Phosphorus Water Digest, BOD, CBOD, Solids, Carbon, Chlorophyll a, Fecal Coliform, Chloride, Nitrate+Nitrite, Nitrogen, Ammonia, Phosphorus, Total, Phosphorus, Ortho, Nitrogen, Total Kjeldahl.

U = Colony Forming Units

\* Holding time Exceeded

Approved by:

Signature of Jason G. Smith
Jason G. Smith, Inorganic
Laboratory Manager New Ulm, MN

Ent 7/21/06 WB

\* Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix
! = Due to sample quantity

# = Due to sample concentration
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL
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MAPLE PLAIN MN 55359-9000

Report Date: 3 Aug 06
Lab Number: 06-A29371
Work Order #:12-8098
Account #: 013173
Sample Matrix: SURFACE WATER
Date Sampled: 12 Jul 06 10:15
Date Received: 12 Jul 06 15:30
PO #: CLEARWATER RIVER

Project Name: CLEARWATER RIVER
Project Number: 0002-75
Sample Description: CR 33.6

Temp at Receipt: 1.0C

Table with 6 columns: As Received Result, Method RL, Method Reference, Date Analyzed, and Analyst. Rows include Phosphorus Water Digest, BOD, Carbonaceous, CBOD, 20 Day, Solids, Total Suspended, Carbon, Total Organic, Chlorophyll a, Fecal Coliform, MF, Nitrate+Nitrite, Nitrogen, Ammonia, Phosphorus, Total, Phosphorus, Ortho, and Nitrogen, Total Kjeldahl.

CFU = Colony Forming Units

\* Holding time Exceeded

Handwritten signature: 10/10/06 WB

Approved by: Jason G. Smith, Inorganic Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration
! = Due to sample quantity \* = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND NW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL
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MAPLE PLAIN MN 55359-9000

Report Date: 3 Aug 06
Lab Number: 06-A29372
Work Order #:12-8098
Account #: 013173
Sample Matrix: SURFACE WATER
Date Sampled: 12 Jul 06 10:45
Date Received: 12 Jul 06 15:30
PO #: CLEARWATER RIVER

Project Name: CLEARWATER RIVER
Project Number: 0002-75
Sample Description: CR 31.8

Temp at Receipt: 1.0C

Table with columns: As Received Result, Method RL, Method Reference, Date Analyzed, Analyst. Rows include Phosphorus Water Digest, BOD, Carbonaceous, CBOD, 20 Day, Solids, Total Suspended, Carbon, Total Organic, Chlorophyll a, Fecal Coliform, MF, Nitrate+Nitrite, Nitrogen, Ammonia, Phosphorus, Total, Phosphorus, Ortho, Nitrogen, Total Kjeldahl.

CFU = Colony Forming Units

\* Holding time Exceeded

Ents
WB
10/10/06

Approved by: Jason G. Smith, Inorganic Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix ! = Due to sample quantity

# = Due to sample concentration + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 3 Aug 06  
Lab Number: 06-A29373  
Work Order #: 12-8098  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 12 Jul 06 11:10  
Date Received: 12 Jul 06 15:30  
PO #: CLEARWATER RIVER

Temp at Receipt: 1.0C


Project Name: CLEARWATER RIVER  
Project Number: 0002-75  
Sample Description: CR 29.0

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					17 Jul 06	RLB
BOD, Carbonaceous	6	mg/L	2	SM 5210B	13 Jul 06 8:59	CJL
CBOD, 20 Day	21	mg/L	2	SM 5210B	13 Jul 06 8:39	PJB
Solids, Total Suspended	22	mg/L	2	USGS I-3765-85	13 Jul 06 10:30	AKF
Carbon, Total Organic	7.0	mg/L	0.5	415.1	20 Jul 06 8:00	Bis
Chlorophyll a	10.9	mg/cubic m	1.0	10200H	17 Jul 06 8:19	JD
Fecal Coliform, MF	2000	CFU/100 mL	10.	SM 9222D 18th Ed	12 Jul 06 17:05	VRK
Nitrate+Nitrite	1.16	mg/L as N	0.20	353.2	19 Jul 06 17:01	RMV
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	19 Jul 06 12:15	TAM
Phosphorus, Total	0.129	mg/L	0.005	EPA 365.1	18 Jul 06 11:10	RMV
Phosphorus, Ortho	0.087	mg/L	0.005	EPA 365.1	13 Jul 06 8:43	RMV
Nitrogen, Total Kjeldahl	1.3	mg/L	0.1	SM 4500NorgB/NH3 E	14 Jul 06 15:20	RSL

CFU = Colony Forming Units

*WB*  
*10/11/06*

Approved by:

  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL
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MAPLE PLAIN MN 55359-9000

Report Date: 3 Aug 06
Lab Number: 06-A29374
Work Order #:12-8098
Account #: 013173
Sample Matrix: SURFACE WATER
Date Sampled: 12 Jul 06 12:10
Date Received: 12 Jul 06 15:30
PO #: CLEARWATER RIVER

Project Name: CLEARWATER RIVER
Project Number: 0002-75
Sample Description: CR 25.6

Temp at Receipt: 1.0C

Table with 6 columns: As Received Result, Method RL, Method Reference, Date Analyzed, Analyst. Rows include Phosphorus Water Digest, BOD, Carbonaceous, CBOD, 20 Day, Solids, Total Suspended, Carbon, Total Organic, Chlorophyll a, Fecal Coliform, MF, Nitrate+Nitrite, Nitrogen, Ammonia, Phosphorus, Total, Phosphorus, Ortho, Nitrogen, Total Kjeldahl.

CFU = Colony Forming Units

Ent: WB 10/11/06

Approved by: Jason G. Smith, Inorganic Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL
WENCK ASSOCIATES INC
1800 PIONEER CRK CTR
MAPLE PLAIN MN 55359-9000

Report Date: 3 Aug 06
Lab Number: 06-A29375
Work Order #:12-8098
Account #: 013173
Sample Matrix: SURFACE WATER
Date Sampled: 12 Jul 06 12:50
Date Received: 12 Jul 06 15:30
PO #: CLEARWATER RIVER

Project Name: CLEARWATER RIVER
Project Number: 0002-75
Sample Description: CR 19.8

Temp at Receipt: 1.0C

Table with 7 columns: As Received Result, Method RL, Method Reference, Date Analyzed, Analyst. Rows include Phosphorus Water Digest, BOD, Carbonaceous, CBOD, 20 Day, Solids, Total Suspended, Carbon, Total Organic, Chlorophyll a, Nitrogen Total, Calculat, Nitrate+Nitrite, Phosphorus, Total, Phosphorus, Ortho, Nitrogen, Total Kjeldahl.

WB
10/11/06

Approved by: [Signature]
Jason G. Smith, Inorganic
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND NW/DW # R-040 IA LAB #: 132 IA LAB #: 022

MVTL guarantees the accuracy of the analysis done on the sample submitted for testing. It is not possible for MVTL to guarantee that a test result obtained on a particular sample will be the same on any other sample unless all conditions affecting the sample are the same, including sampling by MVTL. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 3 Aug 06  
Lab Number: 06-A29376  
Work Order #: 12-8098  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 12 Jul 06  
Date Received: 12 Jul 06 15:30  
PO #: CLEARWATER RIVER

Project Name: CLEARWATER RIVER  
Project Number: 0002-75  
Sample Description: FD 1

Temp at Receipt: 1.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					17 Jul 06	RLB
BOD, Carbonaceous	3	mg/L	2	SM 5210B	13 Jul 06 8:59	CJL
CBOD, 20 Day	13	mg/L	2	SM 5210B	13 Jul 06 8:39	PJB
Solids, Total Suspended	17	mg/L	2	USGS I-3765-85	13 Jul 06 10:30	AKF
Carbon, Total Organic	6.7	mg/L	0.5	415.1	20 Jul 06 8:00	Bis
Chlorophyll a	10.5	mg/cubic m	1.0	10200H	17 Jul 06 8:19	JD
Fecal Coliform, MF	* 1300	CFU/100 mL	10.	SM 9222D 18th Ed	12 Jul 06 17:05	VRK
Nitrate+Nitrite	1.12	mg/L as N	0.20	353.2	23 Jul 06 10:50	RMV
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	19 Jul 06 12:15	TAM
Phosphorus, Total	0.129	mg/L	0.005	EPA 365.1	18 Jul 06 11:11	RMV
Phosphorus, Ortho	0.084	mg/L	0.005	EPA 365.1	13 Jul 06 8:44	RMV
Nitrogen, Total Kjeldahl	0.9	mg/L	0.1	SM 4500NorgB/NH3 E	17 Jul 06 15:15	RSL

CFU = Colony Forming Units

\* Holding time Exceeded

\*\* No collection time supplied by the client.

*WB*  
*10/11/06*

Approved by:

Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

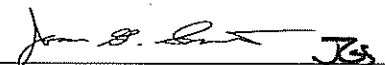
Report Date: 16 Aug 06  
Lab Number: 06-A32002  
Work Order #: 12-8600  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 26 Jul 06 11:30  
Date Received: 26 Jul 06 15:30

Sample Description: CR 31.8

Temp at Receipt: 3.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					31 Jul 06	RMV
BOD, Carbonaceous	< 2	mg/L	2	SM 5210B	27 Jul 06 10:09	CJL
CBOD, 20 Day	13	mg/L	2	SM 5210B	27 Jul 06 16:31	PJB
Solids, Total Suspended	7	mg/L	2	USGS I-3765-85	27 Jul 06 9:25	PJB
Carbon, Total Organic	9.1	mg/L	0.5	415.1	3 Aug 06 8:00	Bis
Chlorophyll a	1.0	mg/cubic m	1.0	10200H	31 Jul 06 9:59	JD
Fecal Coliform, MF	910	CFU/100 mL	10.	SM 9222D 18th Ed	26 Jul 06 17:20	VRK
Nitrate+Nitrite	0.70	mg/L as N	0.20	353.2	30 Jul 06 15:03	JGS
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	2 Aug 06 8:05	TAM
Phosphorus, Total	0.225	mg/L	0.005	EPA 365.1	1 Aug 06 9:23	RMV
Phosphorus, Ortho	0.177	mg/L	0.005	EPA 365.1	27 Jul 06 8:19	RMV
Nitrogen, Total Kjeldahl	1.1	mg/L	0.1	SM 4500NorgB/NH3 E	28 Jul 06 14:20	TAM

CFU = Colony Forming Units

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

WB  
10/11/06

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

MVT L guarantees the accuracy of the analysis done on the sample submitted for testing. It is not possible for MVT L to guarantee that a test result obtained on a particular sample will be the same on any other sample unless all conditions affecting the sample are the same, including sampling by MVT L. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 16 Aug 06  
Lab Number: 06-A32001  
Work Order #: 12-8600  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 26 Jul 06 10:40  
Date Received: 26 Jul 06 15:30

Sample Description: CR 29.0

Temp at Receipt: 3.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					31 Jul 06	RMV
BOD, Carbonaceous	< 2	mg/L	2	SM 5210B	27 Jul 06 9:41	CJL
CBOD, 20 Day	14	mg/L	2	SM 5210B	27 Jul 06 16:31	PJB
Solids, Total Suspended	63	mg/L	2	USGS I-3765-85	27 Jul 06 7:45	PJB
Carbon, Total Organic	7.4	mg/L	0.5	415.1	3 Aug 06 8:00	Bis
Chlorophyll a	8.6	mg/cubic m	1.0	10200H	31 Jul 06 9:59	JD
Fecal Coliform, MF	* 4000	CFU/100 mL	10.	SM 9222D 18th Ed	26 Jul 06 17:20	VRK
Nitrate+Nitrite	1.02	mg/L as N	0.20	353.2	30 Jul 06 15:03	JGS
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	2 Aug 06 8:05	TAM
Phosphorus, Total	0.222	mg/L	0.005	EPA 365.1	1 Aug 06 9:22	RMV
Phosphorus, Ortho	0.165	mg/L	0.005	EPA 365.1	27 Jul 06 8:19	RMV
Nitrogen, Total Kjeldahl	1.4	mg/L	0.1	SM 4500NorgB/NH3 E	28 Jul 06 14:20	TAM

CFU = Colony Forming Units

\* Holding time Exceeded

Approved by:

*Jason G. Smith*  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Ent!  
WB  
10/10/06

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 16 Aug 06  
Lab Number: 06-A32000  
Work Order #: 12-8600  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 26 Jul 06 10:15  
Date Received: 26 Jul 06 15:30

Sample Description: CR 27.2

Temp at Receipt: 3.0C

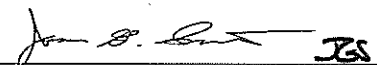
	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					31 Jul 06	RMV
BOD, Carbonaceous	3	mg/L	2	SM 5210B	27 Jul 06 9:41	CJL
CBOD, 20 Day	22	mg/L	2	SM 5210B	27 Jul 06 16:31	PJB
Solids, Total Suspended	19	mg/L	2	USGS I-3765-85	27 Jul 06 7:45	PJB
Carbon, Total Organic	17.6	mg/L	0.5	415.1	3 Aug 06 8:00	Bis
Chlorophyll a	19.7	mg/cubic m	1.0	10200H	31 Jul 06 9:59	JD
Fecal Coliform, MF	* 1600	CFU/100 mL	10.	SM 9222D 18th Ed	26 Jul 06 17:20	VRK
Nitrate+Nitrite	0.67	mg/L as N	0.20	353.2	30 Jul 06 15:02	JGS
Nitrogen, Ammonia	0.57	mg/L	0.08	4500 NH3 B, E	2 Aug 06 8:05	TAM
Phosphorus, Total	0.720	mg/L	0.005	EPA 365.1	1 Aug 06 9:22	RMV
Phosphorus, Ortho	0.581	mg/L	0.005	EPA 365.1	27 Jul 06 8:18	RMV
Nitrogen, Total Kjeldahl	2.7	mg/L	0.1	SM 4500NorgB/NH3 E	28 Jul 06 14:20	TAM

CFU = Colony Forming Units

\* Holding time Exceeded

WB  
10/10/06

Approved by:

  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447660 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 16 Aug 06  
Lab Number: 06-A31999  
Work Order #: 12-8600  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 26 Jul 06 9:30  
Date Received: 26 Jul 06 15:30

Sample Description: CR 25.6

Temp at Receipt: 3.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					31 Jul 06	RMV
BOD, Carbonaceous	2	mg/L	2	SM 5210B	27 Jul 06 9:41	CJL
CBOD, 20 Day	12	mg/L	2	SM 5210B	27 Jul 06 16:31	PJB
Solids, Total Suspended	17	mg/L	2	USGS I-3765-85	27 Jul 06 7:45	PJB
Carbon, Total Organic	11.8	mg/L	0.5	415.1	3 Aug 06 8:00	Bis
Chlorophyll a	4.6	mg/cubic m	1.0	10200H	31 Jul 06 9:59	JD
Fecal Coliform, MF	* 140	CFU/100 mL	10.	SM 9222D 18th Ed	26 Jul 06 17:20	VRK
Nitrate+Nitrite	< 0.2	mg/L as N	0.2	353.2	30 Jul 06 15:02	JGS
Nitrogen, Ammonia	0.36	mg/L	0.08	4500 NH3 B, E	2 Aug 06 8:05	TAM
Phosphorus, Total	0.299	mg/L	0.005	EPA 365.1	1 Aug 06 9:22	RMV
Phosphorus, Ortho	0.198	mg/L	0.005	EPA 365.1	27 Jul 06 8:18	RMV
Nitrogen, Total Kjeldahl	1.7	mg/L	0.1	SM 4500NorgB/NH3 E	28 Jul 06 14:20	TAM

CFU = Colony Forming Units

\* Holding time Exceeded

Approved by:

*Jason G. Smith*  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

*WB*  
*10/10/06*

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL
WENCK ASSOCIATES INC
1800 PIONEER CRK CTR
MAPLE PLAIN MN 55359-9000

Report Date: 15 Sep 06
Lab Number: 06-A36964
Work Order #:12-9607
Account #: 013173
Sample Matrix: SURFACE WATER
Date Sampled: 23 Aug 06 12:30
Date Received: 23 Aug 06 15:30
PO #: CRWD

Project Name: CRWD

Sample Description: CR 31.8

Temp at Receipt: 9.0C

Table with 6 columns: As Received Result, Method RL, Method Reference, Date Analyzed, Analyst. Rows include Phosphorus Water Digest, BOD, Carbonaceous, CBOD, 20 Day, Solids, Total Suspended, Carbon, Total Organic, Chlorophyll a, Fecal Coliform, MF, Chloride, Nitrate+Nitrite, Nitrogen, Ammonia, Phosphorus, Total, Phosphorus, Ortho, Nitrogen, Total Kjeldahl.

FU = Colony Forming Units

Approved by: Jason G. Smith, Inorganic Laboratory Manager New Ulm, MN

WB
10/10/06

= Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix ! = Due to sample quantity

# = Due to sample concentration + = Due to extract volume

CERTIFICATION: MN LAB # 037-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WN/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 15 Sep 06  
Lab Number: 06-A36963  
Work Order #: 12-9607  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 23 Aug 06 11:30  
Date Received: 23 Aug 06 15:30  
PO #: CRWD

Project Name: CRWD

Sample Description: CR 29.0

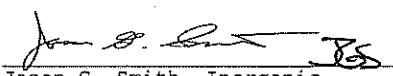
Temp at Receipt: 9.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					26 Aug 06	RLB
BOD, Carbonaceous	2	mg/L	2	SM 5210B	24 Aug 06 14:34	CJL
CBOD, 20 Day	13	mg/L	2	SM 5210B	24 Aug 06 15:59	AKF
Solids, Total Suspended	19	mg/L	2	USGS I-3765-85	24 Aug 06 10:50	CJL
Carbon, Total Organic	8.0	mg/L	0.5	415.1	31 Aug 06 8:15	Bis
Chlorophyll a	5.7	mg/cubic m	1.0	10200H	25 Aug 06 7:35	JD
Fecal Coliform, MF	* 6000	CFU/100 mL	10.	SM 9222D 18th Ed	23 Aug 06 18:30	CAK
Chloride	9.9	mg/L	3.0	325.2	25 Aug 06 15:43	RMV
Nitrate+Nitrite	0.90	mg/L as N	0.20	353.2	30 Aug 06 12:36	RMV
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	28 Aug 06 10:15	RSL
Phosphorus, Total	0.174	mg/L	0.005	EPA 365.1	28 Aug 06 11:32	RMV
Phosphorus, Ortho	0.144	mg/L	0.005	EPA 365.1	24 Aug 06 7:23	RMV
Nitrogen, Total Kjeldahl	0.9	mg/L	0.1	SM 4500NorgB/NH3 E	29 Aug 06 16:40	RSL

CFU = Colony Forming Units

\* Holding time Exceeded

Approved by:

  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

WB  
10/10/06

\* Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL
WENCK ASSOCIATES INC
1800 PIONEER CRK CTR
MAPLE PLAIN MN 55359-9000

Report Date: 16 Oct 06
Lab Number: 06-A42119
Work Order #:12-10896
Account #: 013173
Sample Matrix: SURFACE WATER
Date Sampled: 25 Sep 06 13:00
Date Received: 26 Sep 06 10:45
PO #: CRWD

Project Name: CRWD

Sample Description: CR 33.6

Temp at Receipt: 1.0C

Table with 6 columns: As Received Result, Method RL, Method Reference, Date Analyzed, Analyst. Rows include Phosphorus Water Digest, BOD, CBOD, Solids, Carbon, Chlorophyll a, Fecal Coliform, Chloride, Nitrate+Nitrite, Nitrogen, Ammonia, Phosphorus, Total, Phosphorus, Ortho, Nitrogen, Total Kjeldahl.

FU = Colony Forming Units

\* Holding time Exceeded

Handwritten signature and date: WP 11/29/06

Approved by:

Jason G. Smith, Inorganic Laboratory Manager New Ulm, MN

\* Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix ! = Due to sample quantity

# = Due to sample concentration \* = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
 WENCK ASSOCIATES INC  
 1800 PIONEER CRK CTR  
 MAPLE PLAIN MN 55359-9000

Report Date: 16 Oct 06  
 Lab Number: 06-A42117  
 Work Order #: 12-10896  
 Account #: 013173  
 Sample Matrix: SURFACE WATER  
 Date Sampled: 25 Sep 06 11:40  
 Date Received: 26 Sep 06 10:45  
 PO #: CRWD

Project Name: CRWD

Sample Description: CR 31.8

Temp at Receipt: 1.0C


	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					3 Oct 06	DAP
BOD, Carbonaceous	< 2	mg/L	2	SM 5210B	26 Sep 06 15:10	AKF
CBOD, 20 Day	42	mg/L	2	SM 5210B	26 Sep 06 15:45	CJL
Solids, Total Suspended	5	mg/L	2	USGS I-3765-85	26 Sep 06 13:30	CJL
Carbon, Total Organic	18.5	mg/L	0.5	415.1	28 Sep 06 8:00	Bis
Chlorophyll a	2.3	mg/cubic m	1.0	10200H	6 Oct 06 6:31	JD
Fecal Coliform, MF	* 2700	CFU/100 mL	10.	SM 9222D 18th Ed	26 Sep 06 12:40	INP
Chloride	37.3	mg/L	3.0	325.2	29 Sep 06 14:37	DAP
Nitrate+Nitrite	5.94	mg/L as N	0.20	353.2	2 Oct 06 13:20	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	28 Sep 06 9:40	TAM
Phosphorus, Total	0.566	mg/L	0.005	EPA 365.1	4 Oct 06 9:22	DAP
Phosphorus, Ortho	0.505	mg/L	0.005	EPA 365.1	26 Sep 06 15:14	DAP
Nitrogen, Total Kjeldahl	2.2	mg/L	0.1	SM 4500NorgB/NH3 E	28 Sep 06 13:35	RMV

CFU = Colony Forming Units

\* Holding time Exceeded

*WB*  
*11/29/06*

Approved by:

  
 Jason G. Smith, Inorganic  
 Laboratory Manager New Ulm, MN

= Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
 ! = Due to sample quantity

# = Due to sample concentration  
 + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447660 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 16 Oct 06  
Lab Number: 06-A42118  
Work Order #:12-10896  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 25 Sep 06 12:30  
Date Received: 26 Sep 06 10:45  
PO #: CRWD

Project Name: CRWD

Temp at Receipt: 1.0C

Sample Description: TB 33.2

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					3 Oct 06	DAP
BOD, Carbonaceous	3	mg/L	2	SM 5210B	26 Sep 06 15:10	AKF
CBOD, 20 Day	42	mg/L	2	SM 5210B	26 Sep 06 15:45	CJL
Solids, Total Suspended	7	mg/L	2	USGS I-3765-85	26 Sep 06 13:30	CJL
Carbon, Total Organic	19.0	mg/L	0.5	415.1	28 Sep 06 8:00	Bis
Chlorophyll a	3.0	mg/cubic m	1.0	10200H	6 Oct 06 6:31	JD
Fecal Coliform, MF	* 390	CFU/100 mL	10.	SM 9222D 18th Ed	26 Sep 06 12:40	INP
Chloride	47.4	mg/L	3.0	325.2	29 Sep 06 14:37	DAP
Nitrate+Nitrite	4.38	mg/L as N	0.20	353.2	2 Oct 06 13:20	DAP
Nitrogen, Ammonia	0.29	mg/L	0.08	4500 NH3 B, E	28 Sep 06 9:40	TAM
Phosphorus, Total	0.884	mg/L	0.005	EPA 365.1	4 Oct 06 9:23	DAP
Phosphorus, Ortho	0.802	mg/L	0.005	EPA 365.1	26 Sep 06 15:15	DAP
Nitrogen, Total Kjeldahl	2.3	mg/L	0.1	SM 4500NorgB/NH3 E	28 Sep 06 13:35	RMV

CFU = Colony Forming Units

\* Holding time Exceeded

*WB*  
*11/29/06*

Approved by:

Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

= Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447660 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL
WENCK ASSOCIATES INC
1800 PIONEER CRK CTR
MAPLE PLAIN MN 55359-9000

Report Date: 16 Oct 06
Lab Number: 06-A42116
Work Order #:12-10896
Account #: 013173
Sample Matrix: SURFACE WATER
Date Sampled: 25 Sep 06 11:00
Date Received: 26 Sep 06 10:45
PO #: CRWD

Project Name: CRWD

Sample Description: CR 29.0 F.T

Field Duplicate

Temp at Receipt: 1.0C

Table with columns: As Received Result, Method RL, Method Reference, Date Analyzed, Analyst. Rows include Phosphorus Water Digest, BOD, Carbonaceous, CBOD, 20 Day, Solids, Total Suspended, Carbon, Total Organic, Chlorophyll a, Fecal Coliform, MF, Chloride, Nitrate+Nitrite, Nitrogen, Ammonia, Phosphorus, Total, Phosphorus, Ortho, Nitrogen, Total Kjeldahl.

CFU = Colony Forming Units

\* Holding time Exceeded

WB
11/29/06

Approved by: Jason G. Smith, Inorganic Laboratory Manager New Ulm, MN

RL = Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix ! = Due to sample quantity

# = Due to sample concentration + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 16 Oct 06  
Lab Number: 06-A42115  
Work Order #: 12-10896  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 25 Sep 06 11:00  
Date Received: 26 Sep 06 10:45  
PO #: CRWD

Project Name: CRWD

Sample Description: CR 29.0

Temp at Receipt: 1.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					3 Oct 06	DAP
BOD, Carbonaceous	< 2	mg/L	2	SM 5210B	26 Sep 06 15:10	AKF
CBOD, 20 Day	26	mg/L	2	SM 5210B	26 Sep 06 15:45	CJL
Solids, Total Suspended	14	mg/L	2	USGS I-3765-85	26 Sep 06 13:30	CJL
Carbon, Total Organic	17.5	mg/L	0.5	415.1	28 Sep 06 8:00	Bis
Chlorophyll a	2.4	mg/cubic m	1.0	10200H	6 Oct 06 6:31	JD
Fecal Coliform, MF	* 3100	CFU/100 mL	10.	SM 9222D 18th Ed	26 Sep 06 12:40	INP
Chloride	32.3	mg/L	3.0	325.2	29 Sep 06 14:36	DAP
Nitrate+Nitrite	5.67	mg/L as N	0.20	353.2	2 Oct 06 13:20	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	28 Sep 06 9:40	TAM
Phosphorus, Total	0.457	mg/L	0.005	EPA 365.1	4 Oct 06 9:22	DAP
Phosphorus, Ortho	0.403	mg/L	0.005	EPA 365.1	26 Sep 06 15:14	DAP
Nitrogen, Total Kjeldahl	2.3	mg/L	0.1	SM 4500NorgB/NH3 E	28 Sep 06 13:35	RMV

.FU = Colony Forming Units

\* Holding time Exceeded

*WB*  
*10/29/06*

Approved by:

*Jason G. Smith*  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

. = Reporting Limit

Elevated "Less Than Result" (<): # = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 16 Oct 06  
Lab Number: 06-A42114  
Work Order #: 12-10896  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 25 Sep 06 10:00  
Date Received: 26 Sep 06 10:45  
PO #: CRWD

Project Name: CRWD

Sample Description: CR 27.2

Temp at Receipt: 1.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					3 Oct 06	DAP
BOD, Carbonaceous	< 2	mg/L	2	SM 5210B	26 Sep 06 15:10	AKF
CBOD, 20 Day	27	mg/L	2	SM 5210B	26 Sep 06 15:45	CJL
Solids, Total Suspended	3	mg/L	2	USGS I-3765-85	26 Sep 06 13:30	CJL
Carbon, Total Organic	17.7	mg/L	0.5	415.1	28 Sep 06 8:00	Bis
Chlorophyll a	2.0	mg/cubic m	1.0	10200H	6 Oct 06 6:31	JD
Fecal Coliform, MF	* 2200	CFU/100 mL	10.	SM 9222D 18th Ed	26 Sep 06 12:40	INP
Chloride	21.6	mg/L	3.0	325.2	29 Sep 06 14:36	DAP
Nitrate+Nitrite	3.62	mg/L as N	0.20	353.2	2 Oct 06 13:20	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	28 Sep 06 9:40	TAM
Phosphorus, Total	0.389	mg/L	0.005	EPA 365.1	4 Oct 06 9:22	DAP
Phosphorus, Ortho	0.339	mg/L	0.005	EPA 365.1	26 Sep 06 15:14	DAP
Nitrogen, Total Kjeldahl	1.7	mg/L	0.1	SM 4500NorgB/NH3 E	28 Sep 06 13:35	RMV

.FU = Colony Forming Units

\* Holding time Exceeded

*WB*  
*11/29/06*

Approved by:

*Jason G. Smith*  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

! = Reporting Limit

Elevated "Less Than Result" (<): # = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447690 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
 WENCK ASSOCIATES INC  
 1800 PIONEER CRK CTR  
 MAPLE PLAIN MN 55359-9000

Report Date: 16 Oct 06  
 Lab Number: 06-A42113  
 Work Order #: 12-10896  
 Account #: 013173  
 Sample Matrix: SURFACE WATER  
 Date Sampled: 25 Sep 06 9:00  
 Date Received: 26 Sep 06 10:45  
 PO #: CRWD

Project Name: CRWD

Sample Description: CR 25.6

Temp at Receipt: 1.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					3 Oct 06	DAP
BOD, Carbonaceous	3	mg/L	2	SM 5210B	26 Sep 06 15:10	AKF
CBOD, 20 Day	25	mg/L	2	SM 5210B	26 Sep 06 15:45	CJL
Solids, Total Suspended	8	mg/L	2	USGS I-3765-85	26 Sep 06 13:30	CJL
Carbon, Total Organic	16.0	mg/L	0.5	415.1	28 Sep 06 8:00	Bis
Chlorophyll a	1.4	mg/cubic m	1.0	10200H	4 Oct 06 8:20	JD
Fecal Coliform, MF	* 2100	CFU/100 mL	10.	SM 9222D 18th Ed	26 Sep 06 12:40	INP
Chloride	21.0	mg/L	3.0	325.2	29 Sep 06 14:36	DAP
Nitrate+Nitrite	3.19	mg/L as N	0.20	353.2	2 Oct 06 13:19	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	28 Sep 06 9:40	TAM
Phosphorus, Total	0.368	mg/L	0.005	EPA 365.1	4 Oct 06 9:22	DAP
Phosphorus, Ortho	0.309	mg/L	0.005	EPA 365.1	26 Sep 06 15:14	DAP
Nitrogen, Total Kjeldahl	2.0	mg/L	0.1	SM 4500NorgB/NH3 E	28 Sep 06 13:35	RMV

CFU = Colony Forming Units

\* Holding time Exceeded

*Handwritten initials and date:*  
 MB  
 11/29/06

Approved by:

*Signature of Jason G. Smith*  
 Jason G. Smith, Inorganic  
 Laboratory Manager New Ulm, MN

= Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
 ! = Due to sample quantity

# = Due to sample concentration  
 + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND NW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL
WENCK ASSOCIATES INC
1800 PIONEER CRK CTR
MAPLE PLAIN MN 55359-9000

Report Date: 16 Oct 06
Lab Number: 06-A42055
Work Order #:12-10896
Account #: 013173
Sample Matrix: SURFACE WATER
Date Sampled: 25 Sep 06 14:00
Date Received: 26 Sep 06 10:45
PO #: CRWD

Project Name: CRWD

Sample Description: CR 19.8

Temp at Receipt: 1.0C

Table with 6 columns: As Received Result, Method RL, Method Reference, Date Analyzed, Analyst. Rows include Phosphorus Water Digest, BOD, Carbonaceous, CBOD, 20 Day, Solids, Total Suspended, Carbon, Total Organic, Chlorophyll a, Nitrogen Total, Calculat Chloride, Nitrate+Nitrite, Phosphorus, Total, Phosphorus, Ortho, Nitrogen, Total Kjeldahl.

Handwritten initials WB and date 11/29/06

Approved by: Jason G. Smith, Inorganic Laboratory Manager New Ulm, MN

⌋ = Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix ! = Due to sample quantity

# = Due to sample concentration + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447600 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 26 Oct 06  
Lab Number: 06-A44218  
Work Order #: 12-11353  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 5 Oct 06 12:00  
Date Received: 5 Oct 06 15:00  
PO #: CRWD STREAMS

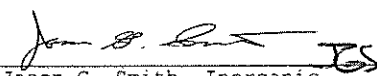
Project Name: CRWD STREAMS

Sample Description: CR 55

Temp at Receipt: 5.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					10 Oct 06	DAP
BOD, Carbonaceous	4	mg/L	2	SM 5210B	6 Oct 06 10:17	AKF
CBOD, 20 Day	6	mg/L	2	SM 5210B	6 Oct 06 11:04	JED
Solids, Total Suspended	7	mg/L	2	USGS I-3765-85	6 Oct 06 8:15	CJL
Carbon, Total Organic	11.0	mg/L	0.5	415.1	12 Oct 06 8:00	Bis
Chlorophyll a	33.7	mg/cubic m	1.0	10200H	11 Oct 06 6:05	JD
Nitrogen Total, Calculat	1.2	mg/L	NA	Calc	11 Oct 06 8:05	Calculated
Chloride	20.2	mg/L	3.0	325.2	10 Oct 06 13:35	DAP
Nitrate+Nitrite	< 0.2	mg/L as N	0.2	353.2	9 Oct 06 15:36	DAP
Nitrogen, Ammonia	0.44	mg/L	0.08	4500 NH3 B, E	11 Oct 06 7:20	RMV
Phosphorus, Total	0.090	mg/L	0.005	EPA 365.1	12 Oct 06 13:11	DAP
Phosphorus, Ortho	0.013	mg/L	0.005	EPA 365.1	6 Oct 06 10:11	DAP
Nitrogen, Total Kjeldahl	1.2	mg/L	0.1	SM 4500NorgB/NH3 E	11 Oct 06 8:05	RMV

*WB*  
*11/24/06*

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

= Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
 WENCK ASSOCIATES INC  
 1800 PIONEER CRK CTR  
 MAPLE PLAIN MN 55359-9000

Report Date: 26 Oct 06  
 Lab Number: 06-A44212  
 Work Order #: 12-11353  
 Account #: 013173  
 Sample Matrix: SURFACE WATER  
 Date Sampled: 5 Oct 06 10:00  
 Date Received: 5 Oct 06 15:00  
 PO #: CRWD STREAMS

Project Name: CRWD STREAMS

Sample Description: CR 33.6

Temp at Receipt: 5.0C

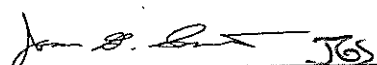
	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					10 Oct 06	DAP
BOD, Carbonaceous	< 2	mg/L	2	SM 5210B	6 Oct 06 10:17	AKF
CBOD, 20 Day	8	mg/L	2	SM 5210B	6 Oct 06 11:04	JED
Solids, Total Suspended	2	mg/L	2	USGS I-3765-85	6 Oct 06 8:15	CJL
Carbon, Total Organic	18.0	mg/L	0.5	415.1	12 Oct 06 8:00	Bis
Chlorophyll a	1.6	mg/cubic m	1.0	10200H	11 Oct 06 6:05	JD
Fecal Coliform, MF	* 600	CFU/100 mL	10.	SM 9222D 18th Ed	5 Oct 06 17:35	INP
Chloride	41.5	mg/L	3.0	325.2	10 Oct 06 13:35	DAP
Nitrate+Nitrite	12.7	mg/L as N	0.20	353.2	9 Oct 06 15:33	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	11 Oct 06 7:20	RMV
Phosphorus, Total	0.232	mg/L	0.005	EPA 365.1	12 Oct 06 13:11	DAP
Phosphorus, Ortho	0.200	mg/L	0.005	EPA 365.1	6 Oct 06 10:11	DAP
Nitrogen, Total Kjeldahl	2.2	mg/L	0.1	SM 4500NorgB/NH3 E	11 Oct 06 8:05	RMV

FU = Colony Forming Units

\* Holding time Exceeded

WB

Approved by:

  
 Jason G. Smith, Inorganic  
 Laboratory Manager New Ulm, MN

= Reporting Limit

Elevated "Less Than Result" (<): # = Due to sample matrix  
 ! = Due to sample quantity

# = Due to sample concentration  
 + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447600 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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1126 N. Front St. ~ New Ulm, MN 56073 ~ 800-782-3557 ~ Fax 507-359-2890  
1411 S. 12th St. ~ Bismarck, ND 58502 ~ 800-279-6885 ~ Fax 701-258-9724  
35 W. Lincoln Way ~ Nevada, IA 50201 ~ 800-362-0855 ~ Fax 515-382-3885  
www.mvtl.com



Page: 1 of 1

WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 26 Oct 06  
Lab Number: 06-A44211  
Work Order #: 12-11353  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 5 Oct 06 9:40  
Date Received: 5 Oct 06 15:00  
PO #: CRWD STREAMS

Project Name: CRWD STREAMS

Sample Description: TB 33.2

Temp at Receipt: 5.0C

	As Received Result	Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest				10 Oct 06	DAP
BOD, Carbonaceous	3 mg/L	2	SM 5210B	6 Oct 06 10:17	AKF
CBOD, 20 Day	11 mg/L	2	SM 5210B	6 Oct 06 11:04	JED
Solids, Total Suspended	2 mg/L	2	USGS I-3765-85	6 Oct 06 8:15	CJL
Carbon, Total Organic	12.0 mg/L	0.5	415.1	12 Oct 06 8:00	Bis
Chlorophyll a	3.9 mg/cubic m	1.0	10200H	11 Oct 06 6:05	JD
Fecal Coliform, MF	* 58000 CFU/100 mL	10.	SM 9222D 18th Ed	5 Oct 06 17:35	INP
Chloride	54.9 mg/L	3.0	325.2	10 Oct 06 13:35	DAP
Nitrate+Nitrite	4.91 mg/L as N	0.20	353.2	9 Oct 06 15:33	DAP
Nitrogen, Ammonia	0.59 mg/L	0.08	4500 NH3 B, E	11 Oct 06 7:20	RMV
Phosphorus, Total	0.609 mg/L	0.005	EPA 365.1	12 Oct 06 13:11	DAP
Phosphorus, Ortho	0.555 mg/L	0.005	EPA 365.1	6 Oct 06 10:11	DAP
Nitrogen, Total Kjeldahl	2.4 mg/L	0.1	SM 4500NorgB/NH3 E	11 Oct 06 8:05	RMV

.FU = Colony Forming Units

\* Holding time Exceeded

WB  
11/29/06

Approved by:

Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

= Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 W1 LAB # 999447600 ND MICRO # 1913-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

MVTl guarantees the accuracy of the analysis done on the sample submitted for testing. It is not possible for MVTl to guarantee that a test result obtained on a particular sample will be the same on any other sample unless all conditions affecting the sample are the same, including sampling by MVTl. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.

