Macroinvertebrate Watershed Based Plan

Twenty-five Mile Creek Watershed
South Carolina

September 23, 2013

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1 Introduction

- *Why is a Watershed Based Management Plan needed?*
- *What is the ultimate goal of the Watershed Based Management Plan?*
- *Who is involved in creating the management plan?*
- *How was the Public involved in the process?*

A watershed is the area of land where all of the water that is under it or drains off of it into a river, stream, or other body of water to the same point. The purpose of a Watershed Based Plan (WBP or Plan) is to document the sources of water pollution and present a course of action to improve water quality within an impaired watershed. The WBP provides an approach to manage and restore the impaired waterbody to its designated use. Community stakeholders play a critical role in plan development, and the final plan reflects the community's goals for their watershed.

Twenty-five Mile Creek watershed has an area of 124 square miles (322 km^2) that mostly encompasses Kershaw and Richland Counties, but also extends into Fairfield County (Figure 1). The Twenty-five Mile Creek is a freshwater creek that flows into the Wateree River. The Wateree River, a continuation of the Catawba River, stretches about 75 miles before it joins the Congaree River. The Wateree River is popular for being a recreational resource for kayaking, fishing, and tubing. Therefore, improvement in Twenty-five Mile Creek's water quality will improve the quality of life and local economics in Kershaw County.

The United States Environmental Protection Agency (EPA) defines impaired waterbodies as any waterbody that does not meet water quality criteria that support its designated use (USEPA, 2012). Impaired waterbodies are then placed on the Section 303(d) list. Aquatic life is one of the designated uses for which streams are evaluated. Macroinvertebrate community assessments are used to verify aquatic life use support determinations. *Macroinvertebrates* are organisms that are large (macro) enough to be seen with the naked eye and lack a backbone (invertebrate). Aquatic macroinvertebrates are good indicators of stream quality because they are affected by the physical, chemical, and biological conditions of the stream; they show the effects of short and long term pollution events; and some macroinvertebrate species are very intolerant of pollution. The disadvantage of a macroinvertebrate survey is that it does not determine the cause of the absence of those species.

In 2000, Twenty-five Mile Creek was first listed on the State of South Carolina's 303(d) for violations of water quality standards for macroinvertebrates at the water quality monitoring station CW-080. This water quality monitoring station is located at the S-28-5 bridge near Lugoff before the creek's confluence with the Wateree River. Monitoring station CW-080 has remained on the 303(d) list for macroinvertebrates as of the date of this report. At the time of first macroinvertebrate sampling event in 1993, CW-080 was fully supporting aquatic life use (Bioclassification score of 3.5). However, at each the following 5 macroinvertebrate sampling events (approximately every 5 years) macroinvertebrate sampling at CW-080 was evaluated to be "partially supporting" aquatic life use (bioclassification score of 3.0 to 3.3). At the most recent macroinvertebrate sampling event in August 2013, CW-080 remained partially supporting aquatic life use standards, just below the cutoff of 3.5 for fully supporting. For the past 15 years CW-080 has had very consistent macroinvertebrate results.

A macroinvertebrate survey indicates the health of the creek; therefore, this WBP describes the macroinvertebrate impairment and identifies potential stressors causing the impairment, as well as provides the recommendations to restore Twenty-five Mile Creek's water quality. DHEC has not identified a specific pollutant of concern, so for the purposes of this WBP, we have assumed that improving water quality will improve the macroinvertebrate community that will ultimately result in Twenty-five Mile Creek becoming fully supporting of aquatic life and being removed from the 303(d) List of impaired streams. Furthermore, the Plan has considered the unique conditions within the watershed and developed suitable approaches to minimize future impacts to the Twenty-five Mile Creek. Altogether, the importance of developing this WBP to address the macroinvertebrate impairment in the Twenty-five Mile Creek Watershed is very clear. Efforts that will be taken to address this impairment in Twenty-five Mile Creek, and ultimately the Wateree River, will be a tremendous benefit to the local economy and the quality of life for citizens who live around and enjoy the stream and river.

Note that all maps can also be found in Appendix A in 11"x17" format.

1.1 How was the plan developed? And who was involved?

The plan was developed using a collaborative approach. This approach aimed to actively involve local stakeholders in selecting management strategies that may be implemented over time to solve water quality problems within the Twenty-five Mile Creek watershed. Active participants in the process included Kershaw County of South Carolina partnered with Richland County of South Carolina that jointly provided the $13,434 match for the grant to develop this macroinvertebrate WBP and the Bacteria WBP, also dated September 23, 2013. Other cooperating organizations included the Town of Elgin; Town of Blythewood; Fairfield County; Kershaw's Richland's and Fairfield's Natural Resources Conservation Service (NRCS); Kershaw's, Richland's and Fairfield's Soil and Water Conservation Districts (SWCD); Kershaw's, Richland's and Fairfield's Public Health Departments; Clemson Extension; Catawba Riverkeeper Foundation; Central Midland Council of Governments (COG); South Carolina Rural Water Association; South Carolina Department of Health & Environmental Control (SCDHEC); AMEC Environment & Infrastructure, Inc. ; and watershed residents.

Over the span of a year, a kickoff meeting and a total of six (6) brainstorming sessions were held with the above-mentioned local stakeholders and the Public in order to determine macroinvertebrate stressors within the Twenty-five Mile Creek Watershed. The brainstorm sessions (Appendix B) included the following topics:

- Urban Sources
- Agricultural Sources
- Septic/Sewer Sources
- Wildlife Sources
- Public Meetings (2)

Along with these meetings, the following helped develop and refine management strategies: SCDHEC macroinvertebrate surveys and other SCDHEC pollutant monitoring, the Twenty-five Mile Creek Bacteria TMDL, Kershaw County's experience sampling the creek and its tributaries, a windshield survey, and other items mention in Section 4.

This WBP incorporates this work as well as SCDHEC guidelines that are required in watershed based management plans to restore impaired waters. This alignment with SCDHEC guidance is intended to enable project partners to seek future SCDHEC funding to help implement the plan.

1.2 Who should read this plan?

Any group that influences or is affected by water quality, habitat management, and land use decisions should read this report. Municipalities and local groups in and around the Twenty-five Mile Creek Watershed should use this plan as the foundation for local action. State and federal agencies can use this plan to enhance their understanding of local watershed conditions and as a basis for coordinating, planning, permitting and regulatory decisions.

2 Executive Summary

This project is located in Twenty-five Mile Creek Watershed (HUC 03050104). Twenty-five Mile Creek is listed on the 2012 303(d) list of impaired waterbodies because it does not support aquatic life based on benthic macroinvertebrate surveys. Because Twenty-five Mile Creek discharges to the Wateree River, the causes of the macroinvertebrate impairment in Twenty-five Mile Creek watershed will have a direct impact on the water quality of the Wateree River, which will be a tremendous benefit to the local economy and the quality of life for citizens who live around and enjoy the stream and river.

A variety of non-point sources (NPS) have the potential to cause the macroinvertebrate impairment in Twenty-five Mile Creek watershed. The most probably stressors are related to flow and deposit of sediment in the creek and its tributaries. In addition, possible stressors include nutrients, low dissolve oxygen and high temperature.

Urbanization of the headwaters of this watershed would indicate that flow in the creek, particularly peak flows, has likely steadily increased in the past 30+ years. Because flow disturbance is known to affect macroinvertebrate communities, flow is considered a probable stressor in Twenty-five Mile Creek. A Stormwater Quantity Master Plan is recommended to find the areas where retrofitting of detention might be beneficial, such as in subdivisions with small lot sizes and therefore high impervious cover.

Sediment is also a probably stressor in Twenty-five Mile Creek Watershed. Several key areas of sediment load were identified, including ditches along dirt roads, mostly in Kershaw County, an actively degrading stream in Stratton Hall Subdivision in Lugoff, a steep gravel road in Clemson Extension, poor riparian buffers throughout the watershed and poor or no conservation tilling practices. Addressing riparian buffers in the watershed will also address the slight summer temperature rise in the watershed.

Nutrients are also a possible stressor in Twenty-five Mile Creek Watershed. Agricultural NPS pollutant sources of nutrients include grazing livestock depositing manure directly into Twenty-five Mile Creek and its tributaries, as well as manure/litter from cattle, horse and poultry farms entering Twenty-five Mile Creek and its tributaries through runoff. Septic tank usage is common for rural homes and businesses, particularly in the upper portion of the Twenty-five Mile Creek watershed, with an estimated septic system failure rate of approximately 5 to 10% (Schueler, 1999). As well sanitary sewer overflows (SSOs) are also a pollutant source of nutrients in the Twenty-five Mile Creek watershed. According to Palmetto Utilities, which provides sewer services to the Richland County portion of the watershed, the placement of fats, oils and grease (FOG) down the drain are a frequent cause of SSOs. In addition, urban runoff, such as domestic pet waste, contributes to nutrients in Twenty-five Mile Creek watershed.

Dissolved oxygen is a concern at CW-229, which is downstream of the former Kennecott Mine. If the former mine is causing the low dissolved oxygen levels, it is being monitored and addressed through NPDES Permit #SC0041378). If it the former mine is not the cause of the low dissolved oxygen levels, other likely causes of low dissolved oxygen are being addressed through sediment, nutrient, and temperature stressors.

To address the macroinvertebrate impairment, Kershaw County, Richland County and Fairfield County will seek funding to install Best Management Practices (BMPs) to reduce pollutants entering Twenty-five Mile Creek and its tributaries from non-point sources. BMPs will include stabilization along dirt and gravel roads, stream restoration, buffers, septic system repairs and replacements, used cooking oil recycling program, pet waste stations, rain barrels, rain gardens, storm drain markers, and agricultural BMPs such as stacking sheds, fencing, and manure composting. An outreach effort will accompany this project, educating farmers, residents and businesses of Twenty-five Mile Creek watershed about the causes and results of the macroinvertebrate impairment and how they can help solve it.

3 Watershed Characteristics

- *What are the features of the surrounding landscape?*
- *What effect does hydrology and soil type have on the Watershed?*
- *What natural resources does the Watershed provide?*
- *How is land within the Watershed being used?*

The following sections have also been paraphrased from the SCDHEC "TMDL Development for Fecal Coliform Bacteria for Twenty-five Mile Creek CW-080 (HUC 03050104-060)" dated September 1, 2004 available at http://www.scdhec.gov/environment/water/tmdl/docs/tmdl_25mile_fc.pdf .

3.1 Location

Twenty-five Mile Creek Watershed has an area of 124 square miles (322 km^2) that mostly encompasses Kershaw County, but also extends into Richland and Fairfield counties (see Figure 1). The Twenty-five Mile Creek in the watershed flows into the Wateree River. Twenty-five Mile Creek is designated as Class Freshwater. There is one SCDHEC water quality monitoring station on Twenty-five Mile Creek. Station

CW-080 is located at the S-28-5 bridge near the town of Lugoff. The other monitoring station in Twenty Five Mile Watershed, CW-229, is located on Bear Creek; a tributary of Twenty-five Mile Creek. The watershed is partly in the Piedmont Ecoregion and partly in the Southern Plains Ecoregion. The watershed is mostly rural, but suburbs of Columbia and portions of several towns (Town of Blythewood, Elgin, and Lugoff) are located in the watershed.

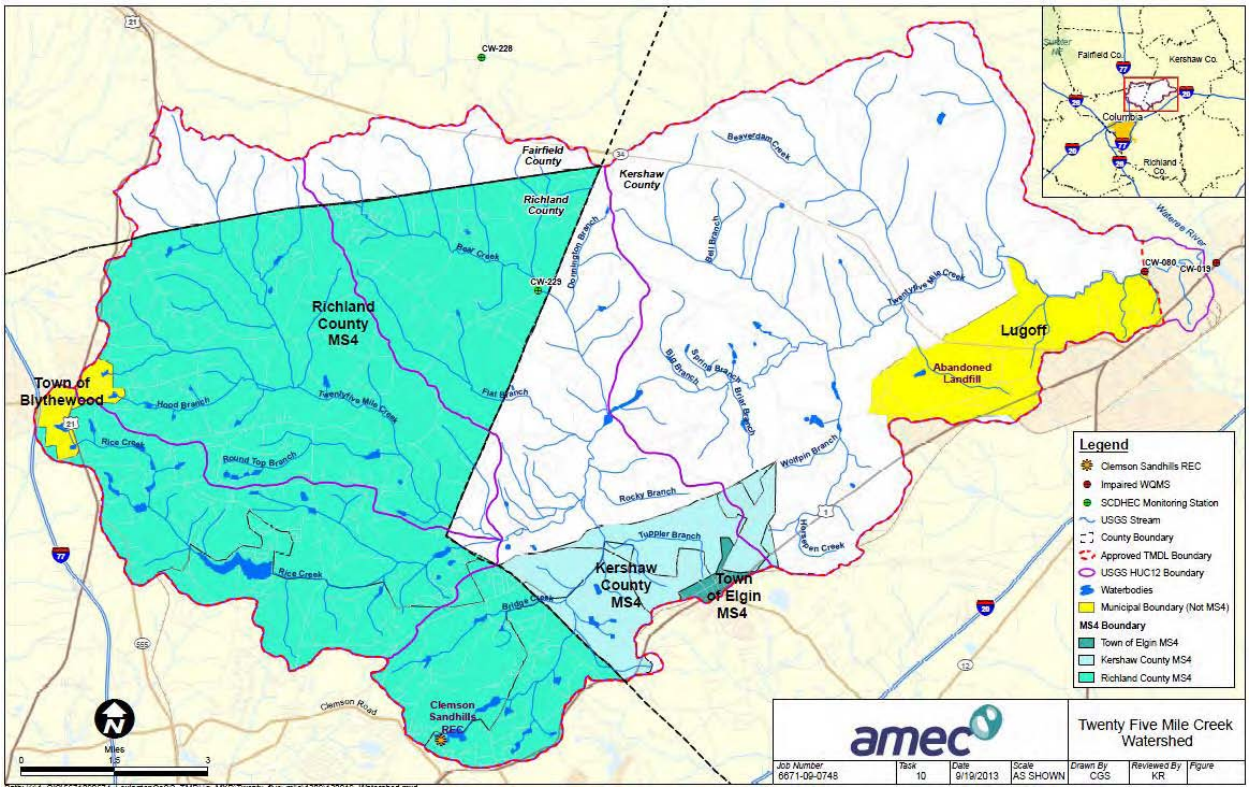


Figure 1. Twenty-five Mile Creek Watershed

3.2 Climate

According to South Carolina Department of Natural Resources (SCDNR), Kershaw County has an average mean temperature of 60.7 °F and an annual average precipitation of 43.8 inches per year. Richland County has an average mean temperature of 66.7 °F and annual average precipitation of 46.3 inches per year. Lastly, Fairfield County has an average mean temperature of 62.1 °F and an annual average precipitation of 43.9 inches per year.

3.3 Soils

There is a diversity of soil types within this large watershed, however for the purpose of this Plan, Hydrologic Soil Groups within the watershed were examined in order to analyze areas with higher runoff potential. Hydrologic Soil Groups (HSG) are a designation developed by the National Resource Conservation Service (NRCS) which describes the infiltration capacity of soil. Soil associations are categorized in decreasing infiltration capacity from A to D and are described in greater detail below:

Group A is sand, loamy sand or sandy loam types of soils. These soils have low runoff potential and high infiltration rates even when thoroughly wetted. They consist chiefly of deep, well to excessively drained sand or gravel and have a high rate of water transmission (greater than 0.30 inches/hour).

Group B is silt loam or loam. These soils have moderate infiltration rates when thoroughly wetted and consist chiefly of moderately deep to deep, moderately well to well drained soils with moderately fine to moderately coarse textures. These soils have a moderate rate of water transmission (0.15-0.30 inches/hour).

Group C soils are sandy clay loams. They have low infiltration rates when thoroughly wetted and consist chiefly of soils with a layer that impedes downward movement of water and soils with moderately fine to fine texture. These soils have a low rate of water transmission of (0.05-0.15 inches/hour).

Group D soils are clay loam, silty clay loam, sandy clay, silty clay or clay. This HSG has the highest runoff potential. They have very low infiltration rates when thoroughly wetted and consist chiefly of clay soils with a high swelling potential, soils with a permanent high water table, soils with a claypan or clay layer at or near the surface and shallow soils over nearly impervious material. These soils have a very low rate of water transmission (0-0.05 inches/hour).

Figure 2 below displays the Hydrologic Soils Groups throughout the Twenty-five Mile Creek Watershed. Compared to Richland and Fairfield Counties, Kershaw County mostly has HSG A and B soils. As well, in Kershaw County, adjacent to Twenty-five Mile Creek and its tributaries is HSG C. HSG C also appears to be predominant in the northern part of Richland County. As a result, understanding the watershed's runoff potential will help narrow down areas that may have a higher potential for pollutant runoff.

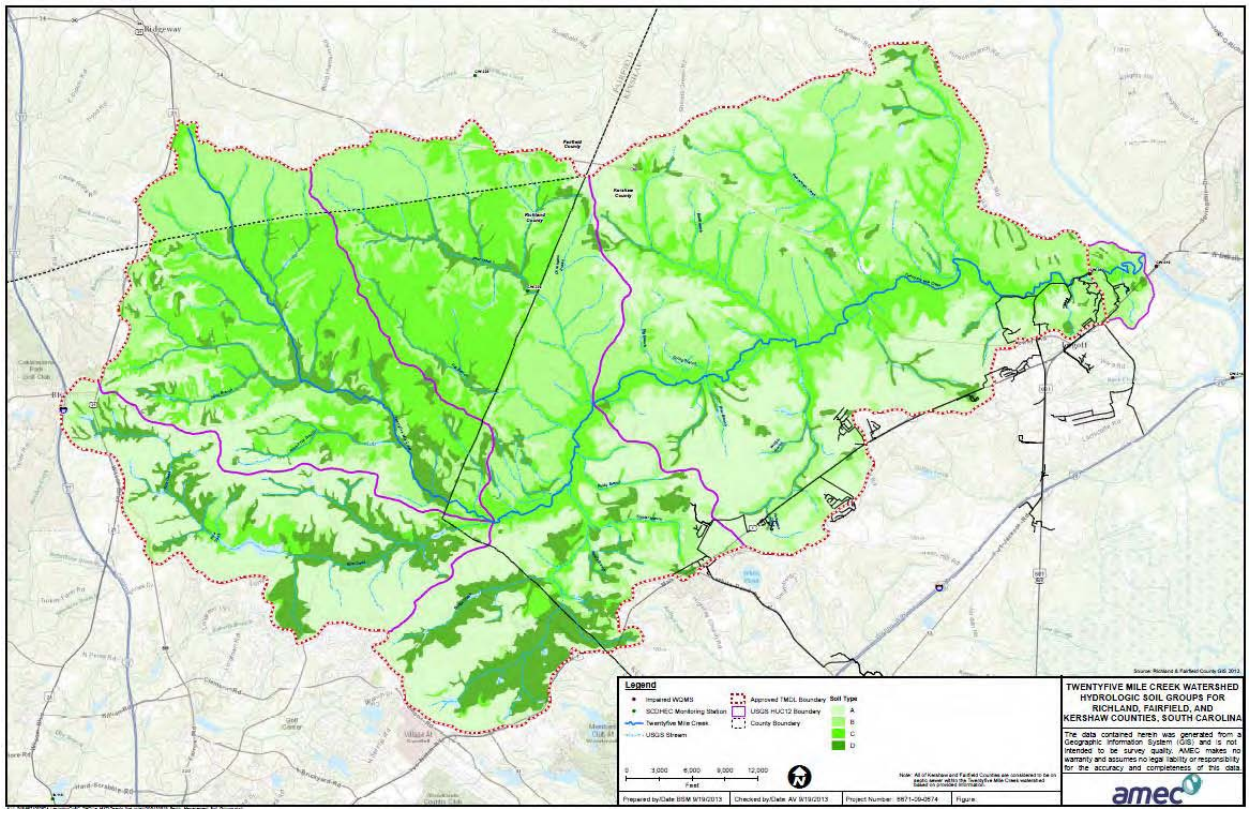


Figure 2. Hydrologic Soil Groups within the Twenty-five Mile Creek Watershed

Along with understanding the watershed's runoff potential areas, Hydrologic Soil Groups may shed some light on the soils' erodibility. Soil erodibility is an estimate of the ability of soils to resist erosion, based on the physical characteristics of each soil. Generally, soils with faster infiltration rates, higher levels of organic matter and improved soil structure have a greater resistance to erosion. Sand, sandy loam and loam textured soils tend to be less erodible than silt, very fine sand, and certain clay textured soils. Though HSG can only characterize infiltration rates and generalize certain soil textures, identifying the Hydrologic Soils Groups can aid the decision process of narrowing down potential sources of pollution via increased sediment loads.

3.4 Land Use

Based on 2006 USGS Multi-Resolution Land Characteristic (MRLC) land use data, 64.5 percent of the watershed is forested land. The remaining 35.5 percent is composed of urban areas (19.5%), wetlands (6.7%), pasture (5.5%), cropland (2.0%), and a small mix of water and barren land (1.3 and 0.5%, respectively). Table 1 presents the percentage of total watershed area for each aggregated land use. Figure 3 displays land use activities in the watershed. The figure illustrates the current 2006 USGS National Land Cover Data (NLCD) compared to the 1992 USGS NLCD. The rest of the document will cite 1992 USGS NLCD data which only varies by tenths of a percentage from the data that was used to develop the TMDL (early 1990s). Using the 1992 USGS NLCD data will not alter the conclusions.

The predominant land use in the watershed is forest; which accounted for 69.9% of the land in 1992 and remained the predominant land use in 2006, covering 64.5% of the watershed (see Table 1). Concentrated forested areas are located mostly in the northern portion of the watershed. When the TMDL was developed, the next largest land use was classified as agriculture. Agriculture areas consisted of crop lands and pastures (18.9% of the watershed). In Richland County, many pasture lands are adjacent to Twenty-five Mile Creek and concentrated in the northern portion of the watershed. Kershaw County's agriculture lands are spread throughout the watershed (see Section **Error! Reference source not found.** for more details on agriculture land use in the Twenty-five Mile Creek Watershed).

According to 2006's USGS NLCD, the percentage of agriculture in the watershed dropped by 11.4% since the TMDL was written. As a result, urban growth excelled in the watershed and became the second largest land use, based on the 2006 NLCD. The loss of forested and agriculture lands (5.4% and 11.4%, respectively) nearly accounts for the amount of urbanized areas gained (16.4%). Commercial and industrial properties dominate in Richland County's southern portion of the watershed, and urbanized areas along U.S. Highway 1 in Kershaw County, such as the Kershaw County MS4 and the Town of Elgin and Lugoff. From 1992 to 2006, the watershed experienced extensive urban growth and has continued to receive growth pressures since 2006 as a result of the watershed's close proximity to the population center of Columbia.

Figure 3 displays the current (2006) USGS National Land Cover Data compared to the 1992 USGS NLCD land use data, which is closely correlated to the land use data used in the Twenty-five Mile Creek TMDL.

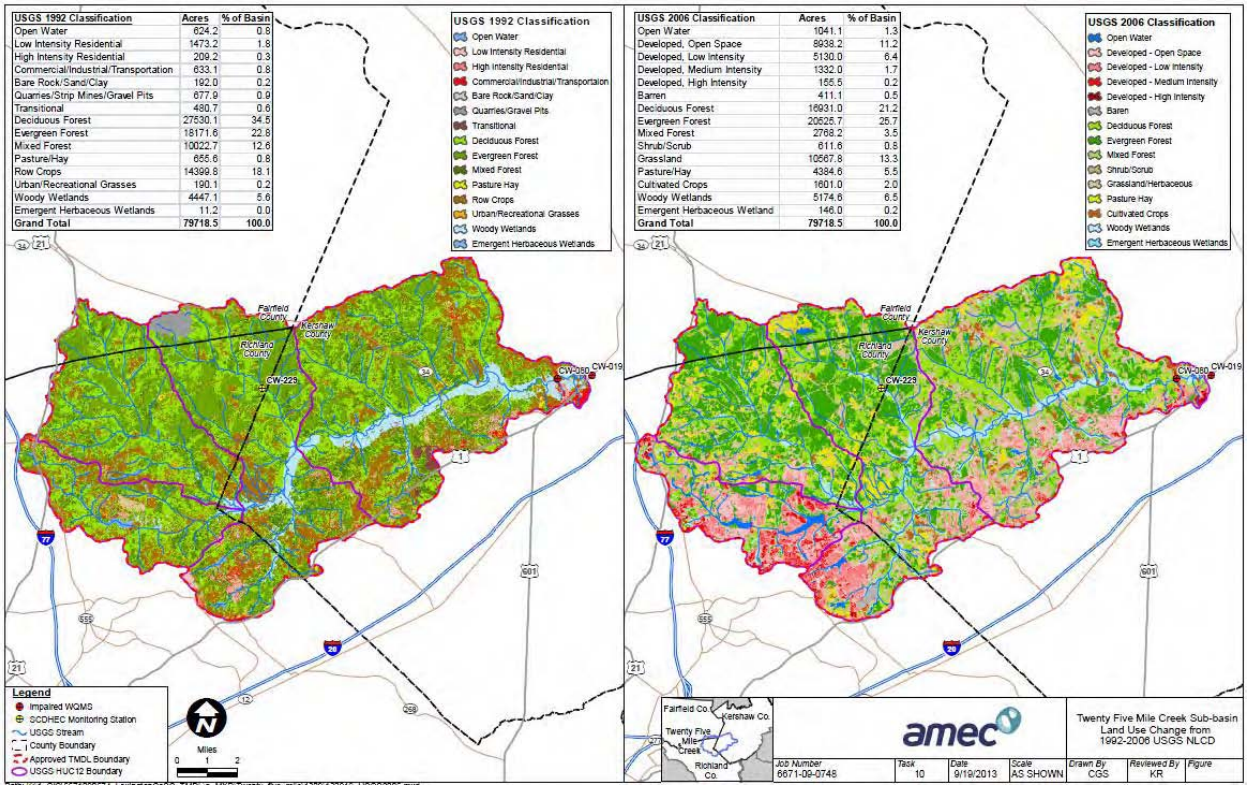


Figure 3. Twenty-five Mile Creek Land Use Change from 1992-2006

Table 1 provides a summary of current land use for the Twenty-five Mile Creek watershed based on 2006 USGS NLCD compared to the information used to develop the TMDL (first column) and the 1992 USGS NLCD (second column). The information used to develop the TMDL claimed to use NLCD data that was collected in the early 1990s, which closely matches the 1992 data. Nonetheless, the watershed's acreage slightly differs by about 42 acres. Both data sets are provided in the table below.

Table 1. Land use Distributions in the Twenty-five Mile Creek Watershed

Land Use Classification	Data Used to Develop TMDL		USGS 1992 NLCD		USGS 2006 NLCD	
	Areas [acres]	% of Watershed	Areas [acres]	% of Watershed	Areas [acres]	% of Watershed
Built-up	2,414.3	3.0	2,505.6	3.1	15,555.7	19.5
Barren	834.0	1.0	869.9	1.1	411.1	0.5
Transitional	525.5	0.7	480.7	0.6	0	0.0
Forest	55,589.1	69.8	55,724.4	69.9	51,404.3	64.5
Pasture	679.9	0.9	655.6	0.8	4,384.6	5.5
Row Crops	14,587.0	18.3	14,399.8	18.1	1,601.0	2.0
Wetlands	4,423.6	5.6	4,458.3	5.6	5,320.6	6.7
Water	622.9	0.8	624.2	0.8	1,041.1	1.3
Total	**79,676.3**	**100.0**	**79,718.5**	**100.0**	**79,718.4**	**100.0**

3.4.1 Land Use Effects on Twenty-five Mile Creek

Based on the 2004 Bacteria TMDL and knowledge of the watershed, and land-use changes in the past 20 to 30 years, the extensive urban growth in Twenty-five Mile Creek Watershed has put a stress on the macroinvertebrate community, through additional sediment load, altered flow regime and increased nutrient load. Additional sediment and nutrient load are contributed from agricultural land and crop farms. These stressors are of concern and are addressed in greater detail in Sections 5 and 7.

4 Watershed Conditions

- *What are the designated and desired uses of our surface waters?*
- *What standards are used to judge water quality?*
- *What is the current condition of the watershed?*
- *What are the impacts of pollutants on the watershed?*

4.1 Stream Class & Criteria

The South Carolina Legislature (S.C. Regulation 61-68) has established water quality classification standards for all surface waters in the State of South Carolina. This system provides water quality goals and criteria and guides management efforts so that individual water bodies can be protected and restored to meet these goals. The impaired stream segment, Twenty-five Mile Creek, is designated as Class Freshwater. Waters of this class are described as follows: "Freshwaters suitable for primary and secondary contact recreation and as a source for drinking water supply after conventional treatment in accordance with the requirements of the Department. Suitable for fishing and the survival and propagation of a balanced indigenous aquatic community of fauna and flora. Suitable also for industrial and agricultural uses." (R.61-68)

Specifically, Twenty-five Mile Creek is listed on the 2012 303(d) list of impaired waterbodies because it does not support aquatic life based on benthic macroinvertebrate surveys. Twenty-five Mile Creek is also impaired for bacteria and has a Total Maximum Daily Load. The bacteria impairment is addressed in a separate Watershed Based Plan dated September 23, 2013.