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Page: 1 of 1

WES BOLL
WENCK ASSOCIATES INC
1800 PIONEER CRK CTR
MAPLE PLAIN MN 55359-9000

Report Date: 26 Oct 06
Lab Number: 06-A44213
Work Order #:12-11353
Account #: 013173
Sample Matrix: SURFACE WATER
Date Sampled: 5 Oct 06 10:30
Date Received: 5 Oct 06 15:00
PO #: CRWD STREAMS

Project Name: CRWD STREAMS

Sample Description: CR 31.8

Temp at Receipt: 5.0C

Table with columns: As Received Result, Method RL, Method Reference, Date Analyzed, Analyst. Rows include Phosphorus Water Digest, BOD, Carbonaceous, CBOD, 20 Day, Solids, Total Suspended, Carbon, Total Organic, Chlorophyll a, Fecal Coliform, MF, Chloride, Nitrate+Nitrite, Nitrogen, Ammonia, Phosphorus, Total, Phosphorus, Ortho, Nitrogen, Total Kjeldahl.

FU = Colony Forming Units

\* Holding time Exceeded

WB

Approved by:

Jason G. Smith, Inorganic
Laboratory Manager New Ulm, MN

= Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix
! = Due to sample quantity

# = Due to sample concentration
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

MVTL guarantees the accuracy of the analysis done on the sample submitted for testing. It is not possible for MVTL to guarantee that a test result obtained on a particular sample will be the same on any other sample unless all conditions affecting the sample are the same, including sampling by MVTL. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.

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Page: 1 of 1

WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 26 Oct 06  
Lab Number: 06-A44214  
Work Order #: 12-11353  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 5 Oct 06 10:50  
Date Received: 5 Oct 06 15:00  
PO #: CRWD STREAMS

Project Name: CRWD STREAMS

Sample Description: CR 29.0


Temp at Receipt: 5.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					10 Oct 06	DAP
BOD, Carbonaceous	< 2	mg/L	2	SM 5210B	6 Oct 06 10:17	AKF
CBOD, 20 Day	8	mg/L	2	SM 5210B	6 Oct 06 11:04	JED
Solids, Total Suspended	3	mg/L	2	USGS I-3765-85	6 Oct 06 8:15	CJL
Carbon, Total Organic	11.5	mg/L	0.5	415.1	12 Oct 06 8:00	Bis
Chlorophyll a	1.4	mg/cubic m	1.0	10200H	11 Oct 06 6:05	JD
Fecal Coliform, MF	* 1500	CFU/100 mL	10.	SM 9222D 18th Ed	5 Oct 06 17:35	INP
Chloride	31.0	mg/L	3.0	325.2	10 Oct 06 13:35	DAP
Nitrate+Nitrite	4.75	mg/L as N	0.20	353.2	9 Oct 06 15:36	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	11 Oct 06 7:20	RMV
Phosphorus, Total	0.272	mg/L	0.005	EPA 365.1	12 Oct 06 13:11	DAP
Phosphorus, Ortho	0.238	mg/L	0.005	EPA 365.1	6 Oct 06 10:11	DAP
Nitrogen, Total Kjeldahl	1.3	mg/L	0.1	SM 4500NorgB/NH3 E	11 Oct 06 8:05	RMV

.FU = Colony Forming Units

\* Holding time Exceeded

Approved by:

  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

\* Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447660 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

MVTL guarantees the accuracy of the analysis done on the sample submitted for testing. It is not possible for MVTL to guarantee that a test result obtained on a particular sample will be the same on any other sample unless all conditions affecting the sample are the same, including sampling by MVTL. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.

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Page: 1 of 1

WES BOLL
WENCK ASSOCIATES INC
1800 PIONEER CRK CTR
MAPLE PLAIN MN 55359-9000

Report Date: 26 Oct 06
Lab Number: 06-A44215
Work Order #:12-11353
Account #: 013173
Sample Matrix: SURFACE WATER
Date Sampled: 5 Oct 06 11:15
Date Received: 5 Oct 06 15:00
PO #: CRWD STREAMS

Project Name: CRWD STREAMS

Sample Description: CR 27.2

Temp at Receipt: 5.0C

Table with 6 columns: As Received Result, Method RL, Method Reference, Date Analyzed, Analyst. Rows include Phosphorus Water Digest, BOD, Carbonaceous, CBOD, 20 Day, Solids, Total Suspended, Carbon, Total Organic, Chlorophyll a, Fecal Coliform, MF, Chloride, Nitrate+Nitrite, Nitrogen, Ammonia, Phosphorus, Total, Phosphorus, Ortho, Nitrogen, Total Kjeldahl.

FU = Colony Forming Units

\* Holding time Exceeded

Approved by:

Signature of Jason G. Smith
Jason G. Smith, Inorganic
Laboratory Manager New Ulm, MN

= Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix
! = Due to sample quantity

# = Due to sample concentration
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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Page: 1 of 1

WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 26 Oct 06  
Lab Number: 06-A44216  
Work Order #: 12-11353  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 5 Oct 06 11:40  
Date Received: 5 Oct 06 15:00  
PO #: CRWD STREAMS

Project Name: CRWD STREAMS

Sample Description: CR 25.6

Temp at Receipt: 5.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					10 Oct 06	DAP
BOD, Carbonaceous	2	mg/L	2	SM 5210B	6 Oct 06 10:17	AKF
CBOD, 20 Day	9	mg/L	2	SM 5210B	6 Oct 06 11:04	JED
Solids, Total Suspended	< 2	mg/L	2	USGS I-3765-85	6 Oct 06 8:15	CJL
Carbon, Total Organic	12.0	mg/L	0.5	415.1	12 Oct 06 8:00	Bis
Chlorophyll a	37.9	mg/cubic m	1.0	10200H	11 Oct 06 6:05	JD
Fecal Coliform, MF	340	CFU/100 mL	10.	SM 9222D 18th Ed	5 Oct 06 17:35	INP
Chloride	27.5	mg/L	3.0	325.2	10 Oct 06 13:35	DAP
Nitrate+Nitrite	1.07	mg/L as N	0.20	353.2	9 Oct 06 15:36	DAP
Nitrogen, Ammonia	< 0.08	mg/L	0.08	4500 NH3 B, E	11 Oct 06 7:20	RMV
Phosphorus, Total	0.206	mg/L	0.005	EPA 365.1	12 Oct 06 13:11	DAP
Phosphorus, Ortho	0.106	mg/L	0.005	EPA 365.1	6 Oct 06 10:11	DAP
Nitrogen, Total Kjeldahl	0.9	mg/L	0.1	SM 4500NorgB/NH3 E	11 Oct 06 8:05	RMV

FU = Colony Forming Units

Approved by:

Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

= Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND NW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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Page: 1 of 1

WES BOLL
WENCK ASSOCIATES INC
1800 PIONEER CRK CTR
MAPLE PLAIN MN 55359-9000

Report Date: 26 Oct 06
Lab Number: 06-A44217
Work Order #:12-11353
Account #: 013173
Sample Matrix: SURFACE WATER
Date Sampled: 5 Oct 06
Date Received: 5 Oct 06 15:00
PO #: CRWD STREAMS

Project Name: CRWD STREAMS

Sample Description: FD1

Temp at Receipt: 5.0C

Table with columns: As Received Result, Method RL, Method Reference, Date Analyzed, Analyst. Rows include Phosphorus Water Digest, BOD, CBOD, Solids, Carbon, Chlorophyll a, Fecal Coliform, Chloride, Nitrate+Nitrite, Nitrogen, Phosphorus, Nitrogen.

FU = Colony Forming Units

\* Holding time Exceeded

\*\* No collection time supplied by the client.

Approved by:

Signature of Jason G. Smith, Inorganic Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix, ! = Due to sample quantity

# = Due to sample concentration, + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447600 ND MICRO # 1013-M ND NW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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# MVT LABORATORIES, Inc.

1126 North Front Street  
New Ulm, MN 56073

Phone: (507) 354-8517

Toll Free: (800) 782-3557 Fax: (507) 359-2890

# CHAIN OF CUSTODY RECORD

PLEASE DO NOT WRITE IN THE SHADED AREAS

100207

WORK ORDER # 12-8543

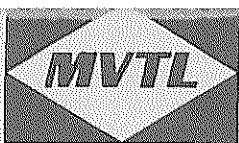
Company Name and Address: <u>Wenck Associates, Inc.</u> <u>1900 Pioneer Creek Ctr</u> <u>Maple Plain, MN 55359-0249</u>		Account #:	Phone #: <u>(763) 479-4283</u>
Billing Address (indicate name and address if different from above):		Contact: <u>Wes Boll</u>	Fax #:
		Name of Sampler: <u>Wes Boll</u>	For faxed report check box <input type="checkbox"/>
		Quote #:	Date Submitted: <u>8/15/05</u>
		Project Name/Number: <u>0002-75</u>	Purchase Order #:

Lab Use Only	Your Sample I.D. or Number	Sample Description	Date	Type of Sample (Matrix or Substance)				Analyze For:
				Soil	Water	Food	Other (Please Be Specific)	
	Example	Tank Bottom Tank #3	01/01/99 11:45 a.m.			X	Sampled Liquid Layer Not bottom sludge	Vitamin A, TKN, Iron, Calcium BOD, COD, Acetone, Shelf Life
A 28602	TA 33.2		8/15/05 8:25		X			Fecal Coliform
03	CR 33.6		8/15/05 8:45					
04	CR 31.8		8/15/05 8:45					
05	T 30.7		8/15/05 9:00					
06	CR 30.0		8/15/05 9:15					
07	CR 29.0		9:25					
08	TW 27.8		9:45					
09	TE 27.8		10:00					
10	T 27.3		10:05					
			10:15					

	Transferred by:	Comments: (Sample Condition)	Date	Received by:	Comments: (Sample Condition)	Date	°C
1	<u>Wesley Boll</u>	<u>or Ice</u>	<u>8/15/05</u>	<u>[Signature]</u>	<u>or Ice</u>	<u>15 Aug 05</u>	<u>2°</u>
2			<u>12:00</u>			<u>13:40</u>	
3							

Disposed of By: \_\_\_\_\_ Disposal Comments: \_\_\_\_\_





**LABORATORIES, Inc.**

1126 North Front Street

New Ulm, MN 56073

Phone: (507) 354-8517

Toll Free: (800) 782-3557

Fax: (507) 359-2890

# Chain of Custody Record

Page 1 of 3

Work Order # 0002-75

Company Name and Address: <u>Wenck Associates</u> <u>1800 Pioneer Creek Cir</u> <u>Maple Plain, MN 55359</u>	Account #:	Phone #: <u>(763) 479-4283</u>
	Contact: <u>Wes Boll</u>	Fax #: <u>(763) 479-4242</u> For faxed report check box <input type="checkbox"/>
Billing Address (indicate if different from above):	Name of Sampler: <u>Wes Boll</u>	E-mail: <u>wboll@wenck.com</u> For e-mail report check box <input checked="" type="checkbox"/>
	Quote Number	Date Submitted: <u>9/26/05</u>
	Project Name/Number:	Purchase Order #:

Sample Information					Bottle Type										Analysis		
Lab Number	Sample ID	Sample Type (Food, Soil, Water, Etc.)	Date Sampled	Time Sampled	VOC Vials	500 ml unpres.	1000 ml unpres.	500 ml HNO3	1000 ml HNO3	500 ml H2SO4	1000 ml H2SO4	Sterile plastic	Amber H2SO4	500 ml NaOH	Filtered? Y or N	Other:	Analysis Required
	<u>CA 31.4</u>	<u>Water</u>	<u>9/26/05</u>	<u>0940</u>													<u>Fecal Coliform</u>
	<u>T 30.7</u>			<u>0945</u>													
	<u>T 30.1</u>			<u>0950</u>													
	<u>CA 30</u>			<u>0955</u>													
	<u>CA 29</u>			<u>1000</u>													
	<u>TW 27.8</u>			<u>1010</u>													
	<u>TE 27.6</u>			<u>1015</u>													
	<u>T 27.3</u>			<u>1020</u>													
	<u>CA 27.2</u>			<u>1025</u>													
	<u>FD 1</u>	<u>Water</u>	<u>9/26/05</u>														

Comments:

KEMSE PAPER CO. / OSWALD PUBLISHING CO., NEW ULM, MN (507) 782-3332) N749

Transferred by:	Date:	Time:	Sample Condition:	Received by:	Date:	Time:	Temp:
<u>Wes Boll</u>	<u>9/26/05</u>	<u>17:45</u>		<u>Adam Carlson</u>	<u>26-Sep-05</u>	<u>11:55</u>	
2.							

Please submit the top two copies with your samples. We will return the completed original with your results.



**LABORATORIES, Inc.**  
1126 North Front Street  
New Ulm, MN 56073

Phone: (507) 354-8517

Toll Free: (800) 782-3557

Fax: (507) 359-2890

# Chain of Custody Record

Page 2 of 3

Work Order # 0002-75

Company Name and Address: <u>Wenck Associates</u>	Account #:	Phone #:
	Contact: <u>Wes Boll</u>	Fax #: For faxed report check box <input type="checkbox"/>
Billing Address (indicate if different from above):	Name of Sampler: <u>Wes Boll</u>	E-mail: For e-mail report check box <input type="checkbox"/>
	Quote Number	Date Submitted:
	Project Name/Number:	Purchase Order #:

Sample Information					Bottle Type										Analysis		
Lab Number	Sample ID	Sample Type (Food, Soil, Water, Etc.)	Date Sampled	Time Sampled	VOC Vials	500 ml unpres.	1000 ml unpres.	500 ml HNO3	1000 ml HNO3	500 ml H2SO4	1000 ml H2SO4	Sterile plastic	Amber H2SO4	500 ml NaOH	Filtered? Y or N	Other:	Analysis Required
	T D 33.2	Water	9/26/05	0830													Fecal Coliform
	T F 33.2			0840													
	T C 33.2			0850													
	T A 33.2			0855													
	T B 33.2			0900													
	C B 35.3			0905													
	C A 33.6			0915													
	T 32.2			0920													
	T A 30.9			0930													
	T B 30.9	Water	9/26/05	0935													

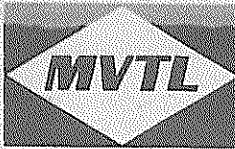
Comments:

KEMBLE PAPER CO. / OSWALD PUBLISHING CO. NEW ULM, MN (507) 782-3553 1745

Transferred by:	Date:	Time:	Sample Condition:	Received by:	Date:	Time:	Temp:
1. <u>Wes Boll</u>	<u>9/26/05</u>	<u>11:45</u>		<u>Adam Carlson</u>	<u>2/5/05</u>	<u>11:55</u>	
2.							

Please submit the top two copies with your samples. We will return the completed original with your results.





**LABORATORIES, Inc.**  
1126 North Front Street  
New Ulm, MN 56073

Phone: (507) 354-8517

Toll Free: (800) 782-3557

Fax: (507) 359-2890

# Chain of Custody Record

Page 3 of 3

Work Order # 0002-75

Company Name and Address: <u>Wenck Associates</u>	Account #:	Phone #:
	Contact: <u>Wes Boll</u>	Fax #: <input type="checkbox"/> For faxed report check box
Billing Address (indicate if different from above):	Name of Sampler: <u>Wes Boll</u>	E-mail: <input type="checkbox"/> For e-mail report check box
	Quote Number	Date Submitted:
	Project Name/Number:	Purchase Order #:

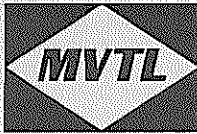
Sample Information					Bottle Type										Analysis		
Lab Number	Sample ID	Sample Type (Food, Soil, Water, Etc.)	Date Sampled	Time Sampled	VOC Vials	500 ml unpres.	1000 ml unpres.	500 ml HNO3	1000 ml HNO3	500 ml H2SO4	1000 ml H2SO4	Sterile plastic	Amber H2SO4	500 ml NaOH	Filtered? Y or N	Other:	Analysis Required
	<u>CA 25.6</u>	<u>Water</u>	<u>9/26/05</u>	<u>1030</u>													<u>Fecal Coliform</u>
	<u>FD 2</u>	<u>Water</u>	<u>9/26/05</u>														

Comments:

KEMSKÉ PAPER CO. / OSWALD PUBLISHING CO., NEW ULM, MN (800) 782-3532 (N745)

	Transferred by:	Date:	Time:	Sample Condition:	Received by:	Date:	Time:	Temp:
1.	<u>Wes Boll</u>	<u>9/26/05</u>	<u>11:45</u>		<u>Adam Carlson</u>	<u>26 Sep 05</u>	<u>11:55</u>	
2.								

Please submit the top two copies with your samples. We will return the completed original with your results.



# MVT LABORATORIES, Inc.

1126 North Front Street  
New Ulm, MN 56073

Phone: (507) 354-8517

Toll Free: (800) 782-3557 Fax: (507) 359-2890

# CHAIN OF CUSTODY RECORD

PLEASE DO NOT WRITE IN THE SHADED AREAS

Cooler # 1 100208

WORK ORDER #

Company Name and Address: <u>Wenck Associates, Inc</u>	Account #:	Phone #:
	Contact: <u>Wes Ball</u>	Fax #:
	Name of Sampler: <u>Wes Ball</u>	For faxed report check box <input type="checkbox"/>
Billing Address (indicate name and address if different from above):	Quote #:	Date Submitted:
	Project Name/Number: <u>0002-75</u>	Purchase Order #:

Lab Use Only	Your Sample I.D. or Number Example	Sample Description Tank Bottom Tank #3	Date Time	Type of Sample (Matrix or Substance)				Analyze For:
				Soil	Water	Food	Other (Please Be Specific)	
	<u>CR 25.6</u>		<u>9/27/05</u> <u>11:45 a.m.</u>		<u>X</u>	<u>X</u>	<u>Sampled Liquid Layer</u> <u>Not bottom sludge</u>	<u>5 Dry CBOD, 20 Dry CBOD, OLR</u> <u>Chloride, Chlor-A, TP, TN,</u> <u>NO<sub>3</sub> + NO<sub>2</sub>, Ammonia-Nitrogen</u> <u>TKN-Nitrogen, TOC, TSS</u> <u>Iron</u>
	<u>CR 27.2</u>		<u>9/27/05</u> <u>11:20</u>	<u>X</u>			<u>(1) 500 ml H<sub>2</sub>SO<sub>4</sub></u> <u>(1) 500 ml HNO<sub>3</sub></u> <u>(1) 1000 ml H<sub>2</sub>SO<sub>4</sub></u>	<u>+ VSS</u>
	<u>CR 25.6</u>		<u>9/27/05</u> <u>10:45</u>				<u>(1) 1000 ml Unpreserved</u>	<u>Ultimate BOD, VSS</u>

	Transferred by:	Comments: (Sample Condition)	Date Time	Received by:	Comments: (Sample Condition)	Date Time	°C
<u>2</u>							
<u>3</u>							

Disposed of By: \_\_\_\_\_ Disposal Comments: \_\_\_\_\_





# LABORATORIES, Inc.

1126 North Front Street  
New Ulm, MN 56073

Phone: (507) 354-8517

Toll Free: (800) 782-3557 Fax: (507) 359-2890

# CHAIN OF CUSTODY RECORD

PLEASE DO NOT WRITE IN THE SHADED AREAS

Cooler # 2 100210

WORK ORDER #

Company Name and Address: <u>Wenck Associates, Inc.</u>	Account #:	Phone #:
	Contact: <u>Wes Boll</u>	Fax #:
	Name of Sampler: <u>Wes Boll</u>	For faxed report check box <input type="checkbox"/>
Billing Address (indicate name and address if different from above):	Quote #:	Date Submitted:
	Project Name/Number: <u>0002-75</u>	Purchase Order #:

Lab Use Only	Your Sample I.D. or Number Example	Sample Description Tank Bottom Tank #3	Date Time	Type of Sample (Matrix or Substance)				Analyze For:
				Soil	Water	Food	Other (Please Be Specific)	
			01/01/99 11:45 a.m.			X	Sampled Liquid Layer Not bottom sludge	Vitamin A, TKN, Iron, Calcium BOD, COD, Acetone, Shelf Life
		<u>CR 29.0</u>	<u>9/27/05</u> <u>12:10</u>		X		(3) 100ml NONE (1) 100ml Amber	5 Day CBOD, 20 Day CBOD Chlor-A
							(1) 500ml NONE	ORP, Chlor de, TSS
							(2) 500ml H <sub>2</sub> SO <sub>4</sub>	TKN-Nitrogen, TOC
							(1) 500ml HNO <sub>3</sub>	Iron
		<u>CR 30.0</u>			X		(1) 1000ml H <sub>2</sub> SO <sub>4</sub>	TP, TN, NO <sub>2</sub> + NO <sub>3</sub> , Ammonia-Nitrogen

	Transferred by:	Comments: (Sample Condition)	Date Time	Received by:	Comments: (Sample Condition)	Date Time	°C
2							
3							

Disposed of By: \_\_\_\_\_ Disposal Comments: \_\_\_\_\_

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# MVT LABORATORIES, Inc.

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# CHAIN OF CUSTODY RECORD

PLEASE DO NOT WRITE IN THE SHADED AREAS

Cooler #3

100211

WORK ORDER #

Company Name and Address: <i>Wenck Associates, Inc.</i>	Account #:	Phone #:
	Contact: <i>Wes Boll</i>	Fax #:
	Name of Sampler: <i>Wes Boll</i>	For faxed report check box <input type="checkbox"/>
Billing Address (indicate name and address if different from above):	Quote #:	Date Submitted:
	Project Name/Number: <i>0008-75</i>	Purchase Order #:

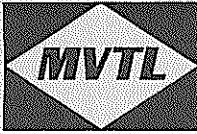
Lab Use Only	Your Sample I.D. or Number	Sample Description	Date	Type of Sample (Matrix or Substance)				Analyze For:
				Soil	Water	Food	Other (Please Be Specific)	
	Example	Tank Bottom Tank #3	01/01/99 11:45 a.m.			X	Sampled Liquid Layer Not bottom sludge	Vitamin A, TKN, Iron, Calcium BOD, COD, Acetone, Shelf Life
		<i>T 30.1</i>	<i>9/27/05 13:28</i>		X		<i>(3) 1000 ml NONE</i>	<i>5 Day CBOD, 20 Day CBOD</i>
							<i>(1) 1000 ml Amber</i>	<i>Chlor-A</i>
							<i>(1) 500 ml NONE</i>	<i>ORP, Chloride, TSS</i>
							<i>(3) 500 ml H<sub>2</sub>SO<sub>4</sub></i>	<i>TKN-Nitrogen, TOC</i>
							<i>(1) 500 ml HNO<sub>3</sub></i>	<i>Iron</i>
							<i>(1) 1000 ml H<sub>2</sub>SO<sub>4</sub></i>	<i>TP, TN, NO<sub>2</sub>+NO<sub>3</sub>, Ammonia-Nitrogen</i>
		<i>T 30.7</i>	<i>9/27/05 13:17</i>		X		<i>"</i>	<i>"</i>

	Transferred by:	Comments: (Sample Condition)	Date Time	Received by:	Comments: (Sample Condition)	Date Time	°C
2							
3							

Disposed of By: \_\_\_\_\_ Disposal Comments: \_\_\_\_\_

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# CHAIN OF CUSTODY RECORD

PLEASE DO NOT WRITE IN THE SHADED AREAS

Page 4 of 10

100212

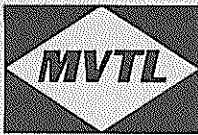
WORK ORDER # \_\_\_\_\_

Company Name and Address: <i>Wenck Associates, Inc</i>	Account #:	Phone #:
	Contact: <i>Wes Boll</i>	Fax #:
	Name of Sampler: <i>Wes Boll</i>	For faxed report check box <input type="checkbox"/>
Billing Address (indicate name and address if different from above):	Quote #:	Date Submitted:
	Project Name/Number: <i>0002-75</i>	Purchase Order #:

Lab Use Only	Your Sample I.D. or Number Example	Sample Description Tank Bottom Tank #3	Date Time	Type of Sample (Matrix or Substance)				Analyze For:
				Soil	Water	Food	Other (Please Be Specific)	
			01/01/99 11:45 a.m.			<b>X</b>	Sampled Liquid Layer Not bottom sludge	Vitamin A, TKN, Iron, Calcium BOD, COD, Acetone, Shelf Life
		<i>CR 31.8</i>	<i>9/27/05</i> <i>13:35</i>		<i>X</i>		<i>(1) 1000ml NONE</i>	<i>Ultimate CBOD, VSS</i>
		<i>CR 31.8</i>	<i>9/27/05</i> <i>13:35</i>		<i>X</i>		<i>(3) 1000ml NONE</i>	<i>5 Day CBOD, 20 Day CBOD</i>
							<i>(1) 1000ml Amber</i>	<i>Chlor-A</i>
							<i>(1) 500ml NONE</i>	<i>ORP, Chloride, TSS</i>
							<i>(2) 500ml H<sub>2</sub>SO<sub>4</sub></i>	<i>TKN-Nitrogen, TOC</i>
							<i>(1) 500ml HNO<sub>3</sub></i>	<i>Iron</i>
							<i>(1) 8000ml H<sub>2</sub>SO<sub>4</sub></i>	<i>TP, TN, NO<sub>2</sub> + NO<sub>3</sub>, Ammonia Nitrogen</i>
		<i>CR 33.6</i>					<i>"</i>	<i>"</i>

1	Transferred by:	Comments: (Sample Condition)	Date Time	Received by:	Comments: (Sample Condition)	Date Time	°C
<i>2</i>							
<i>3</i>							

Disposed of By: \_\_\_\_\_ Disposal Comments: \_\_\_\_\_



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# CHAIN OF CUSTODY RECORD

PLEASE DO NOT WRITE IN THE SHADED AREAS

100209

WORK ORDER # \_\_\_\_\_

Company Name and Address: <i>Wenck Associates</i>	Account #:	Phone #:
	Contact: <i>Wes Boll</i>	Fax #:
	Name of Sampler: <i>Wes Boll</i>	For faxed report check box <input type="checkbox"/>
Billing Address (indicate name and address if different from above):	Quote #:	Date Submitted:
	Project Name/Number:	Purchase Order #:

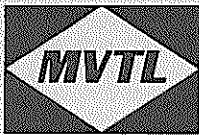
Lab Use Only	Your Sample I.D. or Number	Sample Description	Date	Type of Sample (Matrix or Substance)				Analyze For:
				Soil	Water	Food	Other (Please Be Specific)	
Example	Example	Tank Bottom Tank #3	01/01/99 11:45 a.m.			X	Sampled Liquid Layer Not bottom sludge	Vitamin A, TKN, Iron, Calcium BOD, COD, Acetone, Shelf Life
	TF 33.2		9/12/05 14:05				Cooler 5	Same as Previous
	TD 33.2		9/12/05 14:45				Cooler 5	
	T 30.9		9/12/05 16:10				Cooler 6	+ VSS
	T 32.2		9/12/05 15:15				Cooler 6	
	TA 33.2		9/12/05 15:29				Cooler 7	
	TB 33.2		9/12/05 15:40				Cooler 7	
	TC 33.2		9/12/05 15:06				Cooler 8	
	FDI		9/12/05				Cooler 8	

1	Transferred by:	Comments: (Sample Condition)	Date	Received by:	Comments: (Sample Condition)	Date	°C
	<i>Wes Boll</i>		9/28/05 9:00	<i>Oliver</i>	<i>on Ice</i>	9/28/05 9:00	
2							
3							

Disposed of By: \_\_\_\_\_ Disposal Comments: \_\_\_\_\_

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# CHAIN OF CUSTODY RECORD

PLEASE DO NOT WRITE IN THE SHADED AREAS

100213

WORK ORDER # \_\_\_\_\_

Company Name and Address: <i>Wenck Associates</i>	Account #:	Phone #:
	Contact: <i>Wes Boll</i>	Fax #:
	Name of Sampler: <i>Wes Boll</i>	For faxed report check box <input type="checkbox"/>
Billing Address (indicate name and address if different from above):	Quote #:	Date Submitted:
	Project Name/Number:	Purchase Order #:

Lab Use Only	Your Sample I.D. or Number	Sample Description	Date	Type of Sample (Matrix or Substance)				Analyze For:
				Soil	Water	Food	Other (Please Be Specific)	
	Example	Tank Bottom Tank #3	01/01/99 11:45 a.m.			X	Sampled Liquid Layer Not bottom sludge	Vitamin A, TKN, Iron, Calcium BOD, COD, Acetone, Shelf Life
	T 27.3		9/27/05 17:05		X		Cooler 9	Same as previous
	TE 27.8		9/27/05 16:50		X		Cooler 9	
	TW 27.8		9/27/05 16:35		X		Cooler 10	

1	Transferred by:	Comments: (Sample Condition)	Date	Received by:	Comments: (Sample Condition)	Date	°C
	<i>Wes Boll</i>		9/28/05 8:00	<i>[Signature]</i>	<i>Dr. J...</i>	23.50 8:45	
2							
3							

Disposed of By: \_\_\_\_\_ Disposal Comments: \_\_\_\_\_



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# Chain of Custody Record

Page 1 of 6

Phone: (507) 354-8517

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Fax: (507) 359-2890

Work Order # 12-4607

Company Name and Address: <u>Weg Bolt</u> <u>Wenig Associates</u>		Account #:	Phone #:
Billing Address (indicate if different from above):		Contact:	Fax #: For faxed report check box <input type="checkbox"/>
		Name of Sampler:	E-mail: For e-mail report check box <input type="checkbox"/>
		Quote Number:	Date Submitted:
		Project Name/Number: <u>Clear Water River</u>	Purchase Order #:

Sample Information					Bottle Type										Analysis		
Lab Number	Sample ID	Sample Type (Food, Soil, Water, Etc.)	Date Sampled	Time Sampled	VOC Vials	500 ml unpres.	1000 ml unpres.	500 ml HNO3	1000 ml HNO3	500 ml H2SO4	1000 ml H2SO4	Sterile plastic	Amber H2SO4	500 ml NaOH	Filtered? Y or N	Other:	Analysis Required
A13630	TA33.2	Water	04/19/06	14:50													TP, OP, TN, NO2/NO3, Amm., TKN
A13638	CB33.6			14:20													
A13639	CA31.6			14:00													
A13640	T30.7			13:50													
A13641	T30.1			13:40													
A13642	CA30.0			13:25													
A13643	CA35.3			11:30													
A13644	T32.2			11:15													
A13645	TA30.9	Water	04/19/06	10:55													TP, OP, TN, NO2/NO3, Amm., TKN

Comments:

KEMSK PAPER CO. / OSWALD PUBLISHING CO., NEW ULM, MN (800 782-3557) 17749

Transferred by:	Date:	Time:	Sample Condition:	Received by:	Date:	Time:	Temp:
1. <u>[Signature]</u>	04/19/06	1650	<u>on Ice</u>	<u>[Signature]</u>	19 April	1853	3°
2.							

Please submit the top two copies with your samples. We will return the completed original with your results.



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 1126 North Front Street  
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# Chain of Custody Record

Phone: (507) 354-8517

Toll Free: (800) 782-3557

Fax: (507) 359-2890

Work Order #

Company Name and Address: <i>Wgs Boll 763-479-4200</i> <i>Wendy Aggocowen</i>	Account #:	Phone #:
	Contact:	Fax #: For faxed report check box <input type="checkbox"/>
Billing Address (indicate if different from above):	Name of Sampler:	E-mail: For e-mail report check box <input type="checkbox"/>
	Quote Number	Date Submitted:
Project Name/Number: <i>Clear Water Filter</i>		Purchase Order #:

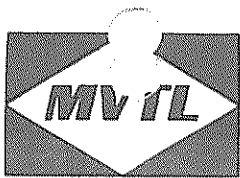
Sample Information					Bottle Type										Analysis		
Lab Number	Sample ID	Sample Type (Food, Soil, Water, Etc.)	Date Sampled	Time Sampled	VOC Vials	500 ml unpres.	1000 ml unpres.	500 ml HNO3	1000 ml HNO3	500 ml H2SO4	1000 ml H2SO4	Sterile plastic	Amber H2SO4	500 ml NaOH	Filtered? Y or N	Other:	Analysis Required
A13630	TA33.2	Water	04/19/06	14:50													Chl, Fe, CBOD-5, CBOD-20, TSS
A13588	TB33.2			14:40													
A13638	CA33.6			14:20													
A13639	CA31.5			14:00													
A13640	T30.7			13:50													
A13641	T30.1			13:40													
A13642	CA30.0			13:25													
A13643	CA35.3			11:30													
A13644	T32.2			11:15													
A13645	TA30.9	Water	04/19/06	10:55													Chl, Fe, CBOD-5, CBOD-20, TSS

Comments:

KEMSE PAPER CO. / SWALD PUBLISHING CO., NEW ULM, MN (800 782 3832) 1745

Transferred by:	Date:	Time:	Sample Condition:	Received by:	Date:	Time:	Temp:
<i>Wendy Aggocowen</i>	04/19/06	1650	<i>on fire</i>	<i>[Signature]</i>	04/20/06	1853	30
2.							

Please submit the top two copies with your samples. We will return the completed original with your results.



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**Chain of Custody Record**

Page 3 of 6

Work Order #

Company Name and Address: <i>Weg Bull 763-479-4200</i> <i>Wendy Aggarwal</i>	Account #:	Phone #:
	Contact:	Fax #: <input type="checkbox"/> For faxed report check box
Billing Address (indicate if different from above):	Name of Sampler:	E-mail: <input type="checkbox"/> For e-mail report check box
	Quote Number	Date Submitted:
	Project Name/Number: <i>Clearwater River</i>	Purchase Order #:

Sample Information					Bottle Type										Analysis		
Lab Number	Sample ID	Sample Type (Food, Soil, Water, Etc.)	Date Sampled	Time Sampled	VOC Vials	500 ml unpres.	1000 ml unpres.	500 ml HNO3	1000 ml HNO3	500 ml H2SO4	1000 ml H2SO4	Sterile plastic	Amber H2SO4	500 ml NaOH	Filtered? Y or N	Other:	Analysis Required
A13630	TA33.2	Water	04/19/06	1450													chl-a, TOC
A13558	TB33.2			1440													
A13638	CA33.6			1420													
A13639	CA31.6			1400													
A13640	T30.7			1350													
A13641	T30.1			1340													
A13642	CA30.0			1325													
A13643	CA35.3			1130													
A13644	T32.2			1115													
A13645	TA30.9	Water	04/19/06	1055													chl-a, TOC

Comments:

KEMSK PAPER CO. OSWALD PUBLISHING CO. NEW ULM, MN (800) 782-3532) N745

	Transferred by:	Date:	Time:	Sample Condition:	Received by:	Date:	Time:	Temp:
1.	<i>Wendy Aggarwal</i>	04/19/06	1650	on Ice	<i>[Signature]</i>	04/19/06	1853	30
2.								

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# Chain of Custody Record

Page 4 of 6

Phone: (507) 354-8517

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Work Order #

Company Name and Address: <i>Weg Bell</i> <i>Wendy Associates</i>	Account #:	Phone #:
	Contact:	Fax #: <input type="checkbox"/> For faxed report check box
Billing Address (indicate if different from above):	Name of Sampler:	E-mail: <input type="checkbox"/> For e-mail report check box
	Quote Number	Date Submitted:
Project Name/Number: <i>Clear Water River</i>		Purchase Order #:

Sample Information					Bottle Type										Analysis		
Lab Number	Sample ID	Sample Type (Food, Soil, Water, Etc.)	Date Sampled	Time Sampled	VOC Vials	500 ml unpres.	1000 ml unpres.	500 ml HNO3	1000 ml HNO3	500 ml H2SO4	1000 ml H2SO4	Sterile plastic	Amber H2SO4	500 ml NaOH	Filtered? Y or N	Other:	Analysis Required
A13646	CR29.0	Water	04/19/06	10:30													TP, OP, TN, NO2/NO3, Amm, TKN, Pb, Cd
A13647	TH27.06			10:15													
A13648	TE27.06			10:00													
A13649	T27.3			09:45													
A13650	CR27.2			09:10													
A13651	CR25.6			09:05													
A13652	TC33.2		15:45	16:05													
A13653	TD33.2			16:30													
A13654	FD1																
A13655	FD2	Water	04/19/06														TP, OP, TN, NO2/NO3, Amm, TKN
A13656	TE33.2	Water	04/19/06	16:20													TP, OP, TN, NO2/NO3, Amm, TKN
A13657	TE33.2	Water	04/19/06	16:05													TP, OP, TN, NO2/NO3, Amm, TKN

Transferred by:	Date:	Time:	Sample Condition:	Received by:	Date:	Time:	Temp:
1. <i>Wendy Bell</i>	4/19/06	16:50	<i>or for</i>	<i>[Signature]</i>	4/19/06	16:53	30
2.							