4.2 Stream Assessments

SCDHEC has sampled and analyzed two water quality monitoring stations (WQMS) in Twenty Five Mile Creek Watershed for various parameters periodically over the past 40 years. WQMS CW-080 is located at the lower end of the creek just upstream of its confluence into the Wateree River. WQMS CW-229 is located in Bear Creek, a tributary of Twenty-five Mile Creek, in the northern portion of the watershed. Figure 1 shows the approximately locations of CW-229 and CW-080. WQMS CW-080 and WQMS CW-229 have been analyzed periodically between 1964 and 2008 for alkalinity, ammonia, Biological Oxygen Demand, Cadmium, Total Organic Carbon, Chromium, Copper, Dissolved Oxygen, Enterococcus, Fecal Coliform, E. Coli, Hardness, Inorganic Nitrogen, Iron, Kjeldahl Nitrogen, Lead, Manganese, Mercury, Nickel, pH, Phosphate, Turbidity and Zinc. SCDHEC discontinued monitoring at WQMS CW-229 after 2007 and CW-080 after 2008.

In addition to monitoring for the above-listed chemical and biological parameters, SCDHEC conducted a macroinvertebrate survey at WQMS CW-080 once each summer in 1993, 1998, 2002, 2007 and through special request in 2013. The results are shown in Table 2 in *Macroinvertebrate Assessments*.

4.2.1 Macroinvertebrate Assessments

According to the 2012 303(d) list, Twenty-five Mile Creek is impaired for macroinvertebrates and does not meet freshwater standards for aquatic biota. Twenty-five Mile Creek was monitored for macroinvertebrates once each summer of the years 1993, 1998, 2002, 2007 and 2013. Table 2 details the biological assessments completed in the Twenty-five Mile Creek Watershed between 1993 and 2007.

Table 2. SCDHEC Macroinvertebrate Results at CW-080

Date	Count	Taxa Richness	EPT Index	NC Biotic Index	EPT Score	BI Score	Bioclass-ification Score	Bioclass-ification	Aquatic Life Use
7/13/1993	552	53	15	5.82	3	4	3.5	Good	Fully Supporting
6/17/1998	219	44	13	5.81	2.4	4	3.2	Good/Fair	Partially Supporting
6/19/2002	222	41	14	5.86	2.6	4	3.3	Good/Fair	Partially Supporting
7/6/2007	304	46	12	5.60	2	4	3	Good/Fair	Partially Supporting
8/15/2013	222	47	14	5.96	2.6	4	3.3	Good/Fair	Partially Supporting

EPT - Ephemeroptera, Plecoptera and Trichoptera

Because of unofficial observations of intolerant macroinvertebrate species during stream visits by AMEC and Kershaw County and the lack of potential sources of macroinvertebrate habitat stressors observed during field visits, SCDHEC agreed to conduct the recent macroinvertebrate survey at CW-080. The results of SCDHEC's past 20 years of macroinvertebrate surveys at WQMS CW-080 are very consistent, but just below the 3.5 cut-off of being fully-supporting of aquatic life.

4.2.2 Water Quality Assessments

Appendix C and D include all of the data that DHEC has collected in Twenty-five Mile Creek watershed and are being made available as a part of this WBP, including alkalinity, ammonia, Biological Oxygen Demand, Cadmium, Total Organic Carbon, Chromium, Copper, Dissolved Oxygen, Enterococcus, Fecal Coliform, E. Coli, Hardness, Inorganic Nitrogen, Iron, Kjeldahl Nitrogen, Lead, Manganese, Mercury, Nickel, pH, Phosphate, Turbidity and Zinc.

4.2.3 Fairfield Kennecott Gold Mine Assessments

The Kennecott Ridgeway Gold Mine, located 25 miles northeast of Columbia, South Carolina, is owned by Kennecott Minerals Company. The mine operated from 1988 to 1999 and consisted of two open pits, processing facilities and a tailings impoundment. The Ridgeway site is currently being reclaimed and environmental monitoring of ground water and surface water (under NDPES permit #SC0041378) will continue for 30 years by SCDHEC. Greater details of the Kennecott Ridgeway Gold Mine are discussed in Section 5.

4.2.4 Abandonded Lugoff Landfill Assessments

Groundwater at the abandoned Lugoff Landfill, located on the bank of Twenty-five Mile Creek near WQMS CW-080 is being monitored by SCDHEC (Figure 1).

4.2.5 Other Assessments

AMEC and Kershaw County have performed a windshield survey through a majority of the watershed and visited numerous points in Twenty-five Mile Creek and its tributaries. Observations during these field visits have been included in Section 5. Examples of the observations include erosion along dirt roads and railroad banks and stream degradation.

In May 2010, AMEC Environment and Infrastructure, Inc. (formerly MACTEC) conducted a stream evaluation of an unnamed tributary to Twenty-five Mile Creek in the Stratton Hall neighborhood of Lugoff, South Carolina (in this Plan, it will be referred to as the Stratton Hall Stream). AMEC concluded that the approximately 0.25 mile long stretch of stream between Wellington Drive and Cambridge Lane is actively degrading and if left alone, it will likely continue to degrade. A possible consequence include bank failure that could undermine power poles and fences, expose portions of a sanitary sewer line, cause loss of property, and degrade aquatic ecology. Due to bank entrenchment issues, in 2013 Fairfield Electric relocated their power lines to the street-side with underground lines. However, as of AMEC's last visit in September 2013, the poles remain in the banks of the stream. As well, from AMEC's recent site visit, the stream appears to continue to degrade. For further details on the condition of the Stratton Hall Stream, the full 2010 report can be found in Appendix E.

In September 2013, Kershaw County Stormwater Management Program (KCSWM Program) collected two nutrient samples from CW-080 and from the tributary at Stratton Hall neighborhood just downstream from Reynolds Nursery, the results of which are made available as a part of this WBP (Table 3). Please note these stream samples were not QAPP approved; the sampling was conducted for the KCSWM Program as a screening tool to help prioritize problems areas within the watershed. Also note that these were ambient samples and not collected during a storm event.

Table 3. Unofficial Nutrient Sampling Results in Twenty-five Mile Creek Watershed

Location	Parameter	Method	Result	Units
Stratton Hall Stream	NO3/NO2	353.2	0.26	mg/L
	TKN	351.2	0.46	mg/L
	Total Phosphorous	365.1	0.094	mg/L
CW-080	NO3/NO2	353.2	<0.020	mg/L
	TKN	351.2	0.55	mg/L
	Total Phosphorous	365.1	0.040	mg/L

SCDHEC does not have numeric nutrient standards. However, these limited, unofficial nutrient results at CW-080 and at Stratton Hall Stream were compared to Virginia DEQ's nutrient reference values of 1.5 mg/L NO3-N and 0.2 mg/L Total Phosphorous for eutrophication. These limited, unofficial sampling results at CW-080 and at Stratton Hall Stream do not exceed the VA DEQ reference values for NO3-N or Phosphorous.

5 Identifying and Prioritizing Stressors, Sources and Causes

- *What is the process for identifying and prioritizing macroinvertebrate stressors in the Watershed?*
- *What are the stressors/causes of the major pollutants in the Watershed?*
- *What are the potential solutions to improve the water quality?*

In order to address the macroinvertebrate impairment of Twenty-five Mile Creek, pollutant stressor(s) affecting the benthic macroinvertebrate community must be identified. Macroinvertebrate assessments are an appropriate tool to determine if a particular stream segment is impaired; however, macroinvertebrate surveys do not provide enough information to determine the causes of the impairment. Therefore, in development of this WBP, it was assumed that if the general water quality and habitat was improved, the macroinvertebrate community would also improve. SCDHEC's Chemical and physical monitoring data and AMEC's field observations provided evidence to support or eliminate candidate stressors. Technical advisors, stakeholders and community members also provided input on the possible stressors and causes of pollutants throughout the project. By identifying the cause of the stressors, implementation efforts can focus on remedying conditions leading to stream impairment. This will ensure that implementation efforts will be completed efficiently and effectively.

Each potential stressor in Twenty-five Mile Creek was then classified as one of the following (Table 4):

• **Non-stressors:** Stressors with data indicating normal conditions, without WQS exceedance, or without any apparent impact.
• **Possible stressors:** Stressors with data indicating possible links to the macroinvertebrate impairment, but without conclusive data to show a direct impact on the macroinvertebrate community.
• **Most probable stressors:** Stressors with conclusive data linking them to the poor health of the macroinvertebrate community.

Table 4: Summary of Stressors in Twenty-five Mile Creek.

Category	Candidate
Most Probable Stressors	Flow, Sediment, Nutrients
Possible Stressors	Dissolved Oxygen, Temperature
Non-Stressors	pH, Heavy Metals

5.1 Non-Stressors

5.1.1 pH

A suitable range of pH levels is required by benthic organisms to survive and realize optimum growth. Very high or low pH conditions can result in a change of dominant benthic invertebrate populations to pH-tolerant organisms. As shown in Appendix C and D, since 1976 very few pH readings dropped below the minimum value of 6.0. The pH readings have not dropped below 6.0 since 2001 and a majority of the low readings were in the 1970s. Therefore, pH is eliminated from the list of stressors.

5.1.2 Heavy Metals

According to the metal analyses by SCDHEC, less than 10% of the samples of the heavy metals exceeded the water quality standards, with the exception of Zinc at CW-229, where 15% of the samples exceeded water quality standards. However, in the past 13 years, since Kennecott Mine stopped operation, 0% of the Zinc results at CW-229 exceeded water quality standards. Therefore, heavy metals were eliminated from the possible stressor list.

5.2 Possible Stressors

5.2.1 Low Dissolved Oxygen

Decreases in dissolved oxygen concentrations in a stream can result in oxygen depletion or anoxic sediments, which adversely impact the river's macroinvertebrate community. Although only one DO measurement at CW-080 (see Appendix C) dropped below the daily average criterion of 5.0, 22% of the DO measurements at CW-229 (Appendix D) between 1999 and 2007 (most recent data) fell below the daily average DO criterion of 5.0. Low dissolved oxygen is, therefore, considered a possible stressor. However, the fact that the factors that affect DO (volume and velocity of flow, temperature, TSS, nutrients, organic wastes and other chemicals) are included individually (see Sections 5 and 7), low dissolved oxygen itself is not being separately addressed as a possible stressor.

Surface and groundwater at Kennecott Mine (upstream of CW-229) are being monitored and addressed by NDPES permit #SC0041378. No further discussion of regarding Kennecott Mine and dissolved oxygen issues at CW-229 is included in this report.

5.2.2 Temperature

Aquatic organisms need a suitable range of temperature to grow, reproduce, and survive. Although the highest summer water temperatures at CW-080 were seen in the 1970s and 1980s, the trend-line of July/August summer temperatures continues to increase (Figure 4). With increasing development in the Twenty-five Mile Creek watershed more impervious surfaces are anticipated, resulting in warmer stormwater runoff, less stream canopy and potentially higher stream temperature.

Therefore, temperature is considered a possible stressor.

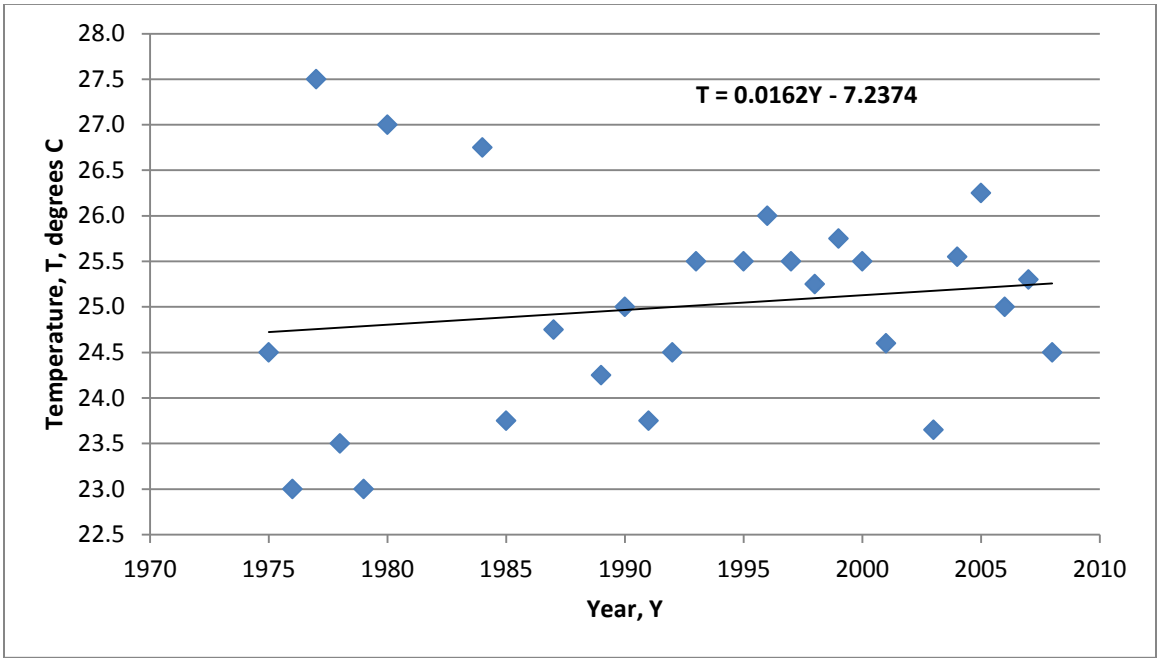


Figure 4 Average July and August Water Temperature at CW-080

5.3 Most Probable Stressors

5.3.1 Sediment

Excessive sedimentation can fill the pores in gravel and cobble substrate, eliminating macroinvertebrate habitat. Sediment can also provide a transport mechanism for pollutants that bind to sediment. While some sediment in a stream is natural, increased sediment loads from runoff from man-made land uses can severely degrade a stream. Potential sources of sediment include agricultural runoff, residential runoff, forestry operations, construction sites, and in-stream disturbances. Total Suspended Solids (TSS) has not been historically measured in Twenty-five Mile Creek watershed. However, turbidity has been measured and the average turbidity levels have very slowly increased since 1963, when turbidity measurements began. Seven exceedances above 50 NTU have occurred since 1989, when the first turbidity exceedance occurred. Development in the urban portions of the watershed is the likely source

of these more recent exceedances, with crop farms and possibly forestry operations also contributing. Therefore, Sediment is classified as a most probable stressor in this study.

5.3.2 Nutrients

Excessive nutrients can stimulate phytoplankton growth and eutrophication, which eventually causes low dissolved oxygen (DO) and stresses aquatic organisms. SCDHEC does not have numeric nutrient standards. However, the nutrient results at CW-080 and CW-229 were compared to Virginia DEQ's nutrient reference values of 1.5 mg/L NO3-N and 0.2 mg/L Total Phosphorous for eutrophication. As shown in Appendix C, it can be seen that the NO2/NO3 levels in CW-080 do not exceed the VA DEQ reference value for NO3; although CW-080 does have an occasional Phosphorous level higher than the VA DEQ reference level for Phosphorous. However, adequate DO at CW-080 does not indicate any evidence of excessive algal growth or eutrophication.

However, at CW-229, 22% of the samples between 1999 and 2007 have dissolved oxygen levels below water quality standards in addition to some NO3/NO2 and Total Phosphorous results higher than the VA DEQ reference values. These indicate that eutrophication may be an issue in the upper portion of the watershed.

Therefore, Nutrients are classified as a most probable stressor in this study.

5.3.3 Flow

Although there is no USGS flow gauge in Twenty-five Mile Creek, the urbanization of the headwaters of this watershed would indicate that flow in the creek, particularly peak flows, has likely steadily increased in the past 30+ years. Because flow disturbance is known to affect macroinvertebrate communities, flow is considered a probable stressor in Twenty-five Mile Creek. In addition, as stream flow increases, the stream system begins to adapt to increased flows. That adaptation often includes stream widening and downcutting. In urban environments, the increased flow can cause such a significant change in the stream system that the stream is disconnected from its floodplain and base flow in the stream is altered – both of which can greatly impact the macroinvertebrate community.

Therefore, Flow is classified as a most probable stressor in this study.

5.4 Other Sources

5.4.1 Point Sources

Individual NPDES permitted point sources were identified within the Twenty-five Mile Creek Watershed and Figure 5 depicts their locations.

The NPDES Industrial general permit, effective January 1, 2011, requires industrial permitted facilities which discharge to a TMDL watershed to sample their discharge and conduct analyses for the TMDL's pollutant of concern (POC) for at least a year following the effective date of the permit. The results of

these sampling activities can be requested from the industrial facility to evaluate which, if any, of the industrial facilities may be affecting macroinvertebrate communities.

In Twenty-five Mile Creek watershed, there were a number of lagoons which are no longer active. The homes that were using these lagoons have since been connected to a sewer system. The Kennecott Ridgeway Gold Mine (SC0041378), located on Bear Creek in Fairfield County, discharges process wastewater only. The Kennecott Ridgeway Gold Mine, located 25 miles north of Columbia in Fairfield County, South Carolina, is owned by Kennecott Minerals Company. The mine operated from 1988 to 1999 and consisted of two open pits, processing facilities and a tailings impoundment (Duckett, 2007). The Ridgeway site is currently being reclaimed for an estimated $30 million. Over time, the two mine pits were filled with water, creating two 100-acre lakes connected by 90 acres of wetlands, and the 380 acre tailings storage facility that contained the finely ground rock remaining after the gold was removed, is now transformed into a tall grass prairie hosting numerous bird and wildlife species (Duckett, 2007). The remaining site is being recontoured and vegetated. Environmental monitoring of ground water and surface water will continue for 30 years by SCDHEC (MEC, 2012). As well, Kennecott has entered into a partnership with the nonprofit Southeastern Natural Sciences Academy to create the Ridgeway Center for Ecological Restoration utilized for environmental education and research (Duckett, 2007).

According to the TMDL, Elgin Estates Inc. (SC0032395) was a small wastewater treatment facility in the Twenty-five Mile Creek watershed. The WWTP was shutdown and had its permit inactivated December 31, 2000 due to its discharge exceeding permit limits for fecal coliform several times. Elgin Estates Inc. may have contributed to the impairment of Twenty-five Mile Creek when the TMDL was developed.

As well, there is an abandoned Lugoff Landfill (Superfund Site) located on the bank of Twenty-five Mile Creek near WQMS CW-080 of Kershaw County, South Carolina that could potentially be contributing to the water quality impairments of Twenty-five Mile Creek. Currently, groundwater at the abandoned Lugoff Landfill is being monitored by SCDHEC.

While unknown at this time, there may be unpermitted point source discharges in the watershed. While stakeholders are out in the field, such discharges, if found, should be noted and addressed.

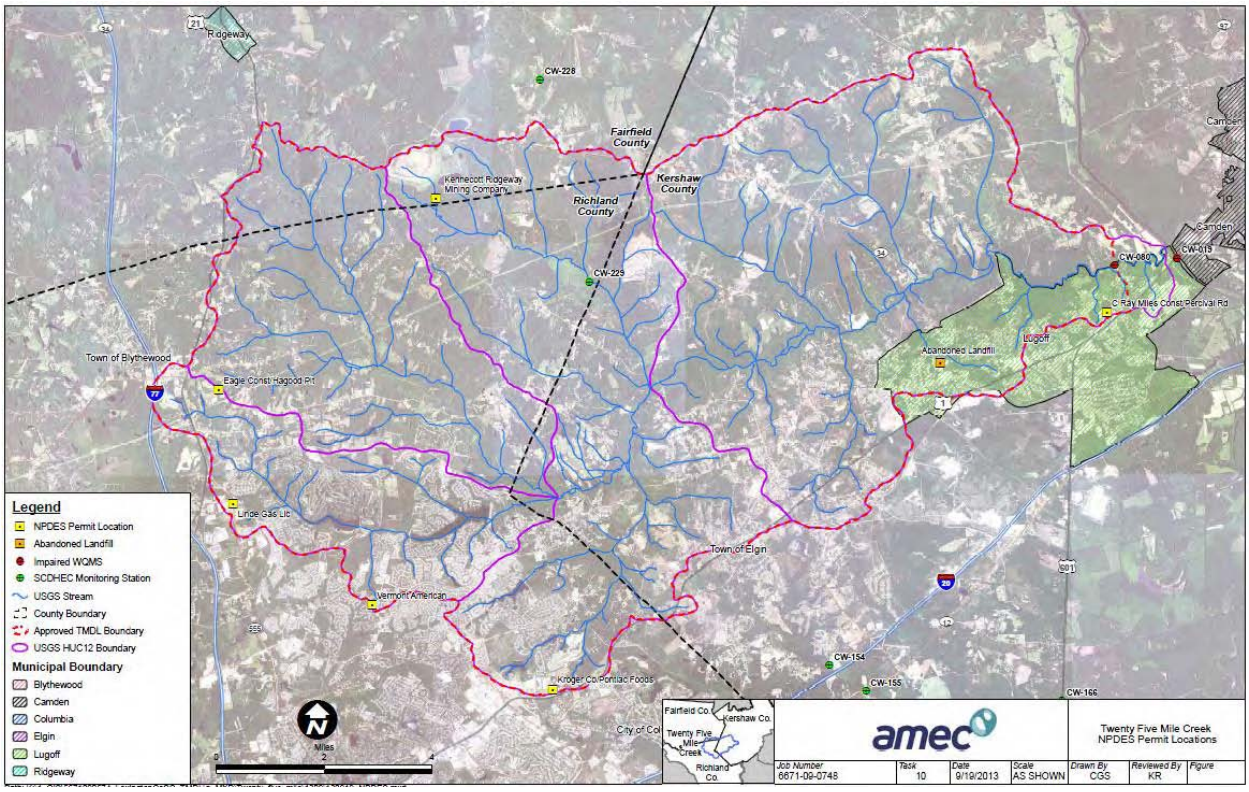


Figure 5. Twenty-five Mile Creek NPDES Permit Locations

5.5 Stressor Identification Summary

Although point source pollution has not been ruled out, nonpoint source pollution has been identified as a likely cause of impairment during evaluation of Twenty-five Mile Creek watershed. The three primary nonpoint source stressors in the watershed are stormwater discharges from impervious surfaces (flow), erosion/sediment (from pastures and crop farms, ditches along dirt roads and degrading streams) and nutrients (from crop farms, failing septic systems and sanitary sewer overflows, livestock, golf courses and nurseries. Possible stressors include low dissolved oxygen and temperature.

6 Watershed Restoration Goals & Objectives

- *What are the restoration goals?*

The goals are to restore the stream to its statutory classification, protect the stream for the long term and involve stakeholders from the watershed. The following goals and objectives were established by the project steering committee and stakeholders at the several brainstorming meetings:

Goal #1 - Improve Twenty-five Mile Creek's water quality so that it meets State water quality standards

- Ensure that Twenty-five Creek meets water quality standards for aquatic life. Address Twenty-five Mile Creek's aquatic life impairment before a macroinvertebrate TMDL is written.

- Continue to monitor water quality parameters such as macroinvertebrates, total suspended solids, turbidity, and nutrients.

- Ensure that Twenty-five Mile Creek watershed provides good habitat for fish and other wildlife so that it can provide a connection to nature for watershed residents.

Goal #2 - Protect and maintain water quality, aquatic and wildlife habitat to ensure Twenty-five Mile Creek continues to meet state water quality standards.

- Improve the management of stormwater runoff for existing development in an effort to improve water quality.

- Ensure zoning and ordinances and enforcement guide new development in a manner that protects Twenty-five Mile Creek.

- Coordinate efforts with other groups in the watershed focused on land conservation and protection strategies.

Goal #3 - Build community support for the protection and enhancement of the land and water resources of the Twenty-five Mile Creek Watershed.

- Develop an outreach program for citizens and businesses to promote and implement the Watershed Based Plans. Include one-on-one outreach and signage to educate residents on their role in implementing the WBPs.

- Strengthen ties with the local schools and local colleges to enhance education and participation in opportunities for community action.

- Perform outreach to residents, businesses, and contractors within the watershed to encourage environmental stewardship within the Twenty-five Mile Creek Watershed.

- Develop and establish a Twenty-five Mile Creek Workgroup to oversee Plans implementation and work towards long term health and ensure that the Watershed Based Plan goals are achieved.

7 Action Plan

7.1 Sediment Stressor

In order to reduce sediment and nutrient input into Twenty-five Mile Creek and its tributaries, as well as raise the summer temperatures and control peak flows, several action items are recommended, including stabilization dirt roads, stream restoration, landscaped buffers along the creek and tributaries, re-routing a gravel road near a lake in Clemson Extension, repairing failing septic systems and agricultural BMPs such as fencing livestock out of streams, waste management systems and conservation tilling.

7.1.1 Stabilization along Dirt Roads and Railroad Embankment

During stakeholder meetings it was determined that there is an issue, particularly in Kershaw County but also to a lesser extent in Fairfield and Richland Counties, with erosion in the ditches along dirt roads. Paving the roads is not a feasible solution for the Counties due to excessive cost, particularly for Kershaw County, which has a total of 90 miles in Twenty-five Mile Creek watershed (and 250 miles throughout the County). It was determined that straw waddles in the ditches along the sloped portions of the dirt roads would slow down the flow during rain events, and encourage growth of vegetation in the ditches, thereby stabilizing the soil. Kershaw County has an estimated 80 miles of dirt roads in Twenty-five Mile Creek watershed. It was estimated that Richland and Fairfield Counties have approximately 10 additional miles of dirt roads in Twenty-five Mile Creek Watershed.

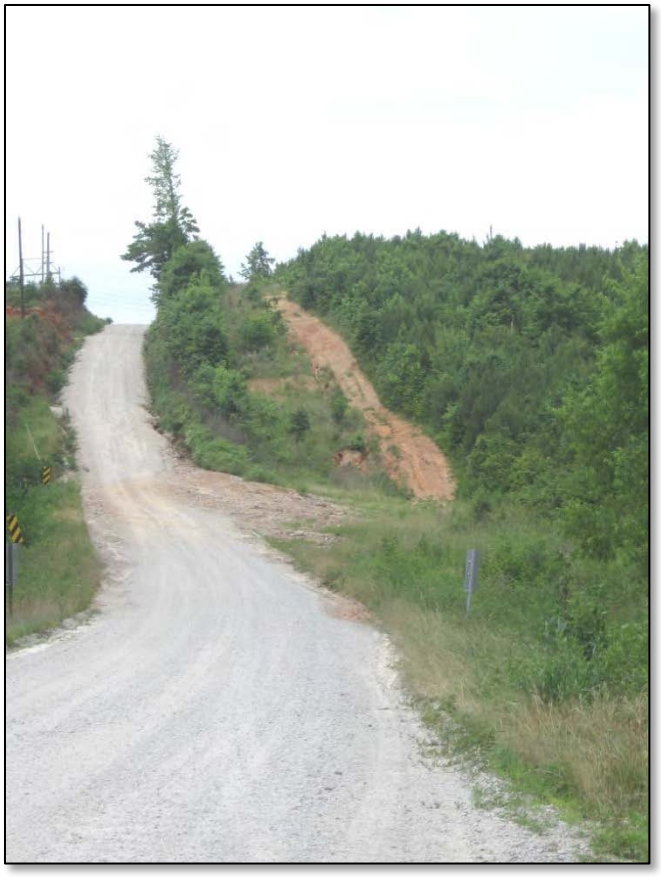


Figure 6. Example of erosion along dirt road in Kershaw County

In addition, during the windshield survey, erosion was observed along the railroad embankment near the Town of Blythewood. Planting vegetation along this embankment and the placement of straw waddles in the sloped portions of the approximately 90 miles of dirt roads in the watershed would reduce the turbidity and total suspended solids in Twenty-five Mile Creek.

This task will basically be a County-related task, so there will not be significant public education or outreach needed, except to inform residents along the dirt roads about the reason for the stabilization efforts.

7.1.2 Stream Restoration (Stratton Hall)

The 0.25 mile stretch of unnamed tributary to Twenty-five Mile Creek between Wellington Drive and Cambridge Lane in the Stratton Hall neighborhood of Lugoff is actively degrading. The yards back up to the stream with little to no riparian buffer, and because there are power lines throughout this stretch, Fairfield Electric has been controlling any growth by the use of herbicides. Possible consequences of this degrading stream include bank failure that could undermine and expose portions of a sanitary sewer line, cause additional loss of property, and degrade aquatic ecology.

Figure 7. Culvert entering Stratton Hall segment of tributary

It is recommended that the bank instability issue be addressed as follows:

1. Create stable channel geometry suitable for each segment of stream within the reach from Wellington Drive to Cambridge Lane.

    a. In the upper stream reach where space is limited, structures (such as a crib wall or rock structure) or bioengineering (soil wrapping and planting) may be required to stabilize banks.

    b. Where there is room, lay back the banks to a stable angle, create a floodplain, and vegetate using woody, native vegetation to the maximum extent practicable.

    c. Install some grade control structures, such as log or rock vanes with energy dissipaters, to prevent further vertical degradation of the stream bed.

    d. Create stable planform geometry for a meandering low flow channel in low slope areas.

2. Remove power poles in order to install bank protection or lay back banks to a stable angle. Fairfield Electric has recently relocated the power lines underground on the street-side, but have not removed the power poles to date.

3. Educate stakeholders using this corridor about the role of riparian, deep-rooted vegetation, the importance of not dumping yard waste or slash into the stream channel, and channel processes

that could affect their property or the utilities within this corridor. This includes residents, the power company, and the sanitary sewer maintenance crew.