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# Chain of Custody Record

Page 5 of 6

Phone: (507) 354-8517

Toll Free: (800) 782-3557

Fax: (507) 359-2890

Work Order #

Company Name and Address: <i>Weg Bell Wenck Associates</i>		Account #: <i>703-479-4200</i>		Phone #:	
Billing Address (indicate if different from above):		Contact:		Fax #: For faxed report check box <input type="checkbox"/>	
		Name of Sampler:		E-mail: For e-mail report check box <input type="checkbox"/>	
		Quote Number		Date Submitted:	
		Project Name/Number: <i>Clear Water Run</i>		Purchase Order #:	

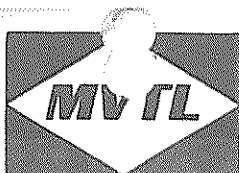
Sample Information					Bottle Type										Analysis		
Lab Number	Sample ID	Sample Type (Food, Soil, Water, Etc.)	Date Sampled	Time Sampled	VOC Vials	500 ml unpres.	1000 ml unpres.	500 ml HNO3	1000 ml HNO3	500 ml H2SO4	1000 ml H2SO4	Sterile plastic	Amber H2SO4	500 ml NaOH	Filtered? Y or N	Other:	Analysis Required
A13646	CH27.0	Water	04/19/06	10:30													Chlor, Fe, Cr6+5, Cr6D-20, TSS
A13647	TH27.9			10:15													
48	TE27.9			10:00													
49	T27.3			09:45													
50	CA27.2			09:10													
51	CA25.6			09:05													
52	TC 33.2		15:35	16:05 <sup>PB</sup>													
53	TD 33.2			16:30													
54	FD1																
55	FD2																Chlor, Fe, Cr6+5, Cr6D-20, TSS

Comments: 56 TE 33.2 water 04/19/06 16:20  
57 TE 33.2 water 04/19/06 16:05

Transferred by:	Date:	Time:	Sample Condition:	Received by:	Date:	Time:	Temp:
1. <i>Weg Bell</i>	4/19/06	16:50	on ice	<i>[Signature]</i>	4/20/06	18:53	3°
2.							

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Page 6 of 6

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Work Order #

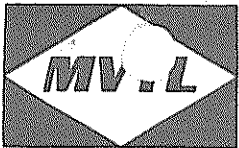
Company Name and Address:	Account #:	Phone #:
	Contact:	Fax #: For faxed report check box <input type="checkbox"/>
Billing Address (indicate if different from above):	Name of Sampler:	E-mail: For e-mail report check box <input type="checkbox"/>
	Quote Number	Date Submitted:
	Project Name/Number:	Purchase Order #:

Sample Information					Bottle Type								Analysis				
Lab Number	Sample ID	Sample Type (Food, Soil, Water, Etc.)	Date Sampled	Time Sampled	VOC Vials	500 ml unpres.	1000 ml unpres.	500 ml HNO3	1000 ml HNO3	500 ml H2SO4	1000 ml H2SO4	Sterile plastic	Amber H2SO4	500 ml NaOH	Filtered? Y or N	Other:	Analysis Required
A13646	CR29.0	Water	04/19/06	1030													chl-a, TOC
A13647	TW27.95			1015													
48	TE27.95			1000													
49	T27.3			0945													
50	CR27.2			0910													
51	CR25.6			0905													
52	TC33.2			1535													
53	TD33.2			1630													
54	FD1																
55	FD2	Water	04/19/06														chl-a, TOC

Comments: 56 TE33.2 1620  
57 TF33.2 water 04/19/06 1605

Transferred by:	Date:	Time:	Sample Condition:	Received by:	Date:	Time:	Temp:
1. <i>Wally Ball</i>	04/19/06	1650	Gr 7cc	<i>[Signature]</i>	194506	1855	30C
2.							

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# Chain of Custody Record

Page \_\_\_\_\_ of \_\_\_\_\_

Work Order #

12-7480

Company Name and Address: WENCK and Associates 1800 Pioneer Creek Circle Maple Plaine Minn 55359-4000		Account #:	Phone #:
Billing Address (indicate if different from above):		Contact:	Fax #: <input type="checkbox"/> For faxed report check box
		Name of Sampler:	E-mail: <input type="checkbox"/> For e-mail report check box
		Quote Number	Date Submitted:
		Project Name/Number:	Purchase Order #:

Sample Information					Bottle Type										Analysis		
Lab Number	Sample ID	Sample Type (Food, Soil, Water, Etc.)	Date Sampled	Time Sampled	VOC Vials	500 ml unpres.	1000 ml unpres.	500 ml HNO3	1000 ml HNO3	500 ml H2SO4	1000 ml H2SO4	Sterile plastic	Amber H2SO4	500 ml NaOH	Filtered? Y or N	Other:	Analysis Required
A26199	LL001	Water	5/22/06	2:00	✓		✓			✓	✓		✓				-TP 31210
A26200	LL002	Water		3:00	✓		✓			✓	✓		✓				-Orthophosphate Phosphorus 31300
																	-TN
																	-NO2 + NO3
																	-TKN Nitrogen
																	-Chloride
																	-Iron 32140
																	-TSS
																	-Chlorophyll-a

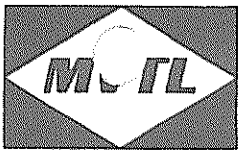
Comments:

KEMSE PAPER CO. / OSWALD PUBLISHING CO., NEW ULM, MN 56073-3532/N749

Transferred by:	Date:	Time:	Sample Condition:	Received by:	Date:	Time:	Temp:
1. Kevin Wittrock	5/22/06			[Signature]	6/23/06	10:55	4
2.							

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Chain of Custody Record

Page 1 of 3

Work Order # 12-6363

Company Name and Address: Wenck Associates, Inc. 1800 Pioneer Creek Ctr Maple Plain, MN 55359		Account #:	Phone #: (763) 479-4283
Billing Address (indicate if different from above):		Contact: Wes Boll	Fax #: For faxed report check box <input type="checkbox"/>
		Name of Sampler: Wes Boll	E-mail: wboll@wenck.com <input checked="" type="checkbox"/> For e-mail report check box
		Quote Number	Date Submitted: 5/30/06
		Project Name/Number: Clearwater River Streams	Purchase Order #:

Sample Information					Bottle Type										Analysis		
Lab Number	Sample ID	Sample Type (Food, Soil, Water, Etc.)	Date Sampled	Time Sampled	VOC Vials	500 ml unpres.	1000 ml unpres.	500 ml HNO3	1000 ml HNO3	500 ml H2SO4	1000 ml H2SO4	Sterile plastic	Amber <del>1000</del> 4	500 ml NaOH	Filtered? Y or N	100 ml Other	Analysis Required
A21420	CR 25.6	Water	5/30/06	11:55			3			1	1	1				1	TP, OP, NO <sub>2</sub> +NO <sub>3</sub> , Ammonia-N, TKN
21	CR 27.2			12:25													Fecal Coliform, Chloride
22	CR 29.0			12:55													5 day CBOD, 20 day CBOD,
23	CR 31.8			13:25													TSS, chlor-a, TOC
24	FD1			←													
25	CR 33.6			14:05													
26	CR 35.3			14:25													
27	TC 33.2			14:50													
28	TB 33.2			15:10													

Comments:

KEMSK PAPER CO. / OSWALD PUBLISHING CO., NEW ULM, MN (800 782 3532) N1749

Transferred by:	Date:	Time:	Sample Condition:	Received by:	Date:	Time:	Temp:
1. Wes Boll	5/30/06	16:45					
2. Don Balbach	5/30/06	16:45	1 Don	Balbach	5/30/06	6:22	4

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**Chain of Custody Record**

Work Order # \_\_\_\_\_

Company Name and Address: <i>Wenck Associates</i>	Account #:	Phone #:
	Contact: <i>Wes Boll</i>	Fax #: <input type="checkbox"/> For faxed report check box
	Name of Sampler:	E-mail: <input type="checkbox"/> For e-mail report check box
Billing Address (indicate if different from above):	Quote Number	Date Submitted:
	Project Name/Number:	Purchase Order #:

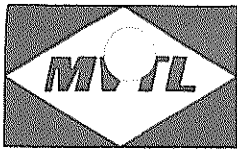
Sample Information					Bottle Type										Analysis		
Lab Number	Sample ID	Sample Type (Food, Soil, Water, Etc.)	Date Sampled	Time Sampled	VOC Vials	500 ml unpres.	1000 ml unpres.	500 ml HNO3	1000 ml HNO3	500 ml H2SO4	1000 ml H2SO4	Sterile plastic	Amber H2SO4	500 ml NaOH	Filtered? Y or N	Other:	Analysis Required
<i>A21429</i>	<i>CR 19.8</i>	<i>Water</i>	<i>5/30/06</i>	<i>11:15</i>			<i>3</i>			<i>1</i>	<i>1</i>		<i>1</i>				<i>TR, OP, TN, NO<sub>2</sub>+NO<sub>3</sub>, TKN Chloride, CBOD-5day, CBOD-20day, TSS, Chlor-a, TOC</i>

Comments:

KEMSK PAPER CO. / OSWALD PUBLISHING CO., NEW ULM, MN (500 782-3532) N749

Transferred by:	Date:	Time:	Sample Condition:	Received by:	Date:	Time:	Temp:
<i>Wes Boll</i>	<i>5/30/06</i>	<i>16:45</i>					
<i>Don Balbach</i>	<i>5/30/06</i>	<i>16:45</i>	<i>Don Balbach</i>		<i>5-30-06</i>	<i>6:23</i>	<i>4</i>

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# Chain of Custody Record

Page 3 of 3

Work Order #

Company Name and Address: <i>Wenck Associates 1800 Pioneer Creek Ctr Maple Plain, MN 55359-0249</i>		Account #:	Phone #:
Billing Address (indicate if different from above):		Contact:	Fax #: For faxed report check box <input type="checkbox"/>
		Name of Sampler:	E-mail: For e-mail report check box <input type="checkbox"/>
		Quote Number	Date Submitted:
		Project Name/Number:	Purchase Order #:

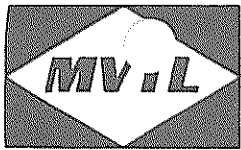
Sample Information					Bottle Type										Analysis		
Lab Number	Sample ID	Sample Type (Food, Soil, Water, Etc.)	Date Sampled	Time Sampled	VOC Vials	500 ml unpres.	1000 ml unpres.	500 ml HNO3	1000 ml HNO3	500 ml H2SO4	1000 ml H2SO4	Sterile plastic	Amber H2SO4	500 ml NaOH	Filtered? Y or N	Other:	Analysis Required
	<del>121</del>																
A21430	LLO01T	Water	5/30/06	9:00	1					1	1	1					Chlor-a TP, OP, TN, NO <sub>2</sub> +NO <sub>3</sub> , TKN, Chloride, TSS
31	LH001M	"	"	"	1					1							TP, OP
32	LH001B	"	"	"	1		1			1							TP, OP, Total Iron
33	LLO02T	Water	5/30/06	9:45	1					1	1	1					TP, OP, TN, NO <sub>2</sub> +NO <sub>3</sub> , TKN, Chloride, TSS, Chlor-a
34	LH002M	"	"	"	1					1							
35	LH002B	"	"	"	1		1			1							

Comments:

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Transferred by:	Date:	Time:	Sample Condition:	Received by:	Date:	Time:	Temp:
1. <i>Wesley Bell</i>	5/30/06	16:45					
2. <i>Ron Balbach</i>	5/30/06	16:45	<i>Ron Balbach</i>		5-30-06	6:23	4

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**Chain of Custody Record**Page 1 of 2Work Order # 18-7155

Company Name and Address: <u>Wenck Associates, Inc.</u> <u>1800 Pioneer Creek Ctr</u> <u>Maple Plain, MN 55359-0249</u>		Account #: <u>13173</u>	Phone #: <u>(763) 479-4283</u>
Billing Address (indicate if different from above):		Contact: <u>Wes Boll</u>	Fax #: <input type="checkbox"/>
		Name of Sampler: <u>Wes Boll</u>	E-mail: <u>wboll@wenck.com</u> <input checked="" type="checkbox"/>
		Quote Number:	Date Submitted:
		Project Name/Number: <u>Clearwater River</u>	Purchase Order #:

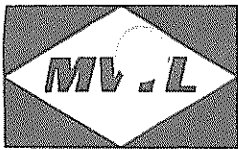
Sample Information					Bottle Type								Analysis				
Lab Number	Sample ID	Sample Type (Food, Soil, Water, Etc.)	Date Sampled	Time Sampled	VOC Vials	500 ml unpres.	1000 ml unpres.	500 ml HNO3	1000 ml HNO3	500 ml H2SO4	1000 ml H2SO4	Sterile plastic	Amber <del>34</del>	500 ml NaOH	Filtered? Y or N	Other:	Analysis Required
A24821	CR 25.6	Water	6/15/06	9:15			3			1	1	1				1	TP, OP, TKN-Nitrogen, Ammonia-N <sub>3</sub>
22	CR 27.2			9:50													NO <sub>2</sub> + NO <sub>3</sub> , Fecal Coliforms,
23	CR 29.0			10:15													Chlorite, CBOD-5 day,
24	CR 31.8			10:40													CBOD-20 day, TSS,
25	CR 33.6			11:15													chlor-a, TOC
26	TB 33.2			11:30													
27	CR 35.3			11:50													
28	TC 33.2			12:10													
29	FDI																

Comments:

KEMSKE PAPER CO. / OSWALD PUBLISHING CO., NEW ULM, MN (800 782-3532) N749

Transferred by:	Date:	Time:	Sample Condition:	Received by:	Date:	Time:	Temp:
1. <u>Wes Boll</u>	<u>6/15/06</u>	<u>14:30</u>					<u>7</u>
2. <u>Don Balbach</u>	<u>6/15/06</u>	<u>14:30</u>		<u>Don Balbach</u>	<u>6-15-06</u>	<u>4:21</u>	<u>6</u>

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# Chain of Custody Record

Page 2 of 2

Work Order #

Company Name and Address: <i>Wenck Associates, Inc</i>		Account #:	Phone #: <i>(763) 479-4283</i>
Billing Address (indicate if different from above):		Contact: <i>Wes Boll</i>	Fax #: For faxed report check box <input type="checkbox"/>
		Name of Sampler:	E-mail: <i>wboll@wenck.com</i> <input checked="" type="checkbox"/> For e-mail report check box
		Quote Number	Date Submitted:
		Project Name/Number: <i>Clearwater River</i>	Purchase Order #:

Sample Information					Bottle Type										Analysis		
Lab Number	Sample ID	Sample Type (Food, Soil, Water, Etc.)	Date Sampled	Time Sampled	VOC Vials	500 ml unpres.	1000 ml unpres.	500 ml HNO3	1000 ml HNO3	500 ml H2SO4	1000 ml H2SO4	Sterile plastic	Amber	500 ml NaOH	Filtered? Y or N	Other:	Analysis Required
<i>A24830</i>	<i>CR 19.8</i>	<i>Water</i>	<i>6/15/06</i>	<i>12:40</i>			<i>3</i>			<i>1</i>	<i>1</i>		<i>1</i>				<i>TP, OP, TN, NO<sub>2</sub> + NO<sub>3</sub>, TRN, Chloride, CBOD-5 day, CBOD-20 day, TSS, chlor-a<sub>5</sub>, FOC</i>

Comments:

KEMSCO PAPER CO. / OSWALD PUBLISHING CO., NEW ULM, MN (800 782 3532) N749

Transferred by:	Date:	Time:	Sample Condition:	Received by:	Date:	Time:	Temp:
<i>Wes Boll</i>	<i>6/15/06</i>	<i>14:30</i>			<i>4:21</i>		<i>-3</i>
<i>Ron Balbach</i>	<i>6/15/06</i>	<i>14:30</i>		<i>Ron Balbach 6-15-06</i>			<i>7</i>

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# Chain of Custody Record

Page \_\_\_\_\_ of \_\_\_\_\_

Work Order # 12-7634

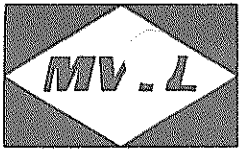
Company Name and Address: <u>Wenck Associates INC</u> <u>1800 Pioneer Creek Center</u> <u>Maple Plain Minn 55359-0429</u>		Account #: <u>13173</u>	Phone #:
Billing Address (indicate if different from above):		Contact:	Fax #: <input type="checkbox"/>
		Name of Sampler: <u>Kevin Wittrock</u>	E-mail: <input type="checkbox"/>
		Quote Number:	Date Submitted:
		Project Name/Number: <u>CRWD</u>	Purchase Order #:

Sample Information					Bottle Type										Analysis		
Lab Number	Sample ID	Sample Type (Food, Soil, Water, Etc.)	Date Sampled	Time Sampled	VOC Vials	500 ml unpres.	1000 ml unpres.	500 ml HNO3	1000 ml HNO3	500 ml H2SO4	1000 ml H2SO4	Sterile plastic	Amber H2SO4	500 ml NaOH	Filtered? Y or N	Other: <u>Na2S2O5</u>	Analysis Required
<u>A26945</u>	<u>CR 25.6</u>		<u>62806</u>	<u>900</u>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<u>TP</u>
<u>46</u>	<u>CR 29.02</u>			<u>940</u>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<u>Orthophosphate</u> <u>Phosphate</u>
<u>47</u>	<u>CR 29.0</u>			<u>1020</u>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<u>NO2# NO3</u>
<u>48</u>	<u>CR 31.8</u>			<u>1040</u>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<u>Ammonia Nitrogen</u>
<u>49</u>	<u>CR 33.6</u>			<u>1109</u>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<u>TKN Nitrogen</u>
<u>50</u>	<u>TR 33.2</u>			<u>1150</u>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<u>Fecal Clostridia</u>
<u>51</u>	<u>CR 35.3</u>			<u>1220</u>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<u>Chloride</u>
<u>52</u>	<u>TR 33.2</u>			<u>1240</u>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<u>CBOD-5 Day</u>
<u>53</u>	<u>HWY 55</u>			<u>110</u>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<u>CBOD 20 Day</u>
<u>54</u>	<u>CR 29.0 FT</u>			<u>10:30</u>			<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>	<u>TSS</u>

Comments: Orthophosphate  
T.O.C @ 285/06

Transferred by:	Date:	Time:	Sample Condition:	Received by:	Date:	Time:	Temp:
<u>[Signature]</u>		<u>18:45</u>	<u>40C</u>	<u>[Signature]</u>	<u>285/06</u>	<u>15:15</u>	
<u>[Signature]</u>	<u>285/06</u>	<u>15:15</u>	<u>@ 285/06 on ice</u>	<u>[Signature]</u>		<u>17:15</u>	

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**Chain of Custody Record**

Page 1 of 2

Work Order # 0002-75

Company Name and Address:  
Wenck Associates Inc  
1800 Pioneer Creek Ctr  
Maple Plain, MN 55359

Account #:

Phone #: 763-479-4283

Contact: Wesley Boll

Fax #:   
For faxed report check box

Name of Sampler: Wesley Boll

E-mail: wboll@wenck.com   
For e-mail report check box

Billing Address (indicate if different from above):

Quote Number:

Date Submitted: 7/12/06

Project Name/Number: 0002-75 Clearwater River

Purchase Order #:

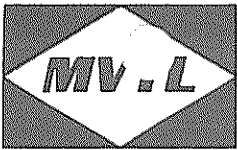
Sample Information					Bottle Type										Analysis		
Lab Number	Sample ID	Sample Type (Food, Soil, Water, Etc.)	Date Sampled	Time Sampled	VOC Vials	500 ml unpres.	1000 ml unpres.	500 ml HNO3	1000 ml HNO3	500 ml H2SO4	1000 ml H2SO4	Sterile plastic	Amber <del>H2SO4</del>	500 ml NaOH	Filtered? Y or N	Other:	Analysis Required
<u>A29375</u>	<u>CR19.8</u>	<u>Water</u>	<u>7/12/06</u>	<u>12:50</u>			<u>3</u>			<u>1</u>	<u>1</u>		<u>1</u>				<u>TP, Ortho-P, TN, NO<sub>2</sub>+NO<sub>3</sub>, TKN-N, Chloride, 5 day CBOD, 20 day CBOD, TSS, Chlor-a, TOC</u>

Comments:

KEMSKE PAPER CO. / QSWALD PUBLISHING CO., NEW ULM, MN (800 782 3632) N749

Transferred by:	Date:	Time:	Sample Condition:	Received by:	Date:	Time:	Temp:
<u>1. Wesley Boll</u>	<u>7/12/06</u>	<u>14:00</u>		<u>Alison Rasmussen</u>	<u>7.12.06</u>	<u>2:00</u>	<u>18</u>
<u>2. Alison Rasmussen</u>	<u>7.12.06</u>	<u>3:30</u>	<u>Cooling</u>				

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Chain of Custody Record

Work Order # 12-8098

Company Name and Address: Wenck Associates, Inc.		Account #: 13173	Phone #: 763-479-4283
Billing Address (indicate if different from above):		Contact: Wesley Boll	Fax #: <input type="checkbox"/>
		Name of Sampler: Wesley Boll	E-mail: wboll@wenck.com <input checked="" type="checkbox"/>
		Quote Number	Date Submitted:
		Project Name/Number: 0002-75-Clearwater River	Purchase Order #:

Sample Information					Bottle Type										Analysis		
Lab Number	Sample ID	Sample Type (Food, Soil, Water, Etc.)	Date Sampled	Time Sampled	VOC Vials	500 ml unpres.	1000 ml unpres.	500 ml HNO3	1000 ml HNO3	500 ml H2SO4	1000 ml H2SO4	Sterile plastic	Amber <del>glass</del>	500 ml NaOH	Filtered? Y or N	Other: 150mL	Analysis Required
A20371	CR 33.6	Water	7/12/06	10:15		3				1	1		1			1	TP, Ortho-P, NO <sub>2</sub> +NO <sub>3</sub> , Ammonia-N,
72	CR 31.8			10:45						1	1		1			1	TKN, Fecal, Chloride
73	CR 29.0			11:10						1	1		1			1	5 day CBOD, 20 day CBOD,
	<del>CR 21.2</del> <sup>No Sample</sup> WB																TSS, Chlor-a, TOC
74	CR 25.6	Water	7/12/06	12:10		3				1	1		1			1	
A20376	FD 1																
Have a fecal bottle w/id CR 35.3 = not bottle for CR 33.6																	
7/12/06 per Wes Fecal CR 35.3 should be CR 33.6																	TR

Comments:

KEMSK PAPER CO. / OSWALD PUBLISHING CO., NEW ULM, MN 1800 782-35221 N749

Transferred by:	Date:	Time:	Sample Condition:	Received by:	Date:	Time:	Temp:
1. Wesley Boll	7/12/06	14:00		Alan Rasmussen	7-12-06	2:00	1°
2. Alan Rasmussen	7-12-06	3:30	Cool				

Please submit the top two copies with your samples. We will return the completed original with your results.





LABORATORIES, Inc.

1126 North Front Street  
New Ulm, MN 56073

Phone: (507) 354-8517

Toll Free: (800) 782-3557

Fax: (507) 359-2890

# Chain of Custody Record

Page 1 of 1

Work Order # 12-8600

Company Name and Address: <u>Wenck Associates</u> <u>1800 Pioneer Creek Center</u> <u>Maple Plain, MN 55359</u>		Account #:	Phone #: <u>763-879-4200</u>
Billing Address (indicate if different from above):		Contact: <u>Wes Boll</u>	Fax #: For faxed report check box <input type="checkbox"/>
		Name of Sampler: <u>Wick Christensen</u>	E-mail: For e-mail report check box <input type="checkbox"/>
		Quote Number	Date Submitted: <u>7-20-06</u>
		Project Name/Number:	Purchase Order #:

Sample Information					Bottle Type										Analysis		
Lab Number	Sample ID	Sample Type (Food, Soil, Water, Etc.)	Date Sampled	Time Sampled	VOC Vials	500 ml unpres.	1000 ml unpres.	500 ml HNO3	1000 ml HNO3	500 ml H2SO4	1000 ml H2SO4	Sterile plastic	Amber H2SO4	500 ml NaOH	Filtered? Y or N	Other: ISO ml	Analysis Required
<u>A31999</u>	<u>CR 25.6</u>	<u>water</u>	<u>7-26-06</u>	<u>0930</u>			<u>W</u>			<u> </u>	<u> </u>		<u> </u>			<u>1</u>	For all sample IDs:
<u>A32000</u>	<u>CR 27.2</u>	<u>↓</u>	<u>↓</u>	<u>1015</u>			<u>↓</u>			<u>↓</u>	<u>↓</u>		<u>↓</u>			<u>↓</u>	TP, OP, NO2+NO3, TKN,
<u>01</u>	<u>CR 29.0</u>	<u>↓</u>	<u>↓</u>	<u>1040</u>			<u>↓</u>			<u>↓</u>	<u>↓</u>		<u>↓</u>			<u>↓</u>	Ammonia N, Fecal, chloride;
<u>02</u>	<u>CR 31.8</u>	<u>↓</u>	<u>↓</u>	<u>1130</u>			<u>↓</u>			<u>↓</u>	<u>↓</u>		<u>↓</u>			<u>↓</u>	CBod-5day, CBod-20day,
																	TSS, chlor-a, TOC

Comments:

KEMSKÉ PAPER CO. / OSWALD PUBLISHING CO., NEW ULM, MN (800) 782-3521 N745

Transferred by:	Date:	Time:	Sample Condition:	Received by:	Date:	Time:	Temp:
<u>1. [Signature]</u>							<u>30</u>
<u>2. [Signature]</u>	<u>7-26-06</u>	<u>3:30</u>	<u>Cool / Ice</u>				

Please submit the top two copies with your samples. We will return the completed original with your results.



12-10896 NO 7100



**CHAIN OF CUSTODY RECORD**

**WENCK ASSOCIATES, INC.**  
 1800 Pioneer Creek Ctr. - P.O. Box 249  
 Maple Plain, MN 55359-0249  
 Phone: (763) 479-4200  
 FAX: (763) 479-4242

FIELD COORDINATOR  
*NORM WENCK*

AIRBILL NO.  
*CR0 D-5 Det*  
*CR0 20 Det*  
*PHYLIA*

PROJ. NO. \_\_\_\_\_ PROJ. NAME *CRWD*

SAMPLERS (Signature) *Zen With* SAMPLE MATRIX

Sample I.D.	Date	Time	Comp.	Grab	Sample Description	Soil	Water	Other	TP	Ortho Phosphorus	TN	NO2#	NO3	Ammonia Nitrogen	TKN	Nitrogen	Fertilizer	Chloride	CR0 D-5 Det	CR0 20 Det	PHYLIA	REMARKS
1	9/25/06	900		/	CR 25.6		/		/	/		/	/	/	/	/	/	/	/	/	/	A42113
2		1000		/	CR 27.2		/		/	/		/	/	/	/	/	/	/	/	/	/	14
3		1100		/	CR 29.0		/		/	/		/	/	/	/	/	/	/	/	/	/	15
4		1140		/	CR 31.8		/		/	/		/	/	/	/	/	/	/	/	/	/	16
5		1230		/	TB 33.2		/		/	/		/	/	/	/	/	/	/	/	/	/	17
6		100		/	CR 33.6		/		/	/		/	/	/	/	/	/	/	/	/	/	18
7		200		/	CR 19.8		/		/	/	/	/	/	/	/	/	/	/	/	/	/	A42085
					CR 29.0 F.T																	

Relinquished by: (Signature) *Zen With* Date *9/25/06* Time *235* Relinquished by: (Signature) *Abode* Date *9/26/06* Time *10:41* Relinquished by: (Signature) \_\_\_\_\_

Relinquished by: (Signature) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ Received for Laboratory by: (Signature) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ Sampling/Receipt Comments \_\_\_\_\_

---

## **Appendix E**

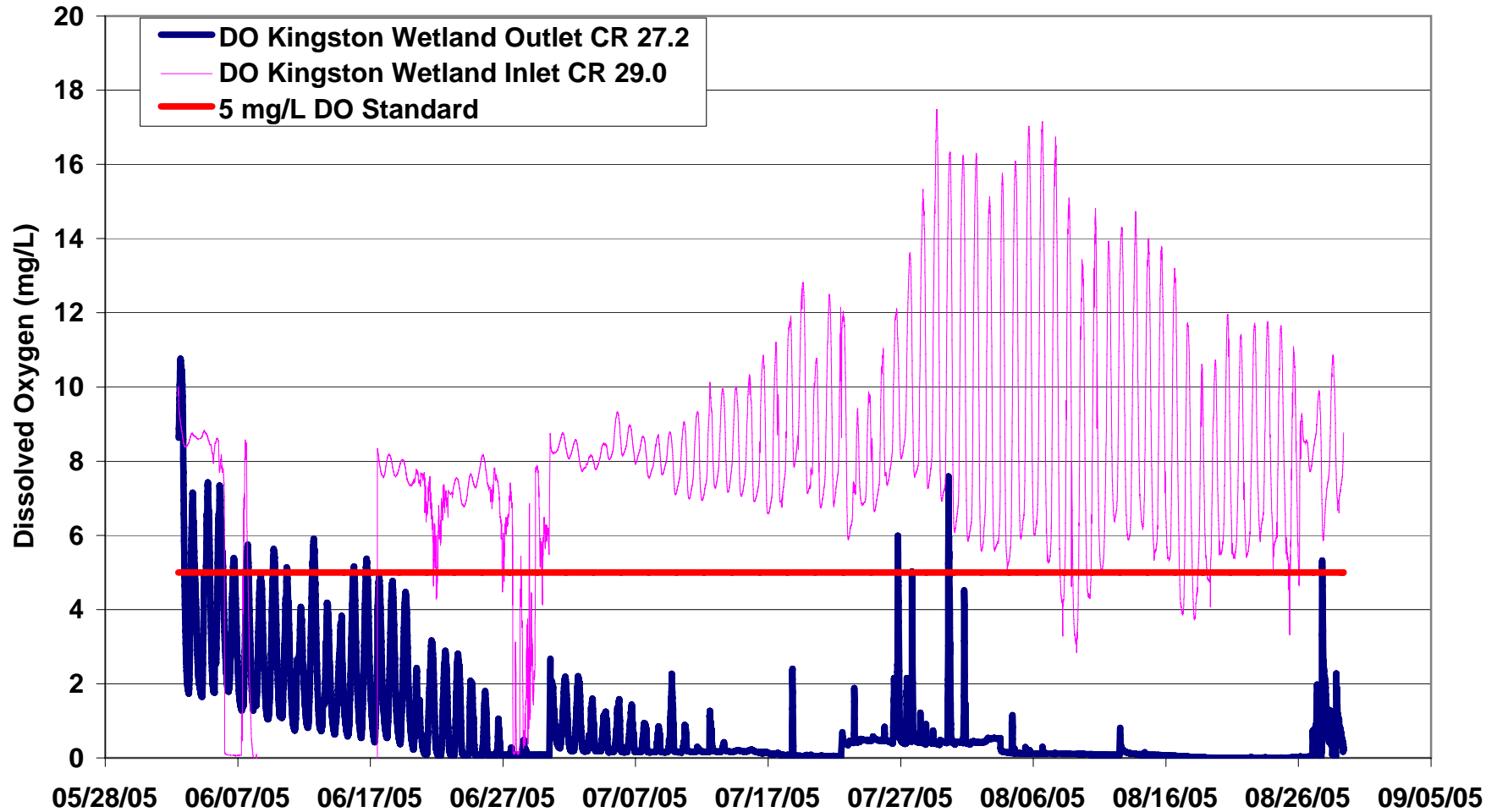
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### **Continuous Dissolved Oxygen Records**

Appendix E Figure 1

Phase II TMDL Study  
Lake Louisa and The Clearwater River (Clear Lake to Lake Betsy)

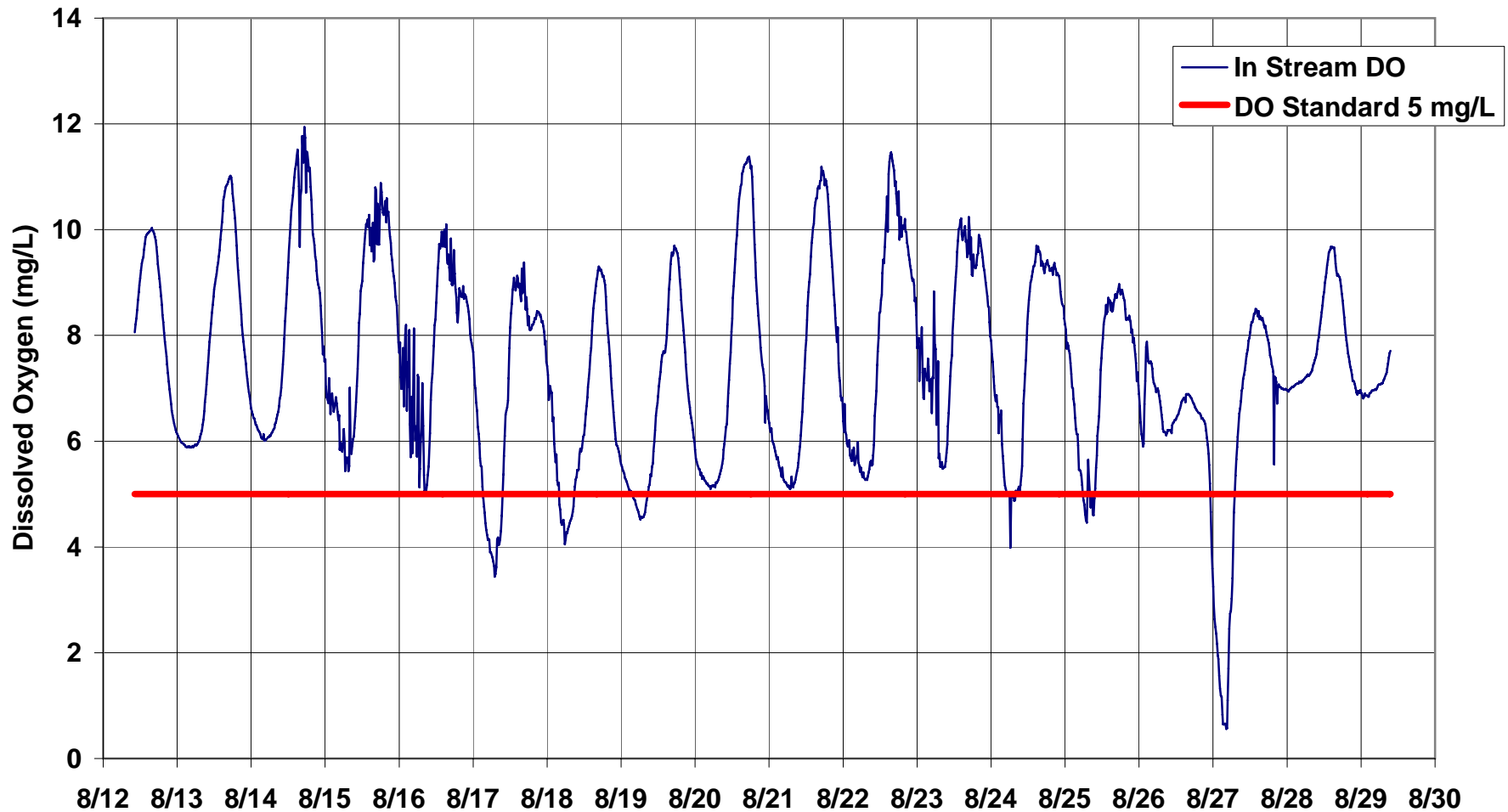
Clearwater River Dissolved Oxygen  
Upstream and Downstream of the Kingston Wetland



Appendix E Figure 2

Phase II TMDL Study  
Lake Loiusa and The Clearwater River (Clear Lake to Lake Betsy)

2005 Clearwater River Dissolved Oxygen  
CR 31.8



Appendix E Figure 3

Phase II TMDL Study  
 Lake Louisa and The Clearwater River (Clear Lake to Lake Betsy)

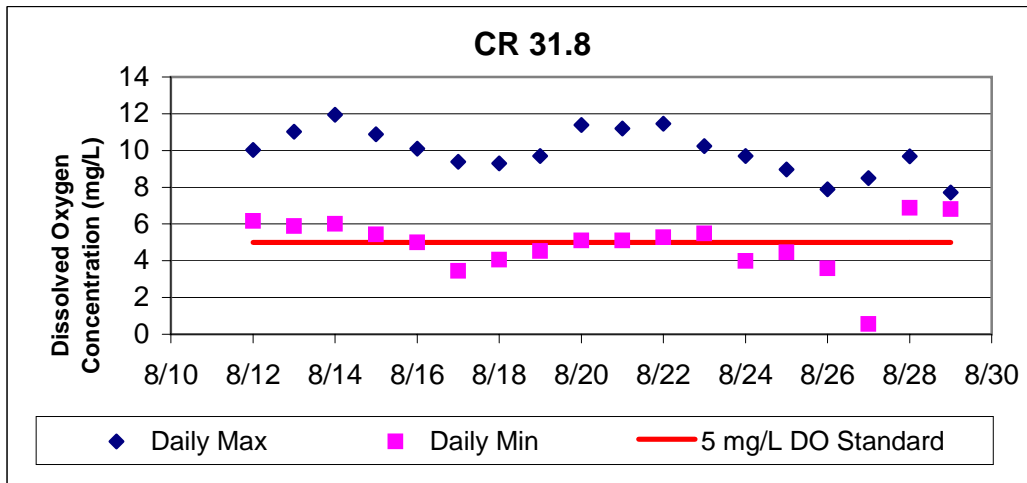
Clearwater River Dissolved Oxygen  
 CR 31.8