4. Where there is landowner cooperation, move some fences to create space for stream stabilization activities.

Significant outreach will be needed to recruit support from the neighbors along the stream and cost share (some in-kind labor of riparian plantings). Initially letters will be sent to the residents, followed-up by a meeting and/or door-to-door recruitment measures.

7.1.3 Riparian Buffers

A riparian buffer is the strip of natural vegetation along the bank of a stream, lake or other water body that separates the water from developed areas such as lawns, buildings, roads, driveways, etc. Buffers can include grass, shrubs, and trees, which hold the soil in place and act as living filters of pollution. Without buffers, homes and residential neighborhoods can contribute sediment, fertilizers, pesticides, metals, oil and other vehicle fluids, pet waste and many other pollutants to nearby waters. Buffers stabilize stream banks with their root systems and prevent erosion; and discourage algae growth and slow runoff to help prevent flooding and flood damage. Riparian buffers will provide shade to keep the stream water cooler, also addressing the temperature stressor.

It was mentioned in a public meeting that silviculture was one of the sources of destruction of riparian buffers. However, Holly Welch of the South Carolina Forestry Commission explained that silviculture activities are required streamside management zones with 40 foot buffers. They conduct regular BMP monitoring, which showed that 91.9% compliance with streamsize management zones across the state and 81.0% compliance with BMPs for stream crossings. Because silviculture BMPs are being monitored by the South Carolina Forestry Commission, they are not being addressed in this plan.

However, buffer requirements in non-silviculture development is being addressed in this plan. Kershaw County revised their Unified Code of Zoning and Land Development Regulations in 2010 to incorporate a 100-foot buffer requirement on perennial streams and 50-foot buffer on intermittent streams for new development. Richland County's current buffer requirements, in general are 50-foot. However, much development occurred in the watershed before these buffer requirements were implemented. Therefore, numerous miles of stream banks have little to no riparian buffer.

To encourage homeowners, businesses and farmers to re-establish a riparian buffer along the tributaries, if awarded a 319 implementation grant, Kershaw, Richland and Fairfield Counties would offer a cost share program to provide trees and shrubs for planting in stream buffer areas. A document by the State of Oregon Department of Environmental Quality called "Cost Estimate to Restore Riparian Forest Buffers and Improve Stream Habitat in the Willamette Basin, Oregon" was used to estimate these costs for Twenty-five Mile Creek Watershed

In addition to the Stratton Hall stream segment, it is estimated that 4 miles of stream buffer in urban portions of the watershed would be planted, and 6 miles of stream buffer in rural/agricultural portions of the watershed would be planted with a 50 foot buffer.

Signficant outreach will be needed to recruit participation from homeowners and farmers along the creek and its tributaries and cost share (some in-kind labor of riparian plantings). Initially letters will be sent to the residents, public meetings as well as social media (Facebook) and County websites.

7.1.4 Gravel Road in Clemson Extension

The gravel road leading from the Children's Garden area to the lake on Clemson Extension property is eroding, causing sediment to flow into the lake. If awarded a 319 grant, it has been proposed to re-route the road to the top of the Children's Garden area. According to Dr. Mac Horton at Clemson Extension, the current gravel road would need to be blocked from traffic and tilled and planted to return it to a pervious and non-eroding surface. This project would reduce the erosion and sediment transfer into the Twenty-five Mile Creek watershed.

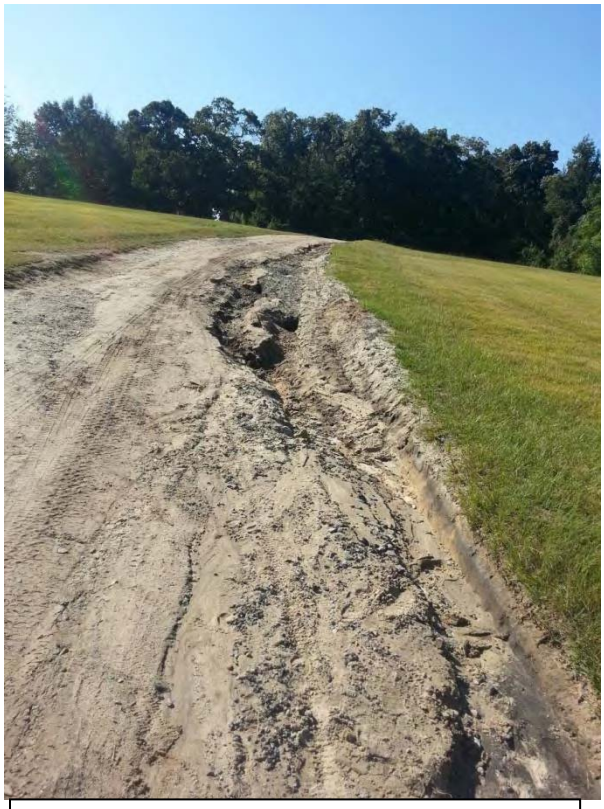


Figure 8. Erosion on Gravel Road at Children's Garden at Clemson Extension

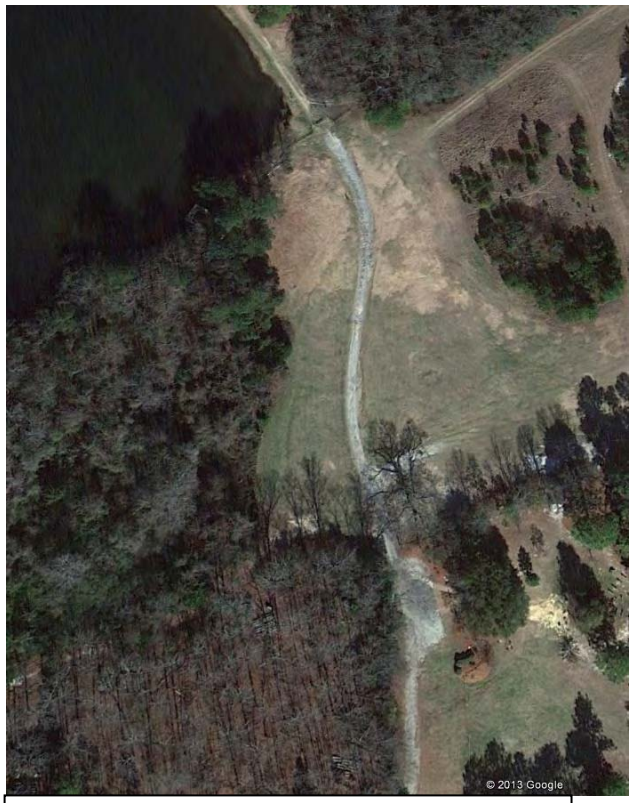


Figure 9. Aerial View of Gravel Road at Clemson Extension with Proximity to Lake

7.1.5 Conservation Tillage

Conservation tillage is a method of soil cultivation whereby new crops are planted in the residue, such as corn stalks or wheat stubble, of previous plantings. Examples of conservation tillage methods include no-till, strip-till, ridge-till, and mulch-till. These practices enhance soil quality, increase soil organic matter, reduce soil erosion, and thereby improve water quality.

To encourage conservation tillage, the Richland and Fairfield Soil Water Conservation Districts offer low-cost rental of no-till drills. The Richland SWCD drill is an 8-foot 1990 United Farm Tool Model 5000 with two seed hoppers - one for large seeds such as grains and soybeans, and another for smaller seeds including clover, ryegrass, Bermuda, and Bahia. The two Fairfield no-till drills are available to farmers in Fairfield County only. The Richland no-till drill is available to farmers in Richland County as well as Kershaw County. However, additional advertising and education to farmers would potentially encourage more no-till drilling in all three counties.

The Richland Soil and Water Conservation District (RSWCD) has been awarded a Conservation Innovation Grant to demonstrate the use of multi-species cover crops and no-till field management to reduce the application of commercial nitrogen and improve soil and environmental health. In partnership with the University of South Carolina-Earth Sciences and Resources Institute and the Dillon and Marlboro Soil and Water Conservation Districts, the RSWCD will conduct research and field trials on five farms in three counties. They will also conduct three educational events to disseminate the results of the trials and encourage soil stewardship.

7.2 Flow Stressor

In order to address peak flow in Twenty-five Mile Creek, efforts need to be taken to reduce the amount of imperviousness and flow from impervious areas into surface waters. Through the stakeholder and public meetings and windshield survey processes, no ideas surfaced to address existing peak flow issues. At the public meeting, a citizen mentioned high flows coming from Lake Carolina prior to or during rain events. However, AMEC visited Twenty-five Mile Creek at the point that it exited the Lake Carolina Dam and it appeared to be a healthy stream segment without any observations any of channel instability, scouring, damaged riparian habitat, etc.

Figure 10. Twenty-Five Mile Creek - Exiting Lake Carolina Dam

Figure 11. Twenty-Five Mile Creek – Downstream from Lake Carolina Dam

Although the stakeholder and public meetings and windshield survey processes did not produce any ideas to specifically address existing peak flow issues, it is recommended that a Stormwater Quantity Master Plan be developed to find the areas where retrofitting of detention might be beneficial, in addition to the rain barrels and rain gardens in Section 7.2.1. Because there is very little industrial development in this watershed, it is recommended to concentrate on commercial development and the small-lot subdivisions (which typically have closer to 25 to 30% impervious cover, compared to larger lot subdivisions, which have less imperviousness), such as patio home neighborhoods like Park Place and townhomes in Lake Carolina for this effort.

To address potential future flow issues, Kershaw County and Richland County are considering options to provide developers incentives to include green infrastructure in site design, such as the incorporation of the Unified Sizing Criteria (USC) in land development regulations. USC not only includes a water quality factor in the sizing of stormwater BMPs, it also includes a channel protection factor. Incentives to include green infrastructure can be used by reducing the size of stormwater ponds for infiltration accomplished with green infrastructure.

The portion of Fairfield County in the watershed is rural and therefore flow is not a significant concern in that portion of the watershed.

7.2.1 Rain Barrels and Rain Gardens

Kershaw County and Richland County will use and supplement, as needed, programs already being implemented as part of MS4 permit compliance to address non-point source reduction from urban storm runoff in the Kershaw County, Richland County and the Town of Elgin MS4 portions of the watershed. Additional and new strategies to address urban runoff are being proposed under the 319 program and are listed below. As part of the 319 program, the Counties propose to expand the following programs already being implemented by the MS4s that have been successful at addressing urban runoff:

- Rain Barrel Program: Provide the first 10 rain barrels for willing participants, conduct rain barrel workshops on how to build one at home, possibly have a paint contest for rain barrels in school, etc. Potentially partner with Carolina Clear to help expand this program for the watershed.

- Rain gardens: The first 10 rain gardens (on average, approximately 200 sq. ft. in size) for residential homeowners could be provided on a cost-share basis between the homeowner and their County. After the first 10, provide workshops and other educational materials to encourage property owners within the watershed to incorporate rain gardens on their lots.

- Kershaw County and Richland County address many urban runoff issues with the construction and post-construction minimum control measures as part of their MS4 permit compliance. As well, Kershaw County is currently in the process of updating their Zoning and Land Development

Regulations (ZLDR) to incorporate methods and design practices that will decrease pollutant loadings.

7.3 Nutrient Stressor

In order to address nutrient stressors, urban sources (such as pet waste), agricultural, sanitary sewer overflows and failing septic systems will be addressed.

7.3.1 Urban Nutrient Sources

The higher percentage of impervious surface and concentration of dogs and cats that live in developed areas increase the nutrient loading from built-up or developed land. The increase in pollutant loadings (bacteria, sediment, and nutrients) from these areas is mostly due to the increase in connected impervious surfaces. This alteration in the natural landscape increases runoff volume and creates an efficient mechanism to convey available pollutants. Since the TMDL was developed, extensive development has occurred within the watershed, particularly the headwaters, increasing the developed areas from approximately 2,420 acres (3%) in 1992 to 15,560 (19.5%) in 2006. As well, the watershed has continued to receive growth pressures since 2006 as a result of the watershed's close proximity to the population center of Columbia. Therefore, urban runoff may be a significant source of pollutants to Twenty-five Mile Creek, and further research is needed to determine the significance of this source.

To better understand the impact that urbanization and increased impervious surfaces may have had on the watershed, a brainstorming session for urban sources was held with stakeholders on December 4, 2012. Stakeholders that attended included Elgin Town Council, Kershaw County Stormwater, Fairfield County, Richland County's Carolina Clear, Town of Blythewood, Central Midlands Council of Governments (COG), and South Carolina Rural Water Association (SCRWA). The goal of the meeting was to gain knowledge of the urbanized areas of the watershed to determine if there were any stormwater, erosion, or domestic pet complaints. As well, brainstorming meetings with local residents of the watershed were held in both Kershaw County and Richland County on April 17th and 18th, 2013 that further helped narrow down potential urban sources of nutrient pollution that need to be addressed.

7.3.1.1 Urban Nutrient Source Findings

Compiling information from assessments mentioned in Section 4 and the brainstorming sessions, the following findings on potential urban sources of nutrient pollution are listed below.

1) Pet Waste
    - Dog Park in the Lake Carolina Subdivision: It was mentioned in both the Urban Sources Meeting and the Public Meeting that there is a Dog Park in Lake Carolina that may be a source of nutrient pollution. Lake Carolina is a large subdivision (approximately 1,650 acres) located in the Northeast Columbia area of Richland County, SC. The subdivision is on Twenty-five Mile Creek and its tributaries near the Kershaw County border. A field study was conducted by AMEC Environment & Infrastructure, Inc. on August 8, 2013 to investigate Lake Carolina's Dog Park. The one-acre Dog Park (approximately 0.5 mile

from Lake Carolina) is located on Lake Carolina Drive, and it was found that adequate pet waste stations are located within this area.

On this site visit, it was also found that there is a pet waste station at Lake Carolina's Sunset Park, which is located on the dam of Lake Carolina (200 acre lake).

Furthermore, it was observed that throughout this large subdivision, there did not appear to be additional pet waste stations. However, it was deduced that Lake Carolina's potential nutrient loadings from pet waste are addressed via pet waste stations in areas where large concentrations of dogs are likely to be found.

- Apartment Complexes: Within the Twenty-five Mile Creek Watershed, there are approximately ten apartment complexes and six of them accept pets. It is anticipated that most of the apartment tenants with pets exercise the pets around the apartment complex. Therefore, a fairly small area can receive a substantial loading of pet waste

and contribute to nutrient loading. The six apartment complexes that accept pets in the watershed include:

1. Reserve at Lake Carolina: 420 Hard Scrabble Road, Columbia, Richland County -Approximately 165 feet from Lake Carolina (located on Twenty-five Creek)
2. Rice Terrace Apartments: 100 Rice Terrace Drive, Columbia, Richland County -Approximately 1.25 miles from Twenty-five Mile Creek
3. Frenwood Apartments: 841 Frenwood Lane, Lugoff, Kershaw County - Approximately 500 feet from Twenty-five Mile Creek
4. Hallmark at Truesdell Apartments: 186 Roy Truesdell Road, Lugoff, Kershaw County -Approximately 0.4 miles from Twenty-five Mile Creek
5. Bridle Ridge Apartments: 40 Boulware Road, Lugoff, Kershaw County -Approximately 0.6 miles from Twenty-five Mile Creek
6. Bridle Station Apartments: 44 Boulware Road, Lugoff, Kershaw County -Approximately 0.65 miles from Twenty-five Mile Creek

- Other Areas of Concern for Pet Waste: The areas listed below are potential sources of nutrient pollution due to a larger concentration of pets in a small area.
    - Vets:
        - Kershaw County - Elgin Veterinary Hospital and Wateree Animal Hospital
        - Richland County - Companion Animal Hospital of Blythewood
    - Washing/Grooming Facilities: Elgin Pet Shop and Doggie Do's both located in Elgin of Kershaw County.
    - Pet Supply Facilities: Just 4 Paws in Blythewood of Richland County
    - Ball fields in the watershed

2) Long Creek Plantation Equestrian Centre: Long Creek Plantation is a 2400-acre designed subdivision located near Blythewood in Richland County, South Carolina. One of the facility amenities available for this subdivision is the Long Creek Equestrian Centre (LCEC) located on Long Town Road East on 33 ½ acres within the Long Creek Plantation in Blythewood, South Carolina. The main barn houses about 30 horses and the hay barn, where the shavings, hay and equipment are kept, has three additional stalls. LCEC has 12 pastures, a covered arena, a jumping arena, a dressage arena, and numerous trails. All of the fields are grassed along with coastal round bales. The five outer pastures have natural running water and the upper fields have water troughs. LCEC is approximately 300 feet from the stretch of Twenty-five Mile Creek that runs downstream of Lake Columbia and upstream of Lake Carolina.
3) Sanitary Sewer Overflows: Further described in Section 7.3.2 below.

7.3.1.2 Target Audience/Description

Target Audience: Urbanized areas with increased impervious surfaces, such as:

- MS4 areas (Kershaw County MS4, Town of Elgin MS4, and Richland County MS4)
- Northeast Columbia, Richland County
- Towns of Blythewood, Elgin and Lugoff

Description: The Plan will target residential, commercial or industrial property owners and users to address urban runoff. For example, users of recreational facilities and public spaces as well as animal vet/supply stores, apartment complexes and residential subdivisions (and their Homeowners Associations) within the Twenty-five Mile Creek Watershed will be targeted for urban runoff education and BMPs.

7.3.1.3 Strategies/BMPs Needed

Kershaw County and Richland County will use and supplement, as needed, programs already being implemented as part of MS4 permit compliance to address non-point source reduction from urban storm runoff in the Kershaw County, Richland County and the Town of Elgin MS4 portions of the watershed. Additional and new strategies to address urban runoff are being proposed under the 319 program and are listed below. As part of the 319 program, the Counties propose to expand the following programs already being implemented by the MS4s that have been successful at addressing urban runoff:

- Installation of approximately 15 pet waste stations. If a 319 Implementation grant is awarded, Kershaw and Richland Counties will provide pet waste stations in green spaces in residential subdivisions, apartment complexes, and public parks (such as ball fields) outside MS4 limits. Veterinary offices, pet supply and grooming stores mentioned in Section 7.3.1.1 (outside of the MS4) will also be possible locations for pet waste stations.

- Rain Barrel Program: Provide the first 10 rain barrels for willing participants, conduct rain barrel workshops on how to build one at home, possibly have a paint contest for rain barrels in school, etc. Potentially partner with Carolina Clear to help expand this program for the watershed.

- Storm drain tagging (approximately 2,000) on roads within the watershed with complementing educational program focused on reducing pet waste disposal in and around storm drains. See below for a photo of an example of a storm drain tag.

Figure 12. Example of a Storm Drain Marker

- Urban Riparian Planting/Stream Stabilization: As mentioned in Section **Error! Reference source not found.**, Stratton Hall Stream is approximately a quarter mile long stream that is actively degrading in Kershaw County near WQMS CW-080. Backyards that are adjacent to this stream potentially have nutrient loadings via pet waste and are in jeopardy of property damage/loss

with the stream continually to degrade. This stretch of stream (and potentially similar locations within the watershed) will be targeted to recruit homeowners to participate in riparian planting/stream stabilization for their backyards.

- Rain gardens: The first 10 rain gardens (on average, approximately 200 sq. ft. in size) for residential homeowners could be provided on a cost-share basis between the homeowner and their County. After the first 10, provide workshops and other educational materials to encourage property owners within the watershed to incorporate rain gardens on their lots.

- Kershaw County and Richland County address many urban runoff issues with the construction and post-construction minimum control measures as part of their MS4 permit compliance. As well, Kershaw County is currently in the process of updating their Zoning and Land Development Regulations (ZLDR) to incorporate methods and design practices that will decrease nutrient loadings.

Estimated nutrient load reductions from proposed urban BMPs for years 1 through 5 are displayed in Table 11 and is discussed in Section 8.2.

7.3.1.4 Management Plan

Project Management: Kershaw County, Richland County and Fairfield County, with the support of a project partners, will furnish project technical support, create and provide outreach and educational campaign/materials and Kershaw County will provide overall project coordination. Each County will act as the lead entity for all advocacy activities to their respective County throughout the outreach and implementation portions of this project.

Prioritization of Sites: With respect to prioritization, property owners in the floodplain of Twenty-five Mile Creek will be addressed first, and, areas in the watershed that are prone to urban runoff. As part of the screening process for potential participants, the location of the urban BMPs and where it drains will be considered compared to MS4 boundaries since systems which drain to the MS4 will not be included if a 319 Implementation Project is granted, but instead will be addressed by the MS4s' Illicit Discharge Detection and Elimination (IDDE) program.

- Pet Stations: target areas that tend to have a large concentration of dogs in common green spaces, such as residential subdivisions, vets/pet supply stores and apartment complexes mentioned previously in Section **Error! Reference source not found.**

- Rain Barrels: recruit participants in concentrated impervious areas such as MS4 areas, residential subdivisions, commercial properties, etc. to incorporate rain barrels on their property.

- Storm Drain Markers: Preferably mark roads with sidewalks so that storm drain markers can be read. Therefore, possible locations include subdivisions, parking lots, parks, etc.

- Urban Riparian Planting/Stream Stabilization: Prioritizing homeowners whose backyards are adjacent to the degrading Stratton Hall Stream.
- Rain Gardens: recruit participants in concentrated impervious areas such as MS4 areas, residential subdivisions, commercial properties, etc. to incorporate rain gardens on their property. Preferably sites with larger backyards/closer to Twenty-five Mile Creek will be targeted first.

7.3.1.5 Outreach Needed

Kershaw County and Richland County will use and supplement, as needed, the public outreach and education programs already being implemented as part of MS4 permit compliance to address non-point source reduction from urban storm runoff. Current outreach and future outreach regarding urban runoff for Kershaw and Richland County MS4s are included below:

Current Outreach:

- Kershaw County and the Town of Elgin's MS4 Public Outreach Program: Kershaw County and the Town of Elgin's intergovernmental agreement make up the Kershaw County Stormwater Management Program (SWMP). Under this program, the Kershaw SWMP complies with Minimum Control Measures 1 and 2 of the MS4 permit to address public education and outreach of urban sources with the following items:

    - Outreach materials (Stormwater bookmarks, stormwater brochures, booklets, etc), Stormwater Pollution Prevention Articles in the Elgin News and West Wateree Chronicle (Pet Waste article, Don't Overwater Your Lawn article, etc.), Fairs and Events (Sparkleberry Fair), Storm Water Minutes posted in municipal buildings (Pick up Pet Waste, Properly Water Your Lawn, etc.), Storm Drain Marking, Blaney Elementary incorporated stormwater-related curriculum and activities, roadside litter clean-ups, etc.

- Richland County's MS4 Public Outreach Program: Utilizes Carolina Clear to meet their Public Education MS4 requirements. Carolina Clear has broadly focused their public education and outreach on stormwater quantity and quality issues within urbanized areas of Richland County. Richland County's public education and outreach of urban sources of pollution includes:

    - Social media with Facebook and Twitter, Public Service Announcement ("We all live downstream" commercial), Festivals and Events (Summer Celebration of Water, Sparkleberry Fair,), Workshops (Carolina Yards and Neighborhoods), Community River Cleanups (Rocky Branch, Gills Creek), Brochures and Outreach Materials (many Pet Waste brochures), two articles in *The State* newspaper, many newsletters, storm drain marking, rain barrel workshop, etc.

Future Outreach:

Recruitment

- Volunteers to install storm drain markers: Target Boyscout Troops, Students in the watershed, HOAs, etc. The second phase will utilize advertisements (radio stations, flyers/newsletters, newspaper ads, etc.) to recruit participants.

- Participants for rain gardens, rain barrel workshops and installation: First start with HOAs and Schools in the watershed for participation. The second phase will utilize advertisements (radio stations, flyers/newsletters, newspaper ads, etc.) to recruit participants.

- Urban Riparian Planting: As mentioned previously, respective Counties (in this case Kershaw County) will first aim to recruit homeowner's with backyards that are adjacent to the Stratton Hall Stream via letters sent to these homeowner addresses.

Public Education

- Have local radio stations to participate in educational 'commercials' (Kershaw: possibly 102.7, Richland: possibly 92.1 The Palm) focusing on stormwater quality and quantity, with topics such as proper pet waste disposal, urban stormwater runoff, and the importance of stream buffers.

- Rain Barrel workshops (how to make one, have a rain barrel painting contest at schools)

- Coffee News or other local newsletters
    - Currently have support from a Lake Carolina HOA, The Elgin News and West Wateree Chronicle to put educational material in their newsletters and newspapers.

- Kershaw, Richland, and Fairfield County Websites: these websites will consider creating stormwater educational layouts with supporting urban runoff educational materials (i.e. articles and links).

- Facebook and Twitter accounts will be considered for Kershaw and Fairfield Counties to educate the public on urban sources of pollution.

- Workshops focusing on pet waste disposal and stream buffers for HOAs in watershed's subdivisions (such as creating a Citizen Advisory Group for the watershed).

- Establish community clean up events for Twenty-five Mile Creek.

7.3.2 Sanitary Sewer Overflows from Fat, Oil, and Grease (FOG)

In urbanized areas, sanitary sewer leakage and overflows can be another source of nutrient contamination. Sanitary sewer overflows (SSOs) can be caused by anything capable of obstructing the flow of wastewater in sewer, including a build-up of solids and fats, oils, and greases (FOG). Although there are different causes for sanitary sewer overflows, FOG poured into sanitary sewer collection systems, either intentionally or unintentionally, have a significant effect on the size and frequency of sanitary sewer overflows. Fats, oils and grease in a warm liquid form may appear to be harmless since they flow easily down the drain. However, as the liquid cools, the FOG solidifies and separates from other liquids in the sewer pipes. The layer of FOG sticks to the sewer pipes and, over time, the flow of wastewater becomes restricted and can cause a backup or overflow (HCSA, 2012).

Gathering information from the Brainstorming Meetings (Urban Sources Meeting, Public Meetings and the final Stakeholder Meeting), SCDHEC, municipalities and sewer companies within the watershed, the following findings are discussed below.

<u>Findings</u>

- AMEC contacted the local municipalities and sewer companies to compile the watershed's Sewer Management Areas Figure (Figure 13 below). Concentrated sewer areas are located in the urbanized areas of Richland County, the Town of Blythewood, the Town of Elgin and the Town of Lugoff.
- To determine the number of sanitary sewer overflows (SSOs) caused by FOG in the Twenty-five Mile Creek Watershed, a FOI was requested from SCDHEC. SSO information received from DHEC included SSOs in the past couple years for all of Kershaw County, Richland County and Fairfield County (not divided up by watershed). The information also was difficult to segregate SSOs caused by FOG. Therefore, these records were not as useful for this Plan; however information provided by Palmetto Utilities and Kershaw County was of use and is mentioned in greater detail below.
- Kershaw County SSOs: According to Dana Reeder, Kershaw County has not had many SSOs in the past couple years, especially not many issues within portions of Kershaw County of the Twenty-

five Mile Creek Watershed. As well, Kershaw County's WWTP has conducted significant upgrades to its system in the past 5 to 6 years, initiated a FOG program, and has begun monitoring their pump stations.

- Palmetto Utilities Sewer Services in Twenty-five Mile Creek Watershed:
    - Palmetto Utilities distribute educational door hangers in residential areas that have a spill caused by either an accumulation of grease (FOG) or rags. They also give customers a door hanger if they have a backup on their private service line in order to educate residents on ways to prevent backups.
    - Grease Trap Inspection/ Pump Out Program: Palmetto Utilities has undertaken this program for their commercial customers in order to try and prevent grease from entering their system. All commercial customers that prepare food (restaurants, school cafeterias, etc.) are required to have a grease trap. They have an inspector who inspects the grease trap, and places the restaurants on a pump out schedule depending on how fast it accumulates grease. The inspector is also on-site during each pump out to ensure that all the grease is taken out by the pump trucks, and not pushed into the system.
        - Note: This is a great preventative measure conducted by Palmetto Utilities; however, pump trucks are not followed once they are off site. Aiken/Augusta area (approximately 2 hours away) is the closest place in the vicinity of the watershed that accepts grease. This inconvenience and cost may result in companies illegally dumping grease and contributing to nutrient pollution within the watershed.
    - Educational Meetings: Palmetto Utilities from time to time have community meetings either at local schools, or homeowners associations to give a presentation that illustrates what FOG and rags do in the sewer system.
    - Areas Susceptible to SSOs from FOG: According to Palmetto Utilities service areas in Richland County of the Twenty-five Mile Creek Watershed, they have SSO problems (from FOG and rags) in the Centennial Section of the Lake Carolina subdivision, Colony Park subdivision off of Rhame Road and The Summit subdivision between Rhame Road and Hard Scrabble. In these areas where they have SSO problems from FOG, Palmetto Utilities try to use jet lines to prevent additional backups.
- Communities Recycling Used Cooking Oil: Kershaw County, Richland County, and Fairfield County have partnered with Midlands Biofuels to accept used cooking oil at their Convenience Centers and other various locations within these Counties. For Kershaw County, convenience centers within the Twenty-five Mile Creek Watershed include the Elgin Convenience Center (2328 Hwy. 1 South, Elgin) and the Lugoff Convenience Center (60 Reclamation Rd., Lugoff). Both Centers have used cooking oil collection containers provided by Midlands Biofuels. Richland County recently partnered with Midlands Biofuels to have their used cooking oil containers placed at Richland's C&D Landfill (1070 Caughman Road North) and the Lower Richland Drop-Off Facility (10531 Garners Ferry Road). Both of these locations are not within the Twenty-five Mile Creek Watershed. As well, there are no Fairfield County Recycling Centers in the Twenty-five Mile Creek Watershed; the closest center is the Ridgeway Center (1966 US Hwy. 21 South, Ridgeway).

- Rendering Facilities: Rendering facility in Lugoff, formerly Biocrude, closed down and it is uncertain if/when it will re-open. A rendering facility is planned to open on Shop Road in Columbia, South Carolina; however, it will most likely take two years or more. Cayce WWTP in Lexington County (near Columbia, South Carolina) accepts grease, but will only accept grease from Lexington County. As mentioned above, Aiken/Augusta area (approximately 2 hours away) is the closest place in the vicinity of the watershed that accepts grease. Again, this inconvenience and cost may result in companies illegally dumping grease, causing SSOs and contributing to nutrient pollution within the watershed.

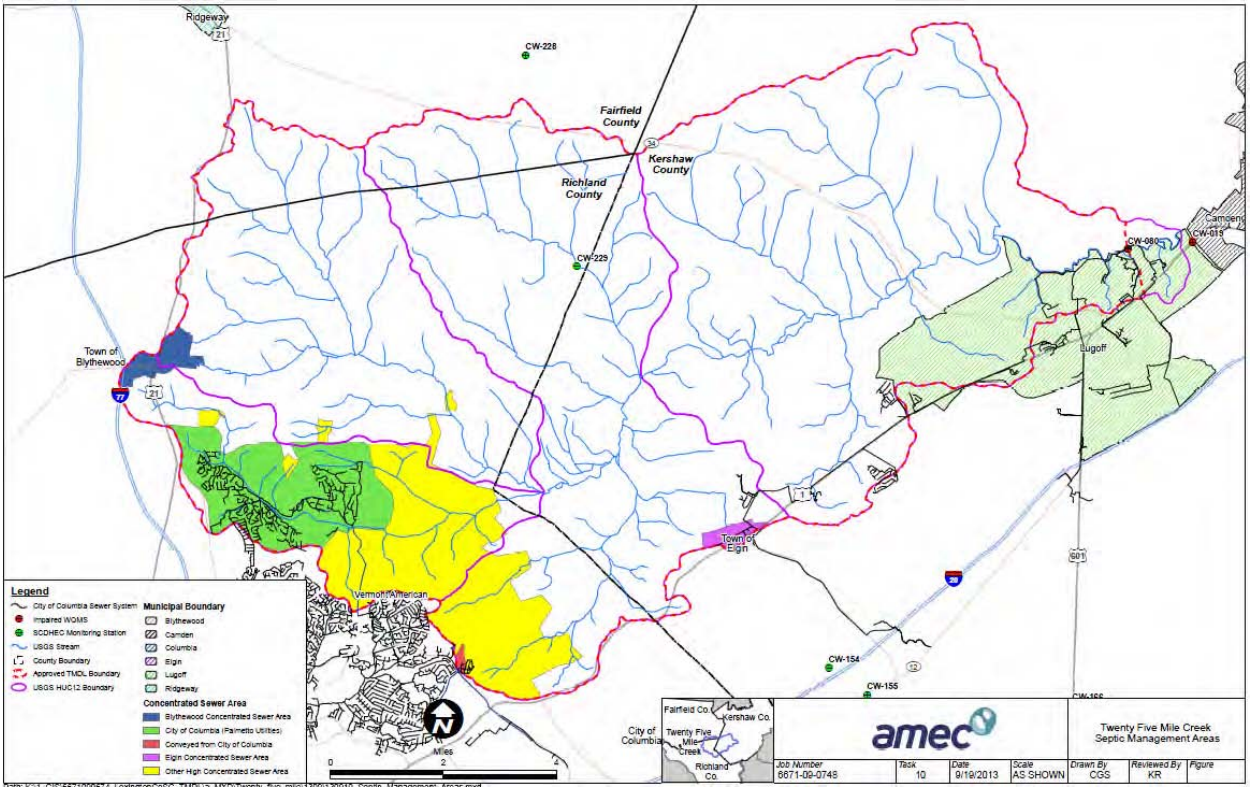


Figure 13. Concentrated sewer areas in the Twenty-five Mile Creek Watershed

[1] Figure 17 and Figure 13 disclaimer: Septic data obtained for the Twenty-five Mile Creek Watershed is a rough estimate of septic parcels within this area. However, this number is believed to be more accurate than the estimated 4,700 septic systems stated in the 2004 TMDL.

7.3.2.1 Target Audience/Description

Target Audience: Residential and commercial generators of FOG with sanitary sewer connections

Description: All homeowners and businesses on sanitary sewer within the watershed that generate FOG are going to be targeted for outreach efforts. Figure 13 from Section 7.3.1 depicts known information about sanitary sewer and septic use areas in the watershed. As well, according to Palmetto Utilities, areas within the watershed that have frequent problems arising from FOG and rags include: Centennial Section of Lake Carolina subdivision, Colony Park subdivision, and the Summit subdivision.

7.3.2.2 Strategies/BMPs Needed

As with the other components of this grant project, participation is voluntary and will be accomplished through a social marketing strategy and focused BMPs. The BMPs selected for this component include:

- Using outreach tools within the watershed to advertise the project and recruit homeowners for participation (further described in Section 7.3.1.4 below).
- Utilize Palmetto Utilities for their educational door hangers and the creation of ones similar.
- Attend and broaden Palmetto Utilities' educational presentations to homeowners on FOG.
- Create an educational commercial on how to properly dispose of FOG.
- Commercial generators of FOG within the watershed (i.e. restaurants): enforcement and inspection for commercial grease traps.
- As mentioend previously, Kershaw County and Fairfield County have a used cooking oil recycling program with Midlands Biofuels. However, the watersehd needs to pilot a used cooking oil recycling program at the recycling facilities in the Richalnd County portion of the Twenty-five Mile Creek Watershed. Possible locations include Clemson's Sandhills Research and Education Center and the Blythewood Fire Station, however, the Blythewood Fire Station is not staffed so this location may not be suitable. Midlands Biofuels will provide the used cooking oil collection containers and provide pick-up service for the used cooking oil.
- Distributing Promotional Can Lids (see photo below) to residents to encourage the practice of not placing fats, oils and grease down the drain. These can lids can fit most food cans from 3 ounces to large family size cans. As well, promotional/educational FOG slogans can be printed on the lids.

- Upgrading Kershaw County WWTP: If the former Biocrude Facility in Lugoff, South Carolina (recently bought by BioCycle, LLC) does not re-open and/or accept commercial grease (i.e. from grease traps) and no other local (Midlands area) alternative for disposal of commercial grease becomes available, then Kershaw County will consider upgrading their WWTP to be able to accept grease.

7.3.2.3 Management Plan

Project Management: Kershaw County, Richland County and Fairfield County, with the support of a project partners, will furnish project technical support, create and provide outreach and educational campaign/materials and Kerhsaw County will provide overall project coordination. Each County will act as the lead entity for all advocacy activities to their respective County by working directly with their local sewer and utility partners and SCDHEC Public Health throughout the outreach and implementation portions of this project.

Prioritization of Sites: With respect to prioritization, first priority will be areas with repeated SSO problems due to FOG, such as Centennial Section of Lake Carolina subdivision, Colony Park subdivision and in the Summit subdivision. Second priority areas will focus on urbanized ares in the floodplains of Twenty-five Mile Creek. Third priority will be to focus on restaurants in the floodplains of Twenty-five Mile Creek.

7.3.2.4 Outreach Needed

Participation in the project is voluntary, and effective outreach will be crucial to the success of the project. The following outreach measures will be performed:

Current Outreach

- Kershaw County MS4 SWMP: have posted a Stormwater Minute for FOG in the MS4's municipal buildings and the County accepts used cooking oil via Midlands Biofuels at Convenience Centers.
- Fairfield County: Accept used cooking oil via Midlands Biofuels at all of their Recycling Centers.
- Richland County MS4 SWMP: Richland County recently partnered with Midlands Biofuels for two of their recycling centers to accept used cooking oil. However, both of these locations are not in the watershed. Richland SWMP also plans to focus this upcoming year on pollutants by partnering with sanitary sewer providers to distribute material to homeowners on reporting sanitary sewer overflows and reducing FOG in pipes.
- Palmetto Utilities: distributes educational door hangers and conduct presentations to HOAs for SSO prevention due to FOG and rags.

Future Outreach

Recruitment:

- Distribution of Promotional Can Lids at facilities and events within the watershed, such as Sparkleberry Fair at Clemson Sandhills, Podunk Festival, Local Races (i.e. Blythewood's Bike Race March 10th), school night events (where parents are involved), etc.
- Conduct surveys, make announcements at community meetings, and participation in local events within the watershed to advertise the project and recruit participation.
- Mention in local newspapers, newsletters, and radio stations the time/place of when promotional FOG can lids will be distributed.

Public Education:

- Distribute educational flyers for commercial generators of FOG (restaurants) within the watershed and possibly create Daily Checklists for these restaurants.
- Conduct surveys, make announcements at community meetings, and participation in local events within the watershed (some mentioned above) to advertise the project and recruit participation.
- Include educational materials in local newspapers and newsletters to prevent SSOs from FOG
    - Have support from Lake Carolina's HOA (Beth Brittingham to put educational information in their newsletter).
    - The Elgins News and West Wateree Chronicle
    - Target neighborhoods and apartments in urbanized areas to distribute educational material on FOG.
- Other social media methods, such as Facebook, Twitter, and the County's websites (for Kershaw, Richland and Fairfield) will be used for outreach to generate interest in the program.
- Advertisement by Counties Recycling Facilities and Midlands Biofuels regarding the new services for recycling used cooking oil. Facilities include:
    - Kershaw County: Elgin and Lugoff Centers
    - Richland County: Clemson's Sandhills Research and Education Center and Blythewood Fire Station
    - Fairfield County: Ridgeway Recycling Center

Baseline information will be gathered in order to understand the level of knowledge of homeowners in the watershed relating to disposal of FOG. Kershaw County and its consultant will determine the best method of acquiring this baseline information regarding the knowledge, attitudes, and practice of homeowners in the watershed. Again, based on Palmetto Utilities services and problems, some targeted areas in the neighborhood have been determined. Once more baseline information is gathered, more focused research will be conducted.

Based on information obtained, a broader outreach effort will be conducted to all homeowners in the watershed. This will include the announcement of the distribution of the Promotional FOG Can Lids and

the new services for recycling used cooking oil at various venues with good exposure to homeowners and businesses in the watershed.

7.3.3 Agricultural Sources – Livestock

Livestock such as cattle, goats, and horses grazing on pasture land can be a significant source of nutrient loading and a source of nutrients and sediments causing macroinvertebrate impairment.

The two main methods of nutrient loading to the Twenty-five Mile Creek Watershed from cattle/horses are stormwater runoff from pastures containing manure and cattle depositing manure directly in the stream. According to the TMDL, loading of nutrients (which accompany bacteria) to the Twenty-five Mile Creek by cattle's direct discharge in the stream is possibly a significant source. As well, cattle concentrated in smaller areas (i.e. shaded area, water sources, feeding areas, etc.) often results in larger, more concentrated manure deposits and poorly stabilized soils resulting in erosion which provides additional mechanism to transport nutrients.

Based on 2006 USGS NLCD data, pasture lands cover 5.5 percent of the Twenty-five Mile Creek Watershed (about 4,385 acres) and may be a significant source of pollution. To help determine if cattle/horse farming activities contribute to the impairment of Twenty-five Mile Creek, a brainstorming session for Agricultural Sources was held on January, 14 2013 to utilize cooperators and stakeholders' knowledge of farms in the watershed. Attendees included Kershaw County Stormwater; Fairfield County; Town of Blythewood; Kershaw, Richland and Fairfield NRCSs; Richland SWCD; Fairfield SWCD; and SCRWA.

Utilizing information from assessments mentioned in Section 4.2, GIS and aerial reviews, and the brainstorming sessions, the findings on agricultural livestock sources of nutrient pollution are listed below.

<u>Findings</u>

The number of farms with livestock was determined for the Twenty-five Mile Creek Watershed. Figure 14 displays the overall number of livestock farms (labeled "Potential Livestock Project Sites" and "Potential Livestock Project Sites (Aerial Interpreted)" on the Figure) and the estimated number of animals per livestock farm. Farms tend to be in the northern half of the watershed, with many hobby farms located in this watershed. Based on information gathered from stakeholders, the estimated numbers of livestock on the farms displayed in Figure 14 are shown in Table 5 below. Due to gaps in stakeholders' knowledge of all of the farms in the watershed, ten percent was added to the stakeholders' estimated numbers of livestock, resulting in the values shown in Table 5. From this information, estimated nutrient loadings from livestock farms were calculated by EPA's STEPL in Section 8.2.

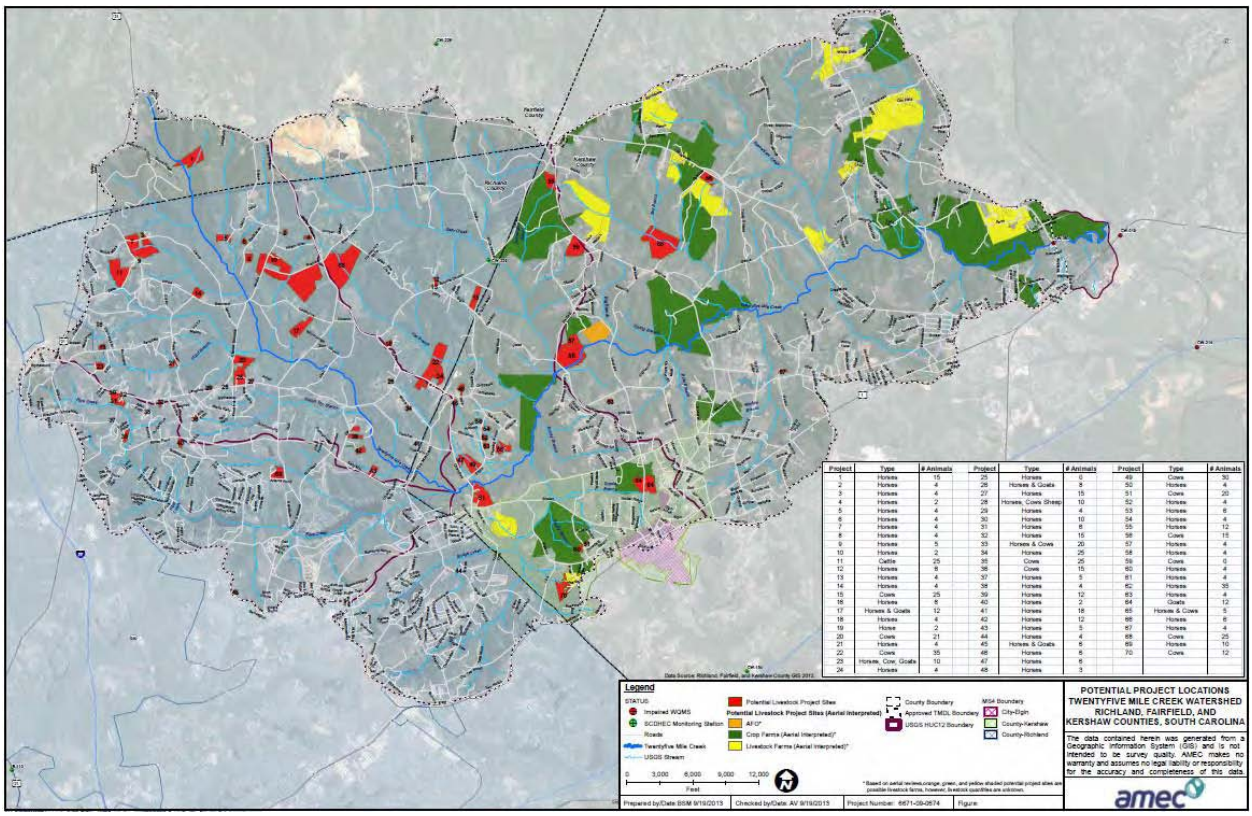


Figure 14. Livestock, Poultry and Crop Farms located in the Twenty-five Mile Creek Watershed

Table 5. Estimated Total Number of Livestock in the Twenty-five Mile Creek Watershed

Livestock	Estimated Total
Cows	267
Horses	290
Goats	18
Sheep	4

7.3.3.1 Target Audience/Description

Target Audience: Cattle/Horse Farms

Description: All agricultural property owners and operators within the watershed area are going to be targeted for outreach efforts. Cattle/horse farms located in the floodplains of Twenty-five Mile Creek of the watershed will be the primary focus for BMP installation, although the program will be made available to any agricultural properties throughout the watershed. Many of the goals of the project (to reduce nutrients in the watershed) also meet some of the goals of the landowners (healthier animals and preserving the land for future generations). Lexington County, another 319 recipient in South Carolina, have found through their Hollow Creek 319 project that the biggest barriers to participation

amongst farmers are a reluctance to change common practices they have performed for years, and resistance to perceived interference of their operations by government.

7.3.3.2 Strategies/BMPs Needed

Reduction of nutrient loading from agricultural land will be accomplished through cost share assistance on the installation of selected BMPs. The goal is to reduce livestock access to the streams, educate and assist farmers with manure management and stabilize soil. Because participation in the project is voluntary, and the landowners are traditionally somewhat skeptical of interference in their operations, effective outreach will be crucial in reaching the appropriate participants. In cooperation with NRCS and Soil Water Conservation Districts (SWCD) of Kershaw, Richland and Fairfield Counties, these outreach efforts will strive to incorporate farms affected by improper livestock and/or farming practices into the project.

Kershaw County anticipates gaining the participation of and assisting approximately 20 total farms (livestock, poultry and crop farms) in the watershed through this project in years 1-5. This is approximately 30% of the 70 farms that has been estimated for the Twenty-five Mile Creek Watershed. Figure 14 shows the 70 potential farms for targeting outreach for the agricultural compenent of this project. An aerial review of the watershed and selected farms with visible signs of animals (cattle, horses, animal feed operations, etc) was conducted. In addition to those targeted farms with animals, Kershaw County and its consultants AMEC also chose targeted crop farms after discovering crop farms that are actively participating in educational farm tours in the watershed, as detailed in the following Section 7.3.5.

Technical Service Providers (TSPs) will work through NRCS of Kershaw, Richland and Fairfield Counties, with the assistance of the SWCDs of the three counties, will work with the landowners to review their livestock operations, assess their resource concerns, develop Conservation Plans and recommend appropriate BMPs. Kershaw County staff and its consultant(s) will work with SWCDs of Kershaw, Richland and Fairfield Counties; NRCS of Kershaw, Richland and Fairfield Counties; and the landowners/operators to choose the appropriate BMPs and ensure they are installed and used correctly. An extensive set of BMPs can be used for different farm activities and resource conditions. Kershaw, Richland, and Fairfield County staff, consultants and project partners will consult the technical specifications and practice standards for applicable agricultural BMPs. The following BMPs will likely be used to filter or reduce the amount of animal waste entering Twenty-five Mile Creek and/or its tributaries, reference for quantities proposed for the Plan:

1. Stream bank fencing will be installed to keep livestock out of floodplain.
2. Development of conservation and manure management plans for each participating farm.
3. Waste management/manure composting, particularly at horse farms.
4. Alternative waters sources, such as groundwater wells and water troughs.
5. Soil stabilization of streambanks.
6. Vegetated buffers or setbacks will be planted along impacted stream beds.
7. Pasture Planting/Critical Area Stabilization.
8. Loafing sheds as an alternative to direct access to streams for livestock.
9. Cross fencing will be installed to promote rotational grazing.
10. Stream crossings may be installed to allow cattle to cross streams without loitering in them.

7.3.3.3 Management Plan for Agricultural Sources

The following plan will be used to manage the agricultural portion of the project. All three agricultural sources addressed in this proposal (livestock, poultry, and cropland), which are further detailed in the following two pollution source sections, will be addressed with this management strategy:

1. Project Management: Kershaw County, Richland County and Fairfield County, with the support of a project partners, will furnish project technical support, create and provide outreach and educational campaign/materials and Kerhsaw County will provide overall project coordination. Each County will act as the lead entity for all advocacy activities to their respective County by working directly with their local agricultural and conservation agency partners throughout the outreach and implementation portions of this project.

2. Recruitment of Landowners: Kershaw, Richland and Fairfield Counties will coordinate efforts to recruit farmers in each County. Each County plans to get out into the community (e.g. public meetings, churches, fire departments, community centers, local activities) to elicit support from farming participants. Each County will combine direct communication with potential participants with local advertising (e.g. local network, flyer distribution, mailings) to recruit participants. Meetings will be conducted in the watershed to inform farmers about the Project as well as providing support and insight into other educational campaign messages and outreach techniques. The Counties plan to use success stories from Lexington County with their 319 Hollow Creek project, such as the farmers' endorsement in the Hollow Creek Farm Tour video (http://www.youtube.com/watch?v=GpsZ2_sV8Rc), as an additional recruiting tool.

3. Prioritization of Sites: All landowners in the watershed who meet the criteria of needing agricultural BMPs will be recruited, despite their location in the watershed. However, with respect to prioritization, those farms in the floodplain of Twenty-five Mile Creek will be addressed first (farms based on Figure 14), and, if necessary, those outside of the floodplain will be addressed next.

    - Horse Farms close to the impaired WQMS CW-080
    - Long Creek Plantation Equine Center in Richland County: LCEC expressed interest in participating in Agricultural BMPs (such as Horse Manure Composting) if an implementation grant was awarded.
    - Farms with many livestock (25+ animals)

4. Development of Conservation Plans and Implementation: TSPs with the NRCS offices, assisted by the SWCDs, will have primary responsibility for helping the landowners develop conservation plans. Kershaw County will administer the 319 grant cost-share fund distribution to land users who successfully complete the installation of BMPs which support the project objectives. NRCS, assisted by SWCDs, will have primary responsibility for ensuring the technical integrity of all planned and installed BMPs. Kershaw County, assisted by its consultant(s) and the SWCDs, will have primary responsibility for developing and distributing the project message and educational campaign.

7.3.3.4 Outreach Needed

Kershaw County will use the same outreach plan to manage all three of the agricultural portions of the project, which are further detailed in the following two pollution source sections. Because participation in the project is voluntary, effective outreach will be crucial in the success of this project. It is fortunate that the goal of the project (to reduce pollutants in the watershed) can be achieved by the same actions that meet some of the goals of the landowners (healthier animals and preserving the land for future generations).

SWCDs and NRCSs are familiar with farmers in the area and know the best locations and means to promote the program. Using the experience of SWCDs and NRCSs, targeted outreach efforts will be employed such as one-on-one interviews with local farmers and visits to individual farms. Kershaw County will use Lexington County's lessons learned from the outreach efforts from their Hollow Creek 319 grant project, such as recruiting participants to reach out to their neighbors and requesting to participate in already planned local community events, (church group meetings or volunteer fire department gatherings) instead of scheduling additional public meetings. Listening sessions at regularly scheduled meetings in the community could be the main outreach method utilized. This will allow the Counties to change its approach based on the types of farms and feedback. For example the barriers to change for poultry farmers may be different from the barriers to change for cattle farmers. Presentation of Lexington Conty's 319 Hollow Creek video during the listening sessions will educate farmers about pollutant loading of the watershed, best management practices that could reduce pollutants from agriculture related enterprises and demonstrate the benefits other Lexington County farmers saw through the program. The Farm Tour video which was also created for Lexington County's Hollow Creek 319 grant will also be used during these listening sessions and local festivals to recruit participants in this project.

After information is gained through the listening sessions, a broader outreach plan will begin. Other social media methods, such as Facebook, County websites (Kershaw, Richland and Fairfield), and Twitter, will be used for outreach for the project. Once interest has been generated in the program, Countys' respective NRCS will conduct site visits to further encourage farmers to voluntarily participate in the project and assist them in developing conservation plans. Site visits can include C.Ray Miles Farm in Kershaw County and the South Carlonia Equine Park in Camden of Kershaw County. The C.Ray Miles Farm received a 319 grant installed agricultural BMPs. Kershaw County was awarded a 319 grant for the South Carolina Equine Park to perform a horse manure composting demonstration project.

7.3.4 Agricultural Sources – Poultry

According to the fecal coliform TMDL at the time it was written in 2004, there were two permitted animal feeding operations in the Twenty-five Mile Creek Watershed. However, it has since been found that one is no longer running in this watershed. Most of the litter from these facilities is carried out of the watershed. However, the manure that is not taken out of the watershed is typically applied to pastures. The facilities' pasture fields within the watershed are permitted for land application of manure. Thus, these fields are exposed to stormwater runoff and potentially contribute to pollutant

loadings, including nutrients contributing to macroinvertebrate impairments, that reach downstream waterbodies.

All modern poultry facilities are required to have a Waste Management Plan by both NRCS and SCDHEC to address the cleaning of chicken litter. There are two types of litter cleaning processes in poultry houses:

- once a year the entire house is cleaned, and
- partial cleanout between cycles where 30-50% of the litter is removed while the remaining litter is wind rowed and then spread back on the floor to a depth of approximately 3 inches deep and then covered with pine shaving.

If the litter is removed from the house and moved into an open space, it is required to be covered within 72 hours. Many facilities employ stacking sheds to keep the litter covered, while others store the litter on the ground (but covered) until needed for personal field application, or until sold to manure brokers. When farmers sell excess litter to manure brokers, it is distributed to other Counties in South Carolina as well as to surrounding states.

The standards that are in place today for poultry farming have improved since the TMDL development. Poultry farmers are more conscientious about the environment, and mandatory permitting regulations have become more stringent over the years. No-till technology is currently employed, which allows the remnant foliage to be left on the field, thereby reducing the likelihood of land-applied manure being transported to waterways by stormwater runoff. Likewise, the use of stacking sheds for the coverage of manure is a more recent practice, which reduces the potential for runoff from the site.

Using stakeholder's knowledge of farms in the watershed from the Agriculture Brainstorming Session (mentioned Section 1.1), along with aerials and GIS, poultry farming activities should be considered a potential source of nutrient loading to Twenty-five Mile Creek.

Findings:

- One animal feeding operation (AFO) from aerial review = AFO off of Veterans Road in Kershaw County. TMDL estimated approximately 56,000 chickens on this facility. Figure 14 displays the location of the AFO in Kershaw County of the Twenty-five Mile Creek Watershed. Stakeholders believe that this poultry farm sells excess litter to manure brokers. There are a few licensed litter brokers in the area that obtain litter from poultry houses and spread it on various farms in the state including farms in Fairfield, Kershaw and Richland Counties. Therefore, it is likely that this manure is distributed around the watershed.

7.3.4.1 Target Audience/Description

Target Audience: Poultry Farms

Description: The educational goals and proposed BMPs for this project are going to focus on the litter that is maintained at facilities for personal use (i.e. field application for feed crops). The BMPs will assist

with upgrading and modernizing facilities and practices to meet both operational goals and Waste Management Plan requirements, which will also meet the program's goals of reducing nutrient loading from poultry operations.

Poultry owners and operators within the watershed area are going to be targeted for outreach efforts. Figure 14 depicts the rural improved areas. The poultry farm located in Kershaw County of the watershed will be the primary focus for BMP installation, although the program will be made available to any agricultural properties throughout the watershed.

7.3.4.2 Strategies/BMPs Needed

Reduction of nutrient loading from agricultural land will be accomplished through a social marketing strategy and cost share assistance on the installation of selected BMPs. The goal of these BMPs for poultry farmers is to educate and assist farmers with proper methods for litter management by upgrading existing control measures of all the poultry operators and for at least one operator to install a litter composter. See below for examples of small- and large-scale composters.

NRCSs, with the assistance of the SWCDs, will work with the landowners to review their operations, assess their resource concerns, review Waste Management Plans, develop Conservation Plans, as needed, and recommend appropriate BMPs. Kershaw County staff and its consultant(s) will work with SWCDs of Kershaw, Richland and Fairfield Counties; NRCS of Kershaw, Richland and Fairfield Counties; and the landowners/operators to choose the appropriate BMPs and ensure they are installed and used correctly.

The following BMPs will be recommended to filter or reduce the amount of poultry waste entering Twenty-five Mile Creek and/or its tributaries:

- Waste storage /coverage for litter removed from houses (such as stacking sheds or improved covering materials),
- Conservation and waste management plans for each participating farm,
- Waste composting. The goal of this project is to have at least one facility install a medium-sized litter composter. A small and large composter shown in the Figures below are also being used as part of the South Carolina Equine Park 319 project in Kershaw County to reduce nutrient runoff from horse manure. The composted litter will provide the same nutrient benefit for field application but will have reduced nutrient runoff.

Estimated nutrient load reductions from proposed agricultural poultry BMPs for years 1 through 5 are displayed in Table 11 and is discussed in Section 8.2.

Figure 15. Example of Small Composter for Waste Management (Photo Source: O2Compost)

Figure 16. Example of Large Composter for Waste Management

7.3.4.3 Management Plan for Agricultural Sources

The management strategies and recruiting process outlined in the livestock agricultural portion above (Section 7.3.3.3) will be expanded to poultry farms as well, but the targeted audience will be adjusted.

7.3.4.4 Outreach Needed

The outreach strategy outlined in the livestock agricultural portion above (Section 0) will be expanded to poultry farms as well with additional advertising targeted specifically to poultry farms.