Date	Precipitation (inches)	Flow (cfs)	Dissolved Oxygen (mg/L)		
			Daily Max	Daily Min	Delta DO
Friday, August 12, 2005			10.03	6.17	3.86
Saturday, August 13, 2005			11.02	5.88	5.14
Sunday, August 14, 2005			11.94	6.01	5.93
Monday, August 15, 2005		0.06	10.88	5.43	5.45
Tuesday, August 16, 2005			10.1	5	5.1
Wednesday, August 17, 2005			9.38	3.44	5.94
Thursday, August 18, 2005	0.28		9.3	4.05	5.25
Friday, August 19, 2005	0.12		9.7	4.52	5.18
Saturday, August 20, 2005			11.38	5.1	6.28
Sunday, August 21, 2005			11.19	5.1	6.09
Monday, August 22, 2005			11.46	5.27	6.19
Tuesday, August 23, 2005			10.24	5.48	4.76
Wednesday, August 24, 2005			9.7	3.99	5.71
Thursday, August 25, 2005			8.97	4.46	4.51
Friday, August 26, 2005	2.12		7.88	3.59	4.29
Saturday, August 27, 2005			8.5	0.56	7.94
Sunday, August 28, 2005			9.68	6.88	2.8
Monday, August 29, 2005			7.71	6.81	0.9
<b>Average:</b>			9.9	4.9	5.1
<b>Standard Dev:</b>			1.2	1.5	1.5
<b>Max:</b>			11.9	6.9	7.9
<b>Min:</b>			7.7	0.6	0.9

T:\0002\75\_TMDL Ph2\Report\Appendix E\_Cont DO\Kingston.xls\Fig d.3

Precipitation: Kingston

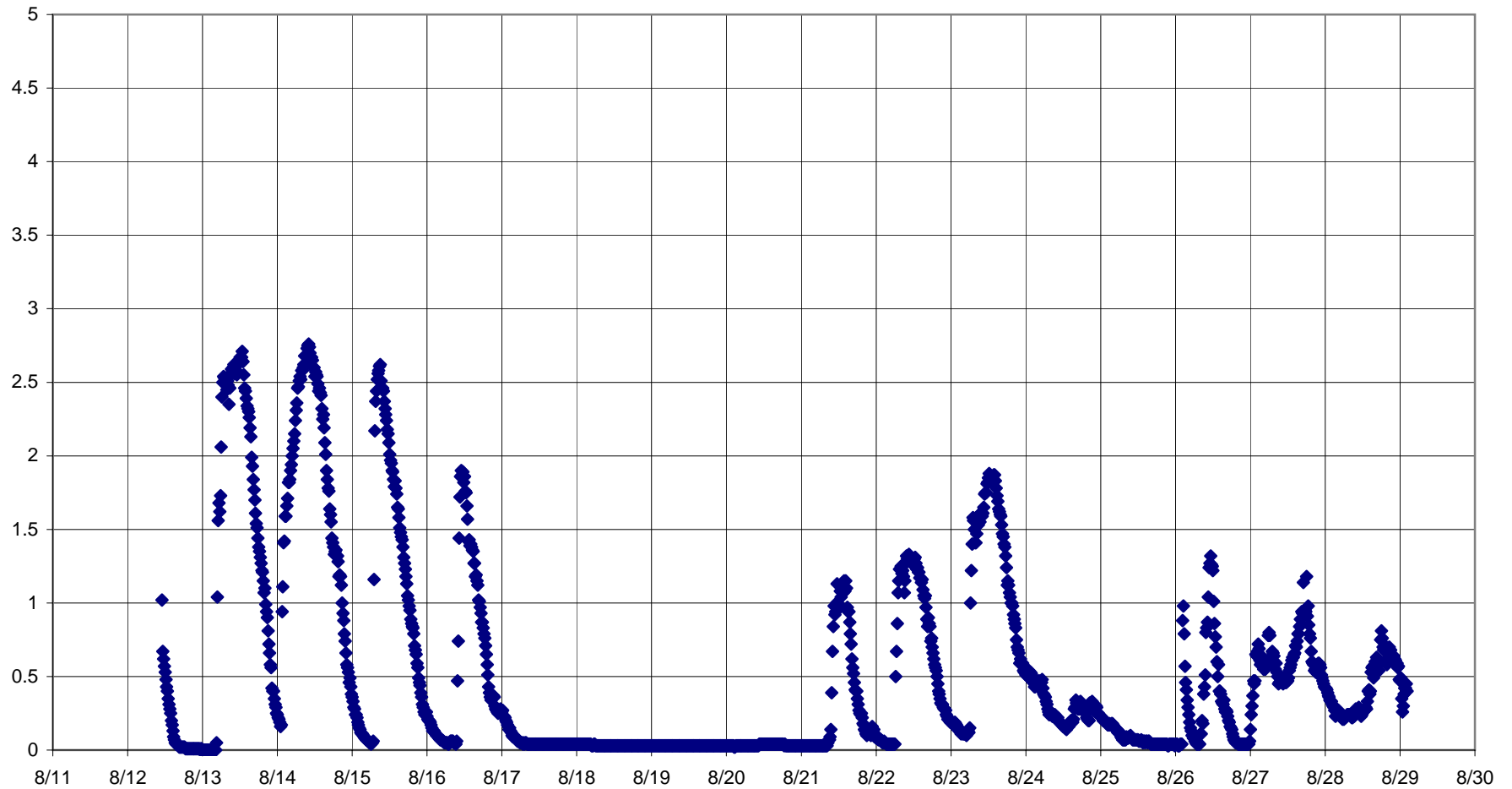
Flow: CR 31.8



Appendix E Figure 4

Phase II TMDL Study  
Lake Louisa and The Clearwater River (Clear Lake to Lake Betsy)

2005 Clearwater River Dissolved Oxygen  
CR 26.1

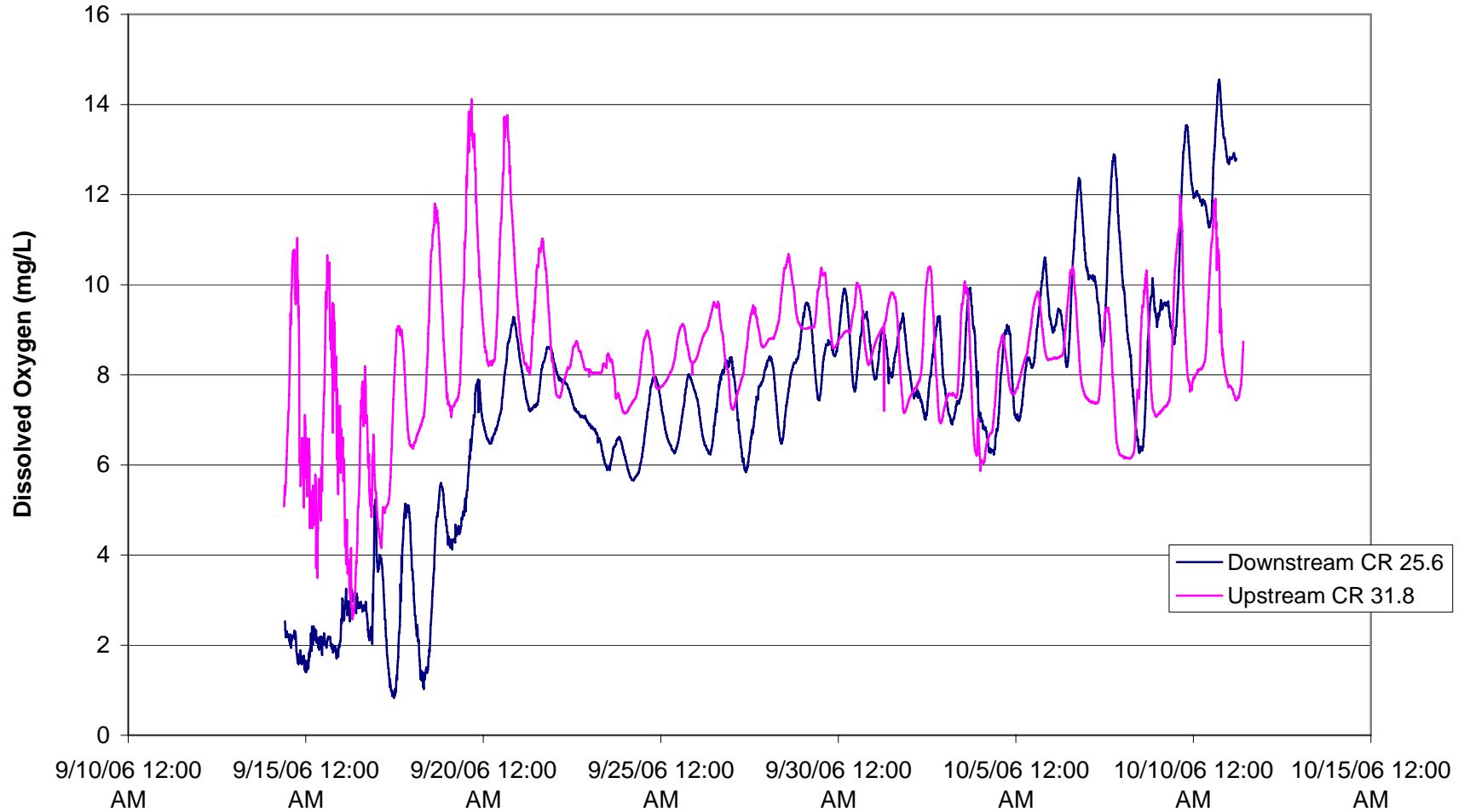




Appendix E Figure 5

Phase II TMDL Study  
Lake Louisa and The Clearwater River (Clear Lake to Lake Betsy)

2006 Clearwater River Dissolved Oxygen  
Upstream and Downstream End of Listed Reach

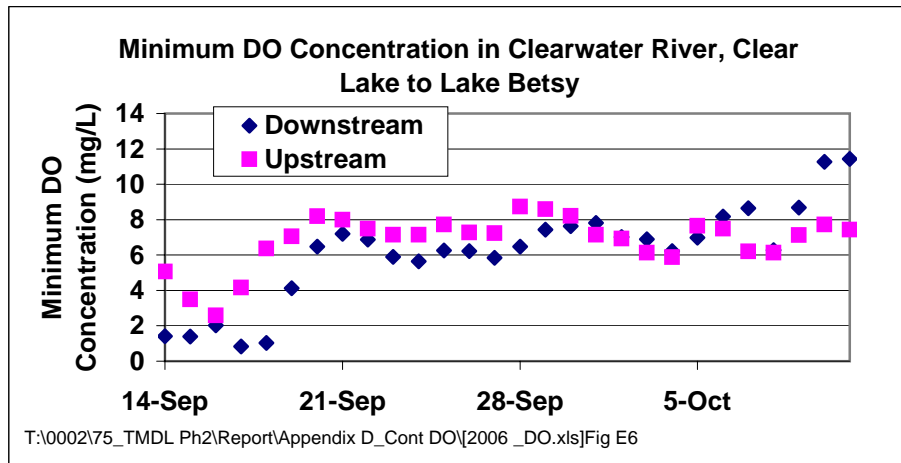


## Appendix E Figure 6

### Phase II TMDL Study Lake Louisa and The Clearwater River (Clear Lake to Lake Betsy)

#### 2006 Clearwater River Dissolved Oxygen Upstream and Downstream End of Listed Reach

Date	Downstream			Upstream			
	Max	Min	Δ DO	Max	Min	Δ DO	
09/14/06	2.53	1.41	1.12	11.03	5.06	5.97	
09/15/06	2.41	1.4	1.01	10.65	3.5	7.15	
09/16/06	5.22	2.03	3.19	8.19	2.58	5.61	
09/17/06	5.14	0.83	4.31	9.08	4.16	4.92	
09/18/06	5.6	1.03	4.57	11.8	6.36	5.44	
09/19/06	7.89	4.13	3.76	14.11	7.06	7.05	
09/20/06	9.28	6.47	2.81	13.76	8.2	5.56	
09/21/06	8.62	7.19	1.43	11.02	8	3.02	
09/22/06	8.26	6.88	1.38	8.75	7.49	1.26	
09/23/06	6.9	5.89	1.01	8.47	7.14	1.33	
09/24/06	7.96	5.65	2.31	8.98	7.15	1.83	
09/25/06	8.01	6.26	1.75	9.13	7.73	1.4	
09/26/06	8.39	6.23	2.16	9.62	7.28	2.34	
09/27/06	8.33	5.84	2.49	9.54	7.23	2.31	
09/28/06	9.15	6.47	2.68	10.68	8.74	1.94	
09/29/06	9.6	7.44	2.16	10.37	8.59	1.78	
09/30/06	9.91	7.63	2.28	10.04	8.22	1.82	
10/01/06	9.36	7.82	1.54	9.83	7.15	2.68	
10/02/06	9.3	7.01	2.29	10.4	6.93	3.47	
10/03/06	9.93	6.9	3.03	10.07	6.13	3.94	
10/04/06	9.11	6.23	2.88	8.89	5.87	3.02	
10/05/06	10.6	6.98	3.62	9.84	7.66	2.18	
10/06/06	12.37	8.17	4.2	10.4	7.48	2.92	
10/07/06	12.89	8.64	4.25	9.49	6.2	3.29	
10/08/06	10.15	6.27	3.88	10.31	6.14	4.17	
10/09/06	13.54	8.68	4.86	11.99	7.12	4.87	
10/10/06	14.55	11.27	3.28	11.91	7.73	4.18	
10/11/06	12.92	11.44	1.48	8.99	7.43	1.56	
<b>Average Δ DO:</b>			2.7				3.5



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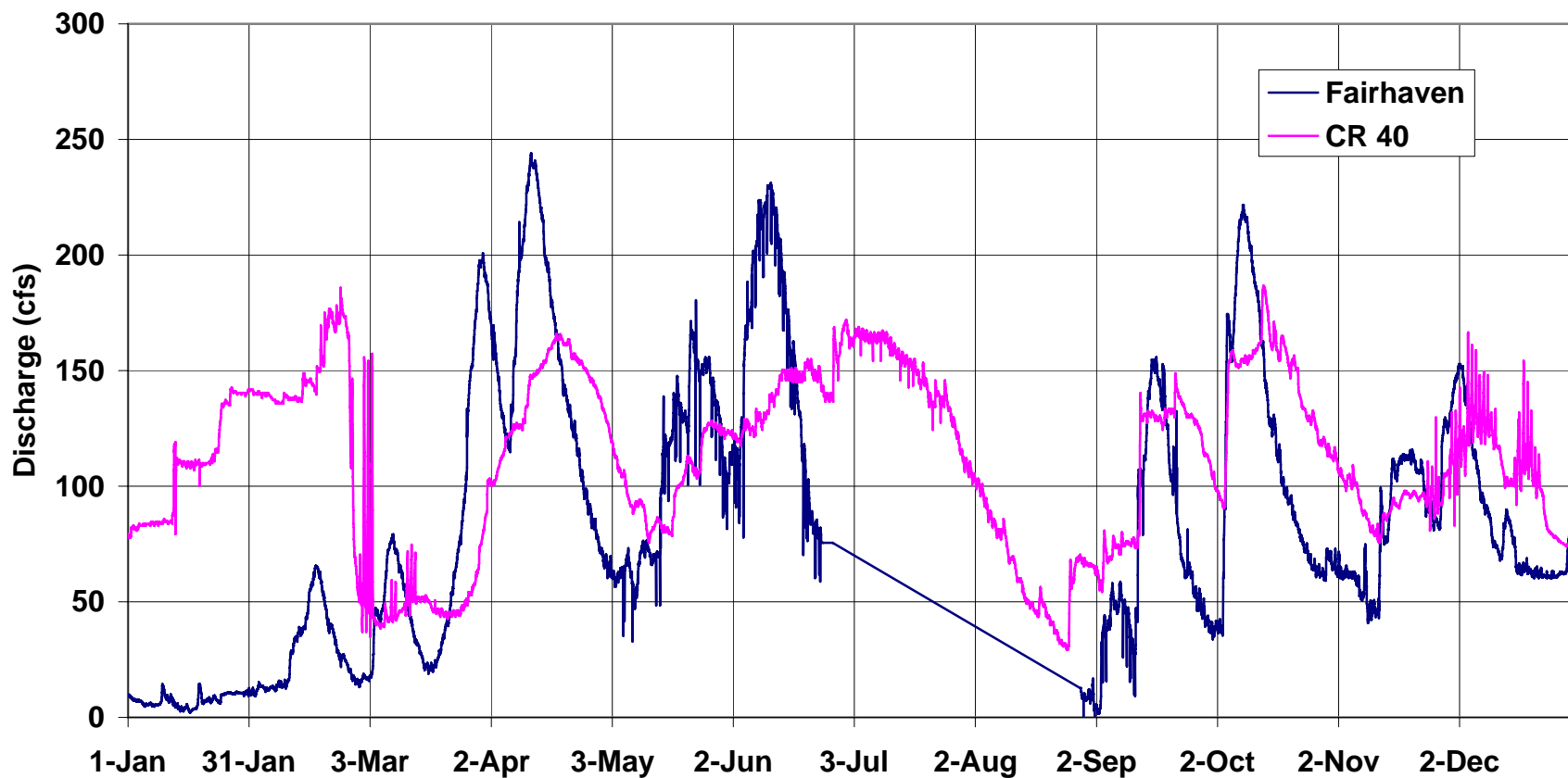
## **Appendix F**

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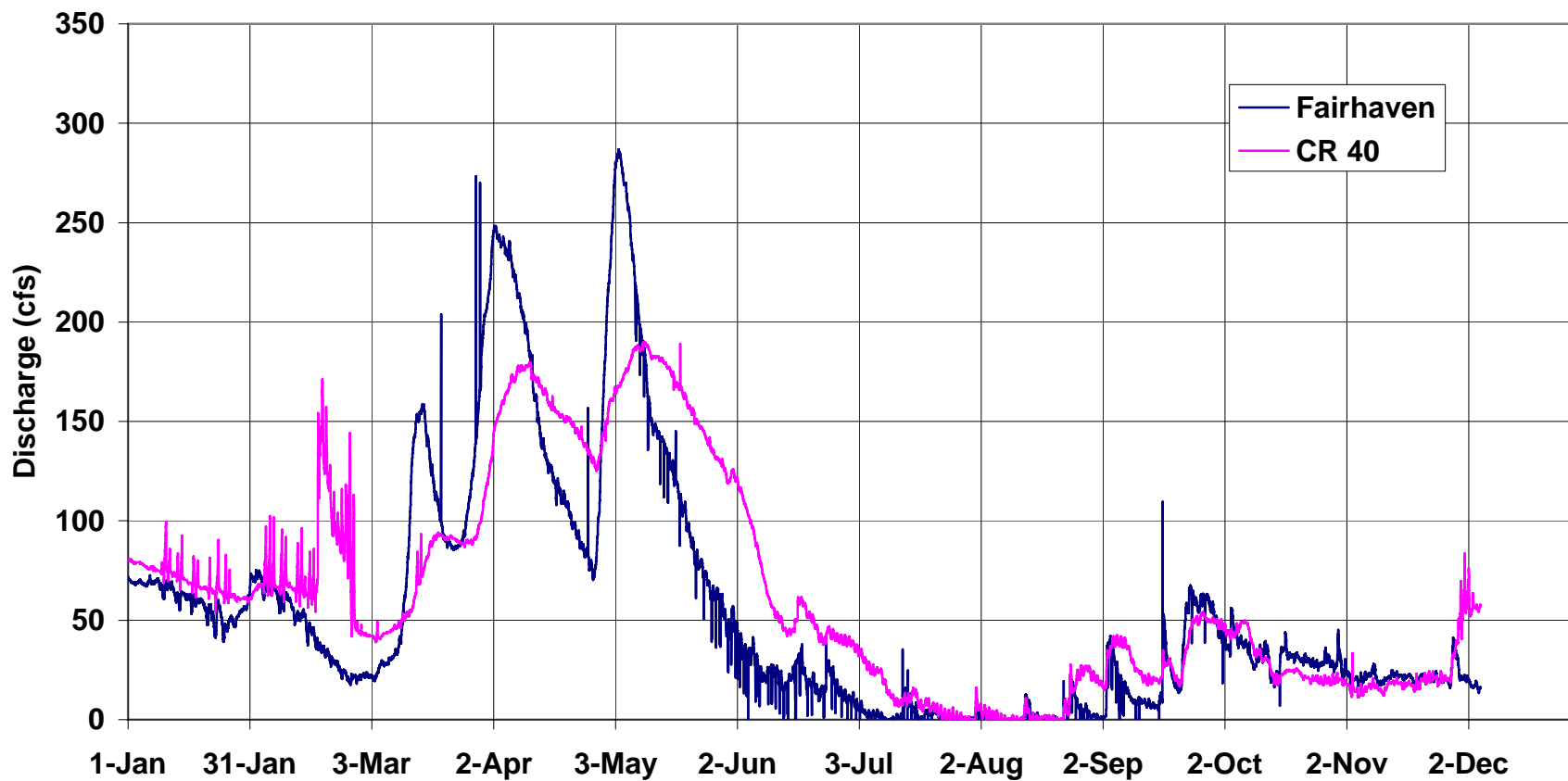
### **Continuous Flow Records**

# Appendix F Figure 1

## Phase II TMDL Study Lake Louisa and The Clearwater River (Clear Lake to Lake Betsy) 2005 Clearwater River Mile Discharge at Fairhaven Dam and CR 40

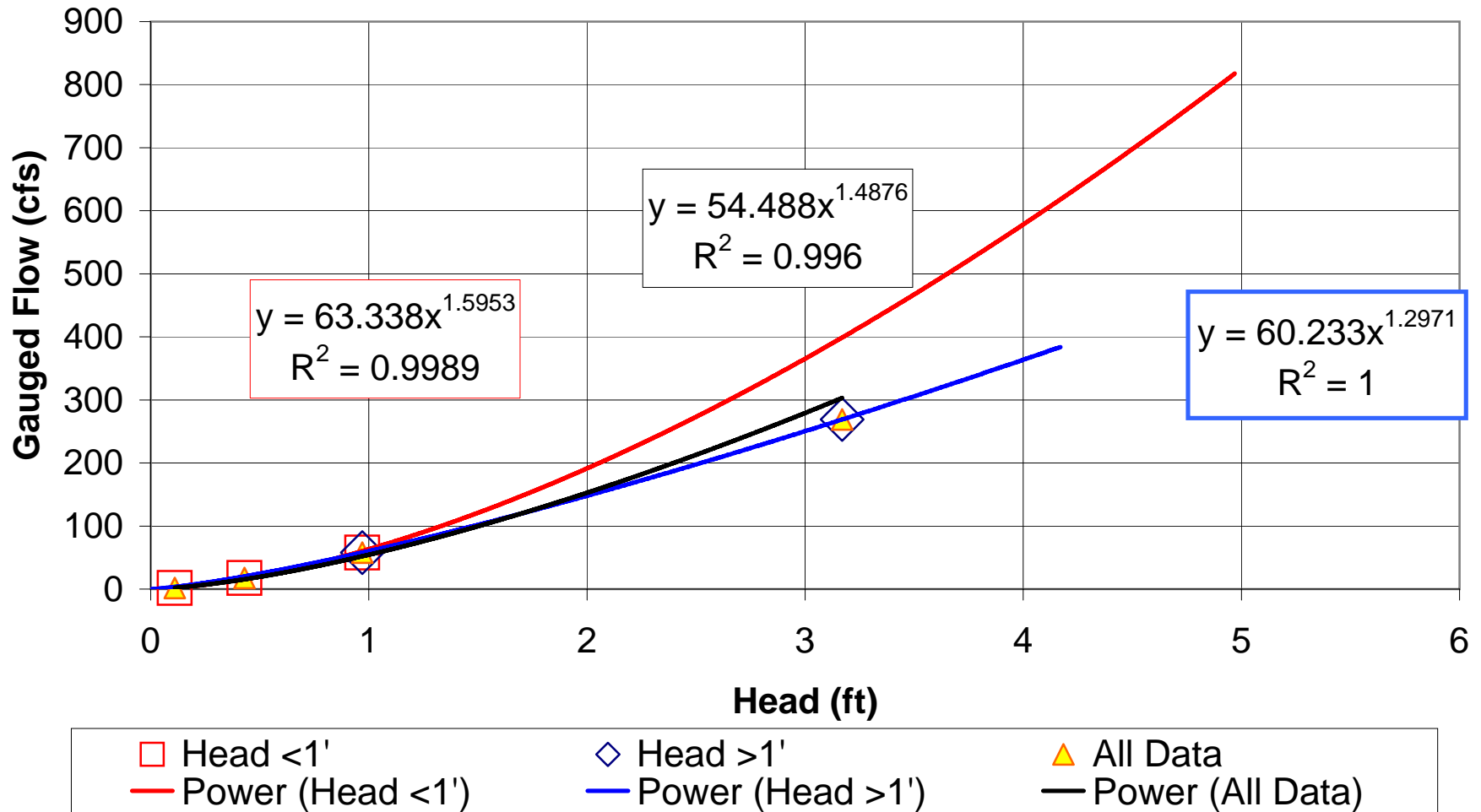


**Appendix F Figure 2**  
**Phase II TMDL Study Lake Louisa and The Clearwater River**  
**(Clear Lake to Lake Betsy)**  
**2006 Clearwater River Mile Discharge at Fairhaven Dam and CR 40**



### Appendix F Figure 3

#### Phase II TMDL Study Lake Louisa and The Clearwater River (Clear Lake to Lake Betsy) Clearwater River at Fairhaven Dam



---

## **Appendix G**

---

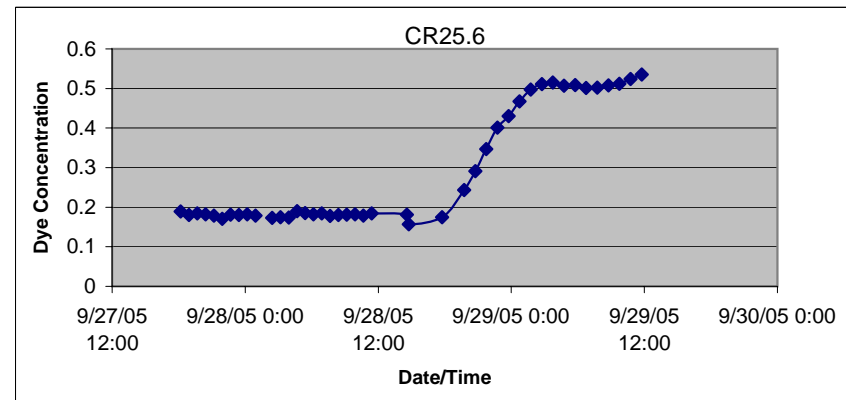
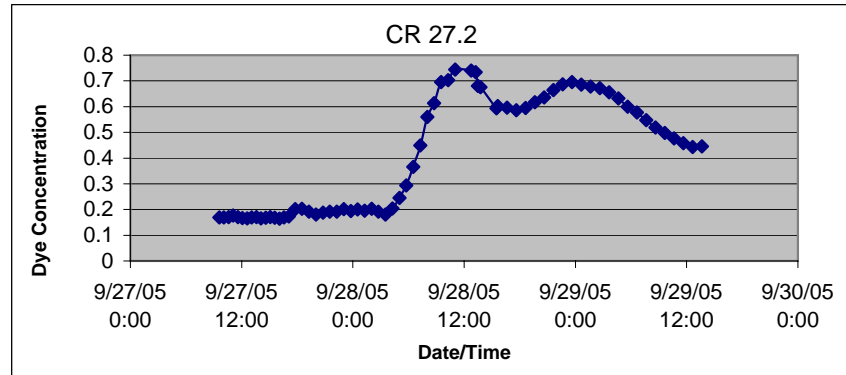
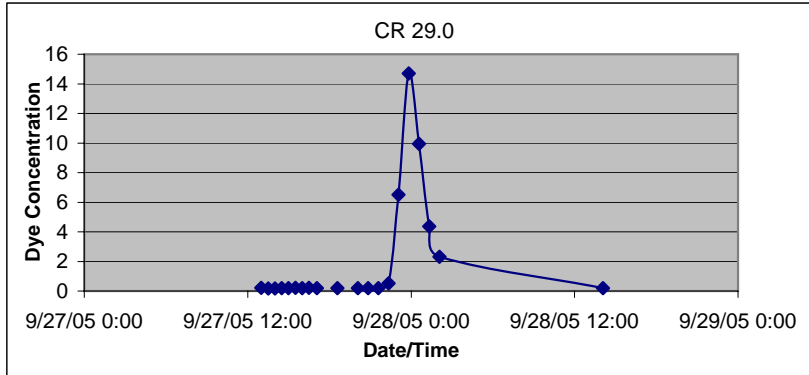
### **Time of Travel Study Results**

## Appendix G

### Clearwater River Watershed District Clearwater River Bacteria and DO TMDL

#### September 2005 Time of Travel Study Results

	Site	Dye Dump Time	Dye Concentration (oz)	Distance from Dump Site (miles)	Dye Peak Time	Time of Travel (hours)	Avg Reach Velocity (miles/hr)	Avg Reach Velocity (ft/sec)	Avg Site Measured Velocity	Gauged Flow (cfs)
Dye Dump #1	CR31.8	9/27/2005 12:00	12	--	--	--	--	--	0.66	6.27
	CR29.0	--	--	2.8	9/27/2005 23:50	11.83	0.24	0.35	0.92	9.68
	CR27.2	--	--	4.6	9/28/2005 23:38	35.63	0.13	0.19	0.11	8.19
Dye Dump #2	CR29.0	9/27/2005 9:15	16	--	--	--	--	--	0.92	9.68
	CR27.2	--	--	1.8	9/28/2005 11:01	25.76	0.07	0.10	0.11	8.19
	CR25.6	--	--	3.4	9/29/2005 3:45	42.5	0.08	0.12	0.10	9.53



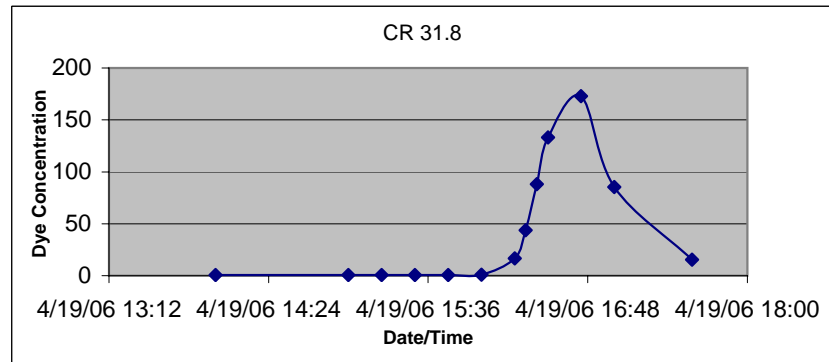
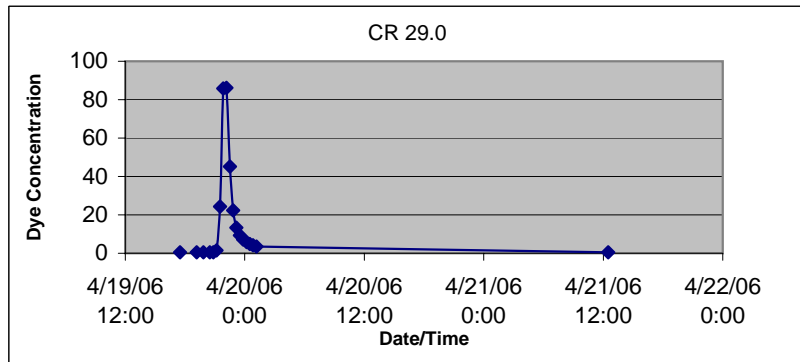
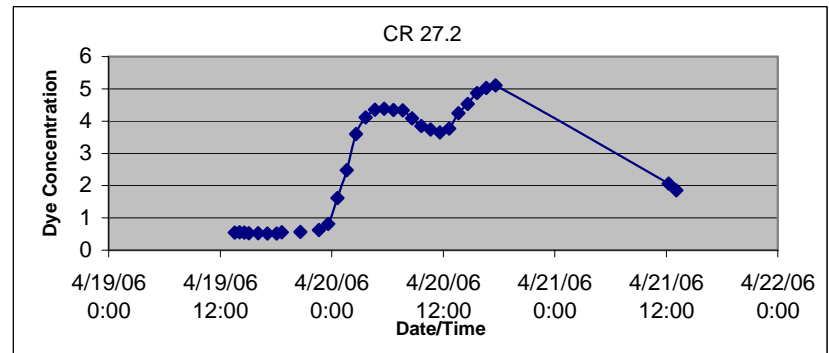
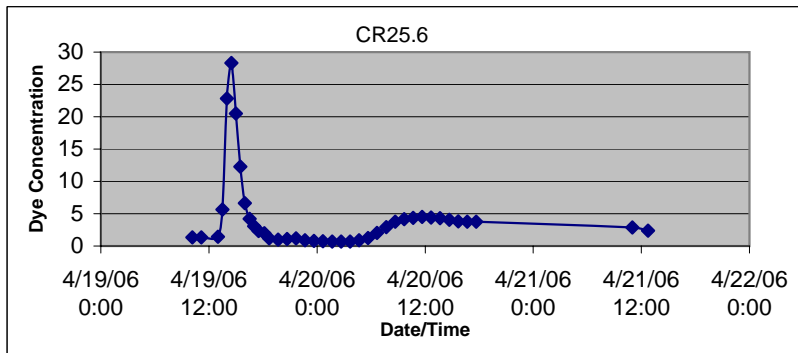


### Appendix G

#### Clearwater River Watershed District Clearwater River Bacteria and DO TMDL

#### April 2006 Time of Travel Study Results

	Site	Dye Dump Time	Dye Concentration (oz)	Distance from Dump Site (miles)	Dye Peak Time	Time of Travel (hours)	Avg Reach Velocity (miles/hr)	Avg Reach Velocity (ft/sec)	Avg Site Measured Velocity	Gauged Flow (cfs)
Dye Dump #1	CR35.3	4/19/2006 11:50	20	--	--	--	--	--	2.23	14.21
	CR31.8	--	--	3.5	4/19/2006 16:45	4.92	0.71	1.04	1.45	26.87
	CR29.0	--	--	6.3	4/19/2006 22:10	10.33	0.61	0.89	1.32	29.15
Dye Dump #2	CR29.0	4/19/2006 10:35	20	--	--	--	--	--	1.32	29.15
	CR27.2	--	--	1.8	4/20/2006 5:38	19.05	0.09	0.14	0.33	34.11
	CR25.6	--	--	3.4	4/20/2006 11:40	25	0.14	0.20	0.30	32.63
Dye Dump #3	CR27.2	4/19/2006 9:10	12	--	--	--	--	--	0.33	34.11
	CR25.6	--	--	1.6	4/19/2006 14:30	5.33	0.30	0.44	0.30	32.63



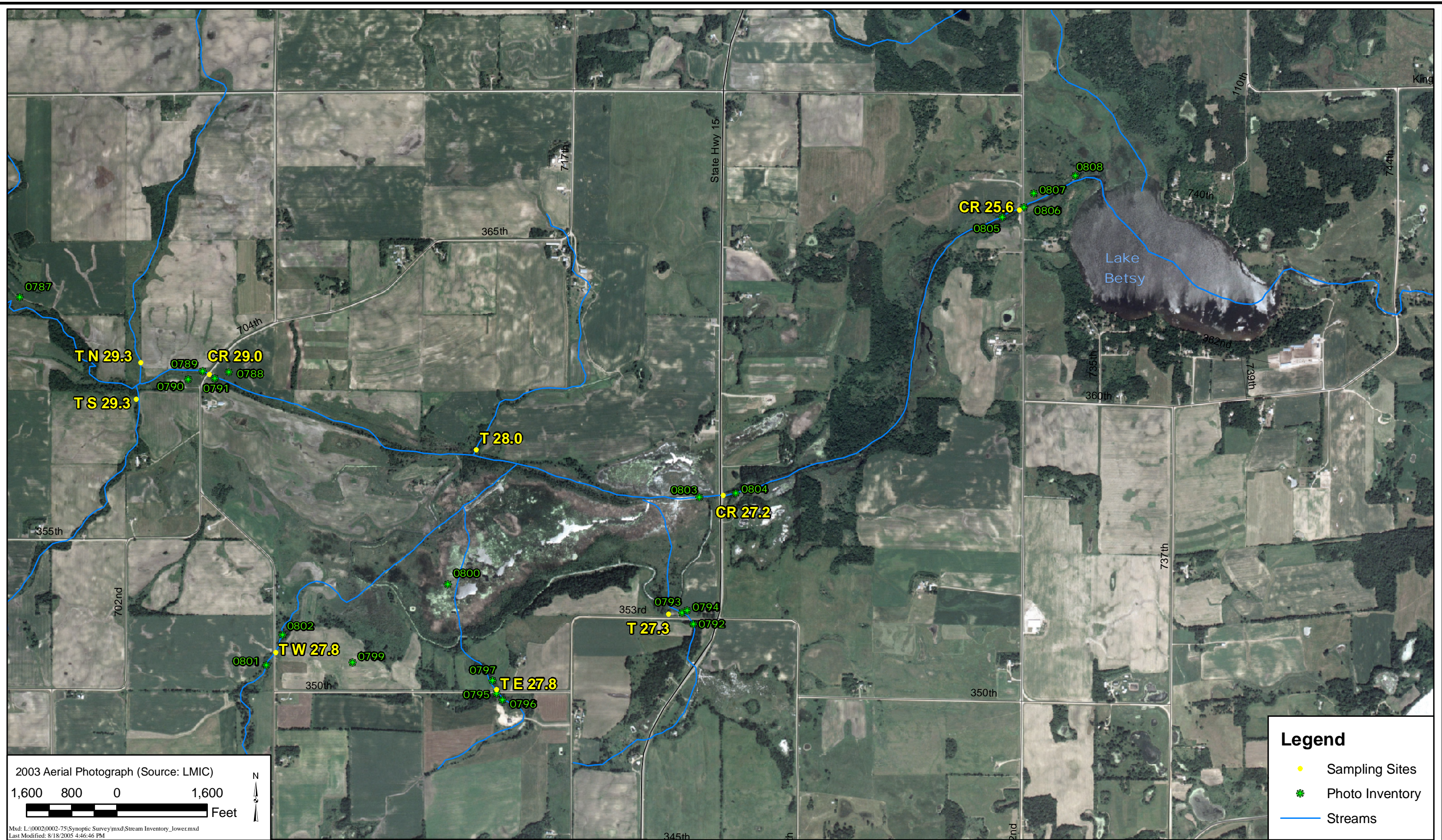
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## **Appendix H**