7.3.5 Agricultural Sources – Cropland

Nutrient loading from croplands is mostly attributed to runoff from manure used for fertilizer and poorly stabilized soils easily runoff and transport nutrient (and sediment) to streams. Cropland within the Twenty-five Mile Creek Watershed has been greatly reduced according to the NLCD 1992 landuse data used to develop the TMDL. In the TMDL, row crop land use accounted for approximately 18.1% of the overall watershed with a total of 14,400 acres. As of the most recent land use data, there are estimated to be less than 2,000 acres of cultivated croplands, approximately 2.0% of the overall watershed.

Using stakeholder's knowledge of farms in the watershed from the Agriculture Brainstorming Session (mentioned Section 7.3.2), along with aerials and GIS, there is a possibility that cropland farming activities contribute to the impairment of Twenty-five Mile Creek.

<u>Findings</u>

- DHEC stated that there no ND (No Discharge) Permits in the watershed for land application of manure, however stakeholders stated that many crop farms spread turkey litter in the watershed, especially near Lugoff in Kershaw County.
- Although the number of crop farms was not determined for this watershed, Figure 14 above displays potential crop farm project sites based on aerial reviews of the watershed.

- The conservative practice of applying turkey litter via disking it in is most likely not occurring; therefore, crop farms within the watershed are potentially contributing to nutrient polluted runoff.

7.3.5.1 Target Audience/Description

Target Audience: Crop farms

Description: All farm owners and operators within the watershed area are going to be targeted for outreach efforts. Croplands located in the floodplains of Twenty-five Mile Creek, along with three crop farms described below will be the primary focus for BMP installation, although the program will be made available to any agricultural properties throughout the watershed.

7.3.5.2 Strategies/BMPs Needed

The strategies and BMPs that will be used for croplands will be very similar to those used for other agricultural sources since the main nutrient loading source addressed will also be runoff, but from fertilization and harvesting practices as opposed to livestock. The goal for crop farmers is to educate and assist farmers with proper methods for fertilizer management, such as disking in turkey litter.

County's respective NRCS, with the assistance of their corresponding SWCD, will work with the landowners to review their operations, assess their resource concerns, and develop Conservation Plans and recommend appropriate BMPs. Kershaw County staff and its consultant(s) will work with SWCDs of Kershaw, Richland and Fairfield Counties; NRCS of Kershaw, Richland and Fairfield Counties; and the landowners/operators to choose the appropriate BMPs and ensure they are installed and used correctly.

The following BMPs will likely be used for croplands: soil stabilization, streambank stabilization, development of manure management plans for each participating farm, waste management/manure composting, vegetated buffers or setbacks will be planted along impacted stream beds, and critical area stabilization.

Estimated nutrient load reductions from proposed agricultural cropland BMPs for years 1 through 5 are displayed in Table 11 and is discussed in Section 8.2.

7.3.5.3 Project Management for Agricultural Sources

The management strategies and recruiting process outlined in the livestock agricultural portion above (Section 7.3.3.3) will be expanded to crop farms as well. As mentioned prior, agricultural lands located within, or close proximity, to Twenty-five Mile Creek's floodplain will be the primary focus for recruitment of BMP installation. Although, the program will be made available to any agricultural properties throughout the watershed. Other farms within the watershed that will be targeted as well include the ones listed below. These three farms participated in the 1st Annual Midlands Farm Tour on April 6-7, 2013. These farms within the watershed are actively participating in organic and sustainable agricultural practices and, therefore, may be willing to participate in this Plan.

1. Crooked Cedar Farm (91464 Lawhorn Road, Blythewood, South Carolina):

   Crooked Cedar Farm is a small family-run farm that uses organic practices to grow a variety of seasonal vegetables and perennial plants and flowers. The farm also has free-range chickens.

2. Paradise Acres Farm (374 Getts Road, Elgin, South Carolina):

   Paradise farms have free-range chickens and turkeys, goats, fruit orchards, and raised bed vegetable gardens.

3. Will-Moore Farms (1916 Three Branches Road., Lugoff, South Carolina):

   a. Wil-Moore Farms is a family farm where all of the animals are raised on a certified organic pasture. Along with cattle, Wil-Moore Farms have Tamworth hogs.

7.3.5.4 Outreach Needed

The outreach strategy outlined in the agricultural - livestock portion above in Section 0 will be expanded to crop farms as well with additional advertising targeted specifically to croplands. Kershaw County and its consultants will further refine the outreach message and strategy (e.g. workshops conducted at the farm, educational flyers) based on their feedback.

7.3.6 Septic Sources

Failing septic systems represent a nonpoint source that can contribute nutrients to receiving waterbodies through surface or subsurface malfunctions. Septic systems that do not function properly may leak sewage which can reach nearby streams. Septic systems can fail due to improper design or construction, and systems may no longer function because of neglected maintenance. According to the TMDL written in 2004, it was estimated that there are 4,700 septic systems in the Twenty-five Mile Creek watershed. There is no accurate estimate of failure rate in this watershed, but several studies have reported failure rates ranging from 5 to 39%, and a rule of thumb of 10% failure is generally used (Schueler, 1999). Many residential property owners may be unaware of problems with their septic tanks or may be unable to afford repair of their septic tanks. Therefore, failing septic systems may be a significant source of nutrients in the watershed. To help determine if failing septic tanks contribute to the impairment of Twenty-five Mile Creek, a brainstorming session for Septic Sources was held on February 7, 2013 with Kershaw County Stormwater, Richland County's Carolina Clear, and SCDHEC from Region 3 and Kershaw County.

Compiling information from assessments mentioned in Section 4, parcel data, soils data, sewer data (Figure 13), and the brainstorming sessions, the following conclusions on failing septic systems as a source of nutrients pollution are listed below.

Findings

- Kershaw County was awarded a grant to build a septic receiving station at their WWTP to accept waste from septic systems, and it is projected to be completed by the end of 2013. This provides septic companies a good local option for proper disposal of septic waste.

- As discussed in the Sewer Sources Section, Kershaw County, Richland County and Fairfield County have partnered with Midlands Biofuels to accept used cooking oil at their Convenience Centers. However, Midlands Biofuels used cooking oil containers are currently not located in the Twenty-five Mile Creek watershed for Richland County. The practice of recycling used cooking oil for septic systems owners prevents backups in their systems as well.

- Gathered Twenty-five Mile Creek Watershed Septic Parcel Data:

    - AMEC obtained building parcel data from Kershaw County. Kershaw County estimates about 800 sewer customers in the Twenty-five Mile Creek watershed area. Therefore, the number of building parcels for the area minus 800 gave a rough estimate of septic owners in Kershaw County portion of the watershed (Figure 17 below and Table 6 below[1]).

    - Richland County provided septic parcel data for the watershed and is displayed in Figure 17 and Table 6.

    - AMEC obtained building parcel data from Fairfield County. All parcels within the Twenty-five Mile Creek watershed portion of Fairfield County are on septic. Therefore, an estimate of septic owners in the Fairfield County portion of the watershed is shown in Figure 17 and Table 6 .

    - AMEC overlaid the watershed's septic data with the area's Hydrologic Soil Groups (Figure 17). Soils information (i.e. infiltration properties) along with age of buildings information will help narrow down areas that may be susceptible to failing septic systems. The analysis of Figure 17 to identify targeted areas is discussed in Section 7.3.5.1 below.

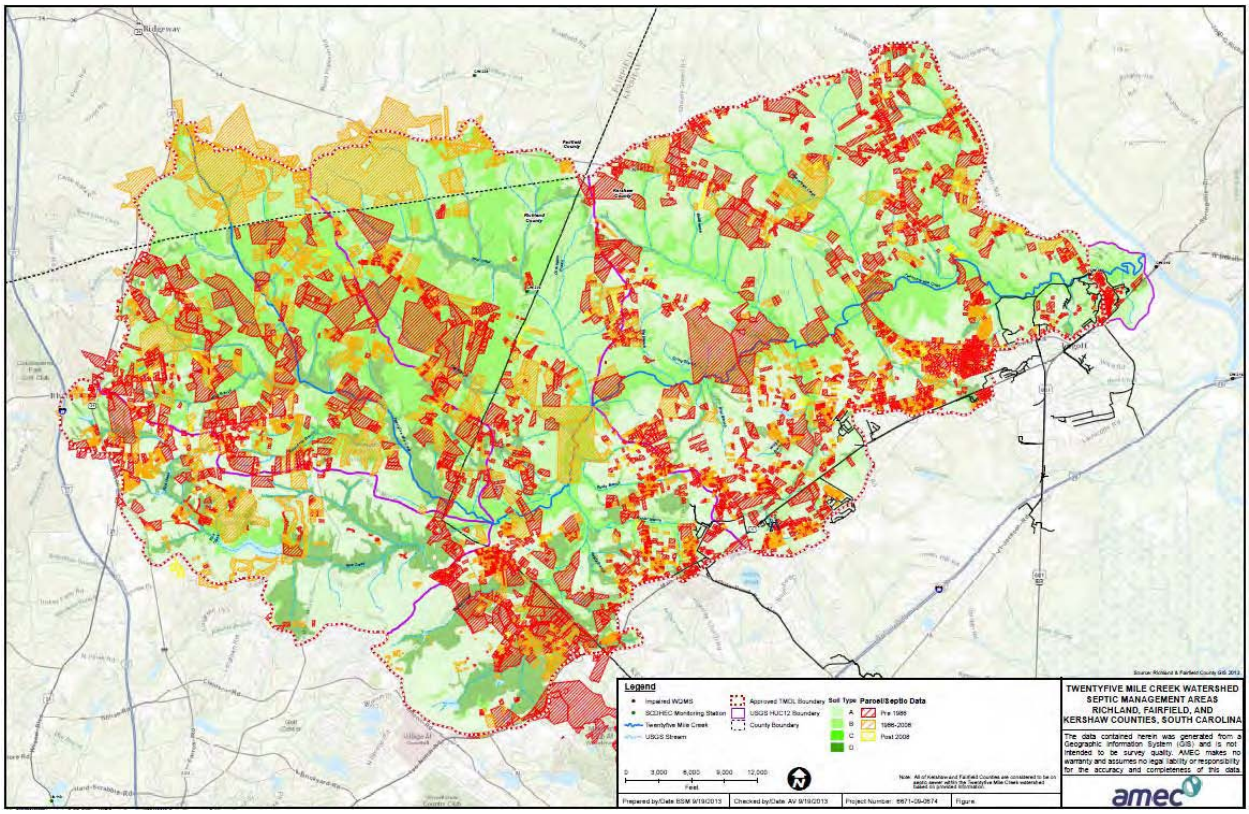


Figure 17. Twenty-five Mile Creek Watershed Septic Management Areas

[1] Figure 17 and Figure 13 disclaimer: Septic data obtained for the Twenty-five Mile Creek Watershed is a rough estimate of septic parcels within this area. However, this number is believed to be more accurate than the estimated 4,700 septic systems stated in the 2004 TMDL.

Table 6. Total Estimated Septic Systems within the Twenty-five Mile Creek Watershed

County	Number of Septic Systems
Kershaw	171
Richland	3,873
Fairfield	2,018
Total	**6,062**

7.3.6.1 Target Audience/Description

Target Audience: Property owners with failing septic systems

Description: All homeowners and businesses whose septic system is in need of repair and/or replacement within the watershed area will be targeted for outreach efforts, though homes located within the MS4 boundaries will be evaluated on a case-by-case basis for qualification for 319 funds. The more rural northern portion of the watershed will be targeted first, with the help of using targeted areas deciphered from Figure 17, Table 6 and Table 7 for the initial outreach efforts. Kershaw, Richland and

Farifield County will reach out to Homeowner Associations, civic groups and the local chamber of commerce to spread the message to more property owners.

An estimated 6,062 septic systems are in the Twenty-five Mile Creek Watershed. From this, parcels with septic were analyzed based on its Hydrologic Soil Group and the date the building was constructed. Dates categories include buildings with septic before 1986, between 1986-2008 and after 2008. Septic regulations and upgrades were made after 2008, therefore septic failures are most likely occurring on C & D soils and areas where septic systems were built before 2008. Of the 600 systems before 1986 and the 486 systems between 1986-2008; it is estimated that a total of 350 septic systems are failing in the Twenty-five Mile Creek watershed.

Table 7. Estimated number of septic tanks in the Twenty-five Mile Creek watershed

County	Number of Septic Tanks	Septic Systems on C & D Soils before 1986	Septic Systems on C & D Soils between 1986-2008
Kershaw County	3,873	205	110
Richland County	2,018	378	376
Fairfield County	171	17	-
Total	**6,062**	**600**	**486**

7.3.6.2 Strategies/BMPs Needed

Counties will work with experienced SCDHEC personnel, local organizations, and septic tank contractors to target historic problem systems and problem areas. Based on septic information gathered, areas to target will include parcels with septic on poor infiltrated soils (HGS C and D) and parcels with old building dates, see Figure 17 and Table 7 above. As well, parcels with septic within the floodplains of Twenty-five Mile Creek will be prioritized for recruitment. Lexington County developed a process as part of the Hollow Creek 319 project, for identifying problem systems, informing and approving participants, properly documenting costs and reimbursements, and screening and contracting with local septic tank contractors that can be of use for Kershaw, Richland and Fairfield Counties to adopt for this project.

In addition, if failing septic systems are believed to be a continuing issue within the Twenty-five Mile Creek Watershed, Kershaw County will consider developing an Acceptable Septic System Letter to be applied County-wide at the time of a sale of a house (similar to a Termite letter).

Estimated nutrient load reductions from proposed septic BMPs for years 1 through 5 are displayed in Table 11 and are discussed in Section 8.2.

7.3.6.3 Project Management for Septic Sources

1. Project Management: Kershaw County, Richland County and Farifield County, with the support of project partners, will complete all reporting requirements, conduct procurement activities, coordinate with SCDHEC and local septic providers for project technical support, create and provide outreach and educational campaign/materials and Kershaw County will provide overall project coordination. Each County will act as the lead entity for all advocacy activities to their respective

County by working directly with the local community throughout the outreach and implementation portions of this project.

2. Prioritization of Sites: All landowners in the watershed who meet the criteria of needing septic repairs will be recruited, despite their location in the watershed. However, with respect to prioritization, those property owners in the floodplain of Twenty-five Mile Creek will be addressed first, as will areas that may be prone to septic failures due to poor soil infiltration and age of septic tank (based on Figure 17 and Table 7). As part of the screening process for potential participants, the location of the septic system and where it drains will be considered compared to MS4 boundaries since systems which drain to the MS4 will not be included if a 319 Implementation Project is granted, but instead will be addressed by the MS4s' Illicit Discharge Detection and Elimination (IDDE) program.

3. Determination of Repair: The SCDHEC will assist the respective County with assessing septic problems. Routine maintenance (i.e. pump outs) is not included as part of this project. If awarded a 319 Implementation Grant, 319 funding will be used for repairs, replacements, or connection to sewer depending on the nature of the problem and location of the system.

7.3.6.4 Outreach Needed

Many septic problems and leaks are due to lack of or poor maintenance of the septic system. Outreach and education, including distribution of the SCDHEC septic maintenance folders, septic "reminder" magnets, and other items listed below (especially in 'Future Outreach') will be used to address this problem and encourage septic owners to improve maintenance.

Current Outreach:

- Kershaw County MS4 SWMP: The program distributes SCDHEC's "Septic System Maintenance" information at their municipal buidlings in the MS4 and local fairs and events.

- Richland County MS4 SWMP: Richland's SWMP distributes a postcard-style handout on septic systems. Richland County's SWMP is looking to expand this program in the upcoming year by working with septic tank service businesses.

Future Outreach:

The reduction of nutrients in the watershed through repair and replacement of failing septic systems also benefits homeowners through the elimination of odor problems, health issues, and increase in property values. The following outreach measures will be performed:

Recruitment of Property Owners with Failing Septic: Marketing materials (e.g. flyers, presentations at community meetings, video from Lexington County's 319 Hollow Creek project which includes endorsements from septic owners who participated, and word-of-mouth will be used to reach out to the local community to inform septic system owners about the Project as well as providing support and insight into educational campaign messages and outreach techniques.

- Conduct surveys, make presentations at community meetings, and/or listening sessions within the watershed to advertise the project and recruit homeowners for participation.
- Identify Homeowner Associations, civic organizations and local chambers of commerce in the watershed to spread the message to more property owners
- Evaluate septic pump-out records obtained from local licensed contractors.
- Work with experienced SCDHEC personnel, local organizations, and septic tank contractors to target historic problem systems and problem areas;
- Tailor available outreach tools (e.g. flyers & video developed for Hollow Creek Water Quality Improvement Project which included homeowner endorsements of the septic program) for Twenty-five Mile Creek audience.
- Other social media methods, such as Facebook, Kershaw, Richland and Fairfield County websites, and Twitter will be used for outreach to generate interest in the Project.
- Distribution of SCDHEC's "Septic System Maintenance" information and septic system management magnets (to provide homeowners guidence for when it is a good time to have their septic system cleaned out).

Baseline information will be gathered in order to understand the level of knowledge of homeowners in the watershed relating to septic tank maintenance and repairs. Kershaw County will work with its consultant(s) to determine the best method of acquiring this baseline information regarding the knowledge, attitudes, and practice of homeowners in the watershed. Once the baseline information is gathered, Counties will conduct more focused research through interviews at local community centers/churches and businesses located in the watershed.

Based on information obtained, a broader outreach effort will be conducted to all homeowners in the watershed. This will include the announcement of the cost share program at various venues with good exposure to homeowners residing in the watershed. It is anticipated that local non-profit organizations and septic tank contractors will assist with outreach efforts. The respective County and their staff will conduct site visits and interviews with homeowners to encourage participation in the cost share program and promote responsible septic tank maintenance practices. All individuals receiving assistance will be educated on proper septic tank maintenance. Follow up surveys will be conducted with homeowners in the last year of the program to determine if there has been a change in their attitudes, knowledge, and future maintenance plans regarding their septic systems.

7.4 Develop a Twenty-five Mile Creek Workgroup to Oversee Plan Implementation

The Stakeholders involved with the creation of this Plan has become the foundation of Twenty-five Mile Creek workgroup.

- The Leaders for this group include Kershaw County and its consultants, Richland County, Fairfield County, the Town of Elgin, Town of Lugoff and the Town of Blythewood.
- List of additional stakeholders by source
    - Urban: Carolina Clear, Central Midlands COG, Santee Lynches COG, SCRWA
    - Sewer: Kershaw, Richland and Fairfield's Public Health (SCDHEC), Palmetto Utilities
    - Agricultural: Kershaw, Richland and Fairfield's NRCSs and SWCDs
    - Septic: Kershaw, Richland and Fairfield's Public Health (SCDHEC)

7.5 Milestones

Twenty-five Mile Creek does not currently meet State water quality standards due to aquatic life impairments. The goal of this plan is for Twenty-five Mile Creek to meet State water quality standards by 2029 (15 years from 2014).

It is proposed that this goal can be accomplished by implementing various structural and nonstructural BMPs to reduce the sediment and nutrient loadings, as well as flow and temperature stressors to Twenty-five Mile Creek.

Since it may take fifteen years for Twenty-five Mile Creek to meet State water quality standards, interim milestones may be tracked to measure progress on Plan implementation. Interim and long term measurable milestones are outlined in Table 8 below.

Table 8. Twenty-five Mile Creek Macroinvertebrate WBP Measurable Milestones

Secure funding adequate to complete restoration priorities identified in this Plan	30
Sediment Stressors:	30
Stabilize along 90 miles of dirt/gravel roads	100
Restore 0.25 miles of Stratton Hall Stream	100
Stabilize/re-route gravel road at Clemson Extension	100
Plant 72 acres of urban riparian buffers	30
Plant 109 acres of rural/agricultural reparian buffers	30
Promote conservation tilling	30
Flow Stressors:	
Install 10 rain barrels	
Install 10 rain gardens	
Nutrient Stressors:	
Urban Sources:	30
Install 15 pet waste stations	
Install 2000 storm drain markers	
Outreach and Education	
Sewer Sources	30
Distribute 2000 promotional FOG can lids	
Recycle Used Cooking Oil: Midlands Biofuels	
Outreach and Education	
Agricultural Sources:	30
20 of 70 farms participate in structural and nonstructural BMPs	
Outreach and Education	
Septic Sources:	15
40 Septic Tank Repairs	
10 Sewer Connections	
Outreach and Education	
Biannual meetings with Twenty-five Mile Creek Workgroup	30
Update Councils within the watershed annually	30
Update County and Town websites quarterly	30
Update/Email stakeholders quarterly	30
Years 6 to 10 (Not included in current budget)	
Action	**Percent Complete**
Secure funding adequate to complete restoration priorities identified in this Plan	60
Stormwater Quantity Master Plan	100
Sediment Stressors:	
Plant 72 acres of urban riparian buffers	60
Plant 109 acres of rural/agricultural reparian buffers	60
Promote conservation tilling	60
Flow Stressors:	
Install 10 rain barrels	
Install 10 rain gardens	
Nutrient Stressors:	60
Urban Sources:	
Install 15 pet waste stations	
Install 2000 storm drain markers	
Outreach and Education	
Sewer Sources	60
Distribute 2000 promotional FOG can lids	
Outreach and Education	
Agricultural Sources:	60
Additional 25 farms, totaling 45 of 70 farms participate in structural and nonstructural BMPs	
Outreach and Education	
Septic Sources:	57
100 Septic Tank Repairs	
50 Sewer Connections	
Outreach and Education	
Biannual meetings with Twenty-five Mile Creek Workgroup	60
Update Councils within the watershed annually	60
Update County and Town websites quarterly	60
Update/Email stakeholders quarterly	60
Years 11 to 15 (Not included in current budget)	
Action	**Percent Complete**
Secure funding adequate to complete restoration priorities identified in this Plan	100
Sediment Stressors:	
Plant 72 acres of urban riparian buffers	100
Plant 109 acres of rural/agricultural reparian buffers	100
Promote conservation tilling	100
Flow Stressors:	
Install 10 rain barrels	
Install 10 rain gardens	
Nutrient Stressors:	100
Urban Sources:	100
Install 15 pet waste stations	
Install 2000 storm drain markers	
Outreach and Education	
Sewer Sources	100
Distribute 2000 promotional FOG can lids	
Outreach and Education	
Agricultural Sources:	100
Additional 25 farms, totaling 70 of 70 farms participate in structural and nonstructural BMPs	
Outreach and Education	
Septic Sources:	100
100 Septic Tank Repairs	
50 Sewer Connections	
Outreach and Education	
Biannual meetings with Twenty-five Mile Creek Workgroup	100
Update Councils within the watershed annually	100
Update County and Town websites quarterly	100
Update/Email stakeholders quarterly	100

Table 9. Twenty-five Mile Creek Macroinvertebreate Watershed Action Plan

Sediment Stressor	Priority	Kershaw County	Kershaw NRCS and SWCD	Richland County	Richland NRCS and SWCD	Fairfield County	FairfieldNRCS and SWCD	SC DHEC Public Health	SC DHEC	NRCS Cost Sharing	Other Grants or partners	Municipal	Landowner	Volunteer	Quantity	Units	Unit Cost	Total	Schedule
		Responsible Party										ng/Labor S							
1. BMPs																			
a. Stabilization along Dirt Roads and Railroad (majority in Kershaw County)	H	X		X		X			X			X			1800	# straw waddles	$20	$36,000	2014 - 2017
b. Stream Restoration - Stratton Hall	H	X							X		X	X			2700	Linear Feet	$104	$281,286	2014 - 2017
c. Stabilizing/Re-routing gravel road in Clemson Extension	H			X					X			X	X	X	2100	Square Yards	$1.00	$2,100	2015
d. Urban Riparian Buffer Planting	H	X		X		X			X			X	X		72	acre	$6,180	$444,960	2014 - 2019
e. Rural/Agricultural Riparian Buffer Planting	H	X	X	X	X	X	X		X	X		X	X		109	acre	$2,800	$305,200	2014 - 2019
f. Conservation tilling - Promotion of low cost No-Till Drill Rental from SWCDs	H	X	X	X	X	X	X		X	X		X	X					$1,000	$1,000
2. Outreach and Education																		0	
a. Contractor education (pre- and post-construction ESC BMPs)	H	X		X		X			X			X						$2,000	2014 - 2019
b. Urban Runoff Education Materials	H	X		X		X			X			X						$2,000	2014 - 2019
c. Riparian buffer Education Materials	H	X		X		X			X			X	X					$2,000	2014 - 2019
c. Rain Barrel Education Materials	M	X		X		X			X			X	X					$2,000	2014 - 2019
d. Rain Garden Education Materials	M	X		X		X			X			X	X					$2,000	2014 - 2019
																		$0	
Flow Stressor																		**0**	
1. BMPs																		$0	
a. Rain Barrels	M	X		X		X			X			X	X		10	# barrels	$75	$750	2014/2015
b. Rain Gardens	M	X		X		X			X			X	X		2000	sq ft	$12	$24,000	2014/2015
2. Programmatic Efforts																		0	
a. Incentives for Green Infrastructure in development	H	X		X		X						X						$0	2015-2016
																		$0	
Nutrients Stressor																		**0**	
1. BMPs																		0	
a. Agricultural BMPs (see Table 10 for detail)	H	X	X	X	X	X	X		X	X		X	X					$781,770	2014-2019
b. Septic BMPs (see Table 10 for detail)	H	X		X		X		X	X			X	X					$294,000	2014-2019
c. SSOs from FOG (see Table 10 for detail)	H	X		X		X		X	X			X						$2,000	2014-2019
d. Pet Waste Stations	L	X		X		X		X	X			X			15	stations	125	$1,875	2014-2019
d. Storm Drain Markers	M	X		X		X		X	X			X			2000	# markers	$5	$10,000	2014/2015
2. Outreach and Education																		0	
a. Fertilizer Education (golf courses, nurseries, homeowners)	M	X		X		X			X			X						$2,000	2014 - 2019
b. Illicit Discharge Detection & Elimination Education Materials	H	X		X		X			X			X						$2,000	2014 - 2019
c. Agricultural Outreach Education and Supplies	H	X	X	X	X	X	X		X	X		X	X					$10,000	
Monitoring																			
Macroinvertebrate															6		700	$ 4,200	
Nutrients															96		55	$ 5,280	
Turbidity															96		10	$ 960	
Total Suspended Solids															96		15	$ 1,440	
Flow Monitoring																		$ 25,000	
Contracted Services																		**$ 100,000**	
TOTAL																		**$ 2,345,821.00**	

Table 10. Detail of Estimated Ag and Septic/Sewer Portion of Macroinvertebrate Project Costs During Years 1-5

		Quantity	Single Cost	Total Price	
SSOs from FOG	Promotional FOG Can Lids	2000	$ 1.00	$ 2,000.00	**$ 2,000.00**
	Midlands Biofuels	15	$ -	$ -	
Agricultural: Construction	Stacking Shed at AFOs, Sq Ft	3,000	$ 4.70	$ 14,100.00	
	Water Well	20	$ 5,860.96	$ 117,219.20	
	Watering Facility	40	$ 699.17	$ 27,966.80	**$781,770.00**
	Pipeline, Ln Ft	10,000	$ 3.49	$ 34,900.00	
	Heavy Use Area Protection, Sq Ft	34,000	$ 4.64	$ 157,760.00	
	Fencing, Ln Ft	36,000	$ 2.45	$ 88,200.00	
	Mini Manure Composting Facility, Unit	20	$ 2,000.00	$ 40,000.00	
	Large Manure Composting Facility, Unit	1	$ 30,000.00	$ 30,000.00	
	Stream Crossing, Unit	2	$ 4,000.00	$ 8,000.00	
	Pasture and Hayland Planting, Acres	200	$ 286.52	$ 57,304.00	
	Loafing Shed, Sq Ft	44,000	$ 3.78	$ 166,320.00	
	Conservation Plan	20	$ 2,000.00	$ 40,000.00	
Septic: Construction	Septic Repairs	40	$ 3,600.00	$ 144,000.00	**$294,000.00**
	Sewer Connection	10	$ 15,000.00	$ 150,000.00	
			Total	**$ 1,077,770.00**	

8 Measures of Success

8.1 Monitoring Plan

A staged approach to monitoring will be considered for sampling, including the following parameters: macroinvertebrate sampling, turbidity, total suspended solids, flow monitoring, nutrients and temperature.

8.1.1 Macroinvertebrate sampling

In order to more precisely isolate the location(s) of the impairment, macroinvertebrate sampling (discussed in Section 8.1.1) will first be considered at 2 points in the watershed (30 and CW-080, labeled in Figure 18).