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### **Field Survey Results**





2003 Aerial Photograph (Source: LMIC)  
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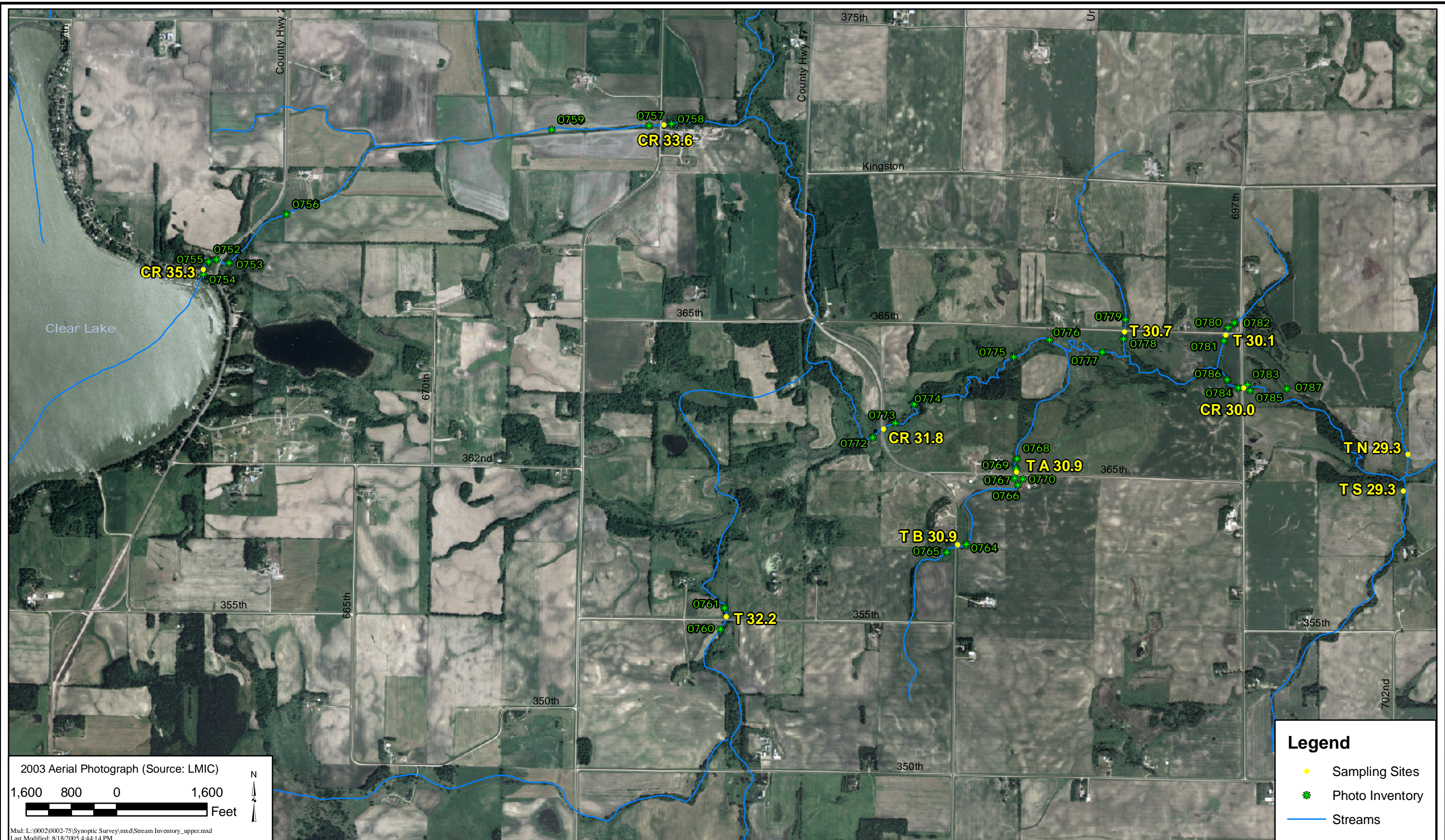
- Sampling Sites
- ✱ Photo Inventory
- Streams

CLEARWATER RIVER WATERSHED DISTRICT  
 Lower Watershed Stream Sampling Locations

**Wenck**  
 Wenck Associates, Inc. 1800 Pioneer Creek Center  
 Environmental Engineers Maple Plain, MN 55359-0429

MAY 2007  
 Figure 1



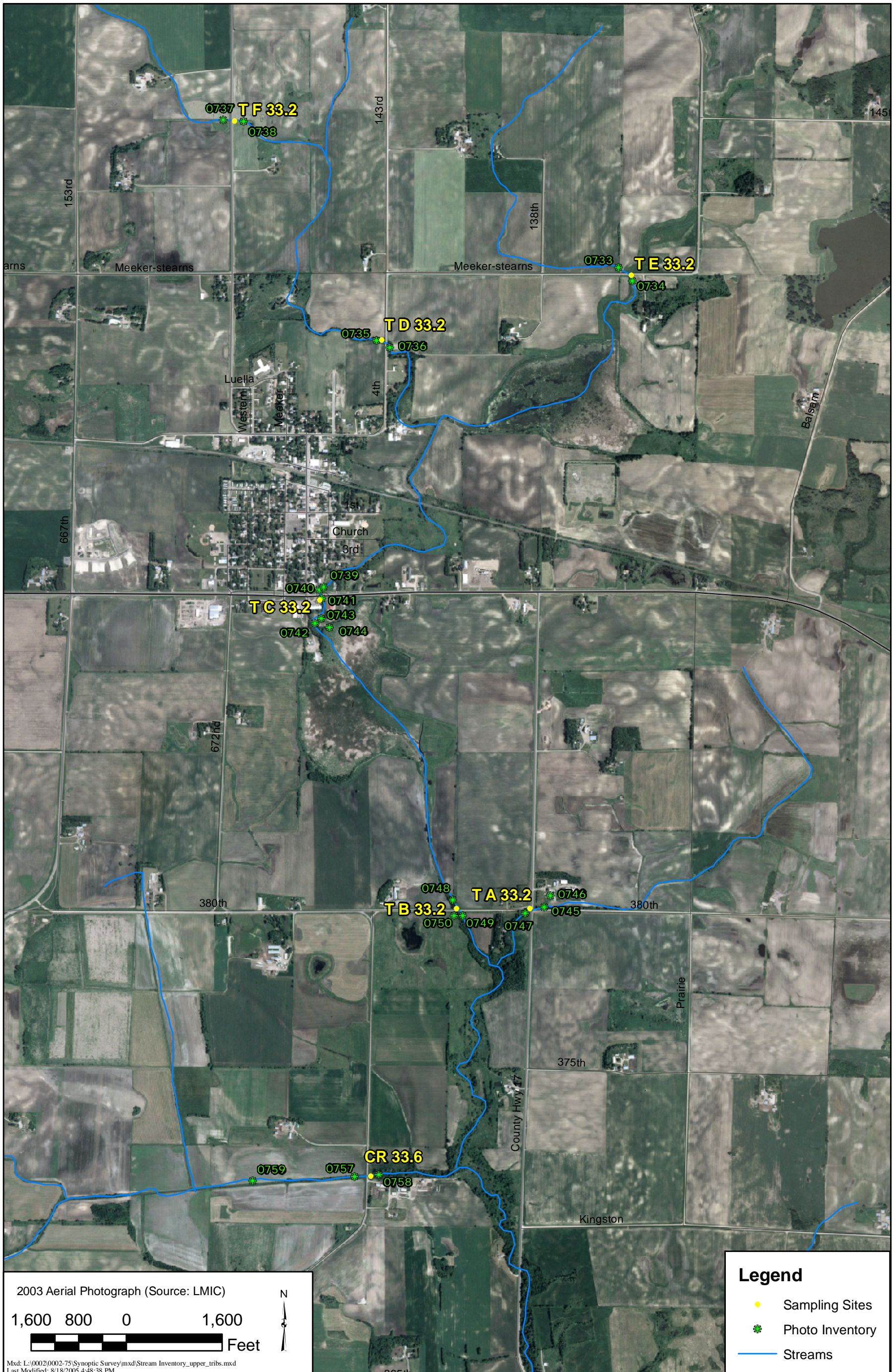


CLEARWATER RIVER WATERSHED DISTRICT  
Upper Watershed Stream Sampling Locations

**Wenck**  
Wenck Associates, Inc. 1800 Pioneer Creek Center  
Environmental Engineers Maple Plain, MN 55359-0429

MAY 2007  
Figure 1





2003 Aerial Photograph (Source: LMIC)

1,600 800 0 1,600 Feet

Mxd: L:\0002\0002-75\Synoptic Survey\mxd\Stream Inventory\_upper\_tribs.mxd  
Last Modified: 8/18/2005 4:48:38 PM

**Legend**

- Sampling Sites
- \* Photo Inventory
- Streams

CLEARWATER RIVER WATERSHED DISTRICT

Upper Watershed Stream Tributary Sampling Locations

COPYRIGHT

Wenck Associates, Inc. 1800 Pioneer Creek Center  
Environmental Engineers Maple Plain, MN 55359-0429

MAY 2007

Figure 1





DSCN0733



DSCN0734



DSCN0735



DSCN0736



DSCN0737



DSCN0738





DSCN0739



DSCN0740



DSCN0741



DSCN0742





DSCN0743



DSCN0744



DSCN0745



DSCN0746





DSCN0747



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DSCN0749



DSCN0750





DSCN0751



DSCN0752



DSCN0753



DSCN0754





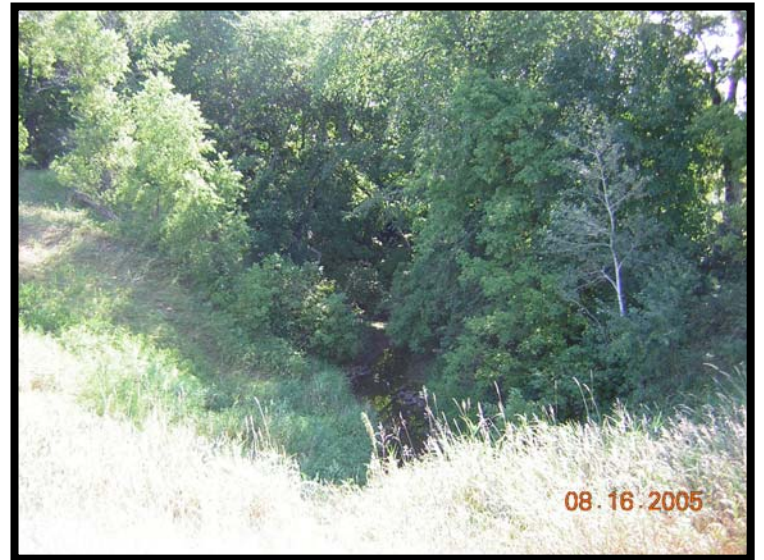
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DSCN0756



DSCN0757



DSCN0758





DSCN0759



DSCN0760



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DSCN0764



DSCN0765



DSCN0766





DSCN0767



DSCN0768



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DSCN0772



DSCN0773



DSCN0774





DSCN0775



DSCN0776

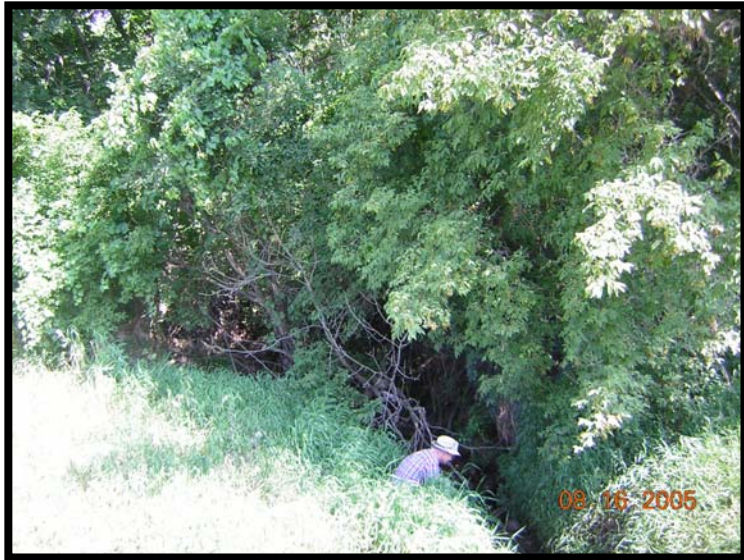


DSCN0777



DSCN0778





DSCN0779



DSCN0780



DSCN0781



DSCN0782





DSCN0783



DSCN0784



DSCN0785



DSCN0786





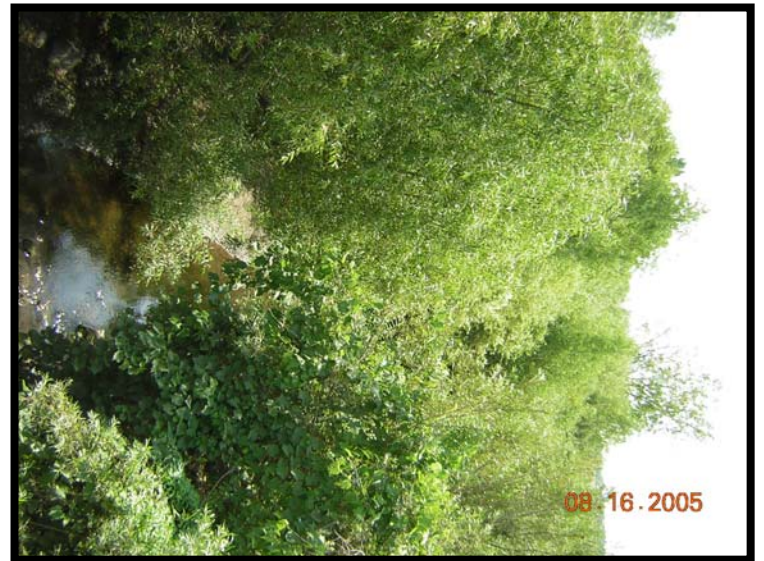
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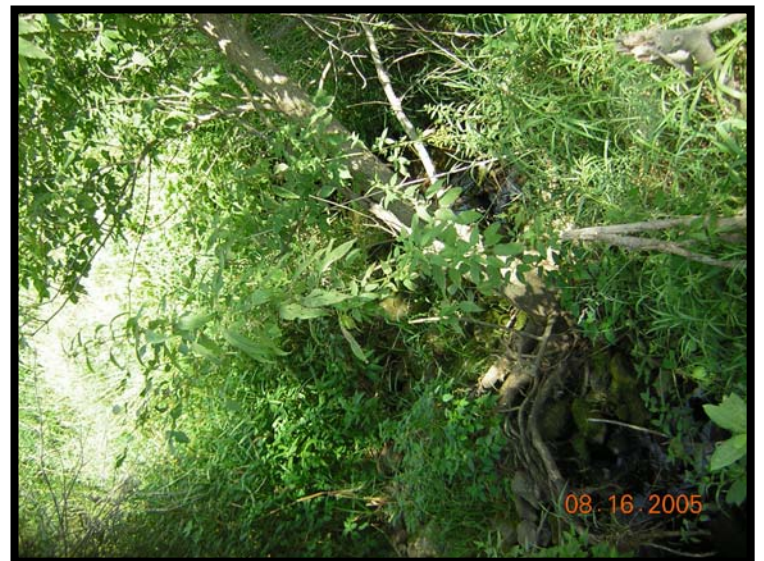
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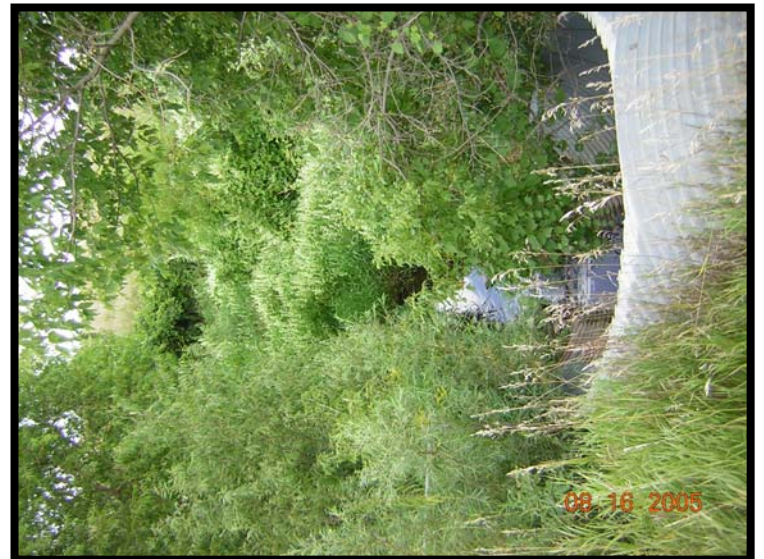
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DSCN0800



DSCN0801



DSCN0802





DSCN0803



DSCN0804



DSCN0805



DSCN0806





DSCN0807



DSCN0808

Clearwater River TMDL  
Physical Inventory

Date/Time 08/16/05

Stream Site CR 2506

Water Body Clearwater River @ Lake Betsy Access Observer WB, GN

GPS Coordinates:

Photos:

0805 up  
0806 down  
0807 down  
0808 down

Channel Morphometry

Ditched and Straight Channel  
Undercut Banks

Riparian Land Use Characteristics

Downstream Upstream  
Pasture Forest  
Forest

Vegetation

Boxelder Riverbank Grape  
Ash Reed Canary  
Buckthorn White Snakeroot  
Coontail  
Duckweed

Tree Canopy and Shaded Areas

Upstream Downstream  
90% 20%

Sediment Type and Classification

Sandy on edges  
Organic muck

Comments and Notes

Forested banks upstream of site, cow pasture  
on N bank downstream

Clearwater River TMDL  
Physical Inventory

Date/Time 08/16/05

Stream Site CR 27.2

Water Body Clearwater River  
at Hwy 15

Observer WB, GN

GPS Coordinates:

Photos: 0803 ~~Upstream~~  
0804 Downstream

Channel Morphometry  
Wide Channel  
Dug out  
Straight

Riparian Land Use Characteristics  
Downstream Forest  
Upstream Wetland

Vegetation  
Downstream: Ash, Boxelder, Reed Canary, Rose, Sycamore, Yellow Willow, Black Willow  
Upstream: Reed Canary, Sandbar Willow, Cattail

Tree Canopy and Shaded Areas  
Downstream 60%  
Upstream 100%

Sediment Type and Classification  
Wetland Soils  
Organic muck

Comments and Notes

Straight dredged channel, ponded area downstream of  
reach, surrounded by wetland upstream

Clearwater River TMDL  
Physical Inventory

Date/Time 8/16/05

Stream Site T27.3

Water Body Tributary @ 353rd St Observer WB, GN

GPS Coordinates:

Photos:

0792 Upstream  
0793 DS  
0794 DS

Channel Morphometry

Straight with steep banks (upstream)  
~~Meanders~~ Meanders (downstream)

Riparian Land Use Characteristics

~~Ag~~ ~~Grassland~~ Grassland

Vegetation

Upstream  
Cattail Jewelweed  
Reed Canary  
Bur Cucumber

Downstream  
Bald Willow  
Elm  
Boxelder

Stinging Nettle Jewelweed  
Reed Canary  
Ash

Tree Canopy and Shaded Areas

Downstream 90%  
upstream 0%

Sediment Type and Classification

Organic Matter  
Muck

Comments and Notes

Upstream, Channel is vegetated and adjacent to ag fields,  
further upstream it is shaded by trees

Downstream, channel is shaded by trees, with a more natural  
channel and wider vegetated buffer

Clearwater River TMDL  
Physical Inventory

Date/Time 08/16/05

Stream Site TE 27.8

Water Body Tributary on 350th St Observer WB, GN

GPS Coordinates:

Photos: 0795 upstream  
0796 upstream  
0797 downstream

Channel Morphometry

Meandering  
Eroded Banks  
Braided  
Steep banks  
downcutting

Riparian Land Use Characteristics

Upstream  
Cow Pasture  
Downstream  
Forest  
Grassland

Vegetation

Upstream  
Elm  
Ash  
Boxelder  
Tree Canopy and Shaded Areas  
90%  
Reed Canary  
Downstream  
Elm  
Boxelder  
Blackthorn  
Jewelweed  
Black Willow

Sediment Type and Classification

Clean fine to medium sand - covered by soil upstream

Comments and Notes

Cow Pasture upstream, tracks evident in streambank, smell of manure, banks eroded from cattle

Downstream, banks are eroded and steep; heavily vegetated

Clearwater River TMDL  
Physical Inventory

Date/Time 8/16/05

Stream Site TW 27.8

Water Body Tributary @ 707th St

Observer WB, GN

GPS Coordinates:

Photos:

0801 UP  
0802 Downstream

Channel Morphometry

Meandering  
Eroded Banks  
Undercut Banks (downstream)

Riparian Land Use Characteristics

Grassland  
Ag Fields

Vegetation

Boxelder      Bur Cucumber      Native Restored Grasses upslope  
Sawbar Willow      Stinging Nettle      Jewelweed  
Reed Canary

Tree Canopy and Shaded Areas

75%

Sediment Type and Classification

~~Riparian area~~ Fine to medium clean sand

Comments and Notes

Riparian area is heavily vegetated with grasses and woody plants.

**Clearwater River TMDL  
Physical Inventory**

Date/Time 08/16/05

Stream Site CR 29.0

Water Body Clearwater River @ 704th St Observer WB, GN

**GPS Coordinates:**

Photos: 788 up  
789 up  
790 down  
791 down

**Channel Morphometry**

Slight Meandering  
Undercut Banks  
Braided  
Sediment Deposits

**Riparian Land Use Characteristics**

Ag (downstream)  
Residential  
Farm on upstream side

**Vegetation**

Black Willow      Sandbar Willow      Bur Cucumber  
Wild Grape      Smooth Brome  
Reed Canary      Reed Canary      ~~Bar Cucumber~~

**Tree Canopy and Shaded Areas**

Upstream - 60%  
Downstream - 90%

**Sediment Type and Classification**

Medium to coarse sand  
Some gravel

**Comments and Notes**

Channel is nearly uniform width, slightly meandering,  
wider grassed buffer upstream (200')

Farm adjacent to stream, no animals evident

Clearwater River TMDL  
Physical Inventory

Date/Time 8/16/05

Stream Site CR 30.0

Water Body Clearwater River @ 70th Observer WB GN

GPS Coordinates:

Photos: 0784 - Upstream  
0785 - downstream  
0786 - downstream

Channel Morphometry

Meandering Undercut banks  
Braided  
Sediment Deposits

Riparian Land Use Characteristics

Upstream Vegetated Buffer (trees)  
Ag fields  
Downstream Vegetated Buffer  
Grassland

Vegetation

Upstream Black Willow Bur Cucumber  
Sandbar Willow Reed Canary  
Boxelder Goldenrod

~~Downstream~~

Tree Canopy and Shaded Areas

Upstream 100%  
Downstream 90%

Sediment Type and Classification

Clean medium to coarse sand  
Organic material at surface

Comments and Notes

Upstream, channel is heavily vegetated by woody vegetation, and bordered by ag fields  
Downstream, channel is bordered by ~~ag~~ grasslands and shrubs



Clearwater River TMDL  
Physical Inventory

Date/Time 8/16/05

Stream Site T 30.1

Water Body Clearwater Tributary on 365th St Observer WB, GN

GPS Coordinates:

Photos:

0780 - Upstream

0783 - CR

0781 - Downstream

0782 - Upstream

Channel Morphometry

Meandering

Steep gradient

Eroded banks (upstream)

Riparian Land Use Characteristics

Up

Vegetated Buffer 150'

Forested

Ag fields

Down

Vegetated buffer

Ag fields

Vegetation

Up

White Oak Boxelder

Wild Grape

White Sycamore

Wood Nettle

Down

Reed Canary

Sandbar Willow

Sumac

Ash

Boxelder

Bur Cucumber

Tree Canopy and Shaded Areas

Up - 100%

Down 60%

Sediment Type and Classification

Medium grained sand

Cobbles and boulders

Comments and Notes

Steep gradient stream with vegetative buffer on both sides surrounded by agricultural fields

Clearwater River TMDL  
Physical Inventory

Date/Time 8/16/05

Stream Site T 3079

Water Body Tributary @ 365th St Observer WB, GN

GPS Coordinates:

Photos:

0778 - downstream  
0779 - upstream

Channel Morphometry

Narrow meandering channel  
Eroded Banks Undercut banks  
Steep gradient

Riparian Land Use Characteristics

Upstream Ag fields Forested buffer  
Downstream Forested grass buffer  
horse pasture  
grassland

Vegetation

Black Willow Goldenrod  
Boxelder Jewelweed  
Reed Canary

Tree Canopy and Shaded Areas

90%

Sediment Type and Classification

Coarse sand with some gravel  
Very little organic matter

Comments and Notes

Stream has steep gradient, less grass in understory upstream,  
more erosion and undercutting upstream

Clearwater River TMDL  
Physical Inventory

Date/Time 8/16/05

Stream Site T30.9

Water Body Tributary @ 355th St

Observer WB, GN

GPS Coordinates:

Photos:

0764 - upstream T30.95  
0765 - downstream  
0766 - upstream  
0767 - upstream  
0770 - upstream  
0768 - downstream  
0769 - upstream

Channel Morphometry

Upstream  
Narrow channel with steep eroded banks  
Downstream  
Channel widens with flatter banks  
Some undercut and eroded banks

Riparian Land Use Characteristics

Upstream  
Agricultural fields  
Farm with feedlot  
Downstream  
Forested  
Grassland

Vegetation

Downstream  
Boxelder  
Green Ash  
Bur Cucumber  
Wild Grape  
Thistle

Tree Canopy and Shaded Areas

Upstream - 0%  
Downstream - 100%

Sediment Type and Classification

Medium to coarse sands with organics

Comments and Notes

Stream flows through feedlot with cattle in stream (2:15-20) upstream.

Heavily forested banks downstream

**Clearwater River TMDL  
Physical Inventory**

Date/Time 8/16/05

Stream Site CR 31.8

Water Body Clearwater River @ 365th Observer WB, GN

GPS Coordinates:

Photos: 0772 - upstream  
0773 - downstream

**Channel Morphometry**

~~Meandering~~  
Meandering  
Undercut banks  
Braided channel      Sediment deposits

**Riparian Land Use Characteristics**

Wetland  
Forested

**Vegetation**

Submergent,      Reed Canary      Goldenrod  
Cobtail      Sandbar willow  
Boxelder

**Tree Canopy and Shaded Areas**

75%

**Sediment Type and Classification**

Fine to medium sand  
layers of gravel  
some sabbie and boulders

**Comments and Notes**

Stream has a flat sloped banks, flows through wetland  
area with wide buffer from ag crops.

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Clearwater River TMDL  
Physical Inventory

Date/Time 08/16/05

Stream Site T32.2

Water Body Tributary at 355th St

Observer WB, G.V

GPS Coordinates:

Photos:

0760 - upstream  
0761 - downstream

Channel Morphometry

Meandering  
Flat sloped banks  
Straighter channel downstream with steeper eroded and undercut banks  
Wide vegetated buffers

Riparian Land Use Characteristics

Upstream  
Forested  
Wetland  
Ag  
Downstream  
Forested  
Restored grassland

Vegetation

Boxelder  
Ash  
Jewelweed  
Dogwood  
Wild Grape  
Willow  
Goldenrod  
Bur Cucumber  
Beggarsstick  
Reed Canary  
Great Ragweed

Tree Canopy and Shaded Areas

100%

Sediment Type and Classification

Medium to coarse sands  
Organic layer on top

Comments and Notes

Upstream

Narrower channel with flatter slopes, more vegetation in understory  
wetlands upstream

Downstream

Heavily forested with steeper banks, wider channel, dug out  
ponded area

Clearwater River TMDL  
Physical Inventory

Date/Time 8/16/05 10:00

Stream Site CR 35.3

Water Body Clearwater River at Clear Lake Observer WB, GN

GPS Coordinates:

Photos:

0752 - ~~downstream~~ upstream

0753 - upstream

0754 - outlet from lake

0755 - Campground

Channel Morphometry

Meandering and Straightened

Riparian Land Use Characteristics

Downstream  
Wetland  
Forest

Upstream  
Campground  
Mowed turf grass to stream edge  
Residential

Vegetation

Downstream  
Reed Canary  
Cattail  
Stinging Nettle

Upstream  
Kentucky Bluegrass  
Cottonwood  
Willow

Tree Canopy and Shaded Areas

25% ds  
70% us

Sediment Type and Classification

Gravel and Cobbles  
Medium to coarse sand

Comments and Notes

Outlet from Clear Lake

Campground and residences upstream with mowed turf grass

Clearwater River TMDL  
Physical Inventory

Date/Time 08/16/05

Stream Site CR 33.6

Water Body Clearwater River  
@ 675th St

Observer WB, GN

GPS Coordinates:

Photos:

0757 - upstream

0758 - downstream

Channel Morphometry

Straightened Ditch Upstream

Meandering downstream

Riparian Land Use Characteristics

95 100 ft vegetated buffer  
smooth brome Ag fields  
border

Vegetation

Reel Canary  
Smooth Brome  
Goldenrod  
Boxelder

Tree Canopy and Shaded Areas

20% ~~downstream~~ upstream  
100% downstream

Sediment Type and Classification

Upstream - medium to coarse sandy clay

Downstream - coarser sand, some gravel and cobble

Comments and Notes

Channel is straight narrow ditch with steep banks upstream,  
flowing through agricultural fields  
Downstream, channel has more meanders and is heavily forested,  
channel widens and sediment is coarser grained with some  
gravel and cobble. Farm adjacent to stream. Very steep  
banks.

Clearwater River TMDL  
Physical Inventory

Date/Time 8/16/05 9:45

Stream Site TB 33.2

Water Body ~~TB 33.2~~ tributary  
@ 380th

Observer WB, GN

GPS Coordinates:

Photos:

0748 - upstream

0749 - downstream channel

0750 - Stream restoration, native grassland

Channel Morphometry

Straight channel

Flooded dugout area downstream

Erosion control downstream

Riparian Land Use Characteristics

Upstream  
Ag land (soybeans/corn)

Downstream  
- Restored Grassland  
- Forest

Vegetation

60% Arrowhead (in channel)

Reed Canary

Boxelder

Bur reed

Ash

Cattail

Restored Native grasses (downstream)

Smartweed

Tree Canopy and Shaded Areas

25% upstream (on E bank only)

75% downstream

Sediment Type and Classification

Medium to coarse sand

< 10% silt, some organics

Comments and Notes

Heavily vegetated ditch upstream, with trees removed on west bank. Drain tile enters from E bank, 30 ft buffer on stream

Stream restoration/erosion control downstream, wide vegetated buffer, restored grassland.

Very little water in streambank



**Clearwater River TMDL  
Physical Inventory**

Date/Time 8/16/05

Stream Site TA 332

Water Body ~~TAA 332A~~ Tributary Observer WB, GN  
@ 380th & City Hwy 17

GPS Coordinates:

Photos:

- 0745 - upstream
- 0746 - Farm adjacent to stream
- 0747 - downstream

**Channel Morphometry**

Meandering  
Culvert under road drops down to stream

**Riparian Land Use Characteristics**

Upstream  
Farm adjacent on N side  
Agriculture  
Mowed grass

Downstream  
Forested area  
Residence

**Vegetation**

60% Reed Canary	String Nettle	Black Willow	Wild Grape
30% Boxelder	Bar Cucumber	Buckthorn	Jewelweed

**Tree Canopy and Shaded Areas**

80% (Boxelder, Buckthorn, Black Willow)

**Sediment Type and Classification**

Fine to coarse, organic rich sand

**Comments and Notes**

Farm adjacent to stream on N end, grass mowed down to ditch.  
Heavily forested downstream with a residence on stream

Clearwater River TMDL  
Physical Inventory

Date/Time 8/16/05

Stream Site TC 33.2

Water Body Tributary @ Hwy 55 in Watkins Observer WB, GN

GPS Coordinates:

Photos:

0739 - Upstream

0740 - Culvert upstream coming from gas station

0741 - downstream

0742 trash pile

0743 - mound  
0744 - wetland

Channel Morphometry

Straight channel (ds) Meandering upstream

Sediment deposits

Under cut banks

Riparian Land Use Characteristics

Light Industrial (downstream)

Residential (upstream)

Gas station (upstream)

Mowed grass to stream edge

Vegetation

80% Reed Canary

Stringing Nettle

Bur Cucumber

Great Ragweed

Smartweed

Jewelweed

Tree Canopy and Shaded Areas

60% (us) Boxelder Ash

Sediment Type and Classification

Fine to coarse sand

Comments and Notes

Stream is more meandering upstream of road, straightened channel downstream. Flows through residential areas (Watkins) and is adjacent to gas station. Downstream, it flows through a large wetland area.

-Trash piles and a large mound of dirt near entrance to wetland behind storage buildings.

Clearwater River TMDL  
Physical Inventory

Date/Time 8/16/05

Stream Site TF33.2

Water Body Tributary @ Colby 2

Observer WB

GPS Coordinates:

Photos:

0738-ds  
0737-us

Channel Morphometry

Straight, ditched channel  
Probably drained wetland areas

Riparian Land Use Characteristics

US - Agriculture (Corn, Beans, Hay), Farm directly adjacent to ditch

DS - Mowed Hay/Grass

Width of buffer varies from 15 to 100 ft

Vegetation

80% Reed Canary Green Bulrush Jewelweed Bar Cucumber  
Stinging Nettle Thistle Smooth Brome

Tree Canopy and Shaded Areas

0%

Sediment Type and Classification

Medium grained sandy loam

Black organic wetland soils

Comments and Notes

Drainage ditch runs through mowed grass/hay and ag fields.  
Wetland area upstream

Clearwater River TMDL  
Physical Inventory

Date/Time 8/16/05

Stream Site TD 33.2

Water Body Tributary @ 143rd

Observer WB GN

GPS Coordinates:

Photos: 0735 - upstream  
0736 - downstream

Channel Morphometry

Meandering channel  
Deposits of debris and sediment

Riparian Land Use Characteristics

Vegetated Buffer (30ft) upstream 100ft+ downstream  
Agricultural (corn, soybeans)

Vegetation

<u>70% Boxelder</u>	<u>Bur Cucumber</u>	<u>hambquarters</u>	<u>Goldenrod</u>
<u>Wild Grape</u>	<u>Jewelweed</u>	<u>Stinging Nettle</u>	<u>smooth Brome (buffer area)</u>

Tree Canopy and Shaded Areas

90% (Boxelder, Ash)

Sediment Type and Classification

Fine to coarse sand  
Some Cobble on downstream end

Comments and Notes

-Channel is completely dry.  
Pool of water on downstream end. Channel narrows downstream

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Clearwater River TMDL  
Physical Inventory

Date/Time 8/16/05

Stream Site TE 33,2

Water Body Tributary @ Meeker - Stearns

Observer WB

GPS Coordinates:

Photos:

0733 - upstream  
0734 - downstream

Channel Morphometry  
Ditched channel

Riparian Land Use Characteristics

Agricultural fields (corn, beans) Grass next to ditch  
Grassed Banks (10ft)

Vegetation

80% Reed Canary Stringing Nettle  
Smooth Brome Alfalfa

Tree Canopy and Shaded Areas

0%

Sediment Type and Classification

Silty Muck with some fine sand

Comments and Notes

- Drainage Ditch flows through mowed grassland. Mixed agricultural use on all sides of stream. Flows through wetland downstream. Channel shape varies from GIS coverage

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## **Appendix I**

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### **Optical Brightener Sampling Results**

## **Appendix I: Optical Brightener Sampling Results**

Passive sampling for optical brighteners was conducted in the CRWD in 2006 to determine the role of failing septic systems in the dissolved oxygen and bacteria impairment.

Optical brighteners are fluorescent white dyes that are often added to laundry soaps and detergents. As a result of their use in laundry soaps, they typically can be found in domestic waste waters that contain laundry effluent. Optical brighteners are removed from waste water by binding to soil and organic particles. If they are not removed by a functioning septic system, they can enter groundwater and surface water bodies.

Because optical brighteners can be detected with the use of a long wave fluorescent, or black light, their presence can be detected in surface or groundwater. The presence of optical brighteners in surface or groundwater, while they are not necessarily harmful to the water themselves, can be an indicator of failing septic systems or a direct discharge of untreated waste water into a surface water body.

### **Methodology**

Optical brightener sampling involves placing a sampling device into a stream and allowing the stream to flow through the device for a fixed period of time. As water flows through sampling device, the optical brighteners accumulate on the pad. The sampling device is then viewed under a fluorescent or black light. If fluorescent areas are seen on the pad under the light, the pad has been exposed to optical brighteners. If the pad does not fluoresce, it can be assumed that optical brighteners were not present in the stream in which it was deployed.

The sampling device is made up of an unwashed cotton pad that is placed inside of a black plastic mesh cage that secures the pad. The sampling device is then secured in flowing water in the stream.

Optical brightener sampling was conducted at four mainstem sites on the Clearwater River and one tributary stream (Figure I-1). The sampling devices were placed in the stream on April 19, 2006 and were collected May 2, 2006 (Figure I-1).

After the devices were collected from the stream, the cotton pads were cleaned of as much sediment and organic matter as possible, dried, and analyzed for the presence of optical brighteners in accordance with methodologies set forth in “An Optical Brightener Sampling Handbook” that can be found at <http://www.naturecompass.org/8tb/sampling/>.

### **Results**

After the cotton pads collected from each site were dried, they were analyzed for the presence of optical brighteners by viewing them in a dark room under a black light. Indicators of optical brighteners were not detected on any of the pads.

### **Conclusions**

Because no optical brighteners were found in the Clearwater River, and there are very few homes in close proximity to the stream, results indicate that failing septic systems are most likely not a significant contributor to elevated bacteria levels or oxygen demand in the impaired reach of the Clearwater River.



**Reference**

Sargent, Dave and Castonguay, Wayne. “An Optical Brightener Sampling Handbook”

<http://www.naturecompass.org/8tb/sampling/>



CRWD

Optical Brightener Sampling Locations


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 Environmental Engineers Maple Plain, MN 55359-0429

JUL 2007

Figure I-1

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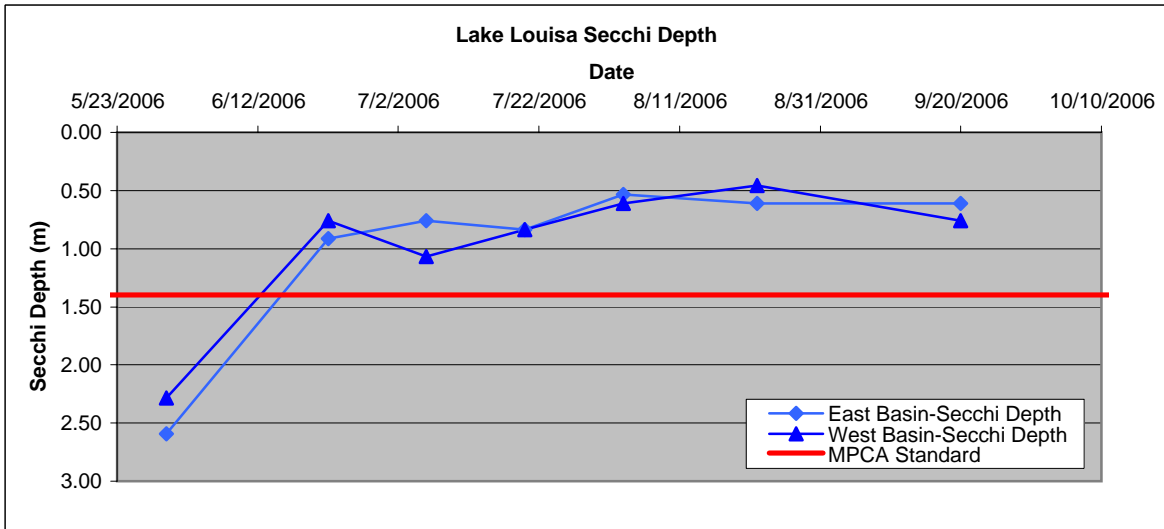
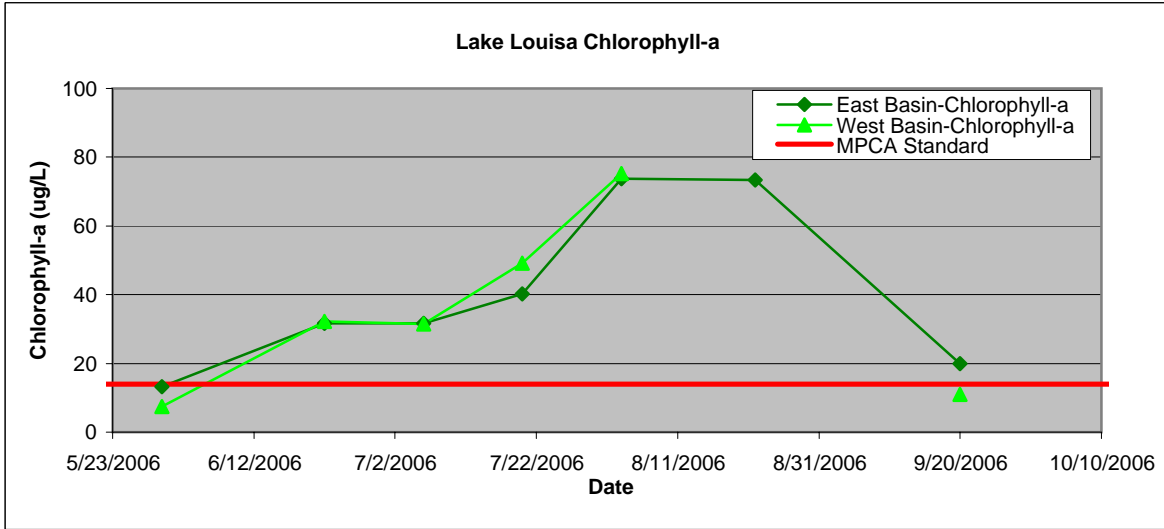
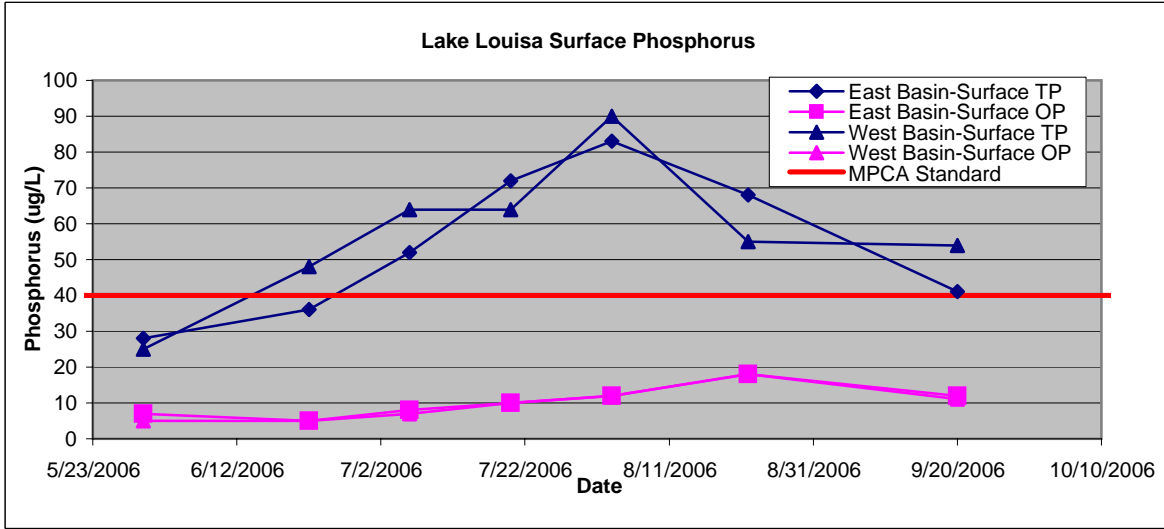
## **Appendix J**

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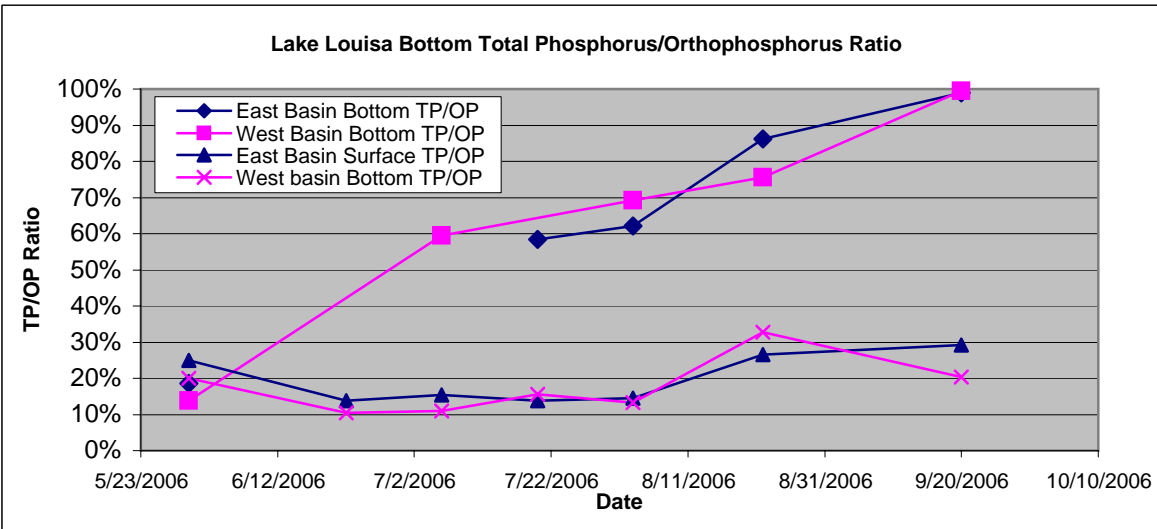
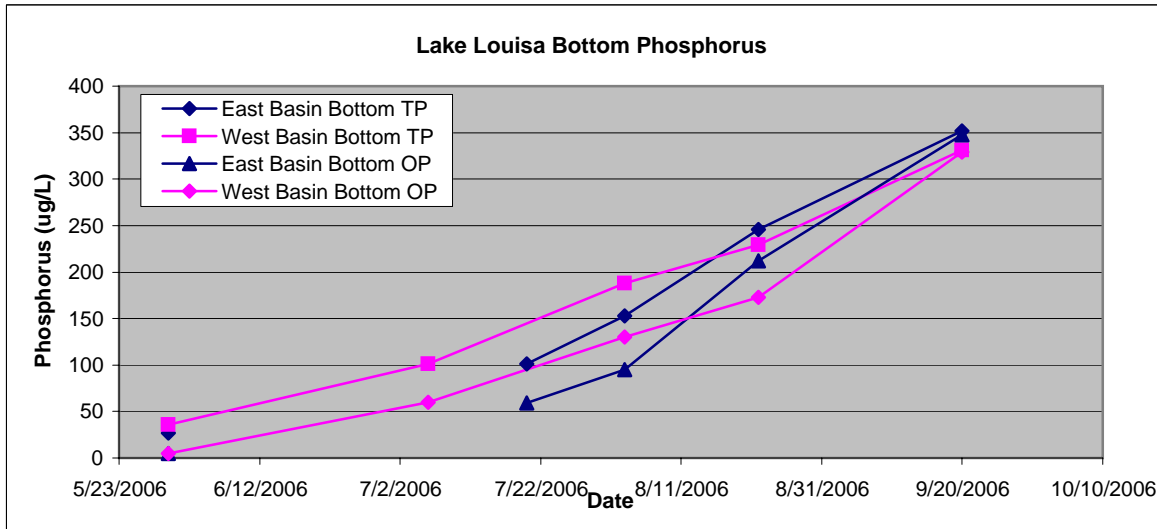
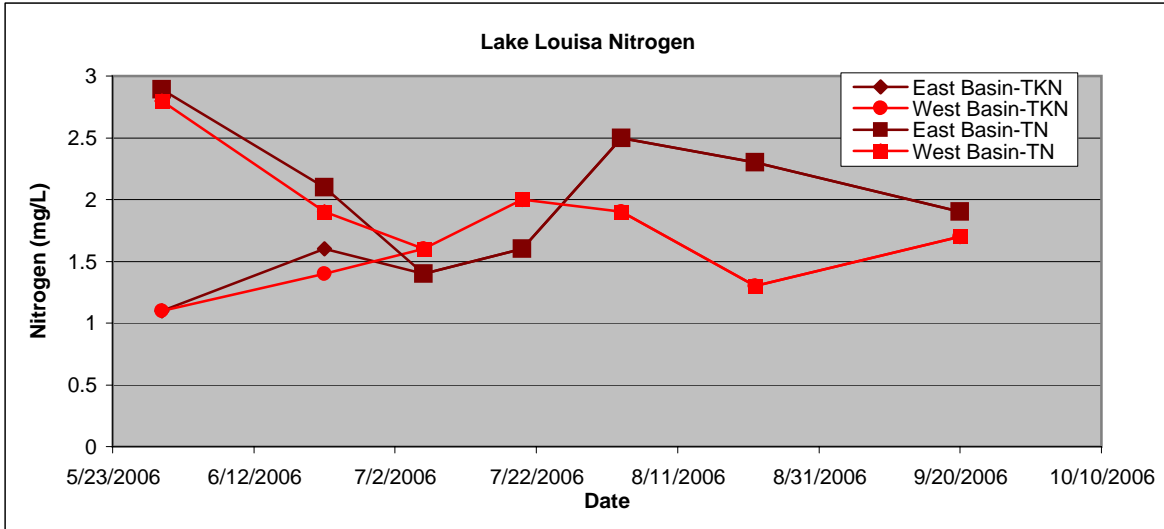
### **Lake Louisa Data Evaluation**



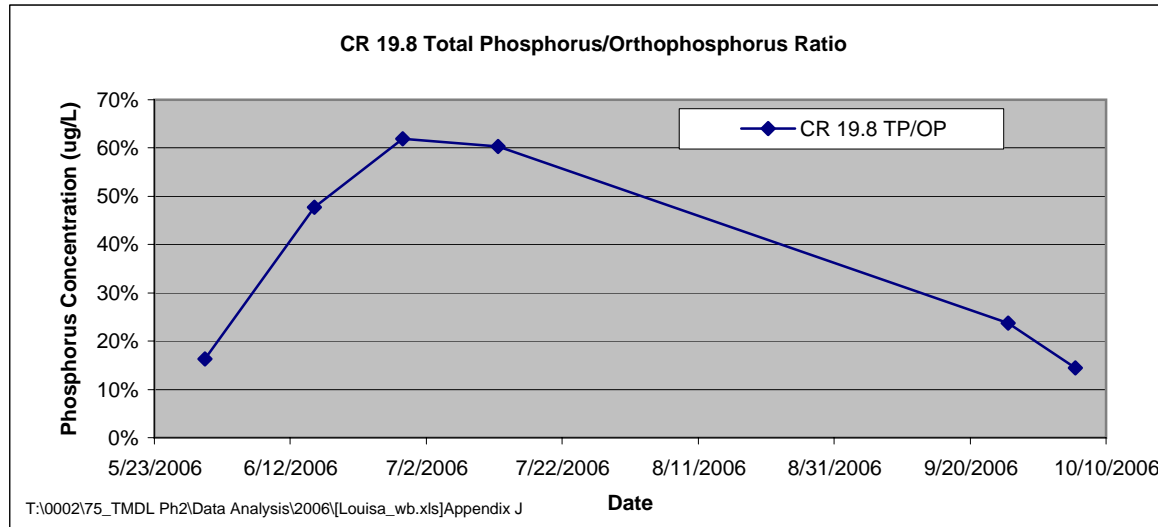
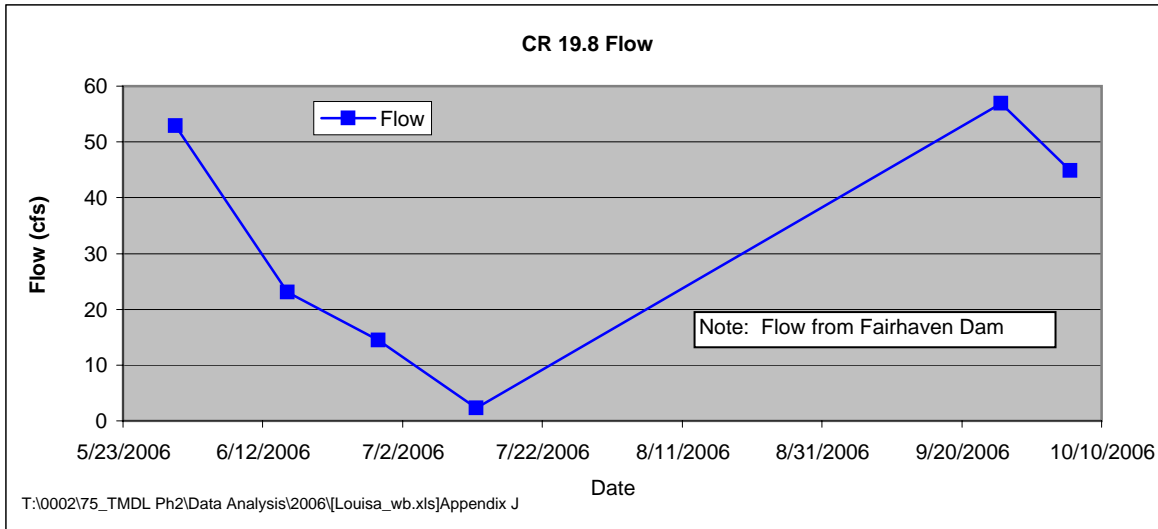
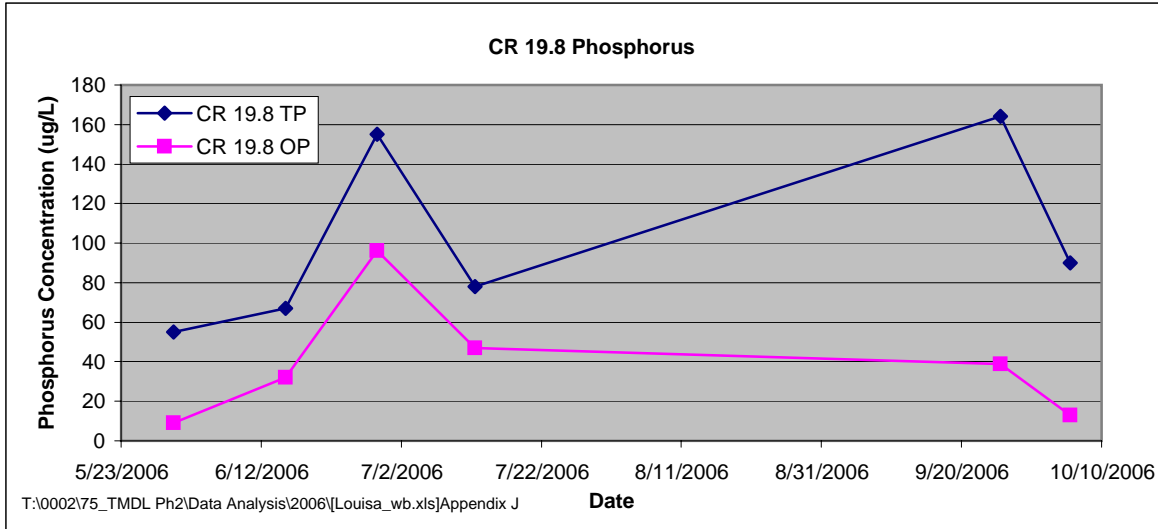
**Appendix J**  
**Clearwater River Watershed District**  
**Lake Louisa Nutrients TMDL**  
**Lake Louisa Data**



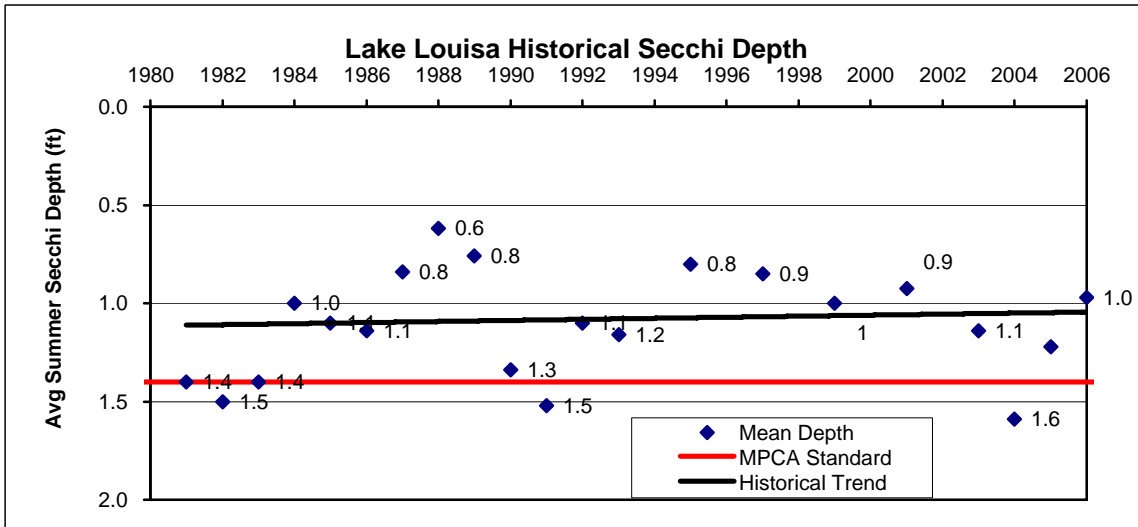
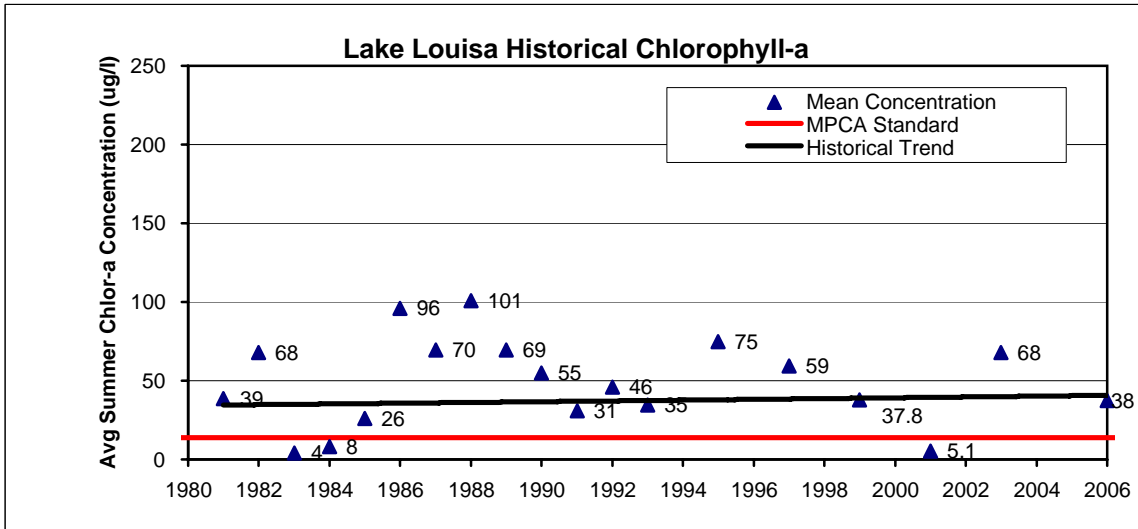
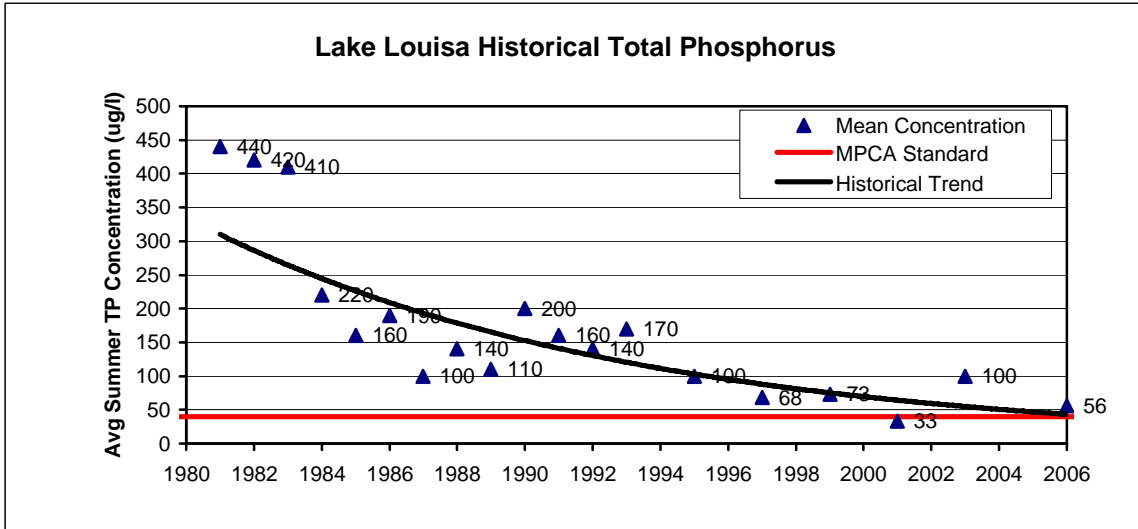
**Appendix J  
Clearwater River Watershed District  
Lake Louisa Nutrients TMDL  
Lake Louisa Data**



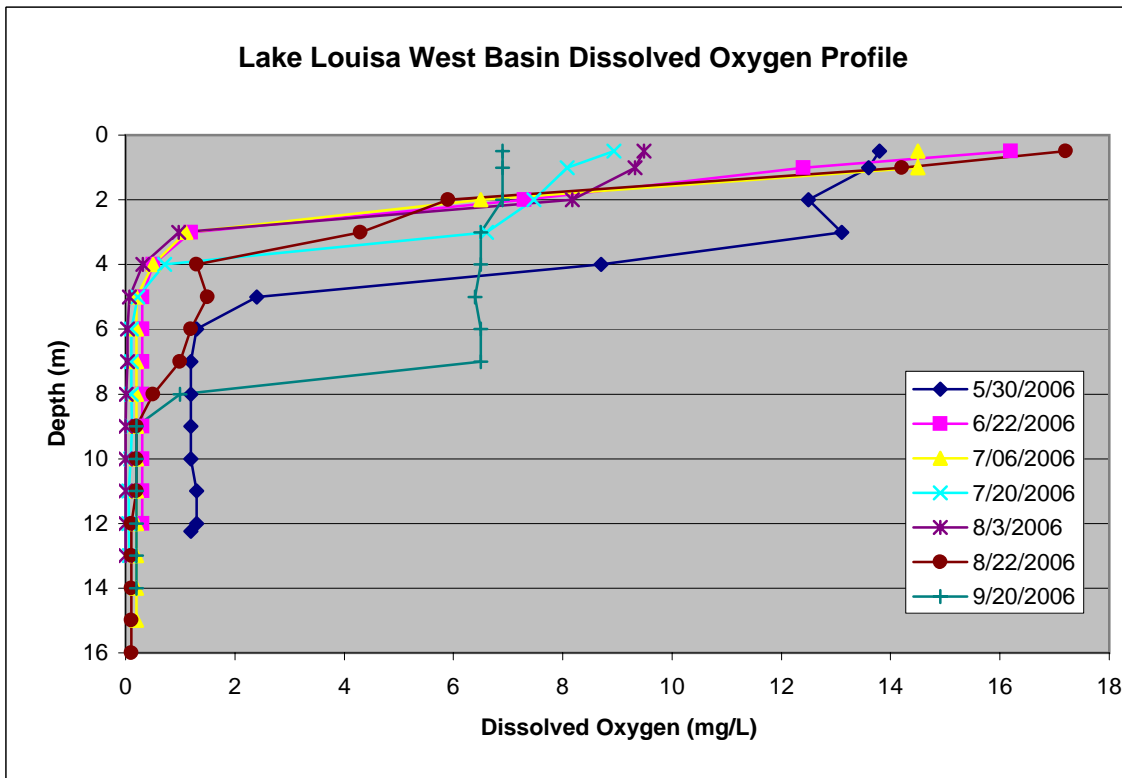
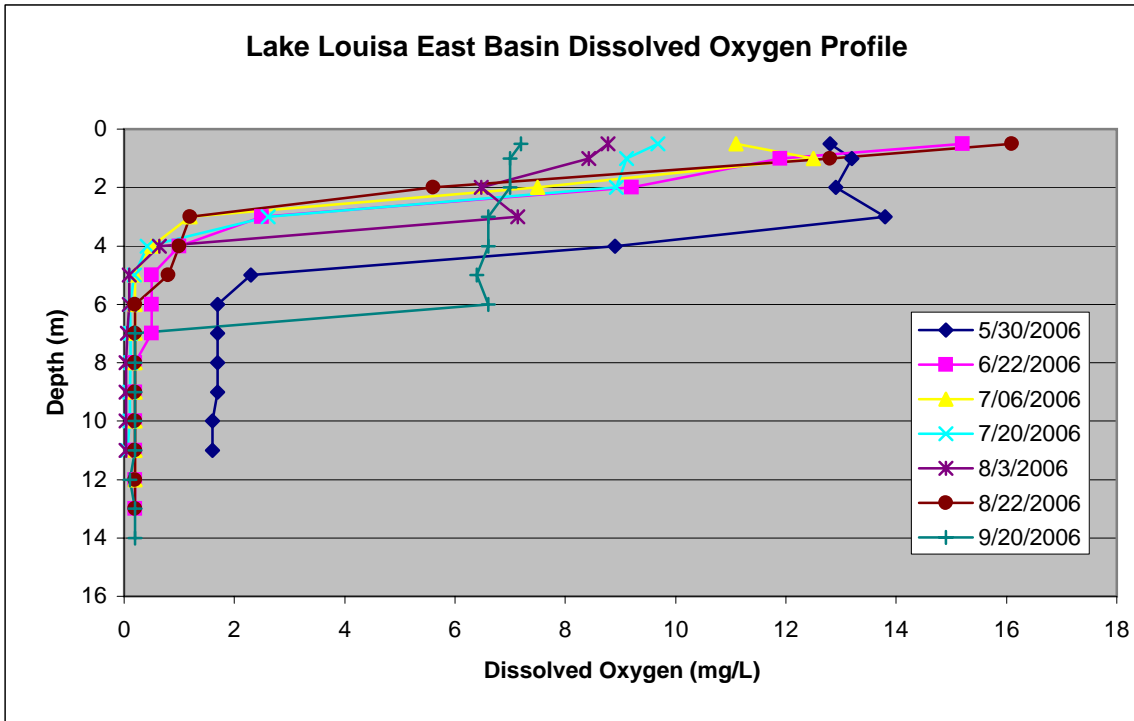
**Appendix J**  
**Clearwater River Watershed District**  
**Lake Louisa Nutrients TMDL**  
**Lake Louisa Data**



**Appendix J**  
**Clearwater River Watershed District**  
**Lake Louisa Nutrients TMDL**  
**Lake Louisa Data**

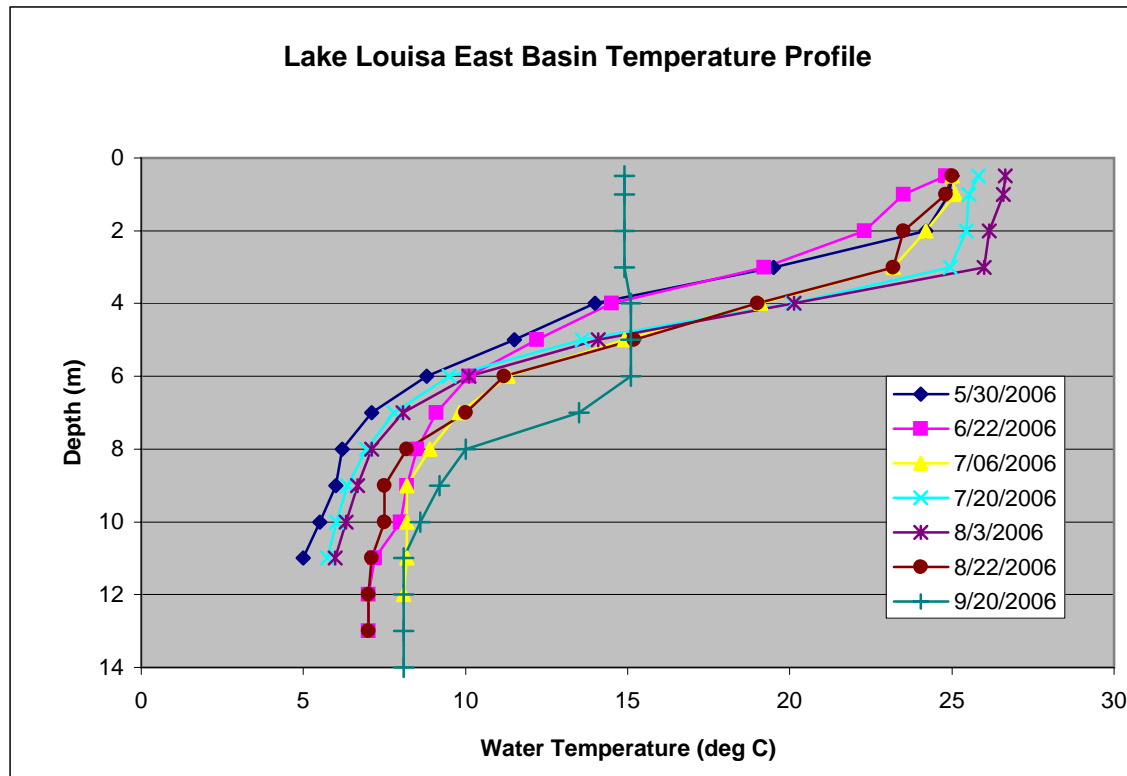
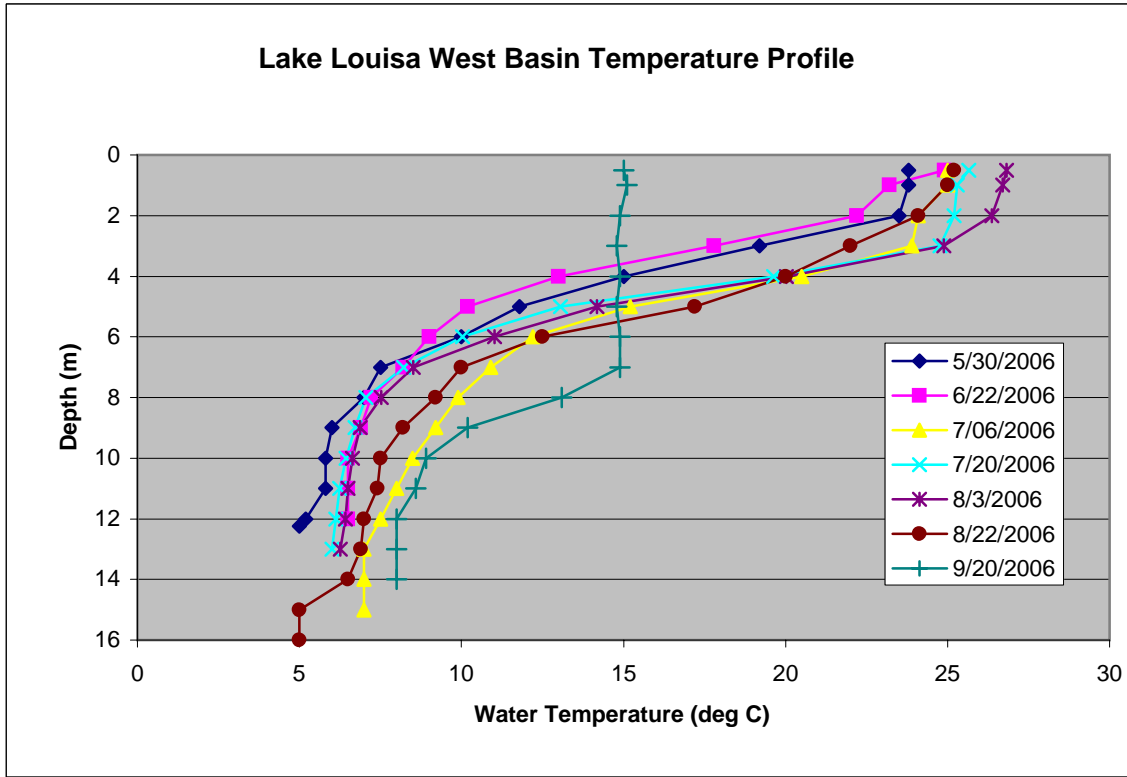


**Appendix J**  
**Clearwater River Watershed District**  
**Lake Louisa Nutrients TMDL**  
**Lake Louisa Data**

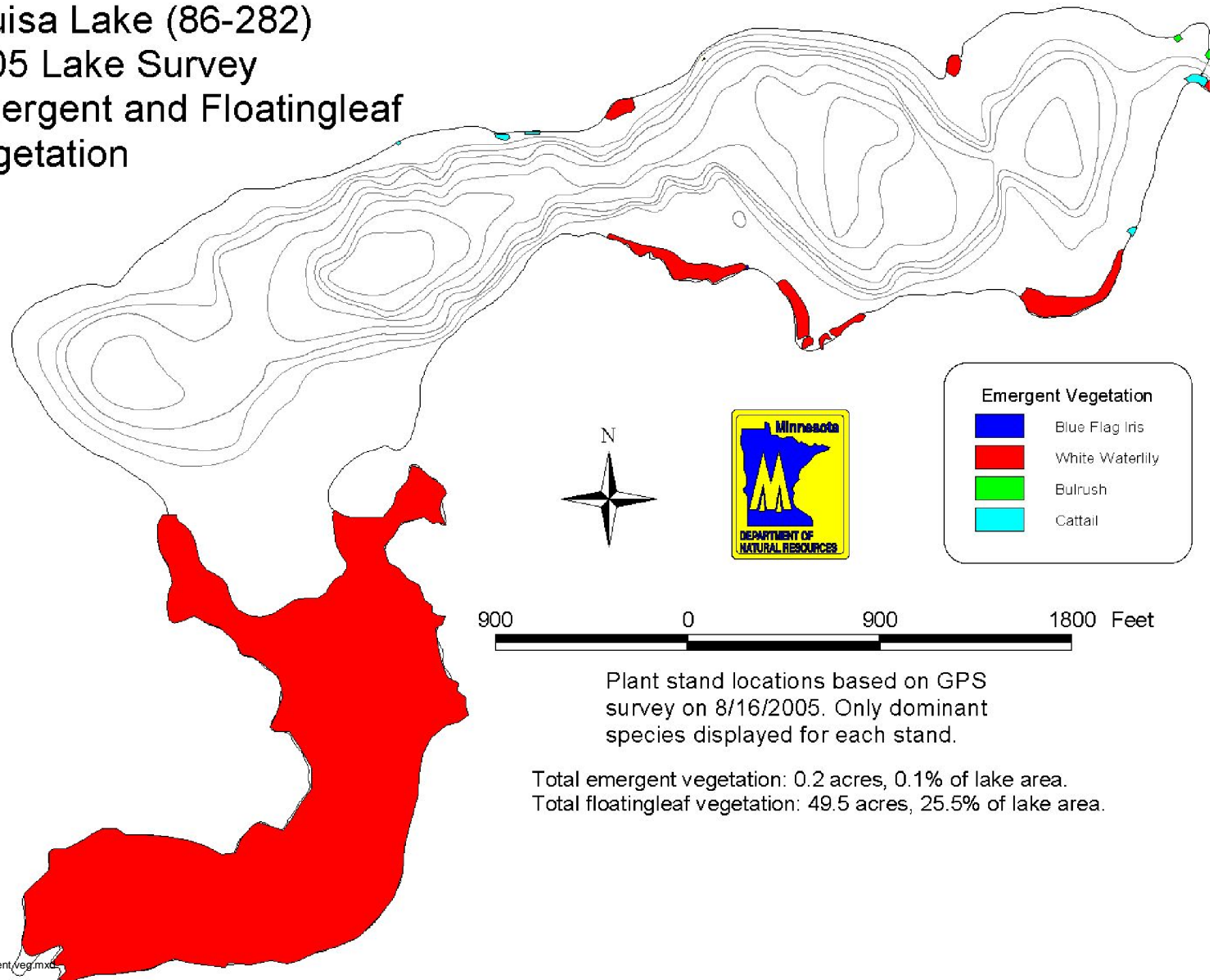




**Appendix J**  
**Clearwater River Watershed District**  
**Lake Louisa Nutrients TMDL**  
**Lake Louisa Data**



Louisa Lake (86-282)  
 2005 Lake Survey  
 Emergent and Floatingleaf  
 Vegetation



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CRWD PHASE II TMDL

Lake Louisa Emergent and Floating Leaf Vegetation

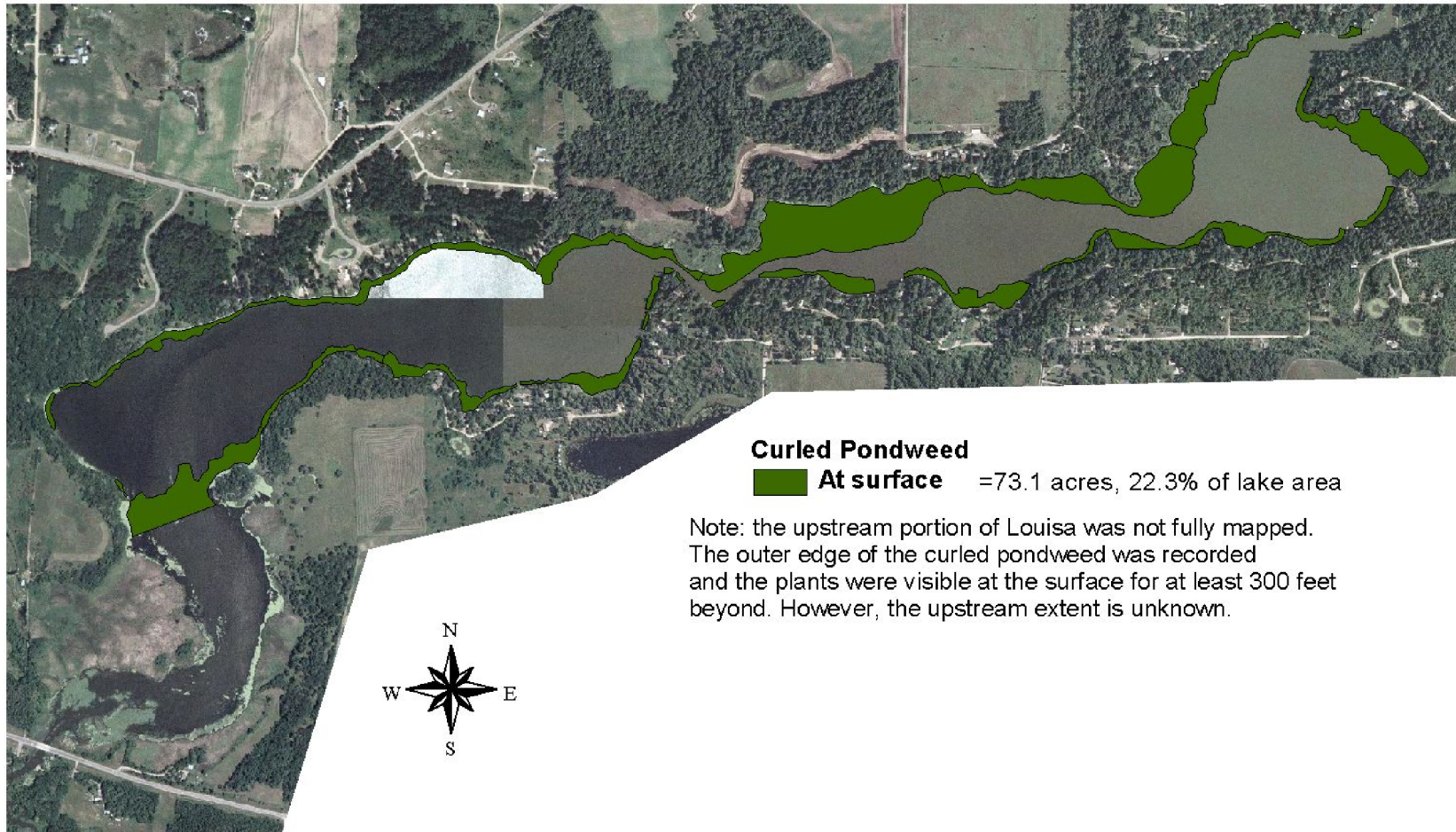
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Appendix J

# Louisa/Marie Curled Pondweed

## 6/2/05



**Curled Pondweed**  
**At surface** =73.1 acres, 22.3% of lake area

Note: the upstream portion of Louisa was not fully mapped.  
The outer edge of the curled pondweed was recorded  
and the plants were visible at the surface for at least 300 feet  
beyond. However, the upstream extent is unknown.