- 30 - Twenty-five Mile Creek at Cherokee
- CW-080

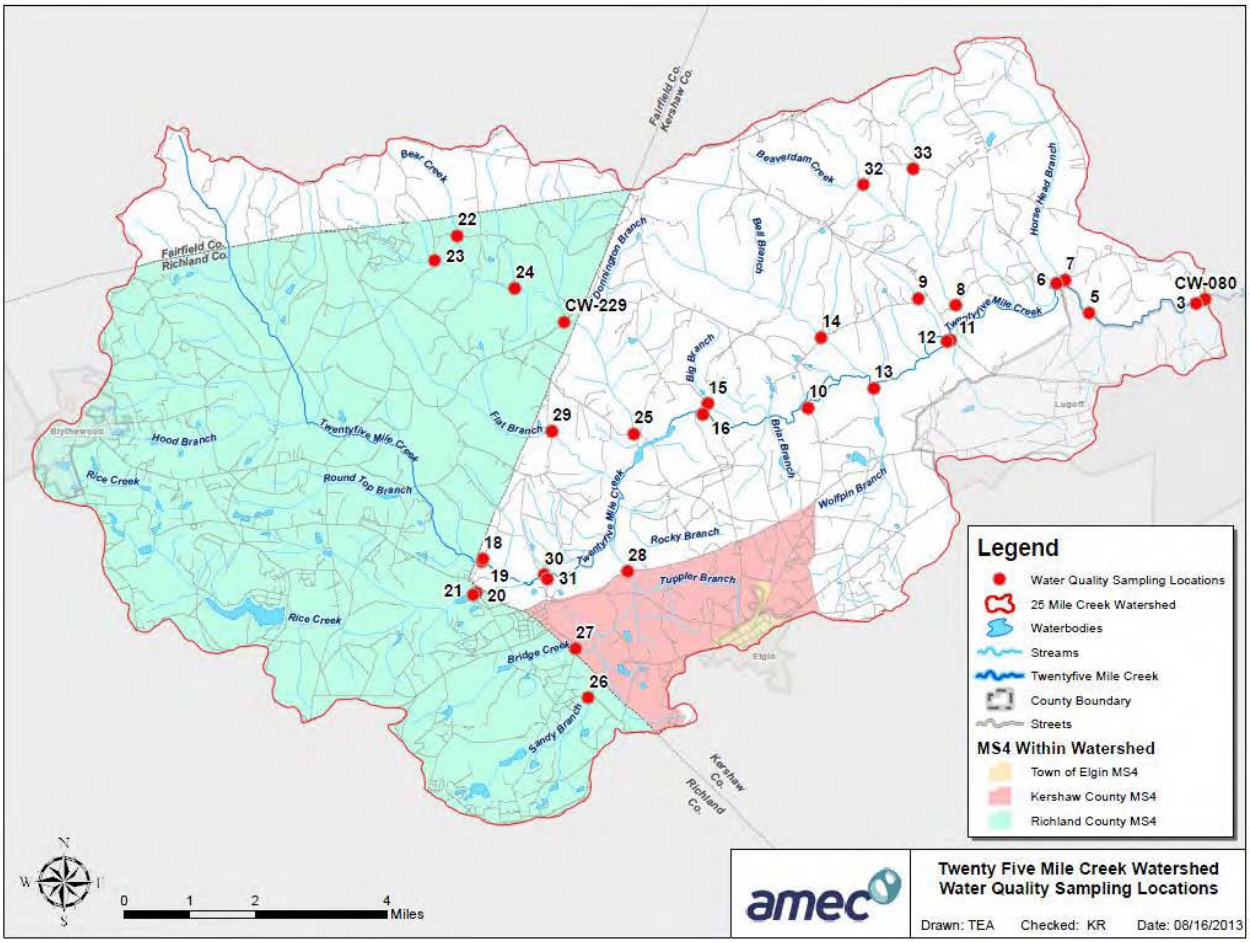


Figure 18. Monitoring Locations in Twenty-five Mile Creek Watershed
(note that only 2 of these stations are recommended for possible macroinvertebrate sampling: 30 and CW-080)

These two locations were selected to potentially isolate the impacted area of Twenty-five Mile Creek. The pointes for sampling were chosen to determine the impact on the stream from the highly urbanized areas of Northeast Columbia and the more rural/agricultural portions of the watershed.

Once the location of the macroinvertebrate impairment is isolated, specific sampling will be considered as discussed in Sections 8.1.2 through 8.1.4.

Details about macroinvertebrate sampling procedures can be found in Appendix F: SCDHEC's Standard Operating and Quality Control Procedures for Macroinvertebrate Sampling.

8.1.2 Turbidity and Total Suspended Solids (TSS)

Once the location(s) of the macroinvertebrate impairment has been isolated, monitoring for turbidity and TSS will be considered in effort to better define sediment impacts on the creek. The following locations (shown on Figure 18) will be considered for turbidity (EPA method 180.1) and TSS (EPA method 160.2) monitoring:

- 18 - Twenty-five Mile Creek at Twenty-five Mile Creek Road,
- 20 - Rice Creek at Kelly Mill Road,
- 28 - Sandy Branch at Wildwood Lane,
- 25 – Bear Creek at Sessions Road,
- 8 – Beaverdam Creek at Kellytown Road,
- 11 – Flat Branch,
- Unnamed tributary of Twenty-five Mile near CW-080 at Frenwood Lane, and
- CW-080.

Quarterly sampling during rain events would be recommended for turbidity and TSS sampling.

Details about turbidity and TSS sampling procedures can be found in Appendix G for SCDHEC's Wastewater Sampling Standard Operating Procedures.

8.1.3 Nutrient monitoring

In order to measure improvements in nutrient runoff into the creek, monitoring for nitrates/nitrites (EPA Method 353.2) and total phosphous (EPA Method 365.1) will be considered. The following locations will be considered for nutrient monitoring:

- 18 - Twenty-five Mile Creek at Twenty-five Mile Creek Road,
- 20 - Rice Creek at Kelly Mill Road,
- 28 - Sandy Branch at Wildwood Lane,
- 25 – Bear Creek at Sessions Road,
- 8 – Beaverdam Creek at Kellytown Road,
- 11 – Flat Branch,
- Unnamed tributary of Twenty-five Mile near CW-080 at Frenwood Lane, and
- CW-080.

Quarterly sampling during rain events would be recommended for nutrient sampling.

Details about nutrient sampling procedures can be found in Appendix G for SCDHEC's Wastewater Sampling Standard Operating Procedures.

8.1.4 Flow monitoring

In order to determine the baseline flow and measure improvement in the impacts that peak flows are having on Twenty-five Mile and its tributaries, flow monitoring may be conducted in Twenty-five Mile. If flow monitoring is conducted, two locations in Twenty-five Mile (such as one in the upper watershed before Lake Carolina and one in the lower watershed near Lugoff) are recommended. Baseline flow monitoring is recommended to be measured in each location for a period of dry weather, but also remaining long enough to obtain data for at least three quality rain events, as well. Three rain gauges would be installed in a triangular shape across the watershed to evaluate and correlate rainfall to flow. Once the baseline flow is evaluated, it is recommended to monitor flow approximately every 2 years to determine improvements in peak flow.

8.2 Anticipated Load Reductions

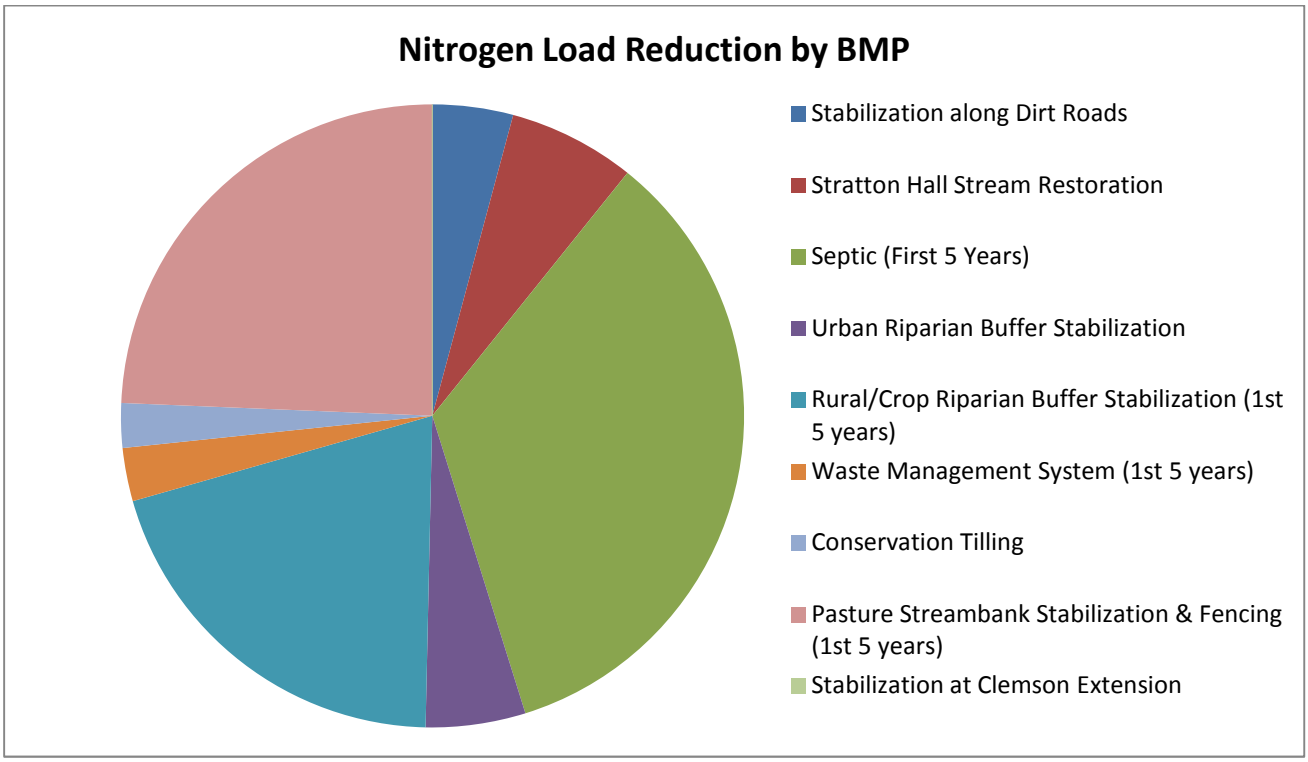
According to EPA's STEPL, the following load reductions will be achieved for each installed BMP:

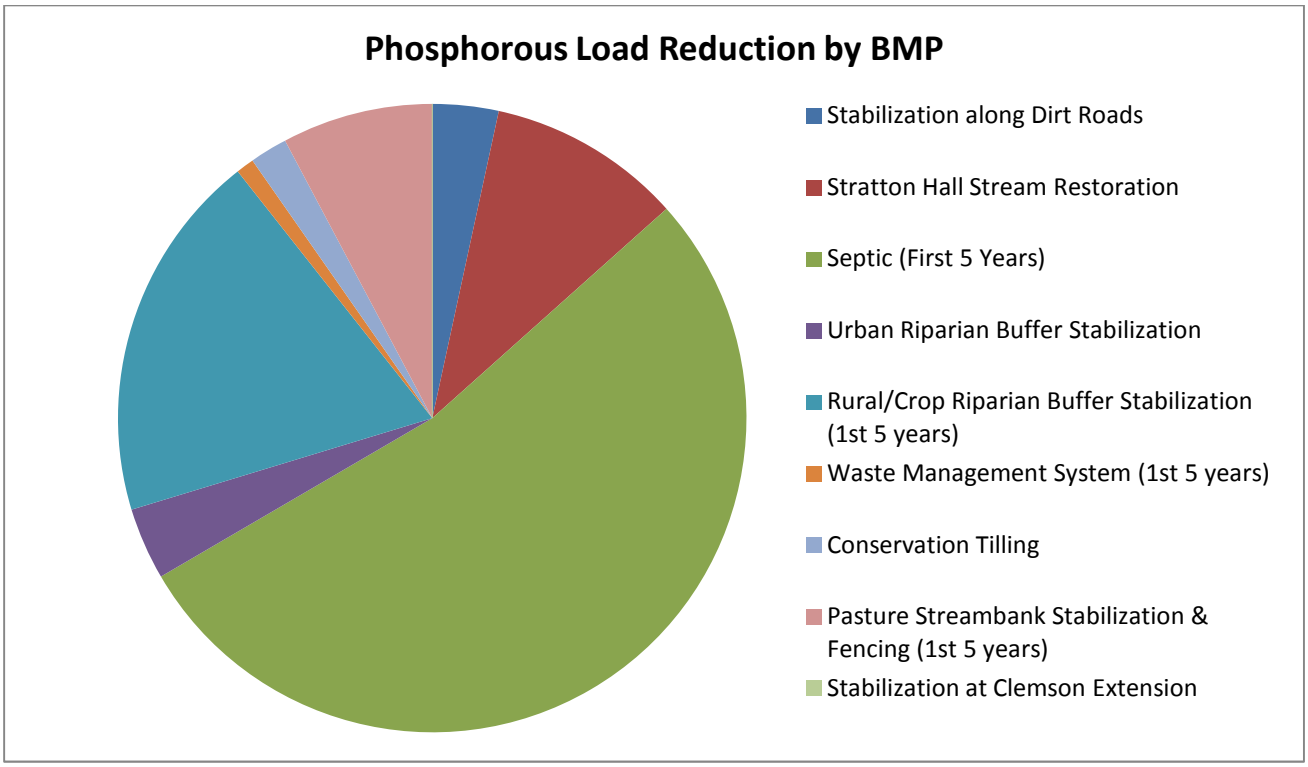
Table 11. Estimated Load Reductions by BMP

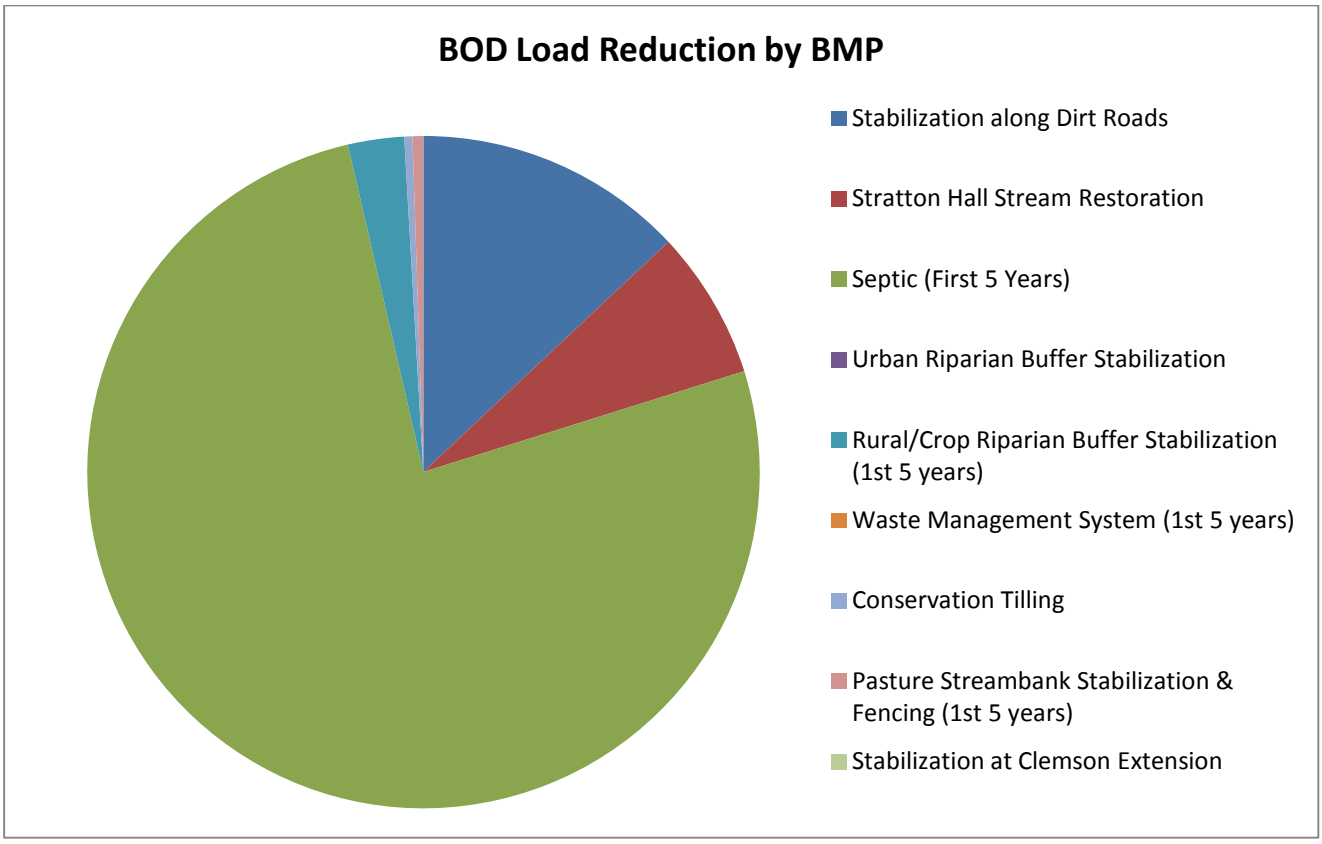
	Nitrogen	Phosphorous	BOD	Sediment
BMPs Installed	**lb/yr**	**lb/yr**	**lb/yr**	**lb/yr**
No BMPs	0	0	0	0
Stabilization along Dirt Roads	189	39	1,082	15,638
Stratton Hall Stream Restoration	297	114	595	323,190
Stabilization at Clemson Extension	0	0	2	38
Urban Riparian Buffer Stabilization	233	42	0	10,613
Rural/Crop Riparian Buffer Stabilization (1st 5 years)	913	218	224	70,103
Waste Management System (1st 5 years)	125	11	0	0
Conservation Tilling	104	22	33	10,463
Pasture Streambank Stabilization & Fencing (1st 5 years)	1,098	89	42	12,971
Septic (First 5 Years)	1,553	608	6,343	0

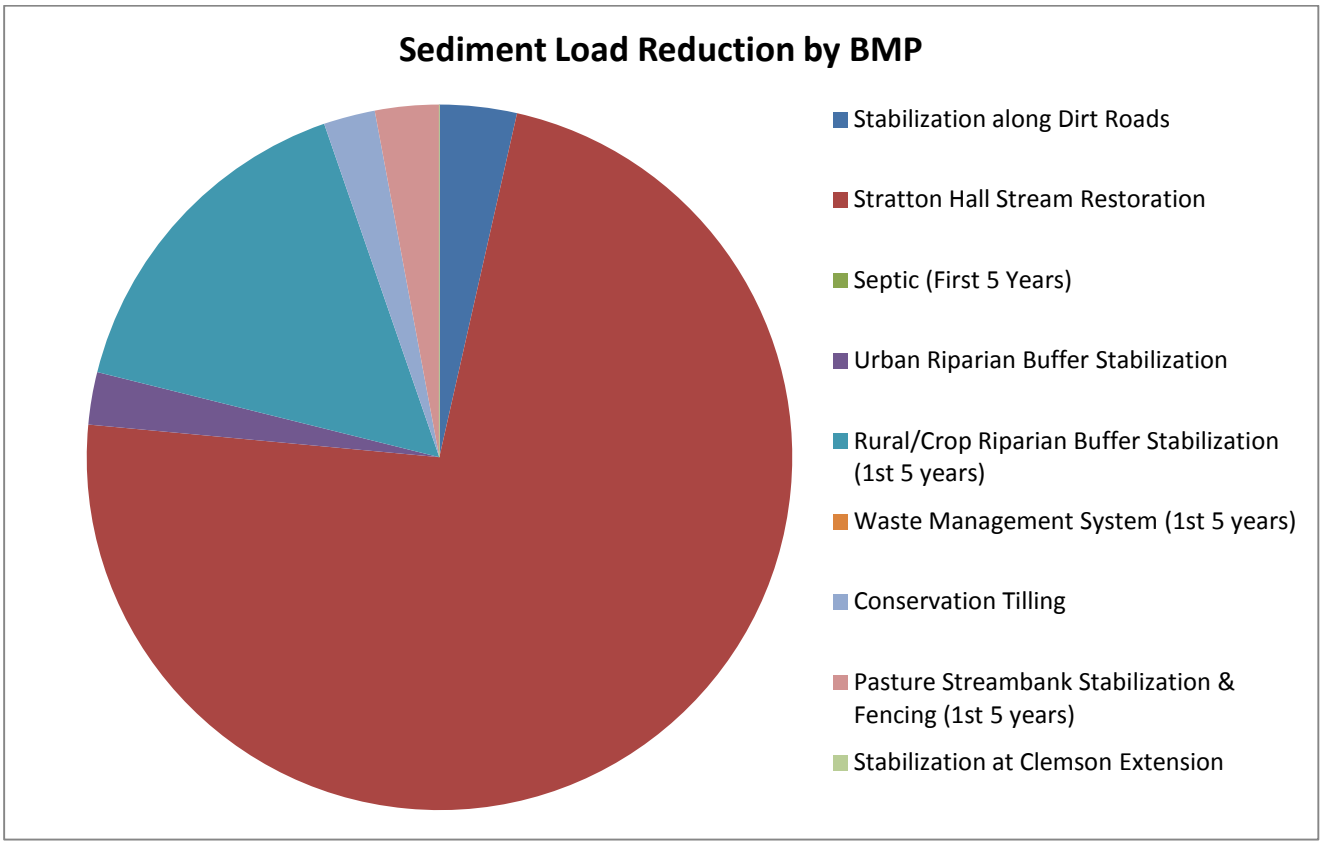
Details of the STEPL model are included in Appendix H. The following pie charts illustrate the % of load reduction by BMP installed.

Figure 19. Load Reduction Graphs by BMP






BOD Load Reduction by BMP
Stabilization along Dirt Roads
Stratton Hall Stream Restoration
Septic (First 5 Years)
Urban Riparian Buffer Stabilization
Rural/Crop Riparian Buffer Stabilization (1st 5 years)
Waste Management System (1st 5 years)
Conservation Tilling
Pasture Streambank Stabilization & Fencing (1st 5 years)
Stabilization at Clemson Extension


Sediment Load Reduction by BMP
Stabilization along Dirt Roads
Stratton Hall Stream Restoration
Septic (First 5 Years)
Urban Riparian Buffer Stabilization
Rural/Crop Riparian Buffer Stabilization (1st 5 years)
Waste Management System (1st 5 years)
Conservation Tilling
Pasture Streambank Stabilization & Fencing (1st 5 years)
Stabilization at Clemson Extension

9 Funding Opportunities

9.1 Grant Funding

Nonpoint Source Grants Programs (319 Grants)

Description: The primary objective of NPS projects is to prevent or reduce nonpoint source pollutant loadings entering water resources so that beneficial uses of the water resources are maintained or restored. South Carolina receives an annual grant allocation from EPA to implement NPS abatement strategies as described in the state's NPS Management Program (PDF-1.3M). A portion of these funds are passed on through a competitive grant process to stakeholder groups, government entities, or other agencies interested in conducting projects that reduce or prevent NPS water pollution through the implementation of an approved TMDL. These funds are known as Section 319 grants and they pay up to 60% of eligible project costs, with the applicant providing a 40% non-federal match.

US EPA/ National Fish and Wildlife Foundation: 5 Star Grants

Description: Open to any public or private entity engaging in community-based restoration. Request for Proposals are expected in October with proposals due in February. Grant amounts are $10,000 to $40,000 (typically in $20,000 to $25,000 range in South Carolina). Partnerships are required with at least 5 organizations. No matching is required, but is strongly encouraged to have at least a 1:1 match, and competitive projects often have 2:1 match (including in-kind match). Five Star grants provide modest financial assistance on a competitive basis to support community-based wetland, riparian, and coastal habitat restoration projects that build diverse partnerships and foster local natural resource stewardship through education, outreach and training activities. Since 2010, there is a new emphasis on urban projects.

NRCS Environmental Quality Incentives Program (EQIP)

EQIP is a voluntary program that provides financial and technical assistance to agricultural producers to help plan and implement conservation practices that address natural resource concerns and for opportunities to improve soil, water, plant, animal, air and related resources on agricultural land and non-industrial private forestland. In addition, a purpose of EQIP is to help producers meet Federal, State, Tribal and local environmental regulations.

In South Carolina, EQIP will pay 75 percent of the costs of eligible conservation practices under the general sign-up. Historically Underserved who are Limited Resource, Socially Disadvantaged, and Beginning Farmers are eligible for 90 percent cost share. A ranking tool is used to prioritize applications based on the resource concerns that each county selected, typically farms within an approved TMDL watershed and farms that are part of a 319 implementation grant are ranked high to receive EQIP funds.

EQIP funds may help pay for the Rural/Agricultural Riparian Buffer Planting and/or the conservation tilling No-Till Drill.

9.2 Self-Supporting Funding

Stormwater Utility Fee

Self-supporting funding (such as a stormwater utility) is not currently envisioned although such mechanisms will be explored if milestones and goals are not met as anticipated since the large structural BMPs would require significantly higher levels of funding.

Landowner Support

If grant opportunities are made available for implementation of this Plan, landowners will be required to provide a match (up to 40%) for installation of certain BMPs (such as agricultural, septic, and riparian plantings). In order to meet this match, some landowners may be able to perform in-kind labor as a way to match these funds.

10 Technical Assistance

If awarded a 319 Implementation Grant, Kershaw County requests that SCDHEC return to measuring water quality parameters (such as bacteria, nutrients, turbidity, TSS and macroinvertebrates) at CW-080 on a monthly basis.

NRCS, one of many valuable partners in this project, will help recruit agricultural landowners, develop Conservation Plans and offer recommendations for agricultural BMPs. NRCS also administers the EQIP cost share program. The landowners may apply for EQIP funds, in order maximize the effect of the 319 grant funds. TSPs and SWCDs will assist NRCS with conservation plans and BMP inspections.

The U.S. Department of Housing and Urban Development (HUD) administers the Community Development Block Grant Program, which assists low- and moderate-income persons. At this time, CDBG funds are not available in the watershed. However, if CDBG priorities change, this option may be pursued, if available, in regard to supplementing potential 319 grant funds for septic repairs. Assistance from CDBG coordinators within this watershed will be pursued in order to help maximize the effect of potential 319 grant funds.

In addition to the cooperation of NRCSs, SWCDs, HUD Kershaw County will administer the implementation project with the help of many supporting organizations which may include: Richland County, Fairfield County, the Town of Elgin, Town of Lugoff, Town of Blythewood, Carolina Clear, Central Midlands COG, Santee Lynches COG, SCRWA, SCDHEC Public Health, Palmetto Utilities, and SCDNR. The participation of these groups will have a large impact on the ability to conduct an effective and efficient social marketing campaign.

Kershaw County Stormwater will outline portions of the project to be conducted by their consultant, AMEC Environment & Infrastructure, Inc. These tasks are anticipated to be related to project oversight, reporting, and social marketing.

11 References:

Cumberland County Soil & Water Conservation District (SWCD), "Trout Brook Watershed Management Plan" dated December 2012. http://www.cumberlandswcd.org/publications/ws_pubs/trout_brook/wmp/TB_wmp.pdf

Duckett, Roy and Fred Fox. April 11, 2007. Kennecott Receives State and national Environmental Awards: Flambeau (WI) and Eagle (MI) Owner Recognized for Environmental Successes. http://www.flambeaumine.com/documents/news_releases/Ridgeway_Mine.pdf

Halifax County Service Authority (HCSA), Virginia. 2012. "FOG Control Program" dated 2012. http://www.hcsa.us/files/HCSA-What-is-FOG.pdf

Minerals Education Coalition (MEC). 2012. "Ridgeway Gold Mine" http://www.mineralseducationcoalition.org/reclamation-stories/metals/goldsilver/ridgeway-gold-mine

ORDEQ. 2010. "Cost Estimate to Restore Riparian Forest Buffers and Improve Stream Habitat in the Willamette Basin, Oregon" http://www.deq.state.or.us/wq/tmdls/docs/WillametteRipCost030310.pdf

SCDHEC, "TMDL Development for Fecal Coliform for the Twenty Five Mile Basin (HUC 03050104-060); Stations: C-088" dated September 1, 2004, http://www.scdhec.gov/environment/water/tmdl/docs/tmdl_25mile_fc.pdf.

Schueler, T. 1999. "Microbes and Urban Watersheds." Watershed Protection Techniques. 3(1): 551-596.