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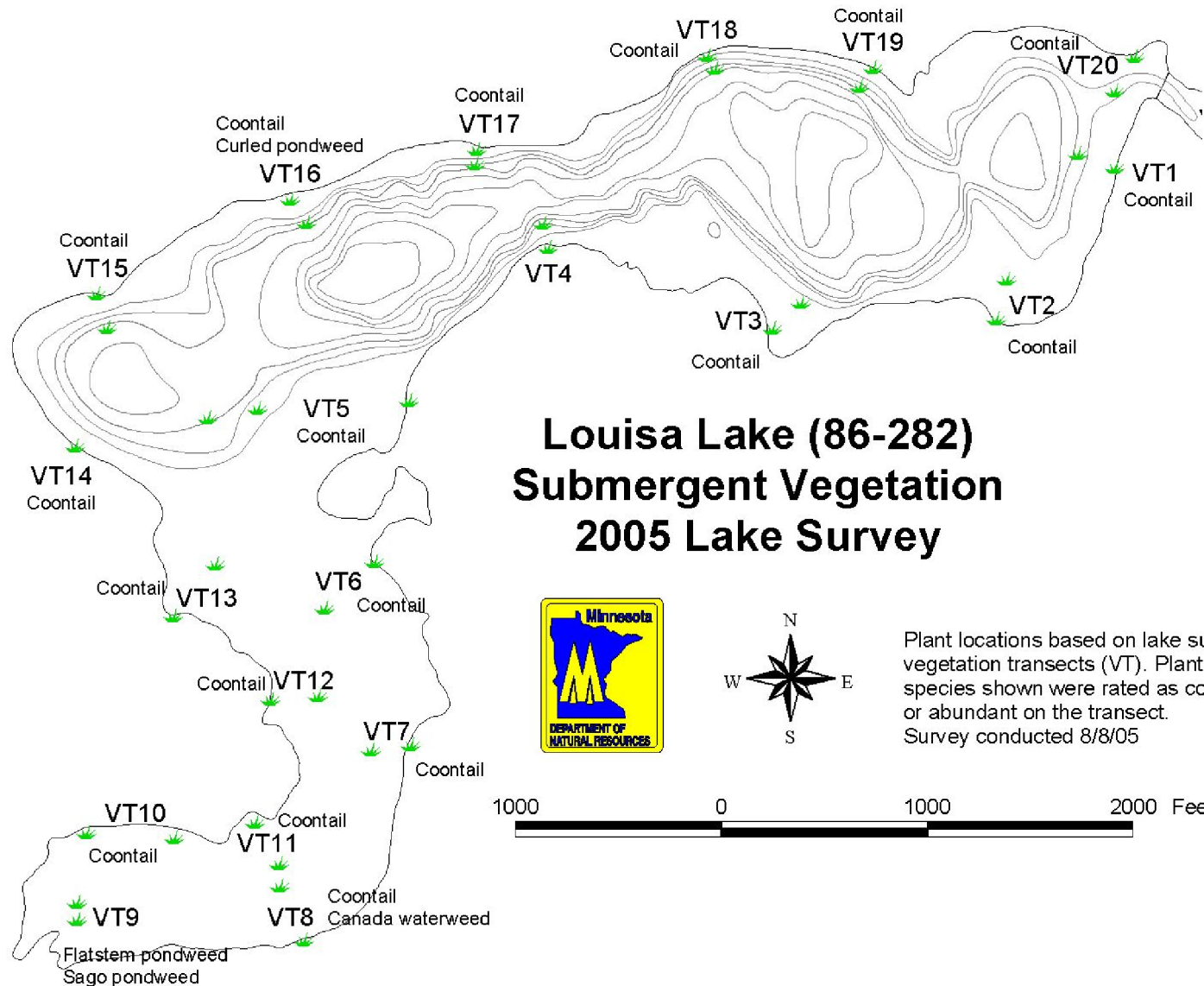
LAKE LOUISA PHASE II TMDL

Curly Leaf Pondweed Extent in Lake Louisa

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Appendix J



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CRWD PHASE II TMDL

Lake Louisa Submergent Vegetation

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 Wenck Associates, Inc. 1800 Pioneer Creek Center  
 Environmental Engineers Maple Plain, MN 55359-0429

AUG 2007  
Appendix J

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## **Appendix K**

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### **Lake Louisa Field Data and Laboratory Results**



Clearwater River Watershed Lake Sampling

Date of Sampling: 5/30/06  
 Start Time: 8:50  
 End Time: \_\_\_\_\_  
 Sampler(s): WB, KW

Site Location: Lake Louisa East  
 Site Description: LLO01

Chain of Custody: \_\_\_\_\_

Comments: Thick  
Curly leaf pondweed  
growing to surface  
near shore.

Site Coordinates: \_\_\_\_\_

Expected Depth (ft): 36'  
 Measured Depth (ft): 36'

Weather: 75° Sunny  
Calm

Secchi Disk (ft): 8.5

Field Measurements						
Field Sample ID	Sample Date and Time	Temp (°C)	Cond. (mS)	D.O. (mg/l)	Depth (ft)	pH (S.U.)
LLO01T	5/30/06 9:00	25.0	.	12.80	0.5	.
		24.9	.	13.70	1.0	.
		24.2	.	12.90	2.0	.
		19.5	.	13.80	3.0	.
LLO01M	5/30/06 9:00	14.0	.	8.90	4.0	.
		11.5	.	2.30	5.0	.
		8.8	.	1.7	6.0	.
		7.1	.	1.7	7.0	.
		6.7	.	1.7	8.0	.
		6.0	.	1.7	9.0	.
LLO01B	5/30/06 9:00	5.5	.	1.6	10.0	.
		5.0	.	1.6	11.0	.
					12	
					13	
					14	
					15	

Entered SWL 8/25/06  
 QA WB 10/10/06

Clearwater River Watershed Lake Sampling

Date of Sampling: 5/30/06  
 Start Time: 9:40  
 End Time: \_\_\_\_\_  
 Sampler(s): WB, KW

Site Location: LH002  
 Site Description: Louisa West  
 Chain of Custody: \_\_\_\_\_

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Site Coordinates: \_\_\_\_\_

Expected Depth (ft): 39  
 Measured Depth (ft): 39

Weather: 78° Sunny  
Calm

Secchi Disk (ft): 7.5

Field Measurements						
Field Sample ID	Sample Date and Time	Temp (°C)	Cond. (mS)	D.O. (mg/l)	Depth (ft)	pH (S.U.)
LH002T	5/30/06 9:45	23.8	.	13.8	0.5	.
		23.8	.	13.6	1.0	.
		23.5	.	12.5	2.0	.
		19.2	.	13.1	3.0	.
LH002M	5/30/06 9:45	15.0	.	8.7	4.0	.
		11.8	.	2.4	5.0	.
		10.0	.	1.7	6.0	.
		7.5	.	1.2	7.0	.
		7.0	.	1.2	8.0	.
		6.0	.	1.2	9.0	.
		5.8	.	1.2	10.0	.
LH002B (11.5)	5/30/06 9:45	5.8	.	1.3	11.0	.
		5.8	.	1.3	12	.
		5.2	.	1.3	13	.
		5.0	.	1.2	13.25	.
					14	
					15	

Entered SWL 8/24/06  
 QA WB 10/10/06





Clearwater River Watershed Lake Sampling

Date of Sampling: 6/22/06  
 Start Time: 300  
 End Time: \_\_\_\_\_  
 Sampler(s): Kenneth

Site Location: LL002  
 Site Description: Louisa

Chain of Custody: \_\_\_\_\_

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Site Coordinates: \_\_\_\_\_

Expected Depth (ft): \_\_\_\_\_

Measured Depth (ft): \_\_\_\_\_

Weather: Sunny  
82°

Secchi Disk (ft): 3.0

Field Measurements						
Field Sample ID	Sample Date and Time	Temp (°C)	Cond. (mS)	D.O. (mg/l)	Depth (ft)	pH (S.U.)
		<u>24.8</u>		<u>15.2</u>	0.5	
		<u>23.5</u>		<u>11.9</u>	1.0	
		<u>22.3</u>		<u>9.3</u>	2.0	
		<u>19.2</u>		<u>7.5</u>	3.0	
		<u>14.8</u>		<u>1.0</u>	4.0	
		<u>12.2</u>		<u>0.5</u>	5.0	
		<u>10.1</u>		<u>0.5</u>	6.0	
		<u>9.1</u>		<u>0.5</u>	7.0	
		<u>8.5</u>		<u>0.2</u>	8.0	
		<u>8.2</u>		<u>0.2</u>	9.0	
		<u>8.0</u>		<u>0.2</u>	10.0	
		<u>7.2</u>		<u>0.2</u>	11.0	
		<u>7.0</u>		<u>0.2</u>	12	
		<u>7.0</u>		<u>0.2</u>	13	
					14	
					15	

ENT WB  
10/10/06

Clearwater River Watershed Lake Sampling

Date of Sampling: 7606  
 Start Time: \_\_\_\_\_  
 End Time: \_\_\_\_\_  
 Sampler(s): \_\_\_\_\_

Site Location: LL 001  
 Site Description: \_\_\_\_\_

Chain of Custody: \_\_\_\_\_

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Site Coordinates: \_\_\_\_\_

Expected Depth (ft): \_\_\_\_\_  
 Measured Depth (ft): \_\_\_\_\_

Weather: SUNNY CUR 520  
70° PH 620

Secchi Disk (ft): 25

Field Measurements						
Field Sample ID	Sample	Temp (°C)	Cond. (mS)	D.O. (mg/l)	Depth (ft)	pH (S.U.)
	Date and Time					
	<u>7606</u>	<u>25</u>	<u>1</u>	<u>11.1</u>	0.5	
		<u>25.1</u>	<u>.</u>	<u>12.5</u>	1.0	
		<u>26.2</u>	<u>.</u>	<u>12.5</u>	2.0	
		<u>23.2</u>	<u>.</u>	<u>11.2</u>	3.0	
		<u>19.1</u>	<u>.</u>	<u>0.8</u>	4.0	
		<u>17.9</u>	<u>.</u>	<u>0.2</u>	5.0	
		<u>11.8</u>	<u>.</u>	<u>0.2</u>	6.0	
		<u>9.8</u>	<u>.</u>	<u>0.2</u>	7.0	
		<u>9.9</u>	<u>.</u>	<u>0.2</u>	8.0	
		<u>9.2</u>	<u>.</u>	<u>0.2</u>	9.0	
		<u>9.2</u>	<u>.</u>	<u>0.2</u>	10.0	
		<u>9.2</u>	<u>.</u>	<u>0.2</u>	11.0	
		<u>9.1</u>	<u>.</u>	<u>0.2</u>	12	
					13	
					14	
					15	

Ent WB  
10/10/06

Clearwater River Watershed Lake Sampling

Date of Sampling: 7/6/06  
 Start Time: 9:30  
 End Time: \_\_\_\_\_  
 Sampler(s): \_\_\_\_\_

Site Location: LL002  
 Site Description: \_\_\_\_\_

Chain of Custody: \_\_\_\_\_

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Site Coordinates: \_\_\_\_\_

Expected Depth (ft): \_\_\_\_\_  
 Measured Depth (ft): \_\_\_\_\_

Weather: ~~\_\_\_\_\_~~  
~~\_\_\_\_\_~~ ✓

Secchi Disk (ft): 3.5

Field Measurements

Field Sample ID	Sample Date and Time	Temp (°C)	Cond. (mS)	D.O. (mg/L)	Depth (ft)	pH (S.U)
		25	500	14.5	0.5	7.8
		23.5		14.5	1.0	
		24.1		6.3	2.0	
		24.9		15.1	3.0	
		26.1		6.5	4.0	
		15.3		0.2	5.0	
		10.9		0.2	6.0	
		9.9		0.2	7.0	
		9.8		0.2	8.0	
		9.8		0.2	9.0	
		9.8		0.2	10.0	
		9.8		0.2	11.0	
		9.8		0.2	12	
		9.8		0.2	13	
		9.8		0.2	14	
		9.8		0.2	15	

Ent WB  
 10/10/06

Clearwater River Watershed Lake Sampling

Date of Sampling: 7/20/06  
 Start Time: 10:05  
 End Time: 10:45  
 Sampler(s): WB

Site Location: LLO01

Site Description Louisa-East Site

Chain of Custody:

Comments: Water is green in color.

Site Coordinates:

Expected Depth (ft):  
 Measured Depth (ft): 34.3'

Weather: 76°  
NE wind 5mph

Secchi Disk (ft): 2.75

Field Measurements						
Field Sample ID	Sample Date and Time	Temp (°C)	Cond. (mS)	D.O. (mg/l)	Depth (ft)	pH (S.U.)
LLO01T005	7/20/06 10:15	25.81	590	9.68	0.5	8.39
		25.52	593	9.11	1.0	8.33
		25.44	592	8.93	2.0	8.29
		24.95	611	8.61	3.0	8.04
LLO01M045	7/20/06 10:20	20.09	681	0.42	4.0	7.75
		13.59	772	0.18	5.0	7.63
		9.49	836	0.10	6.0	7.51
		7.79	884	0.12	7.0	7.42
		6.95	930	0.12	8.0	7.35
		6.35	956	0.10	9.0	7.28
		6.01	982	0.11	10.0	7.27
LLO01B100	7/20/06 10:30	5.74	993	0.06	11.0/25	7.16
					12	
					13	
					14	
					15	

Entered SWL 8/24/06

QA: WB  
 10/10/06

Clearwater River Watershed Lake Sampling

Date of Sampling: 7/20/06  
 Start Time: 11:15  
 End Time: 11:55  
 Sampler(s): WB

Site Location: LLO02

Site Description Louisa-West Site

Chain of Custody:

Comments: water is green  
suspended algae in  
water column

Site Coordinates: 45 18.48  
94 15.26

Expected Depth (ft):  
 Measured Depth (ft): 40.5

Weather: 75° Sunny  
NE Wind 5mph

Secchi Disk (ft): 2.75

Field Measurements

Field Sample ID	Sample Date and Time	Temp (°C)	Cond. (mS)	D.O. (mg/l)	Depth (ft)	pH (S.U.)
LLO021005	7/20/06 11:25	25.66	605	8.93	0.5	8.42
		25.30	605	8.08	1.0	8.34
		25.20	607	7.47	2.0	8.30
		24.77	612	6.61	3.0	8.22
<del>LLO021005</del>	<del>7/20/06 11:35</del>	19.64	695	0.71	4.0	7.82
		13.06	794	0.22	5.0	7.61
		10.04	850	0.11	6.0	7.51
		8.27	903	0.11	7.0	7.44
		7.06	937	0.10	8.0	7.39
		6.72	958	0.12	9.0	7.34
		6.44	971	0.09	10.0	7.31
		6.24	978	0.06	11.0	7.29
<del>LLO021005</del>	<del>7/20/06 11:45</del>	6.12	986	0.06	12	7.28
		6.01	996	0.07	13.0	7.24
					14	
					15	

No Sample

No Sample

QA WB  
 10/10/06

Entered SWL 8/29/06

8/03/06 10:00

Secchi: 2.0 fz

L1002

Depth	Temp	DO	Cond	pH	
0.5	26.82	9.49	586	8.62	T
1	26.71	9.32	580	8.64	
2	26.36	8.17	582	8.56	
3	24.88	0.97	622	8.25	
4	20.03	0.32	689	7.90	
5	14.19	0.07	797	7.98	M
6	11.03	0.03	856	7.56	
7	8.51	0.03	903	7.47	
8	7.52	0.01	947	7.39	
9	6.87	0	975	7.34	
10	6.64	0	997	7.30	
11	6.50	0	1006	7.27	
12	6.41	0	1009	7.25	12.5 B
13	6.27	0	1020	7.22	

LLOØ1

Secchi 1.75 ft

Depth	Temp	DO	Cond	pH	
.5	26.65	8.77	568	8.61	LLOØ1 Top
1.0	26.58	8.43	568	8.58	
2	26.15	6.48	573	8.47	
3	25.99	7.14	569	8.46	
4	20.14	0.64	681	8.01	
5	14.10	0.09	777	7.65	LLOØ1 M
6	10.10	0.09	846	7.52	
7	8.08	0.06	883	7.44	
8	7.11	0.03	930	7.35	
9	6.68	0.03	964	7.28	
10	6.31	0.03	983	7.23	
11	5.98	0.03	1006	7.16	LLOØ1 B <sub>10.5</sub>

WB  
10/10/06

Clearwater River Watershed Lake Sampling

Date of Sampling: 8/22/06

Site Location: LL001

Start Time: 12:00

End Time: \_\_\_\_\_

Site Description \_\_\_\_\_

Sampler(s): RW

Chain of Custody: \_\_\_\_\_

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Site Coordinates: \_\_\_\_\_

Expected Depth (ft): \_\_\_\_\_

Measured Depth (ft): \_\_\_\_\_

Weather: Sunny  
74°

Secchi Disk (ft): 2'

Field Measurements						
Field Sample ID	Sample	Temp (°C)	Cond. (mS)	D.O. (mg/l)	Depth (ft)	pH (S.U.)
	Date and Time					
		25		16.1	0.5	
		24.8		13.8	1.0	
		23.7		5.6	2.0	
		23.2		1.2	3.0	
		19.2		1.0	4.0	
		15.2		0.8	5.0	
		11.2		0.2	6.0	
		10.6		0.2	7.0	
		8.2		0.2	8.0	
		7.5		0.2	9.0	
		7.5		0.2	10.0	
		7.1		0.2	11.0	
		7.0		0.2	12	
		7.0		0.2	13	
					14	
					15	

Ent WB



Clearwater River Watershed Lake Sampling

Date of Sampling: 82206  
 Start Time: 100  
 End Time: \_\_\_\_\_  
 Sampler(s): \_\_\_\_\_

Site Location: 66002  
 Site Description: \_\_\_\_\_  
 Chain of Custody: \_\_\_\_\_

Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Site Coordinates: \_\_\_\_\_  
 Expected Depth (ft): \_\_\_\_\_  
 Measured Depth (ft): \_\_\_\_\_

Weather: Sunny  
78°

Secchi Disk (ft): 1.5

Field Measurements						
Field Sample ID	Sample Date and Time	Temp (°C)	Cond. (mS)	D.O. (mg/l)	Depth (ft)	pH (S.U.)
		25.2		17.2	0.5	
		25.0		14.2	1.0	
		24.8		5.9	2.0	
		23.0		4.3	3.0	
		17.0		1.3	4.0	
		17.2		1.2	5.0	
		12.5		1.2	6.0	
		10.0		1.0	7.0	
		9.2		0.5	8.0	
		7.1		0.2	9.0	
		7.5		0.2	10.0	
		7.4		0.4	11.0	
		7.4		0.1	12	
		6.9		0.1	13	
		5.9		0.1	14	
		5.0		0.1	15	
		5.0		0.1		

Ent WB



# MINNESOTA VALLEY TESTING LABORATORIES, INC.

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1411 S. 12th St. ~ Bismarck, ND 58502 ~ 800-279-6885 ~ Fax 701-258-9724  
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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

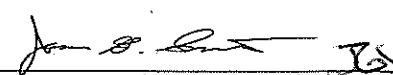
Report Date: 21 Jun 06  
Lab Number: 06-A21430  
Work Order #: 12-6363  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 30 May 06 9:00  
Date Received: 30 May 06 18:22  
PO #: CLEARWATER RIVER

Project Name: CLEARWATER RIVER STREAMS

Sample Description: LL001T

Temp at Receipt: 4.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					6 Jun 06	DAP
Solids, Total Suspended	2	mg/L	2	USGS I-3765-85	31 May 06 10:10	RMV
Chlorophyll a	13.2	mg/cubic m	1.0	10200H	2 Jun 06 7:20	JD
Nitrogen Total, Calculat	2.9	mg/L	NA	Calc	1 Jun 06 15:47	Calculated
Chloride	21.0	mg/L	3.0	325.2	5 Jun 06 11:26	RMV
Nitrate+Nitrite	1.79	mg/L as N	0.20	353.2	1 Jun 06 15:47	DAP
Phosphorus, Total	0.028	mg/L	0.005	EPA 365.1	6 Jun 06 13:03	RMV
Phosphorus, Ortho	0.007	mg/L	0.005	EPA 365.1	31 May 06 16:35	DAP
Nitrogen, Total Kjeldahl	1.1	mg/L	0.1	SM 4500NorgB/NH3 E	1 Jun 06 6:45	RSL

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

*Mc*  
*8/24*  
*QA*  
*WB*

⌋ = Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

MVTL guarantees the accuracy of the analysis done on the sample submitted for testing. It is not possible for MVTL to guarantee that a test result obtained on a particular sample will be the same on any other sample unless all conditions affecting the sample are the same, including sampling by MVTL. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 21 Jun 06  
Lab Number: 06-A21431  
Work Order #: 12-6363  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 30 May 06 9:00  
Date Received: 30 May 06 18:22  
PO #: CLEARWATER RIVER

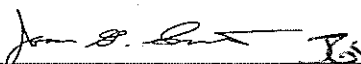
Project Name: CLEARWATER RIVER STREAMS

Sample Description: LL001M

Temp at Receipt: 4.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					6 Jun 06	DAP
Phosphorus, Total	0.035 mg/L		0.005	EPA 365.1	6 Jun 06 13:03	RMV
Phosphorus, Ortho	< 0.005 mg/L		0.005	EPA 365.1	31 May 06 16:35	DAP

*NIC 0-2-06*  
*QA*  
*WB*

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

= Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 21 Jun 06  
Lab Number: 06-A21432  
Work Order #:12-6363  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 30 May 06 9:00  
Date Received: 30 May 06 18:22  
PO #: CLEARWATER RIVER

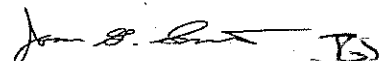
Project Name: CLEARWATER RIVER STREAMS

Sample Description: LL001B

Temp at Receipt: 4.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					6 Jun 06	DAP
Water Digestions					5 Jun 06	JMS
Phosphorus, Total	0.027	mg/L	0.005	EPA 365.1	6 Jun 06 13:03	RMV
Phosphorus, Ortho	< 0.005	mg/L	0.005	EPA 365.1	31 May 06 16:36	DAP
Iron	0.050	mg/L	0.010	6010	7 Jun 06 11:28	CJR

Approved by:

  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

= Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447600 ND MICRO # 1013-M ND WN/DW # R-040 IA LAB #: 132 IA LAB #: 022

*M/L 2006*  
*QA WB*

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WES BOLL  
 WENCK ASSOCIATES INC  
 1800 PIONEER CRK CTR  
 MAPLE PLAIN MN 55359-9000

Report Date: 21 Jun 06  
 Lab Number: 06-A21433  
 Work Order #: 12-6363  
 Account #: 013173  
 Sample Matrix: SURFACE WATER  
 Date Sampled: 30 May 06 9:45  
 Date Received: 30 May 06 18:22  
 PO #: CLEARWATER RIVER

Project Name: CLEARWATER RIVER STREAMS

Sample Description: LL002T

Temp at Receipt: 4.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					6 Jun 06	DAP
Solids, Total Suspended	2	mg/L	2	USGS I-3765-85	31 May 06 10:10	RMV
Chlorophyll a	7.4	mg/cubic m	1.0	10200H	2 Jun 06 7:20	JD
Nitrogen Total, Calculat	2.8	mg/L	NA	Calc	1 Jun 06 15:47	Calculated
Chloride	21.2	mg/L	3.0	325.2	5 Jun 06 11:26	RMV
Nitrate+Nitrite	1.72	mg/L as N	0.20	353.2	1 Jun 06 15:47	DAP
Phosphorus, Total	0.025	mg/L	0.005	EPA 365.1	6 Jun 06 13:03	RMV
Phosphorus, Ortho	< 0.005	mg/L	0.005	EPA 365.1	31 May 06 16:36	DAP
Nitrogen, Total Kjeldahl	1.1	mg/L	0.1	SM 4500NorgB/NH3 E	1 Jun 06 6:45	RSL

QA  
 MB  
 MIC  
 8.8.06

Approved by: Jason G. Smith  
 Jason G. Smith, Inorganic  
 Laboratory Manager New Ulm, MN

= Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
 ! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
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MAPLE PLAIN MN 55359-9000

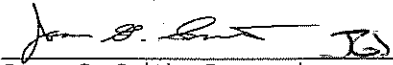
Report Date: 21 Jun 06  
Lab Number: 06-A21434  
Work Order #: 12-6363  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 30 May 06 9:45  
Date Received: 30 May 06 18:22  
PO #: CLEARWATER RIVER

Project Name: CLEARWATER RIVER STREAMS

Sample Description: LL002M

Temp at Receipt: 4.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					6 Jun 06	DAP
Phosphorus, Total	0.034 mg/L		0.005	EPA 365.1	6 Jun 06 13:03	RMV
Phosphorus, Ortho	< 0.005 mg/L		0.005	EPA 365.1	31 May 06 16:36	DAP

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

*MV 6-20-06*  
*QA*  
*WB*

☒ = Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 21 Jun 06  
Lab Number: 06-A21435  
Work Order #: 12-6363  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 30 May 06 9:45  
Date Received: 30 May 06 18:22  
PO #: CLEARWATER RIVER

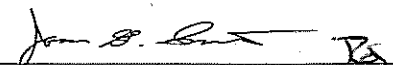
Project Name: CLEARWATER RIVER STREAMS

Sample Description: LL002B

Temp at Receipt: 4.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					6 Jun 06	DAP
Water Digestions					5 Jun 06	JMS
Phosphorus, Total	0.036	mg/L	0.005	EPA 365.1	6 Jun 06 13:03	RMV
Phosphorus, Ortho	0.005	mg/L	0.005	EPA 365.1	31 May 06 16:36	DAP
Iron	0.235	mg/L	0.010	6010	7 Jun 06 11:28	CJR

*MIC 8-22-06*  
*QA WB*

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

⌋ = Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M HD WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
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 MAPLE PLAIN MN 55359-9000

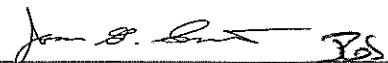
Report Date: 9 Jul 06  
 Lab Number: 06-A26199  
 Work Order #: 12-7480  
 Account #: 013173  
 Sample Matrix: SURFACE WATER  
 Date Sampled: 22 Jun 06 14:00  
 Date Received: 23 Jun 06 10:55

Sample Description: LL001

Temp at Receipt: 4.0 C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					26 Jun 06	RLB
Water Digestions					27 Jun 06	JMS
Solids, Total Suspended	6	mg/L	2	USGS I-3765-85	23 Jun 06 15:40	CJL
Chlorophyll a	31.7	mg/cubic m	1.0	10200H	27 Jun 06 7:57	JD
Nitrogen Total, Calculat	2.1	mg/L	NA	Calc	30 Jun 06 16:08	Calculated
Chloride	19.9	mg/L	3.0	325.2	26 Jun 06 16:15	RMV
Nitrate+Nitrite	0.48	mg/L as N	0.20	353.2	30 Jun 06 16:08	DAP
Phosphorus, Total	0.036	mg/L	0.005	EPA 365.1	27 Jun 06 9:25	RMV
Phosphorus, Ortho	< 0.005	mg/L	0.005	EPA 365.1	23 Jun 06 17:15	DAP
Nitrogen, Total Kjeldahl	1.6	mg/L	0.1	SM 4500NorgB/NH3 E	26 Jun 06 12:55	TAM
Iron	0.030	mg/L	0.010	6010	7 Jul 06 10:20	CJR

Approved by:

  
 Jason G. Smith, Inorganic  
 Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
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# = Due to sample concentration  
 + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

QA WB

Ent 7/24/06 WB

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WENCK ASSOCIATES INC  
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 MAPLE PLAIN MN 55359-9000

Report Date: 9 Jul 06  
 Lab Number: 06-A26200  
 Work Order #: 12-7480  
 Account #: 013173  
 Sample Matrix: SURFACE WATER  
 Date Sampled: 22 Jun 06 15:00  
 Date Received: 23 Jun 06 10:55

Sample Description: LL002

Temp at Receipt: 4.0 C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					26 Jun 06	RLB
Water Digestions					27 Jun 06	JMS
Solids, Total Suspended	6	mg/L	2	USGS I-3765-85	23 Jun 06 15:40	CJL
Chlorophyll a	32.3	mg/cubic m	1.0	10200H	27 Jun 06 7:57	JD
Chloride	19.6	mg/L	3.0	325.2	26 Jun 06 16:15	RMV
Nitrate+Nitrite	0.49	mg/L as N	0.20	353.2	30 Jun 06 16:08	DAP
Phosphorus, Total	0.048	mg/L	0.005	EPA 365.1	27 Jun 06 9:25	RMV
Phosphorus, Ortho	< 0.005	mg/L	0.005	EPA 365.1	23 Jun 06 17:15	DAP
Nitrogen, Total Kjeldahl	1.4	mg/L	0.1	SM 4500NorgB/NH3 E	26 Jun 06 12:55	TAM
Iron	0.033	mg/L	0.010	6010	7 Jul 06 10:20	CJR

Approved by: Jason G. Smith  
 Jason G. Smith, Inorganic  
 Laboratory Manager New Ulm, MN

QA  
WB

Ent 7/21/06 aub

Reporting Limit

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CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 18 Jul 06  
Lab Number: 06-A28434  
Work Order #: 12-7936  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 6 Jul 06 8:30  
Date Received: 7 Jul 06 10:05  
PO #: CLEARWATER

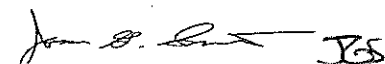
Project Name: CLEARWATER

Sample Description: LL001 TOP

Temp at Receipt: 5.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest Solids, Total Suspended	10	mg/L	2	USGS I-3765-85	17 Jul 06 14:45	RLB
Chlorophyll a	31.6	mg/cubic m	1.0	10200H	12 Jul 06 8:46	AKF
Nitrogen Total, Calculat	1.4	mg/L	NA	Calc	11 Jul 06 15:51	JD
Chloride	21.2	mg/L	3.0	325.2	14 Jul 06 15:02	Calculated
Nitrate+Nitrite	< 0.2	mg/L as N	0.2	353.2	11 Jul 06 15:51	RMV
Phosphorus, Total	0.052	mg/L	0.005	EPA 365.1	18 Jul 06 11:02	RMV
Phosphorus, Ortho	0.008	mg/L	0.005	EPA 365.1	7 Jul 06 16:55	RMV
Nitrogen, Total Kjeldahl	1.4	mg/L	0.1	SM 4500NorgB/NH3 E	10 Jul 06 13:40	RSL

Approved by:

  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

QA  
WB  
Ent WB 7/21/06

\* Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
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# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 18 Jul 06  
Lab Number: 06-A28436  
Work Order #:12-7936  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 6 Jul 06 8:30  
Date Received: 7 Jul 06 10:05  
PO #: CLEARWATER

Project Name: CLEARWATER

Sample Description: LL001 MIDDLE

Temp at Receipt: 5.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					17 Jul 06	RLB
Phosphorus, Total	0.049	mg/L	0.005	EPA 365.1	18 Jul 06 11:02	RMV
Phosphorus, Ortho	0.012	mg/L	0.005	EPA 365.1	7 Jul 06 16:55	RMV

Approved by: Jason G. Smith  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

*Ent' WB 7/21/06  
QA WB*

\* Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 18 Jul 06  
Lab Number: 06-A28438  
Work Order #: 12-7936  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 6 Jul 06 8:30  
Date Received: 7 Jul 06 10:05  
PO #: CLEARWATER


Project Name: CLEARWATER

Sample Description: LL001 BOTTOM

Temp at Receipt: 5.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					17 Jul 06	RLB
Water Digestions					12 Jul 06	JMS
Phosphorus, Total	0.577	mg/L	0.005	EPA 365.1	18 Jul 06 11:02	RMV
Phosphorus, Ortho	0.025	mg/L	0.005	EPA 365.1	7 Jul 06 15:56	RMV
Iron	0.729	mg/L	0.010	6010	12 Jul 06 14:21	CJR

Approved by:

  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Ent: 7/21/06 WB  
QA  
WP

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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MAPLE PLAIN MN 55359-9000

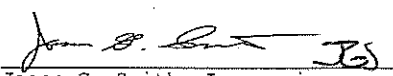
Report Date: 18 Jul 06  
Lab Number: 06-A28435  
Work Order #: 12-7936  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 6 Jul 06 9:30  
Date Received: 7 Jul 06 10:05  
PO #: CLEARWATER

Project Name: CLEARWATER

Sample Description: LL002 TOP

Temp at Receipt: 5.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					17 Jul 06	RLB
Solids, Total Suspended	11	mg/L	2	USGS I-3765-85	7 Jul 06 14:45	AKF
Chlorophyll a	31.4	mg/cubic m	1.0	10200H	12 Jul 06 8:46	JD
Nitrogen Total, Calculat	1.6	mg/L	NA	Calc	11 Jul 06 15:51	Calculated
Chloride	21.4	mg/L	3.0	325.2	14 Jul 06 15:02	RMV
Nitrate+Nitrite	< 0.2	mg/L as N	0.2	353.2	11 Jul 06 15:51	RMV
Phosphorus, Total	0.064	mg/L	0.005	EPA 365.1	18 Jul 06 11:02	RMV
Phosphorus, Ortho	0.007	mg/L	0.005	EPA 365.1	7 Jul 06 16:55	RMV
Nitrogen, Total Kjeldahl	1.6	mg/L	0.1	SM 4500NorgB/NH3 E	10 Jul 06 13:40	RSL

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Ent 7/21/06 WB  
QA  
WB

- Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL
WENCK ASSOCIATES INC
1800 PIONEER CRK CTR
MAPLE PLAIN MN 55359-9000

Report Date: 18 Jul 06
Lab Number: 06-A28437
Work Order #:12-7936
Account #: 013173
Sample Matrix: SURFACE WATER
Date Sampled: 6 Jul 06 9:30
Date Received: 7 Jul 06 10:05
PO #: CLEARWATER

Project Name: CLEARWATER

Sample Description: LL002 MIDDLE

Temp at Receipt: 5.0C

Table with 6 columns: As Received Result, Method RL, Method Reference, Date Analyzed, Analyst. Rows include Phosphorus Water Digest, Total, and Ortho.

Ent: 7/21/06 WB

QA WB

Approved by: Jason G. Smith, Inorganic Laboratory Manager New Ulm, MN

Reporting Limit
Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration
! = Due to sample quantity + = Due to extract volume
CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

MVTL guarantees the accuracy of the analysis done on the sample submitted for testing. It is not possible for MVTL to guarantee that a test result obtained on a particular sample will be the same on any other sample unless all conditions affecting the sample are the same, including sampling by MVTL. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.



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WES BOLL
WENCK ASSOCIATES INC
1800 PIONEER CRK CTR
MAPLE PLAIN MN 55359-9000

Report Date: 18 Jul 06
Lab Number: 06-A28439
Work Order #:12-7936
Account #: 013173
Sample Matrix: SURFACE WATER
Date Sampled: 6 Jul 06 9:30
Date Received: 7 Jul 06 10:05
PO #: CLEARWATER

Project Name: CLEARWATER

Sample Description: LL002 BOTTOM

Temp at Receipt: 5.0C

Table with 6 columns: As Received Result, Method RL, Method Reference, Date Analyzed, Analyst. Rows include Phosphorus Water Digest, Water Digestions, Phosphorus, Total, Phosphorus, Ortho, and Iron.

Ent 7/21/06 WB
QA
WB

Approved by: Jason G. Smith, Inorganic Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447600 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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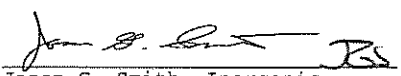
WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 30 Jul 06  
Lab Number: 06-A31162  
Work Order #: 12-8455  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 20 Jul 06 10:20  
Date Received: 21 Jul 06 11:30  
PO #: CLEARWATER  
Chain of Custody Number: 100214  
Temp at Receipt: 2.0C

Project Name: CLEARWATER  
Project Number: 0002-75  
Sample Description: LLO01M045

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					24 Jul 06	RMV
Phosphorus, Total	0.041 mg/L		0.005	EPA 365.1	25 Jul 06 7:27	RMV
Phosphorus, Ortho	< 0.005 mg/L		0.005	EPA 365.1	21 Jul 06 17:24	RMV

*Ent WB*

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

= Reporting Limit  
Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL
WENCK ASSOCIATES INC
1800 PIONEER CRK CTR
MAPLE PLAIN MN 55359-9000

Report Date: 30 Jul 06
Lab Number: 06-A31163
Work Order #:12-8455
Account #: 013173
Sample Matrix: SURFACE WATER
Date Sampled: 20 Jul 06 10:30
Date Received: 21 Jul 06 11:30
PO #: CLEARWATER
Chain of Custody Number: 100214
Temp at Receipt: 2.0C

Project Name: CLEARWATER
Project Number: 0002-75
Sample Description: LLO01B100

Table with 7 columns: As Received Result, Method RL, Method Reference, Date Analyzed, Analyst. Rows include Phosphorus Water Digest, Water Digestions, Phosphorus, Total, Phosphorus, Ortho, and Iron.

Ent WB

Approved by: [Signature]
Jason G. Smith, Inorganic
Laboratory Manager New Ulm, MN

= Reporting Limit
Elevated "Less Than Result" (<): # = Due to sample matrix ! = Due to sample quantity # = Due to sample concentration + = Due to extract volume
CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
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 MAPLE PLAIN MN 55359-9000


Report Date: 30 Jul 06  
 Lab Number: 06-A31164  
 Work Order #: 12-8455  
 Account #: 013173  
 Sample Matrix: SURFACE WATER  
 Date Sampled: 20 Jul 06 10:15  
 Date Received: 21 Jul 06 11:30  
 PO #: CLEARWATER  
 Chain of Custody Number: 100214  
 Temp at Receipt: 2.0C

Project Name: CLEARWATER  
 Project Number: 0002-75  
 Sample Description: LLO01T005

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					24 Jul 06	RMV
Solids, Total Suspended	18	mg/L	2	USGS I-3765-85	21 Jul 06 15:10	CJL
Chlorophyll a	40.2	mg/cubic m	1.0	10200H	25 Jul 06 6:07	JD
Nitrogen Total, Calculat	1.6	mg/L	NA	Calc	30 Jul 06 10:53	Calculated
Chloride	22.7	mg/L	3.0	325.2	28 Jul 06 13:57	RMV
Nitrate+Nitrite	< 0.2	mg/L as N	0.2	353.2	30 Jul 06 10:53	RMV
Phosphorus, Total	0.072	mg/L	0.005	EPA 365.1	25 Jul 06 7:29	RMV
Phosphorus, Ortho	0.010	mg/L	0.005	EPA 365.1	21 Jul 06 17:24	RMV
Nitrogen, Total Kjeldahl	1.6	mg/L	0.1	SM 4500NorgB/NH3 E	27 Jul 06 6:25	TAM

Ent WB

Approved by:

  
 Jason G. Smith, Inorganic  
 Laboratory Manager New Ulm, MN

= Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
 ! = Due to sample quantity

# = Due to sample concentration  
 + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447660 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL
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MAPLE PLAIN MN 55359-9000

Report Date: 30 Jul 06
Lab Number: 06-A31165
Work Order #:12-8455
Account #: 013173
Sample Matrix: SURFACE WATER
Date Sampled: 20 Jul 06 11:25
Date Received: 21 Jul 06 11:30
PO #: CLEARWATER
Chain of Custody Number: 100214
Temp at Receipt: 2.0C

Project Name: CLEARWATER
Project Number: 0002-75
Sample Description: LLO02T005

Table with 6 columns: As Received Result, Method RL, Method Reference, Date Analyzed, Analyst. Rows include Phosphorus Water Digest, Solids, Total Suspended, Chlorophyll a, Nitrogen Total, Chloride, Nitrate+Nitrite, Phosphorus, Total, Phosphorus, Ortho, Nitrogen, Total Kjeldahl.

Approved by: Jason G. Smith, Inorganic Laboratory Manager New Ulm, MN

QA WB

= Reporting Limit
Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration
! = Due to sample quantity + = Due to extract volume
CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WN/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
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1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 10 Aug 06  
Lab Number: 06-A33817  
Work Order #: 12-8968  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 3 Aug 06 10:20  
Date Received: 4 Aug 06 9:50  
PO #: CLEARWATER RIVER

Project Name: CLARWATER RIVER

Sample Description: LL001T

Temp at Receipt: 3.0 C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					7 Aug 06	RLB
Solids, Total Suspended	16	mg/L	2	USGS I-3765-85	4 Aug 06 15:15	CJL
Chlorophyll a	73.7	mg/cubic m	1.0	10200H	8 Aug 06 8:09	JD
Nitrogen Total, Calculat	2.5	mg/L	NA	Calc	9 Aug 06 11:48	Calculated
Chloride	25.7	mg/L	3.0	325.2	5 Aug 06 14:57	RMV
Nitrate+Nitrite	< 0.2	mg/L as N	0.2	353.2	9 Aug 06 11:48	RMV
Phosphorus, Total	0.083	mg/L	0.005	EPA 365.1	8 Aug 06 11:26	RMV
Phosphorus, Ortho	0.012	mg/L	0.005	EPA 365.1	4 Aug 06 17:56	RMV
Nitrogen, Total Kjeldahl	2.5	mg/L	0.1	SM 4500NorgB/NH3 E	7 Aug 06 15:55	TAM

Ent.  
WB

Approved by: Jason G. Smith  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 10 Aug 06  
Lab Number: 06-A33818  
Work Order #: 12-8968  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 3 Aug 06 10:20  
Date Received: 4 Aug 06 9:50  
PO #: CLEARWATER RIVER

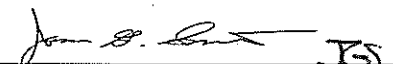
Project Name: CLARWATER RIVER

Sample Description: LL001M

Temp at Receipt: 3.0 C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					7 Aug 06	RLB
Phosphorus, Total	0.062	mg/L	0.005	EPA 365.1	8 Aug 06 11:26	RMV
Phosphorus, Ortho	0.005	mg/L	0.005	EPA 365.1	4 Aug 06 17:56	RMV

Ent  
WB

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL
WENCK ASSOCIATES INC
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MAPLE PLAIN MN 55359-9000

Report Date: 10 Aug 06
Lab Number: 06-A33819
Work Order #:12-8968
Account #: 013173
Sample Matrix: SURFACE WATER
Date Sampled: 3 Aug 06 10:20
Date Received: 4 Aug 06 9:50
PO #: CLEARWATER RIVER

Project Name: CLARWATER RIVER

Sample Description: LL001B

Temp at Receipt: 3.0 C

Table with 6 columns: As Received Result, Method RL, Method Reference, Date Analyzed, Analyst. Rows include Phosphorus Water Digest, Water Digestions, Phosphorus, Total, Phosphorus, Ortho, and Iron.

Ent
WB

Approved by: [Signature]
Jason G. Smith, Inorganic
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL
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MAPLE PLAIN MN 55359-9000

Report Date: 10 Aug 06
Lab Number: 06-A33820
Work Order #:12-8968
Account #: 013173
Sample Matrix: SURFACE WATER
Date Sampled: 3 Aug 06 11:00
Date Received: 4 Aug 06 9:50
PO #: CLEARWATER RIVER

Project Name: CLARWATER RIVER

Sample Description: LL002T

Temp at Receipt: 3.0 C

Table with 6 columns: As Received Result, Method RL, Method Reference, Date Analyzed, Analyst. Rows include Phosphorus Water Digest Solids, Chlorophyll a, Nitrogen Total, Chloride, Nitrate+Nitrite, Phosphorus Total, Phosphorus Ortho, Nitrogen Total Kjeldahl.

Approved by: Jason G. Smith, Inorganic Laboratory Manager New Ulm, MN

Ent WB

Reporting Limit

Elevated "Less Than Result" (<): # = Due to sample matrix ! = Due to sample quantity # = Due to sample concentration + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL
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MAPLE PLAIN MN 55359-9000

Report Date: 10 Aug 06
Lab Number: 06-A33821
Work Order #: 12-8968
Account #: 013173
Sample Matrix: SURFACE WATER
Date Sampled: 3 Aug 06 11:00
Date Received: 4 Aug 06 9:50
PO #: CLEARWATER RIVER

Project Name: CLARWATER RIVER

Sample Description: LL002M

Temp at Receipt: 3.0 C

Table with 6 columns: As Received Result, Method RL, Method Reference, Date Analyzed, Analyst. Rows include Phosphorus Water Digest, Total, and Ortho.

Approved by:

Signature of Jason G. Smith, Inorganic Laboratory Manager New Ulm, MN

Ent WB

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix
! = Due to sample quantity

# = Due to sample concentration
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL
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MAPLE PLAIN MN 55359-9000

Report Date: 10 Aug 06
Lab Number: 06-A33822
Work Order #:12-8968
Account #: 013173
Sample Matrix: SURFACE WATER
Date Sampled: 3 Aug 06 11:00
Date Received: 4 Aug 06 9:50
PO #: CLEARWATER RIVER

Project Name: CLARWATER RIVER

Sample Description: LL002B

Temp at Receipt: 3.0 C

Table with 6 columns: As Received Result, Method RL, Method Reference, Date Analyzed, Analyst. Rows include Phosphorus Water Digest, Water Digestions, Phosphorus, Total, Phosphorus, Ortho, and Iron.

Approved by: Jason G. Smith, Inorganic Laboratory Manager New Ulm, MN

Ent WB

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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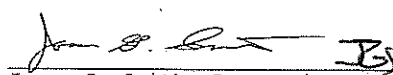
Report Date: 4 Sep 06  
Lab Number: 06-A36825  
Work Order #: 12-9581  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 22 Aug 06 12:00  
Date Received: 23 Aug 06 10:10  
PO #: CRWD

Project Name: CRWD

Sample Description: LL001T

Temp at Receipt: 4.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					26 Aug 06	RLB
Solids, Total Suspended	19	mg/L	2	USGS I-3765-85	23 Aug 06 15:00	CJL
Chlorophyll a	73.3	mg/cubic m	1.0	10200H	25 Aug 06 7:35	JD
Nitrogen Total, Calculat	2.3	mg/L	NA	Calc	30 Aug 06 12:36	Calculated
Chloride	22.3	mg/L	3.0	325.2	25 Aug 06 15:42	RMV
Nitrate+Nitrite	< 0.2	mg/L as N	0.2	353.2	30 Aug 06 12:36	RMV
Phosphorus, Total	0.068	mg/L	0.005	EPA 365.1	28 Aug 06 11:31	RMV
Phosphorus, Ortho	0.018	mg/L	0.005	EPA 365.1	24 Aug 06 7:22	RMV
Nitrogen, Total Kjeldahl	2.3	mg/L	0.1	SM 4500NorgB/NH3 E	25 Aug 06 11:45	TAM

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

I  
Int  
WB

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DN # R-040 IA LAB #: 132 IA LAB #: 022

MVT L guarantees the accuracy of the analysis done on the sample submitted for testing. It is not possible for MVTL to guarantee that a test result obtained on a particular sample will be the same on any other sample unless all conditions affecting the sample are the same, including sampling by MVTL. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.

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WES BOLL
WENCK ASSOCIATES INC
1800 PIONEER CRK CTR
MAPLE PLAIN MN 55359-9000

Report Date: 4 Sep 06
Lab Number: 06-A36826
Work Order #:12-9581
Account #: 013173
Sample Matrix: SURFACE WATER
Date Sampled: 22 Aug 06 12:15
Date Received: 23 Aug 06 10:10
PO #: CRWD

Project Name: CRWD

Sample Description: LL001M

Temp at Receipt: 4.0C

Table with 6 columns: As Received Result, Method RL, Method Reference, Date Analyzed, Analyst. Rows include Phosphorus Water Digest, Phosphorus, Total, and Phosphorus, Ortho.

Ent WB

Approved by: Jason G. Smith, Inorganic Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447690 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL
WENCK ASSOCIATES INC
1800 PIONEER CRK CTR
MAPLE PLAIN MN 55359-9000

Report Date: 4 Sep 06
Lab Number: 06-A36827
Work Order #:12-9581
Account #: 013173
Sample Matrix: SURFACE WATER
Date Sampled: 22 Aug 06 12:30
Date Received: 23 Aug 06 10:10
PO #: CRWD

Project Name: CRWD

Sample Description: LL001B

Temp at Receipt: 4.0C

Table with 6 columns: As Received Result, Method RL, Method Reference, Date Analyzed, Analyst. Rows include Phosphorus Water Digest, Water Digestions, Phosphorus, Total, Phosphorus, Ortho, and Iron.

Ent WB

Approved by: Jason G. Smith, Inorganic Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL
WENCK ASSOCIATES INC
1800 PIONEER CRK CTR
MAPLE PLAIN MN 55359-9000

Report Date: 4 Sep 06
Lab Number: 06-A36828
Work Order #:12-9581
Account #: 013173
Sample Matrix: SURFACE WATER
Date Sampled: 22 Aug 06 13:00
Date Received: 23 Aug 06 10:10
PO #: CRWD

Project Name: CRWD

Sample Description: LL002T

Temp at Receipt: 4.0C

Table with 6 columns: As Received Result, Method RL, Method Reference, Date Analyzed, Analyst. Rows include Phosphorus Water Digest, Nitrogen Total, Chloride, Nitrate+Nitrite, Phosphorus Total, Phosphorus Ortho, Nitrogen Total Kjeldahl.

Approved by: Jason G. Smith, Inorganic Laboratory Manager New Ulm, MN

ENT WB

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 4 Sep 06  
Lab Number: 06-A36829  
Work Order #: 12-9581  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 22 Aug 06 13:15  
Date Received: 23 Aug 06 10:10  
PO #: CRWD

Project Name: CRWD

Sample Description: LL002M

Temp at Receipt: 4.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					26 Aug 06	RLB
Phosphorus, Total	0.069	mg/L	0.005	EPA 365.1	28 Aug 06 11:31	RMV
Phosphorus, Ortho	0.019	mg/L	0.005	EPA 365.1	24 Aug 06 7:22	RMV

Approved by:

*Jason G. Smith*  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

*Ent WB*

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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MAPLE PLAIN MN 55359-9000

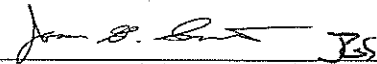
Report Date: 4 Sep 06  
Lab Number: 06-A36830  
Work Order #: 12-9581  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 22 Aug 06 13:30  
Date Received: 23 Aug 06 10:10  
PO #: CRWD

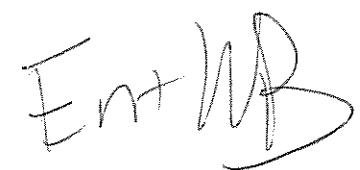
Project Name: CRWD

Sample Description: LL002B

Temp at Receipt: 4.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					26 Aug 06	RLB
Water Digestions					28 Aug 06	JMS
Solids, Total Suspended	9	mg/L	2	USGS I-3765-85	23 Aug 06 15:00	CJL
Chlorophyll a	3.7	mg/cubic m	1.0	10200H	25 Aug 06 7:35	JD
Phosphorus, Total	0.229	mg/L	0.005	EPA 365.1	28 Aug 06 11:32	RMV
Phosphorus, Ortho	0.173	mg/L	0.005	EPA 365.1	24 Aug 06 7:23	RMV
Iron	0.073	mg/L	0.010	6010	29 Aug 06 8:19	CJR

Approved by:   
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN



Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

MVTl guarantees the accuracy of the analysis done on the sample submitted for testing. It is not possible for MVTl to guarantee that a test result obtained on a particular sample will be the same on any other sample unless all conditions affecting the sample are the same, including sampling by MVTl. As a mutual protection to clients, the public and ourselves, all reports are submitted as the confidential property of clients, and authorization for publication of statements, conclusions or extracts from or regarding our reports is reserved pending our written approval.

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WES BOLL
WENCK ASSOCIATES INC
1800 PIONEER CRK CTR
MAPLE PLAIN MN 55359-9000

Report Date: 4 Oct 06
Lab Number: 06-A41539
Work Order #:12-10756
Account #: 013173
Sample Matrix: SURFACE WATER
Date Sampled: 20 Sep 06 10:00
Date Received: 21 Sep 06 10:20
PO #: CRWD

Project Name: CRWD

Sample Description: LLO01 T

Temp at Receipt: 4.0C

Table with 6 columns: As Received Result, Method RL, Method Reference, Date Analyzed, Analyst. Rows include Phosphorus Water Digest Solids, Chlorophyll a, Nitrogen Total, Chloride, Nitrate+Nitrite, Nitrogen, Ammonia, Phosphorus, Total, Phosphorus, Ortho, Nitrogen, Total Kjeldahl.

Approved by:

Jason G. Smith, Inorganic Laboratory Manager New Ulm, MN

= Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix ! = Due to sample quantity

# = Due to sample concentration + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447600 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

Ent WB





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WES BOLL
WENCK ASSOCIATES INC
1800 PIONEER CRK CTR
MAPLE PLAIN MN 55359-9000

Report Date: 4 Oct 06
Lab Number: 06-A41535
Work Order #:12-10756
Account #: 013173
Sample Matrix: SURFACE WATER
Date Sampled: 20 Sep 06 10:00
Date Received: 21 Sep 06 10:20
PO #: CRWD

Project Name: CRWD

Sample Description: LLO01 M

Temp at Receipt: 4.0C

Table with 6 columns: As Received Result, Method RL, Method Reference, Date Analyzed, Analyst. Rows include Phosphorus Water Digest, Total, and Ortho.

Handwritten initials/signature

Handwritten 'WB'

Handwritten 'QA' and 'WB'

Approved by: Jason G. Smith, Inorganic Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix ! = Due to sample quantity

# = Due to sample concentration + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 4 Oct 06  
Lab Number: 06-A41537  
Work Order #: 12-10756  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 20 Sep 06 10:00  
Date Received: 21 Sep 06 10:20  
PO #: CRWD

Project Name: CRWD

Sample Description: LLO01 B

Temp at Receipt: 4.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					26 Sep 06	RMV
Water Digestions					26 Sep 06	JMS
Phosphorus, Total	0.352	mg/L	0.005	EPA 365.1	27 Sep 06 13:49	DAP
Phosphorus, Ortho	0.348	mg/L	0.005	EPA 365.1	22 Sep 06 7:25	RMV
Iron	0.085	mg/L	0.010	6010	26 Sep 06 15:25	CJR

Approved by: Jason G. Smith  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Ent  
WB

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447600 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL  
WENCK ASSOCIATES INC  
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Report Date: 4 Oct 06  
Lab Number: 06-A41540  
Work Order #: 12-10756  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 20 Sep 06 11:30  
Date Received: 21 Sep 06 10:20  
PO #: CRWD

Project Name: CRWD

Sample Description: LLOO2 T

Temp at Receipt: 4.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest					26 Sep 06	RMV
Solids, Total Suspended	5	mg/L	2	USGS I-3765-85	21 Sep 06 15:30	CJL
Chlorophyll a	10.9	mg/cubic m	1.0	10200H	4 Oct 06 8:20	JD
Nitrogen Total, Calculat	1.7	mg/L	NA	Calc	25 Sep 06 15:09	Calculated
Chloride	20.3	mg/L	3.0	325.2	29 Sep 06 14:36	DAP
Nitrate+Nitrite	< 0.2	mg/L as N	0.2	353.2	25 Sep 06 15:09	DAP
Nitrogen, Ammonia	0.36	mg/L	0.08	4500 NH3 B, E	25 Sep 06 15:25	RSL
Phosphorus, Total	0.054	mg/L	0.005	EPA 365.1	27 Sep 06 13:49	DAP
Phosphorus, Ortho	0.011	mg/L	0.005	EPA 365.1	22 Sep 06 7:25	RMV
Nitrogen, Total Kjeldahl	1.7	mg/L	0.1	SM 4500NorgB/NH3 E	22 Sep 06 13:40	RSL

Approved by: Jason G. Smith  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

*Handwritten signature/initials*

= Reporting Limit

Elevated "Less Than Result" (<): # = Due to sample matrix  
! = Due to sample quantity

# = Due to sample concentration  
+ = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WENCK ASSOCIATES INC  
1800 PIONEER CRK CTR  
MAPLE PLAIN MN 55359-9000

Report Date: 4 Oct 06  
Lab Number: 06-A41536  
Work Order #: 12-10756  
Account #: 013173  
Sample Matrix: SURFACE WATER  
Date Sampled: 20 Sep 06 11:30  
Date Received: 21 Sep 06 10:20  
PO #: CRWD

Project Name: CRWD

Sample Description: LLOO2 M

Temp at Receipt: 4.0C

	As Received Result		Method RL	Method Reference	Date Analyzed	Analyst
Phosphorus Water Digest						
Phosphorus, Total	0.040	mg/L	0.005	EPA 365.1	26 Sep 06	RMV
Phosphorus, Ortho	0.009	mg/L	0.005	EPA 365.1	27 Sep 06 13:49 22 Sep 06 7:25	DAP RMV

*Ent WB*

Approved by: *Jason G. Smith*  
Jason G. Smith, Inorganic  
Laboratory Manager New Ulm, MN

Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration  
! = Due to sample quantity \* = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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WES BOLL
WENCK ASSOCIATES INC
1800 PIONEER CRK CTR
MAPLE PLAIN MN 55359-9000

Report Date: 4 Oct 06
Lab Number: 06-A41538
Work Order #:12-10756
Account #: 013173
Sample Matrix: SURFACE WATER
Date Sampled: 20 Sep 06 11:30
Date Received: 21 Sep 06 10:20
PO #: CRWD

Project Name: CRWD

Sample Description: LLOO2 B

Temp at Receipt: 4.0C

Table with 6 columns: As Received Result, Method RL, Method Reference, Date Analyzed, Analyst. Rows include Phosphorus Water Digest, Water Digestions, Phosphorus, Total, Phosphorus, Ortho, and Iron.

Approved by: Jason G. Smith, Inorganic Laboratory Manager New Ulm, MN

Ent WB

\* Reporting Limit

Elevated "Less Than Result" (<): @ = Due to sample matrix # = Due to sample concentration
! = Due to sample quantity + = Due to extract volume

CERTIFICATION: MN LAB # 027-015-125 WI LAB # 999447680 ND MICRO # 1013-M ND WW/DW # R-040 IA LAB #: 132 IA LAB #: 022

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**LABORATORIES, Inc.**

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New Ulm, MN 56073

Phone: (507) 354-8517

Toll Free: (800) 782-3557

Fax: (507) 359-2890

Chain of Custody Record

Page 1 of 1

Work Order # 12-2936

Company Name and Address: <u>Wenck and Associates</u> <u>1800 Pioneer Creek Circle</u> <u>Maple Plaine Minn 55359-9000</u>		Account #:	Phone #:
Billing Address (indicate if different from above):		Contact:	Fax #: <input type="checkbox"/> For faxed report check box
		Name of Sampler:	E-mail: <input type="checkbox"/> For e-mail report check box
		Quote Number	Date Submitted:
		Project Name/Number:	Purchase Order #:

Sample Information					Bottle Type										Analysis		
Lab Number	Sample ID	Sample Type (Food, Soil, Water, Etc.)	Date Sampled	Time Sampled	VOC Vials	500 ml unpres.	1000 ml unpres.	500 ml HNO3	1000 ml HNO3	500 ml H2SO4	1000 ml H2SO4	Sterile plastic	Amber H2SO4	500 ml NaOH	Filtered? Y or N	Other: <u>Let's Amber</u>	Analysis Required
<u>A28434</u>	<u>LL001 TOP</u>	<u>Water</u>	<u>7/6/06</u>	<u>830</u>		<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	<u>TP</u>
<u>36</u>	<u>LL001 mid</u>	<u>-</u>		<u>830</u>		<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>							<u>Orthophosphate ✓</u> <u>Phosphorus ✓</u>
<u>38</u>	<u>LL001 Bottom</u>	<u>-</u>		<u>830</u>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>							<u>TW</u>
<u>35</u>	<u>LL002 Top</u>	<u>-</u>		<u>930</u>		<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>					<input checked="" type="checkbox"/>	<u>NO2+NO3 ✓</u>
<u>37</u>	<u>LL002 Mid</u>	<u>-</u>		<u>930</u>		<input checked="" type="checkbox"/>				<input checked="" type="checkbox"/>							<u>TKN-Nitrogen ✓</u>
<u>38</u>	<u>LL002 Bottom</u>	<u>-</u>		<u>930</u>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/>							<u>Chloride ✓</u>
																	<u>Iron ✓</u>
																	<u>TSS ✓</u>
																	<u>Chlorophyll A ✓</u>

Comments:

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Transferred by:	Date:	Time:	Sample Condition:	Received by:	Date:	Time:	Temp:
<u>1. Ken Wetton</u>	<u>7/6/06</u>	<u>1100</u>		<u>M Schmidt</u>	<u>7/17/06</u>	<u>10:05 am</u>	<u>5</u>
<u>2.</u>							

Please submit the top two copies with your samples. We will return the completed original with your results.



# MVT LABORATORIES, Inc.

1126 North Front Street  
New Ulm, MN 56073

Phone: (507) 354-8517

Toll Free: (800) 782-3557 Fax: (507) 359-2890

# CHAIN OF CUSTODY RECORD

PLEASE DO NOT WRITE IN THE SHADED AREAS

100214

WORK ORDER # 128455

Company Name and Address: <u>Wenck Associates, Inc.</u> <u>1800 Pioneer Creek Ctr</u> <u>Maple Plain, MN 55359</u>	Account #:	Phone #: <u>(763) 479-4283</u>
	Contact: <u>Wes Boll</u>	Fax #:
Billing Address (indicate name and address if different from above):	Name of Sampler: <u>Wes Boll</u>	For faxed report check box <input type="checkbox"/>
	Quote #:	Date Submitted:
	Project Name/Number: <u>0002-75 Clearwater</u>	Purchase Order #:

Lab Use Only	Your Sample I.D. or Number	Sample Description	Date	Type of Sample (Matrix or Substance)				Analyze For:
				Soil	Water	Food	Other (Please Be Specific)	
	Example	Tank Bottom Tank #3	01/01/99 11:45 a.m.			X	Sampled Liquid Layer Not bottom sludge	Vitamin A, TKN, Iron, Calcium BOD, COD, Acetone, Shelf Life
<u>64</u>	<u>LH001T005</u>		<u>7/20/06</u> <u>10:15</u>		<u>X</u>			<u>TP, Ortho-P, TN, NO<sub>2</sub>-N, NO<sub>3</sub>-N, TKN, Chloride, TSS, chlor-a</u>
<u>A31162</u>	<u>LH001M045</u>		<u>7/20/06</u> <u>10:30</u>		<u>X</u>			<u>TP, Ortho-P</u>
<u>63</u>	<u>LH001B100</u>		<u>7/20/06</u> <u>10:30</u>		<u>X</u>			<u>TP, Ortho-P, Total Fe</u>
<u>65</u>	<u>LH002T005</u>		<u>7/20/06</u> <u>11:25</u>		<u>X</u>			<u>TP, Ortho-P, TN, NO<sub>2</sub>-N, NO<sub>3</sub>-N, TKN, Chloride, TSS, chlor-a</u>

	Transferred by:	Comments: (Sample Condition)	Date	Received by:	Comments: (Sample Condition)	Date	°C
<u>1</u>	<u>Wesley Boll</u>		<u>7/20/06</u> <u>14:00</u>	<u>W. Schmidt</u>		<u>7/21/06</u>	<u>2</u>
<u>2</u>						<u>11:30am</u>	
<u>3</u>							

Disposed of By:	Disposal Comments:
-----------------	--------------------

Please submit the top two copies with your samples. We will return the completed original with your results.



**LABORATORIES, Inc.**

1126 North Front Street  
New Ulm, MN 56073

Phone: (507) 354-8517

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# CHAIN OF CUSTODY RECORD

PLEASE DO NOT WRITE IN THE SHADED AREAS

Page 1 of 1

100215

WORK ORDER # 12-8968

Company Name and Address: <u>Wenck Associates</u> <u>1800 Pioneer Creek Ctr</u> <u>Maple Plain, MN 55359-0249</u>	Account #:	Phone #: <u>(763) 479-4283</u>
	Contact: <u>Wes Boll</u>	Fax #:
	Name of Sampler:	For faxed report check box <input type="checkbox"/>
Billing Address (indicate name and address if different from above):	Quote #:	Date Submitted:
	Project Name/Number: <u>Clearwater River</u>	Purchase Order #:

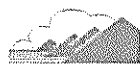
Lab Use Only	Your Sample I.D. or Number	Sample Description	Date	Type of Sample (Matrix or Substance)				Analyze For:	
			Time	Soil	Water	Food	Other (Please Be Specific)		
	Example	Tank Bottom Tank #3	01/01/99 11:45 am.				X	Sampled Liquid Layer Not bottom sludge	Vitamin A, TKN, Iron, Calcium BOD, COD, Acetone, Shelf Life
<u>A32817</u>	<u>LLO01T</u>		<u>10:30</u> <u>8/3/06</u>		X				<u>TP, Ortho-P, TN, NO<sub>2</sub>+NO<sub>3</sub>, TKN,</u> <u>Chloride, TSS, chlor-a</u>
<u>18</u>	<u>LLO01M</u>		<u>8/3/06</u> <u>10:30</u>		X				<u>TP, Ortho-P</u>
<u>19</u>	<u>LLO01B</u>		<u>8/3/06</u> <u>10:30</u>		X				<u>TP, Ortho-P, Iron</u>
<u>20</u>	<u>LLO02T</u>		<u>8/3/06</u> <u>11:00</u>		X				<u>TP, Ortho-P, TN, NO<sub>2</sub>+NO<sub>3</sub>, TKN,</u> <u>Chloride, TSS, chlor-a</u>
<u>21</u>	<u>LLO02M</u>		<u>8/3/06</u> <u>11:00</u>		X				<u>TP, Ortho-P</u>
<u>22</u>	<u>LLO02B</u>		<u>8/3/06</u> <u>11:00</u>		X				<u>TP, Ortho-P, Iron</u>

1	Transferred by:	Comments: (Sample Condition)	Date	Received by:	Comments: (Sample Condition)	Date	°C
			Time			Time	
	<u>Wesley Boll</u>		<u>8/03/06</u> <u>14:50</u>	<u>MC</u>		<u>4 Aug 06</u> <u>14:50</u>	<u>3.0 C</u>
2							
3							

Disposed of By: \_\_\_\_\_ Disposal Comments: \_\_\_\_\_

Please submit the top two copies with your samples. We will return the completed original with your results.





# Wenck

## CHAIN OF CUSTODY RECORD

**WENCK ASSOCIATES, INC.**  
 1800 Pioneer Creek Ctr. - P.O. Box 249  
 Maple Plain, MN 55359-0249  
 Phone: (763) 479-4200  
 FAX: (763) 479-4242

FIELD COORDINATOR

Norm Wenck

AIRBILL NO.

12-9581  
NO 6900

PROJ. NO.

PROJ. NAME

G.R.W.D.

SAMPLERS (Signature)

*Ken Walker*

SAMPLE MATRIX

TP

Orthophosphorus

TN

NO2+NO3

TKN

Nitrogen

Chloride

Iron

SS

Chlorophyll A

REMARKS

(Analyses, Detection Limits, Turnaround Time, Preservation, QA/QC, Run/Hold, Previous Data)

Sample I.D.	Date	Time	Comp.	Grab	Sample Description	Soil	Water	Other	TP	Orthophosphorus	TN	NO2+NO3	TKN	Nitrogen	Chloride	Iron	SS	Chlorophyll A	REMARKS
1	8/22/06	1200		✓	LL001T		-		✓	✓	-	✓	-	-	-		✓	-	A 36825
2		1215		-	LL001M		-			-									26
3		1230			LL001B		-			-									27
4		100			LL002T		-		-	-	-		-	-					28
5		115			LL002M		-			-									29
6		130			LL002B		-			-									30

Relinquished by: (Signature)

*Ken Walker*

Date

8/22/06

Time

5:00

Relinquished by: (Signature)

Relinquished by: (Signature)

Date

Time

Relinquished by: (Signature)

Relinquished by: (Signature)

Date

Time

Received for Laboratory by: (Signature)

*M. Schmidt*

Date

8/23/06

Time

10:00 AM

Sampling/Receipt Comments

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12-10755

NO 6970



WENCK ASSOCIATES, INC.  
1800 Pioneer Creek Ctr. - P.O. Box 249  
Maple Plain, MN 55359-0249  
Phone: (763) 479-4200  
FAX: (763) 479-4242

FIELD COORDINATOR  
*Norm Wenck*

AIRBILL NO.

PROJ. NO. \_\_\_\_\_ PROJ. NAME *CRWD*

SAMPLERS (Signature) *Ken With* SAMPLE MATRIX TP *Orthophosphorus* Phosphorus TN NO2 NO3 TKN Nitrogen Chloride Iron TSS *Chlorophyll A*

REMARKS  
Analyses, Detection Limits,  
Turnaround Time, Preservation,  
QA/QC, Run/Hold, Previous Data)

Sample I.D.	Date	Time	Comp.	Grab	Sample Description	Soil	Water	Other	TP	Orthophosphorus	Phosphorus	TN	NO2	NO3	TKN	Nitrogen	Chloride	Iron	TSS	Chlorophyll A	REMARKS	
	9/20/06	1000			LL001 T		-		✓	-	-	✓	-	-	-	-	-	-	-	-	-	A41539
					LL001 M				✓	-	-											A41535
					LL001 B				✓	-	-							✓				A41537
		1130			LL002 T				✓	-	-	✓	-	-	-	-	-		✓	✓		A41540
					LL002 M				✓	-	-											A41536
					LL002 B				✓	-	-							✓				A41538

Relinquished by: (Signature) *Ken With* Date 9/20/06 Time 2:20 Relinquished by: (Signature) \_\_\_\_\_ Relinquished by: (Signature) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ Relinquished by: (Signature) \_\_\_\_\_

Relinquished by: (Signature) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_ Received for Laboratory by: (Signature) *M. Schmidt* Date 9/21/06 Time 10:20 am Sampling/Receipt Comments \_\_\_\_\_

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