USEPA 2013, Chapter 4 Macroinvertebrates and Habitat http://water.epa.gov/type/rsl/monitoring/vms40.cfm

USEPA. 1991. Guidance for Water Quality-Based Decisions: The TMDL Process. Office of Water, EPA 440/4-91-001

USEPA. 2012. Water Quality Standards Handbook: Second Edition. http://water.epa.gov/scitech/swguidance/standards/handbook/index.cfm

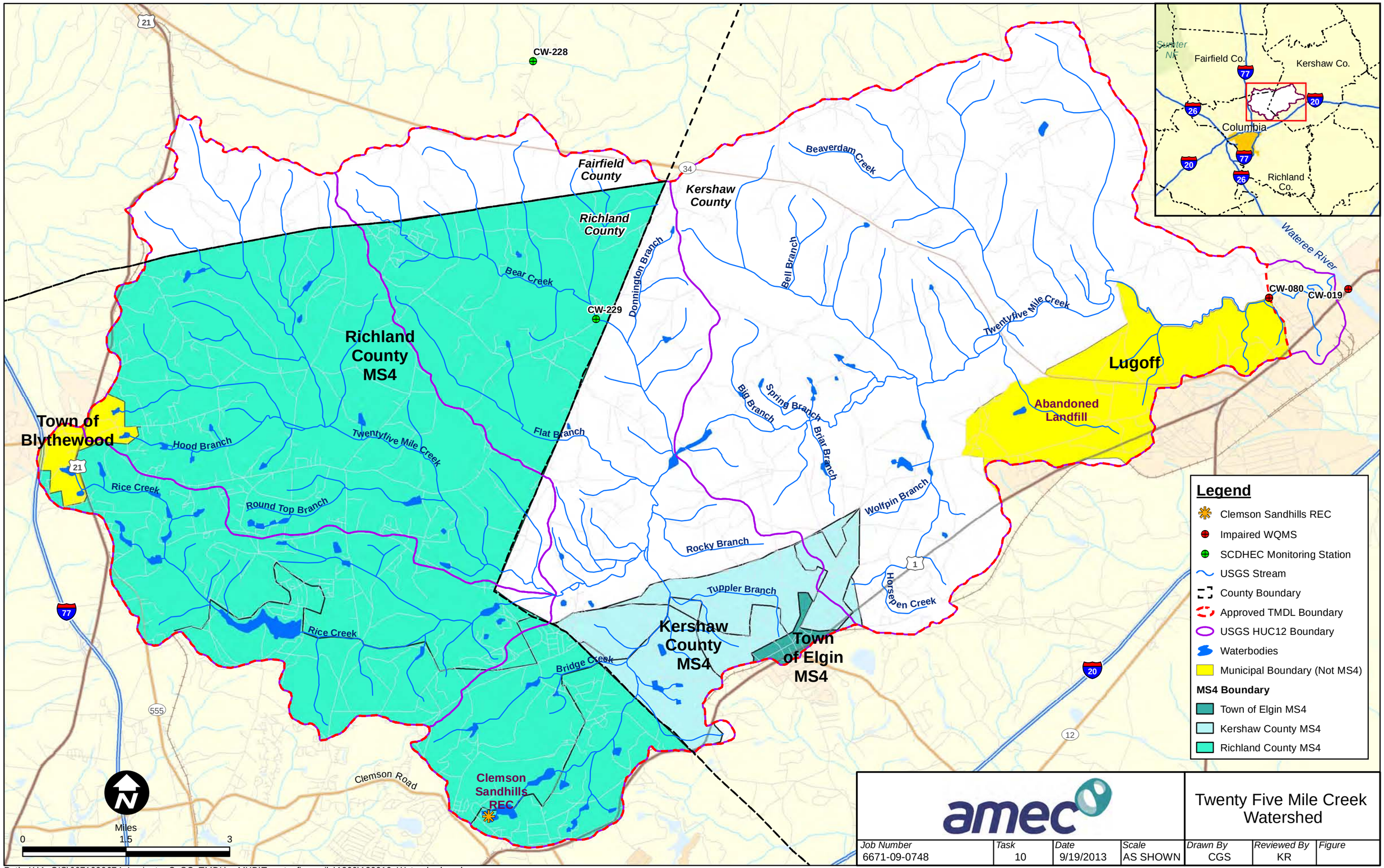
USEPA STORET data, http://www.scdhec.gov/environment/water/surface.htm#storet.

VADEQ. 2010."Stressor Analysis for Benthic Macroinvertebrate Impairment for Sandy Bottom Branch and an Unnamed Tributary to Sandy Bottom Branch, Accomack County, Virginia" http://www.deq.virginia.gov/Portals/0/DEQ/Water/TMDL/StressReports/sandybottombc.pdf

Wischmeier, W.H. 1969 "Divison S-6 – Soil and Water Management and Conservation" http://www.portal.ufra.edu.br/attachments/991_Aula%203%20Relation%20of%20Soil%20Properties.pdf

Appendices

Appendix A



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Twenty Five Mile Creek Watershed

Job Number	Task	Date	Scale	Drawn By	Reviewed By	Figure
6671-09-0748	10	9/19/2013	AS SHOWN	CGS	KR	

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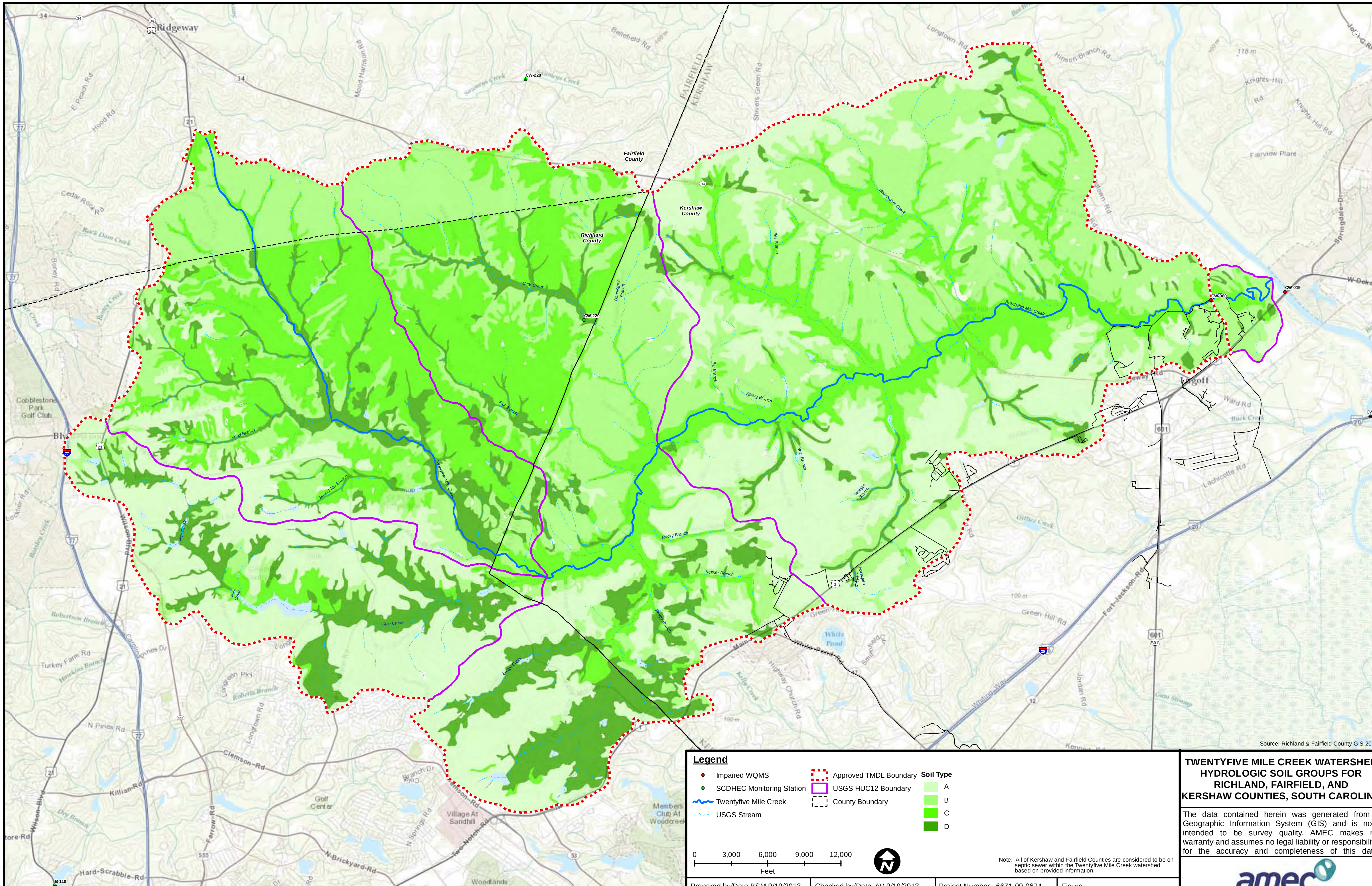

TWENTYFIVE MILE CREEK WATERSHED HYDROLOGIC SOIL GROUPS FOR RICHLAND, FAIRFIELD, AND KERSHAW COUNTIES, SOUTH CAROLINA

The data contained herein was generated from a Geographic Information System (GIS) and is not intended to be survey quality. AMEC makes no warranty and assumes no legal liability or responsibility for the accuracy and completeness of this data.

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Prepared by/Date:BSM 9/19/2013 | Checked by/Date: AV 9/19/2013 | Project Number: 6671-09-0674 | Figure:

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USGS 1992 Classification	Acres	% of Basin
Open Water	624.2	0.8
Low Intensity Residential	1473.2	1.8
High Intensity Residential	209.2	0.3
Commercial/Industrial/Transportation	633.1	0.8
Bare Rock/Sand/Clay	192.0	0.2
Quarries/Strip Mines/Gravel Pits	677.9	0.9
Transitional	480.7	0.6
Deciduous Forest	27530.1	34.5
Evergreen Forest	18171.6	22.8
Mixed Forest	10022.7	12.6
Pasture/Hay	655.6	0.8
Row Crops	14399.8	18.1
Urban/Recreational Grasses	190.1	0.2
Woody Wetlands	4447.1	5.6
Emergent Herbaceous Wetlands	11.2	0.0
Grand Total	**79718.5**	**100.0**

USGS 1992 Classification

- Open Water
- Low Intensity Residential
- High Intensity Residential
- Commercial/Industrial/Transportaion
- Bare Rock/Sand/Clay
- Quarries/Gravel Pits
- Transitional
- Deciduous Forest
- Evergreen Forest
- Mixed Forest
- Pasture Hay
- Row Crops
- Urban/Recreational Grasses
- Woody Wetlands
- Emergent Herbaceous Wetlands

USGS 2006 Classification	Acres	% of Basin
Open Water	1041.1	1.3
Developed, Open Space	8938.2	11.2
Developed, Low Intensity	5130.0	6.4
Developed, Medium Intensity	1332.0	1.7
Developed, High Intensity	155.5	0.2
Barren	411.1	0.5
Deciduous Forest	16931.0	21.2
Evergreen Forest	20525.7	25.7
Mixed Forest	2768.2	3.5
Shrub/Scrub	611.6	0.8
Grassland	10567.8	13.3
Pasture/Hay	4384.6	5.5
Cultivated Crops	1601.0	2.0
Woody Wetlands	5174.6	6.5
Emergent Herbaceous Wetland	146.0	0.2
Grand Total	**79718.5**	**100.0**

USGS 2006 Classification

- Open Water
- Developed - Open Space
- Developed - Low Intensity
- Developed - Medium Intensity
- Developed - High Intensity
- Baren
- Deciduous Forest
- Evergreen Forest
- Mixed Forest
- Shrub/Scrub
- Grassland/Herbaceous
- Pasture Hay
- Cultivated Crops
- Woody Wetlands
- Emergent Herbaceous Wetlands

Fairfield County
Kershaw County
Richland County
CW-229
CW-080
CW-019
34
21
1
77
20
601
555
12
268
277

Legend

- Impaired WQMS
- SCDHEC Monitoring Station
- USGS Stream
- County Boundary
- Approved TMDL Boundary
- USGS HUC12 Boundary

Miles
0 1 2

Fairfield Co.
Kershaw Co.
Twenty Five Mile Creek
Richland Co.

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Twenty Five Mile Creek Sub-basin
Land Use Change from
1992-2006 USGS NLCD

Job Number	Task	Date	Scale	Drawn By	Reviewed By	Figure
6671-09-0748	10	9/19/2013	AS SHOWN	CGS	KR	

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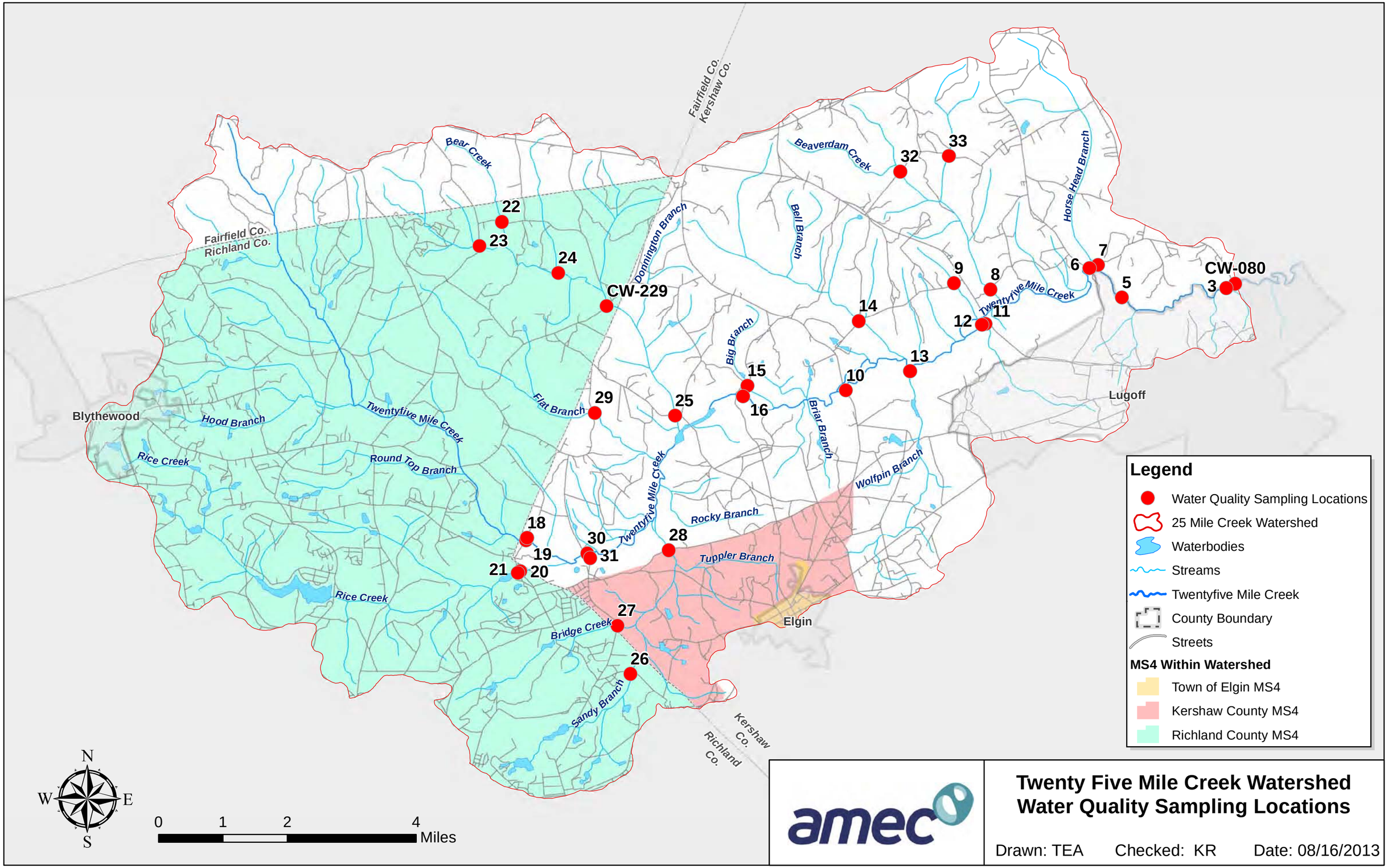
Fairfield Co.
Kershaw Co.
Fairfield Co.
Richland Co.
Bear Creek
Beaverdam Creek
Horse Head Branch
Donnington Branch
Bell Branch
Twentyfive Mile Creek
Big Branch
Briar Branch
Flat Branch
Hood Branch
Rice Creek
Round Top Branch
Rocky Branch
Wolfpin Branch
Tuppler Branch
Bridge Creek
Sandy Branch
Kershaw Co.
Richland Co.
Blythewood
Lugoff
Elgin
CW-229
CW-080
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Miles
Legend
Water Quality Sampling Locations
25 Mile Creek Watershed
Waterbodies
Streams
Twentyfive Mile Creek
County Boundary
Streets
MS4 Within Watershed
Town of Elgin MS4
Kershaw County MS4
Richland County MS4
amec
Twenty Five Mile Creek Watershed
Water Quality Sampling Locations
Drawn: TEA
Checked: KR
Date: 08/16/2013

Ridgeway

21

CW-228

Fairfield County

34

Kershaw County

Richland County

CW-229

Camden

CW-019

CW-080

Lugoff

Town of Blythewood

21

77

1

Town of Elgin

601

20

Vermont American

CW-154

12

CW-155

CW-166

Legend

- City of Columbia Sewer System
- Impaired WQMS
- SCDHEC Monitoring Station
- USGS Stream
- County Boundary
- Approved TMDL Boundary
- USGS HUC12 Boundary

Municipal Boundary

- Blythewood
- Camden
- Columbia
- Elgin
- Lugoff
- Ridgeway

Concentrated Sewer Area

- Blythewood Concentrated Sewer Area
- City of Columbia (Palmetto Utilities)
- Conveyed from City of Columbia
- Elgin Concentrated Sewer Area
- Other High Concentrated Sewer Area

N

0 2 4 Miles

Fairfield Co.
Kershaw Co.
City of Columbia
Twenty Five Mile Creek
Richland Co.

amec

Twenty Five Mile Creek Septic Management Areas

Job Number	Task	Date	Scale	Drawn By	Reviewed By	Figure
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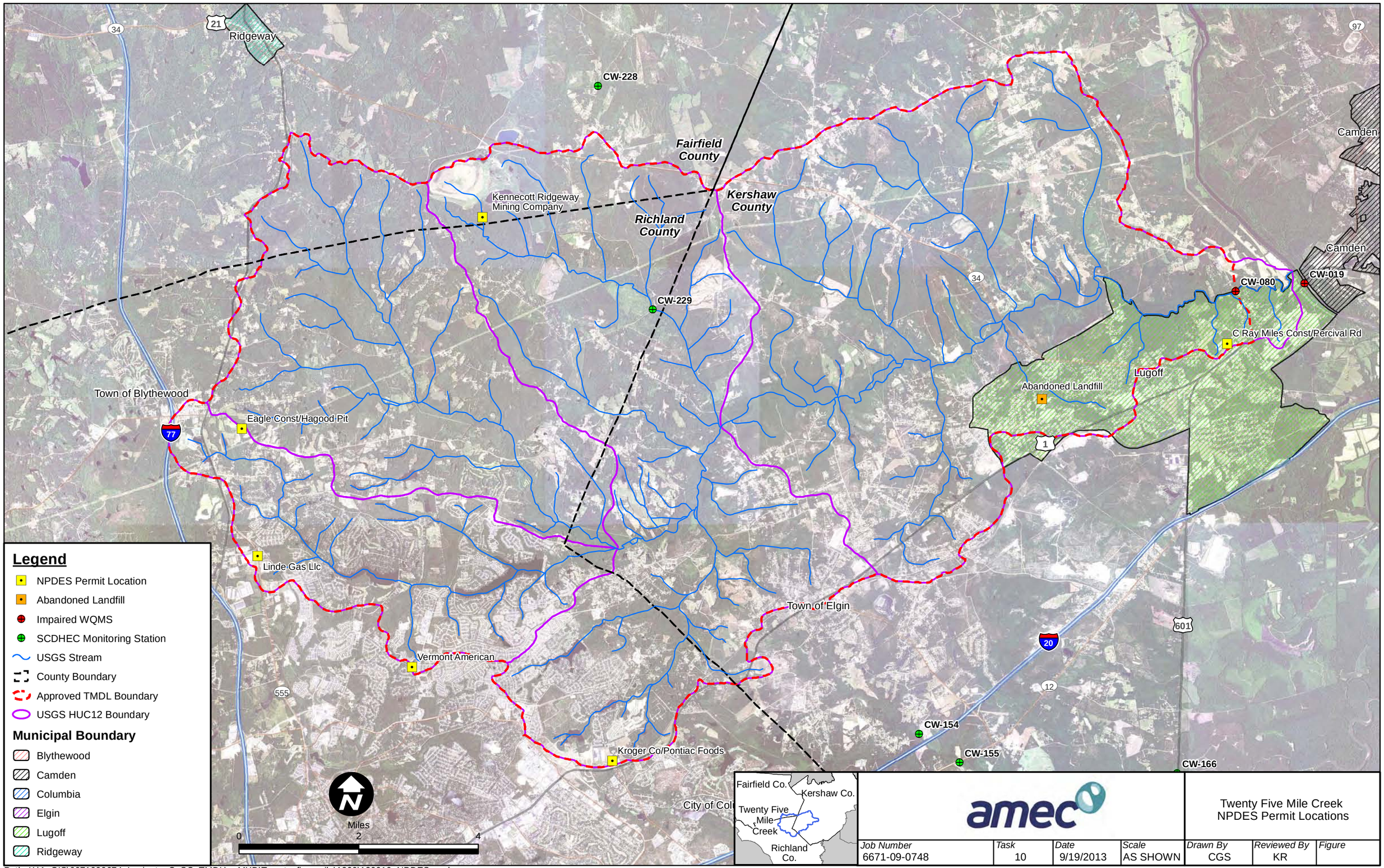

Twenty Five Mile Creek
NPDES Permit Locations

Job Number	Task	Date	Scale	Drawn By	Reviewed By	Figure
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Project	Type	# Animals	Project	Type	# Animals	Project	Type	# Animals
1	Horses	15	25	Horses	0	49	Cows	30
2	Horses	4	26	Horses & Goats	8	50	Horses	4
3	Horses	4	27	Horses	15	51	Cows	20
4	Horses	2	28	Horses, Cows Sheep	10	52	Horses	4
5	Horses	4	29	Horses	4	53	Horses	6
6	Horses	4	30	Horses	10	54	Horses	4
7	Horses	4	31	Horses	6	55	Horses	12
8	Horses	4	32	Horses	15	56	Cows	15
9	Horses	5	33	Horses & Cows	20	57	Horses	4
10	Horses	2	34	Horses	25	58	Horses	4
11	Cattle	25	35	Cows	25	59	Cows	0
12	Horses	6	36	Cows	15	60	Horses	4
13	Horses	4	37	Horses	5	61	Horses	4
14	Horses	4	38	Horses	4	62	Horses	35
15	Cows	25	39	Horses	12	63	Horses	4
16	Horses	6	40	Horses	2	64	Goats	12
17	Horses & Goats	12	41	Horses	18	65	Horses & Cows	5
18	Horses	4	42	Horses	12	66	Horses	6
19	Horse	2	43	Horses	5	67	Horses	4
20	Cows	21	44	Horses	4	68	Cows	25
21	Horses	4	45	Horses & Goats	6	69	Horses	10
22	Cows	35	46	Horses	6	70	Cows	12
23	Horses, Cow, Goats	10	47	Horses	6			
24	Horses	4	48	Horses	3			

Data Source: Richland, Fairfield, and Kershaw County GIS 2013.

Legend

STATUS
- Impaired WQMS
- SCDHEC Monitoring Station
- Roads
- Twentyfive Mile Creek
- USGS Stream

- Potential Livestock Project Sites

Potential Livestock Project Sites (Aerial Interpreted)
- AFO*
- Crop Farms (Aerial Interpreted)*
- Livestock Farms (Aerial Interpreted)*

- County Boundary
- Approved TMDL Boundary
- USGS HUC12 Boundary

MS4 Boundary
- City-Elgin
- County-Kershaw
- County-Richland

0 3,000 6,000 9,000 12,000 Feet

* Based on aerial reviews,orange, green, and yellow shaded potential project sites are possible livestock farms, however, livestock quantities are unknown.

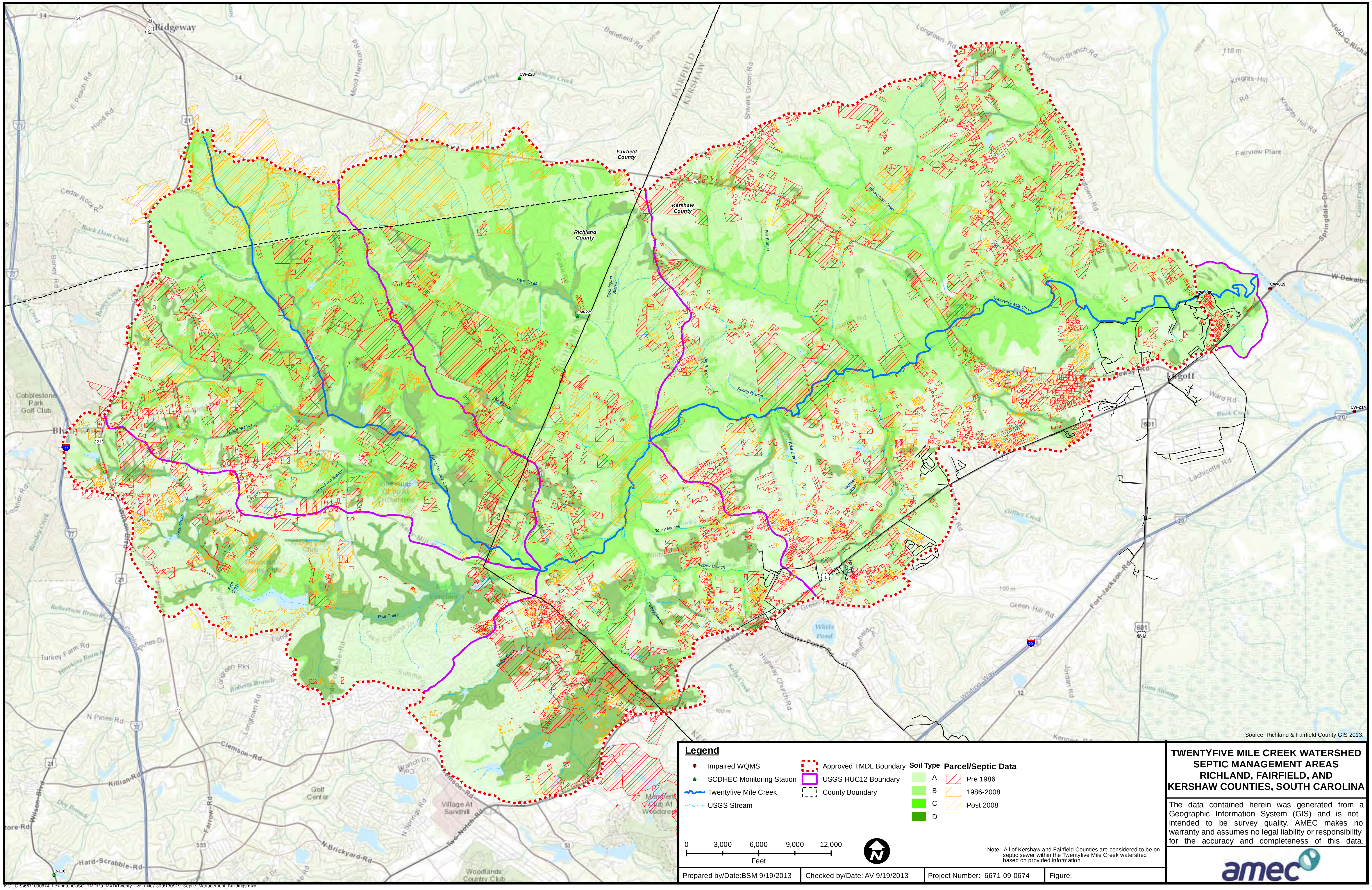
POTENTIAL PROJECT LOCATIONS TWENTYFIVE MILE CREEK WATERSHED RICHLAND, FAIRFIELD, AND KERSHAW COUNTIES, SOUTH CAROLINA

The data contained herein was generated from a Geographic Information System (GIS) and is not intended to be survey quality. AMEC makes no warranty and assumes no legal liability or responsibility for the accuracy and completeness of this data.

Prepared by/Date:BSM 9/19/2013	Checked by/Date: AV 9/19/2013	Project Number: 6671-09-0674	Figure:

K:\1_GIS\6671\09\0674_LexingtonCoSC_TMDLs\a_MXD\Twenty_five_mile\130919\130919_TwentyFiveMile_Potential_Project_Locations.mxd

TWENTYFIVE MILE CREEK WATERSHED SEPTIC MANAGEMENT AREAS RICHLAND, FAIRFIELD, AND KERSHAW COUNTIES, SOUTH CAROLINA



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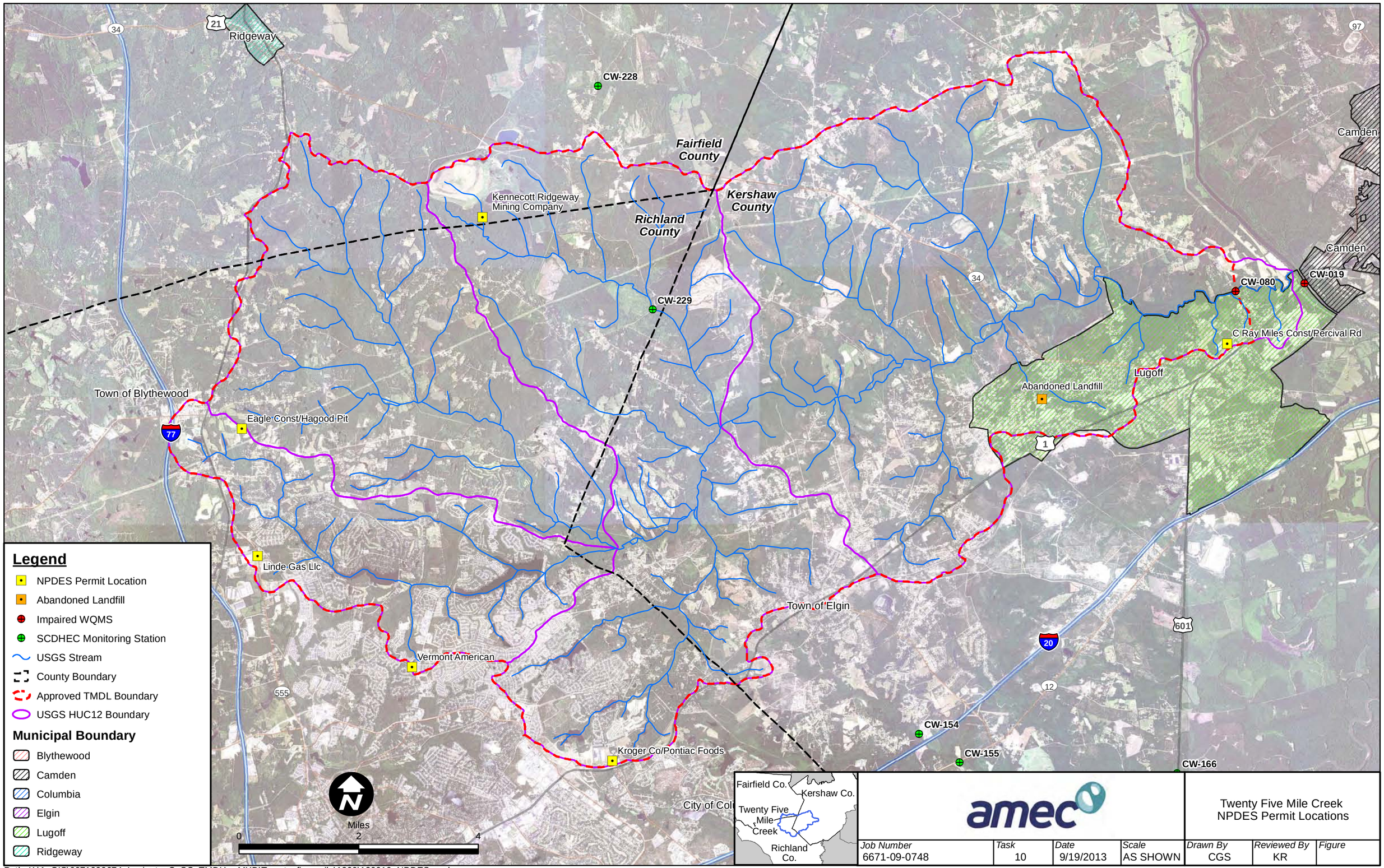
Prepared by/Date:BSM 9/19/2013	Checked by/Date: AV 9/19/2013	Project Number: 6671-09-0674	Figure:

K:\1_GIS\6671090674_LexingtonCoSC_TMDL\a_MXD\Twenty_five_mile\130919\130919_Septic_Management_Buildings.mxd



Twenty Five Mile Creek
NPDES Permit Locations

Job Number	Task	Date	Scale	Drawn By	Reviewed By	Figure
6671-09-0748	10	9/19/2013	AS SHOWN	CGS	KR	

Path: K:\1_GIS\6671090674_LexingtonCoSC_TMDL\a_MXD\Twenty_five_mile\1309\130919_NPDES.mxd

Appendix B

Urban Sources Brainstorming Session | December 4, 2012

All,

Thank you to those who attended yesterday's meeting and contributed to our first brainstorming session. You all provided a lot of input on potential sources of urban pollution in Twentyfive Mile Creek watershed and have given us some good information to do more research. Below is our recap of yesterday's meeting. Please let us know if you we missed anything or if you have any questions or new ideas.

Fecal Coliform Sources: indicator of pathogens (found in human and animal waste)

1. Sanitary Sewer Overflows (SSOs)
    - We are going to put in an FOI (Freedom of Information) request to DHEC and the Office of Regulatory Staff in order to obtain SSO data from Richland and Kershaw Counties. This will help us to determine whether SSOs are an issue in this watershed, and if so, what the cause of the SSOs were (Fats, Oils and Greases (FOG) or other).
    - Find out if any apartment complexes in the watershed are contributing to SSOs caused by FOG. Possibly subdivisions as well.
    - It was noted that the odor at the pump station at the pump station near the soccer fields in Elgin (and Woodcreek Farms) is not a surface water quality issue.
    - We plan to invite private sewer companies to the septic brainstorm session.
2. Pet Waste
    - 2 vets in Kershaw County (Elgin Veterinary Hospital off Pine St, Wateree Animal Hospital
    - 2 dog washing/grooming facilities (one being Doggy Do's, do you all have the name of the second?).
    - As far as we know, there are no dog parks in the watershed. Maybe there are spaces in subdivisions where pets gather? Keep your eyes and ears open for the possibility.
        - It was mentioned that the Turtle Creek subdivision (near Clemson Sandhills REC) has a lot pets and the neighborhood backs up to a wetland preserve. Can you all think of any other neighborhoods that would have a large concentration of dogs? Possibly Lake Carolina?
    - According to Mary Caflish, she found 2 vets in Richland County. Mary, are these in the watershed? If so, what are their names and locations?
    - Want to look into the dogs that are held at Hunting Clubs across the watershed. Not sure if this would categorize as an Urban source, but is a good source to look in to.
    - Again, will want to see if there are any pet waste problems at apartment complexes. Even though they may have installed pet waste stations, may need to emphasis public education and outreach at certain complexes. Gregory Sprouse mentioned a database resource that could help us with a list of apartment complexes in the watershed, and possibly those that accept dogs.
    - Equestrian clubs/communities/centers with subdivisions, such as Longcreek Plantation. Can you all think of any others in the watershed?
3. Water Fowl
    - Canada Geese were discussed, but expect that they are not a major contributor to fecal load in the watershed and difficult to address.

Macroinvertebrate Sources: indicator of stream health.

1. Toxicity
    - We do not want to rule out any possible toxicity impairments caused by abandon landfills and abandon gas stations.
    - Will need to research if there are any Superfund sites in the watershed.
        - We know that there is a reclamation mine in Fairfield County (**Kennecott Ridgeway Mine**). Operations at this precious metal mine ceased in 1999, the Kennecott Mineral Company implemented a successful reclamation and closure plan designed to minimize environmental impacts on the site's land. Since the end of mining operations, all previously disturbed land surfaces have been subsequently reclaimed and restored, or retained for future sustainable uses. Also, in October 2002, Ridgeway signed a Memorandum of Understanding with the Southeastern Natural Sciences Academy to create the Center for Ecological Restoration on the site of the reclaimed mine. The Center focuses on providing environmental education and research about sustainable programs for economic growth, balanced with environmental protection. Hence, I think it's safe to assume that this site is not of concern as a pollution source to Twenty-five Mile Creek.

2. Nutrients
    - Fertilizers in yards, nurseries, and golf courses. We were able to locate one nursery directly upstream of the water quality monitoring station CW-080, 2 golf course within the watershed, and have a good idea of the dense subdivision in Northeast Columbia that we could target.

3. **Alteration in Hydrology:**
    a. **Increased Runoff**
    b. **Sediment Loads**
    - **This is the area that we need more input from you all.** As suggested by DHEC's macroinvertebrate specialist, he believes that the increase in urban areas (such as the upper portions of the watershed) have altered the natural hydrology of the watershed with increased runoff volumes and their faster rates, as well as increased sediment loads, to enter Twenty-five Mile Creek. Therefore, we need to know if there are any problematic areas (such as increased impervious areas) that are causing higher concentrated flows and erosion.
    - Gregory Sprouse has data on the number of permits for single family homes and commercial properties in the watershed, which could be useful in determining whether urbanization has likely worsened the problem since DHEC's macroinvertebrate testing in 2007.
    - During our "windshield tour" of the watershed we did notice some erosion along the railroad embankment in Blythewood, about which we told Michael Criss.

Non-Urban Sources mentioned for discussion at future brainstorm sessions:

- USC Equestrian Team which trains at One Wood Farm – just outside of 25-mile creek watershed, but a good opportunity for distribution of education materials

- Unofficial horse trails on undeveloped property east of I-77, but just outside of watershed.
- Planning for Bike Trails in Kershaw County (include horse trails?)
- Information gathered by Upstate Forever and City of Pickens regarding dumping of deer carcasses after cutting the heads off.

This was the first brainstorming session of five. We plan to have brainstorming sessions for agriculture sources, septic, wildlife, and a public meeting. As mentioned yesterday, you are all more than welcome (encouraged) to come to any of the sessions that will be held in the future. We will soon let you know when the Agriculture brainstorming meeting will be scheduled. Again, thank you for your input yesterday, we made great progress! Please contact either myself (katherine.resler@amec.com) or Angela (angela.vandelay@amec.com) if you can think of anything else to add to this list that we have all developed. For your aid, we have attached an aerial map of the watershed (the one we had displayed yesterday). Also attached is the project's list of stakeholders and their contact information.

Please let us know if we have missed anything or if you have any questions/concerns.

Thanks,
Kelli

Kelli Resler, EIT
Staff Water Resources Professional
AMEC Environment and Infrastructure
720 Gracern Road, Suite 132, Columbia, SC 29210, USA
Tel (803) 798-1200, Fax (803) 750-1303
katherine.resler@amec.com
amec.com

Agricultural Sources Brainstorming Session | January 14, 2013

All,

Thank you to those who attended Monday's meeting and contributed to the second brainstorming session for agricultural activities. You all provided a lot of input on potential sources of agricultural pollution in Twenty-five Mile Creek watershed and have given us some good information to conduct more research. Below is our recap of Monay's meeting. Please let us know if we missed anything or if you have any questions or new ideas.

We had a lot of discussions pertaining to an actual implementation grant for this project, however I first want to focus on what was accomplished or what needs to be done to write these watershed based plans for fecal coliform and macroinvertebrates.

In order to develop the plans, we need to quantify the following:

- Approximate # of livestock farms and the approximate #of livestock in the watershed
- Approximate # of horse farms and the approximate # of horses in the watershed
- Approximate # of Agriculture Feed Operations (AFOs) and approximate # of poultry in the watershed
- Approximate # of crop farms in the watershed

Agricultural Sources and Resources to Consider:

- NRCS said that they could provide the # of farms and # of animals in current and past conservation plans/contracts within the watershed to help with the quantification of the parameters listed above.
- Michael Criss may be able to help us contact the USC Equestrian team, which is just out of the watershed in Blythewood, but may have information for # horses and # horse farms in the Twenty-five Mile Creek watershed.
- Chanda and Buddy (RSWCD) may be able to get a list of large animal vets in the watershed, who may be able to help us with numbers and/or contacts of farms in the watershed.
- It was deduced that the watershed encompasses smaller hobby farms (compared to ones in Camden). Therefore, if we could find out some numbers such as # of animals/ per farm, averages can be assumed in order to estimate agricultural pollutant loads in the watershed.
- If there are no other options, we can use parcel data and possibly aerials and to help determine # of farms in the watershed.
- It would be very helpful if we could determine # of crop farms in the watershed, along with what crop farms spread turkey litter. It was mentioned that this may be a big source in Kershaw County, especially around Lugoff.
    - Could contact Dave Wilson with Bureau of Water at DHEC to get a list of permits for litter (i.e. those who spread it, brokers, etc.)
    - Dana Reeder has Holly Welch of SC Forestry Commission's (Piedmont) contact information

Discussions on the possibility of an Implementation Grant(s):

- The current 319 grant deadline for developing the watershed based plans is September 2013. However, the RFP for an implementation grant may come out this summer. Kershaw County

would like to complete these watershed based plans before then so they can apply for the implementation grant.

- IF Kershaw County is awarded an implementation grant, the grant time period would likely be 3 years. Also, this would be a "partial implementation grant proposal", so that not all BMPs will be applied for at the same time. Therefore, we don't have to apply and implement all BMPs written in the watershed based plans at one time.
- **Money:**
    - One 319 requirement is "…eighty percent (80%) of Federal 319 funds must be directed solely towards on-the-ground BMP implementation."
    - A second 319 requirement is: "… a minimum non-federal match of forty percent (40%) of the total cost of the project (Grant funds requested = 60%, non-federal match = 40%, total project cost = 100%)."
    - The grant is typically set-up for 40% of every BMP to be paid by non-federal funds (farmer or septic homeowner); and 80% of the Federal match is required to be spent on in-the ground BMPs. Therefore, approximately 90% of the entire implementation project budget (money & labor) will be for construction. That leaves ~10% for project management, social marketing/recruitment, reporting, supplies, and Technical Service Providers (if it is necessary) – which could still add up to $30k-$60k.
    - It was discussed that the NRCS agents are extremely busy and can only work on farms that qualify for the EQIP program. These farmers are typically referred to a Technical Service Provider, who charge for their time and we will have limited access to them. This is a situation we will address when we submit for an implementation grant.
    - Property owners are also likely to qualify for EQIP for some of their practices, so it may be a joint situation (1 farm, 1 Conservation Plan, some BMPs covered by EQIP and others covered by 319).
- **Stakeholder participation:**
    - Would need help with the recruitment of local farmers, development of conservation plans, and inspection to confirm proper BMP installation. Logistics for the conservation plans & inspections are discussed under "Money" above.
    - Encouraged to contact Bill Melvin and Rafael Mendez with Lexington County, who provide these services to both Hollow Creek 319 grant and Twelvemile 319 grant.
- **Marketing techniques to recruit participants:**
    - Again, utilize local large animal vets
    - Brochures/signs for local feed stores
    - Clemson Extension agents
    - Farm magazines or district letters
        - Farm Service Agency (FSA) to advertise in their letters
    - County Council members may know local farmers and can help recruit for their participation
    - Local meetings to attend and present
- One BMP 319 Implementation grant was awarded in Kershaw County to a farm in the adjacent Spears Creek Watershed (C. Ray Miles Farm). Could potentially use this farm for demos/Farm Tours.

<u>Other Items Discussed:</u>

- Septic Tank Failures:
    - Assessor for septic data (Buddy Atkins, RSWCD, to help get his contact information)

    - Collect soils data for the watershed (i.e. use Web Soil Survey). Soils data may help use deduce what areas may have more failures. For example, Richland County's portion of the watershed mostly consists of the Lakeland soil series (sand), which may facilitate more septic tank failures.
    - If awarded implementation grant (with septic failures being a source in this watershed), to recruit participants, may want to contact realtors in the area to distribute grant information. Kershaw County is considering making an "acceptable septic" letter a requirement before sale of a home (similar to a termite inspection letter). This would encourage participation in the grant.
- Urban Sources:
    - Look into construction activities that may be in noncompliance with their SWPPPs (Stormwater Pollution Prevention Plans) such as The View (although this subdivision does not appear to be in 25 Mile Creek watershed).
    - It was requested that we overlay concentrated urban areas and water hydrant layer (RC) to help with septic and sewer estimations.
- Forestry:
    - Another source to consider for macroinvertebrate impairments could be timber clear cuts in Fairfield County and northern Richland County. Dana Reeder has Holly Welch of SC Forestry Commission's (Piedmont) contact information. It was mentioned that they have a 40 foot buffer requirement, but are not inspected/supervised for compliance.

Thank you again for your participation Monday in the Agricultural Brainstorm Session, we made great progress with your input! The remaining sessions we plan to hold include, septic, sewer, wildlife, and a public meeting. Again, you are all more than welcome (encouraged) to come to any of the sessions that will be held in the future. We will soon let you know when the Septic brainstorming meeting will be scheduled.

Please contact myself (katherine.resler@amec.com) or Angela Vandelay (angela.vandelay@amec.com) if you can think of anything else to add to this list that we have all developed. Also let us know if we have missed anything or if you have any questions/concerns.

Thanks,
Kelli

Kelli Resler, EIT
Staff Water Resources Professional
AMEC Environment and Infrastructure
720 Gracern Road, Suite 132, Columbia, SC 29210, USA
Tel (803) 798-1200, Fax (803) 750-1303
katherine.resler@amec.com
amec.com

Septic Sources Brainstorming Session | February 7, 2013

All,

Thank you to those who attended Thursday's meeting and contributed to the third brainstorming session on septic tanks. You provided a lot of input on potential sources of failing septic tanks in the Twenty-five Mile Creek watershed and have given us some good information to conduct more research. Below is the recap of Thursday's meeting. Please let me know if I missed anything or if you have any questions or new ideas.

Septic Sources / Pathogen Load Calculations

- Parcel septic information from County GIS
    - Richland County - Buddy Atkins, RSWCD / Quinton Epps, RC have submitted a request for sewer/septic data by parcel in RC
    - Kershaw County does not have septic data by parcel, so we will have to use the "concentrated sewer areas" that we have gathered.
    - Fairfield County – the portion of Twentyfive Mile Creek watershed in FC is assumed to be septic.
    - AMEC will use this data to create a map with parcel septic information on soils layer. Soils data may help us deduce what areas are more likely to have more failures. For example, Richland County's portion of the watershed mostly consists of the Lakeland soil series (sand), which are less likely to have septic failures.
    - DHEC confirmed at Thursday's meeting that this would be helpful data for estimating problematic areas and confirming load calculations.
- AMEC will request from Leonard Gordon available septic tank repair reports in the watershed from the past 2 years.
- Jim Raymond and Steve Edwards to remind septic contractors to complete/submit repair reports
- Jim Raymond and Steve Edwards, could you clarify whether contractors are supposed to turn in repair reports only if the septic system installed used alternative products, or if they are supposed to turn one in for all repairs?
- Jim and Steve told us that septic contractors are required to keep logs of the septic tanks they pump out, but these logs are not submitted to DHEC (if they are even completed regularly) and it would be a lot of manual entry to compile this data in a spreadsheet. The idea is to look for repeat pump-outs, which would indicate problems, but this was determined to be too time consuming for the small amount of information.

- AMEC will also request from DHEC a list of denials for septic permit requests.

Discussions on the possibility of an Implementation Grant(s):

- Money:
    - Participants will pay 40% match for a septic tank repair/replacement or tie-in to sewer, unless CDBG is an option (see next bullet) and/or a sliding scale is used (such as lower incomes qualify for a 20% match or 0% match)
    - CDBG
        - Richland County CDBG – According to Valeria Jackson, the census tracts in the RC portion of the watershed do not meet the income requirements to qualify, so CDBG funds will not be available.
        - Kershaw County & Fairfield County CDBG – According to Martha Whitaker, CDBG funds are available only for running sewer lines to an area of >= 51% low/moderate income and cannot be used to pay any fees. CDBG funds cannot be used for septic repairs or replacement, only for sewer tie on. If a subdivision meets the >= 51% low/moderate income (through an income survey) and has 70% commitment to tie on, and meets the cost reasonableness (<$10,00 per unit) and meets the minimum $50k maximum $500k requirements, it is possible to submit an application (annual application request due 3/15) for a grant with a 10% local match.
- Stakeholder participation:
    - DHEC will conduct inspections and issue repair permits for those who seek and qualify to participate in the 319 grant for a septic repair/replacement/sewer tie-in.
    - AMEC will look into the need/possibility/method training septic companies (how to inspect, what to look for, etc)
    - AMEC will look into the need/possibility/method to educate builders to avoid clearing/disturbing the proposed septic area (i.e. drainfield) during construction.
- Marketing techniques to recruit participants:
    - Can advertise on Kershaw County's radio station, 102.7 (not only to recruit septic tank participants, but other watershed participants as well, such as farmers.)
    - Discussed at the previous meeting, to recruit participants, may want to contact realtors in the area to distribute grant information. Kershaw County is considering making an "acceptable septic" letter a requirement before sale of a home (similar to a termite inspection letter). This would encourage participation in the grant.

Other Items Discussed:

- Jim Raymond to send the text/reference of the state regulation stating that if sewer is available and have a septic failure, cannot repair septic, must tie into sewer.

- Another source of pathogens could be FOG (fats, oils, and greases) from restaurants in Kershaw County. It was understood that at one point grease from grease traps had to be shipped to Aiken or Augusta for treatment. Due to the long distance, there is a risk of illegal dumping in the watershed (either on the ground or in storm drains or even in sewer manholes, which could result in SSOs). The extra time required to drive grease to Aiken or Augusta could cause delays in other homeowners getting their septic system pumped out. However, we are told that a company called Biocrude in Lugoff will accept grease. AMEC will conduct more research to determine whether this is a sufficient facility for acceptance and treatment of grease.

- Kershaw was awarded a grant to build a septic receiving station at the waste water treatment plant. Project is out for bid for construction.

Thank you again for your participation Thursday in the Septic Sources Brainstorm Session, we made great progress with your input! The remaining sessions we plan to hold include wildlife and a public meeting. Again, you are all more than welcome (encouraged) to come to any of the sessions. We will soon let you know when the Wildlife brainstorming meeting will be scheduled.

Please contact myself (angela.vandelay@amec.com) or Kelli Resler (katherine.resler@amec.com) if you can think of anything else to add to this list that we have all developed. Also let us know if we have missed anything or if you have any questions/concerns.

Thanks,
Angela

Angela Vandelay, EIT
Water Resources Scientist
AMEC Environment and Infrastructure
720 Gracern Road, Suite 132, Columbia, SC 29210, USA
Tel (803) 798-1200, Direct (803)798-1240 ext. 129, Fax (803) 750-1303
angela.vandelay@amec.com
amec.com

Wildlife Sources Brainstorming Session | April 17, 2013

All,

The Wildlife Brainstorm Session, held on April 17th, was attended by Dudley Britt (DNR), Johnny Stowe (DNR), Mary Caflish (Carolina Clear) and myself (AMEC) to discuss the issue of Wildlife in Twenty-five Mile Creek watershed. The following is a summary from the meeting.

Brochures
Johnny and Dudley like the "Proper Carcass Disposal" brochure that Lexington County and AMEC created for Hollow Creek Watershed. However, they firmly believe that if some hunters do not have an accessible and legal place to dispose of carcasses, they mayl dump them illegally. They suggested that a similar brochure (which would need to be updated for Kershaw, Richland and Fairfield County landfill rules) be distributed at points of license (rather than only at the hunter education classes - which are heavily attended by young hunters, as well as at the Farmer's Market at Clemson Extension and Sparkleberry Fair. They also suggested that the DHEC brochure detailing how to build a gut pit be distributed as well.

Disposal Options
Angela is looking into landfill options/costs/hours for disposal of carcasses by individuals. The permitting of the rendering facility in Lugoff was not approved by Kershaw County Council, so this will not be a disposal option.

DOT
It was questioned where DOT puts the animal carcasses they remove from the sides of the roads. Angela talked to the Richland County DOT and Kershaw County DOT and learned that they dispose of carcasses in the municipal landfill on Screaming Eagle Road and Kershaw County landfill, respectively.

Hunt Clubs
Johnny and Dudley do not believe that hunt clubs are a problem because many have their own gut pits for disposal. They believe that the "urban hunter" who may hunt on public or private lands, often on the weekend when landfills may be closed, is possibly the cause of illegal carcass dumping.

Deer Processors
The question arose whether Deer Processors are permitted and/or inspected by DHEC. It was also questioned what deer processors do with the carcasses. Angela to find out.

Fishing
It was mentioned that there are a lot of commercial fishermen on the Wateree River. It was also mentioned that DNR's Fisheries Department would be a good stakeholder, both for the carcass disposal issue and the macrinvertabrate issue in general.

Wild Hogs
One of the biggest problems that SCDNR is having is wild hogs, which are reproducing at an exponential rate, have no natural enemies in SC, and carry 2 especially bad diseases (swine brucellosis and pseudorabies). Their habit of "wallowing in the mud" has a direct affect on water quality. DNR is strongly encouraging hunter to kill as many wild hogs as they can to control their population.

Other wildlife
Canada Geese, and racoons were also discussed.

Other organizations
SCWDS (Southeast Cooperative Wildlife Disease) has top notch scientists, vets and PhDs regarding diseases in wildlife, Wildlife Health Lab and APhIS (Animal & Plant Health Inspection Service) may also be resources.

If you have any additional ideas or questions regarding wildlife sources of fecal coliform or macroinvertebrate impairments in Twenty-five Mile Creek watershed, please let me know.

Thank you,

Angela

Angela Vandelay, EIT
Water Resources Scientist
AMEC Environment and Infrastructure
720 Gracern Road, Suite 132, Columbia, SC 29210, USA
Tel (803) 798-1200, Direct (803)798-1240 ext. 129, Fax (803) 750-1303
angela.vandelay@amec.com
amec.com

To all attendees,

Thank you so much for attending the Twenty-Five Mile Creek Watershed public meeting(s) on April 17th and 18th, as well as for your interest and input in addressing the water quality issues in the watershed. Attached are the slides from the presentation, detailing the watershed characteristics, the impairments and how the watershed based plans will address the bacteria and macroinvertebrate impairments. The following list includes the input provided by all of the attendees at both public meetings. As we mentioned at one of the public meetings, the creek doesn't know County boundaries - it's all one watershed and we are developing the Watershed Based Plans with that perspective as well.

1. Dog Park at Lake Carolina - potential location for pet waste stations. If you know of other areas where dogs congregate, such as apartment complexes, please let us know.
2. Releasing water from Lake Carolina dam - concern about erosive flows.
3. It was mentioned that a lot of farms have closed in the watershed, such as the cotton industry. However, crop and livestock farms are still active and predominant in the watershed. We are working with the National Resource Conservation Service, Soil Water Conservation District, and US Farm Agency and are aware of quite a few farms in the watershed.
4. It was mentioned that animals (both wildlife and livestock) have lived in this watershed for a long time and a member of the audience felt that animals are not the cause of the impairments. Although it is true that animals have lived in the watershed for a long time, the problem that has arisen is how humans are affecting the animals' habitats and behaviors. For example, urban growth is concentrating wildlife in smaller, more congested areas, thereby increasing the concentration of bacteria in or near the streams. Also, larger concentration of livestock on smaller farms causes destabilization of vegetation and soil from the trampling of livestock. This causes erosion and faster transport of bacteria to the creek.
5. It was commented that shellfish, beavers and otters have been observed in Twenty-five Mile Creek.
6. A lot of timber clear-cutting is occurring, especially near Quail Creek Subdivision.
7. Two chicken farms were mentioned: Monroe Farms and Prestige Farms.
8. Concern was expressed about the former County landfill and the possibility that it is leaching into Twenty-five Mile Creek. Dana Reeder, Kershaw County Public Works Director, is aware of this issue. They are monitoring this area and are working with DHEC on any findings.
9. A few members of the audience have seen white foam in the creek. We encouraged the audience to call the County when they have suspicious observations in the creek such as this (likely surfactant) so that the County can come and investigate while it is occurring. The Richland and Kershaw Counties' and Town of Elgin's MS4 permit requires them to investigate potential illicit discharges. The Kershaw County number is: (803)425-7191. The Richland County number is: (803)929-6000.
10. 10.While discussing septic issues in the County, the subject of the rendering facility that closed down in Lugoff was mentioned. At this time, it does not appear that this rendering facility is going t re-open. Kershaw County is looking into the possibility of upgrading their wastewater treatment plant to be able to accept grease (from grease traps at restaurants) in order to discourage illegal dumping of grease into sewer manholes or storm drains, etc. Currently, it appears that the closest facility that will accept grease is Augusta.
11. Dumping of carcasses was agreed to be an issue. A member of the audience suggested that wildlife cameras at bridge crossings (~$100 each) would be an effective way to catch those who are doing it so that fines can be issued. It was also mentioned that signs with fines for illegal

dumping would help. This issue and the potential BMPs to prevent this problem can be addressed in the plans.

12. Several attendees were interested in receiving the DHEC Septic Maintenance Folder. We have mailed one to those who expressed interest and we've attached them to this e-mail. They are also available at the Elgin Library, Elgin Town Hall and Kershaw County Government Building in Camden. If you would like one mailed to you, please let me know. Several attendees were not aware that a septic tank needed to be pumped out unless/before there is a problem. DHEC recommends that a 1000 gallon tank in a house with 4 people be pumped out every 3 years (the table with recommendations for various tank sizes and occupancy is in the Septic System Homeowner's Guide). Pumping out a septic tank is a preventative maintenance task similar to changing the oil in your car, and if you don't do it regularly, it can result in a very costly repair or replacement. The topic was also brought up about sewer lines being extended to current septic areas. This is a financial and logistical decision that the County has to make.
13. It was mentioned that Coopers Pond neighborhood has sediment loading issues, and that a private property upstream was dumping their backhoes into Rhimer Pond. Again, when you see issues such as heavy sediment loads in a pond, please contact the County so that they can investigate. The Kershaw County number is: (803)425-7191. The Richland County number is: (803)929-6000.
14. It was mentioned that the pump station at Kelly Mill Road and Old Kelly Mill Road has a strong odor. Although an odor is not necessarily a sign that there are surface waters being polluted. However, this is the type of issue that should be reported to the County at the time of occurrence so that they can investigate.
15. It was commented that, although Kershaw County accepts almost everything at their recycle centers, Richland County is not as easy or willing to accept many recyclables.
16. It was also asked whether we would consider using volunteer monitoring, which of course we said yes; we will look into this matter.

Again, we strongly encourage you to report your concerns to the appropriate County! And, we thank you for your interest and input! We were able to get great information from you all to conduct additional research of pollutant sources in the watershed and potentially address these items in the watershed based plans. If you would like to provide more input about water quality concerns in the Twenty-five Mile Creek Watershed or gather more information about the grant, please feel free to contact me.

Also, Kershaw County plans to organize a **Citizen Advisory Group** for the Kershaw County and Town of Elgin MS4. If you are a resident or business owner in the Elgin area of Kershaw County and **would like to participate in the Citizen Advisory Group, please let me know.**

Thank you again for your input!

Angela Vandelay

Angela Vandelay, EIT
Water Resources Scientist
AMEC Environment and Infrastructure
720 Gracern Road, Suite 132, Columbia, SC 29210, USA
Tel (803) 798-1200, Direct (803)798-1240 ext. 129, Fax (803) 750-1303
angela.vandelay@amec.com
amec.com

Final Stakeholders Brainstorming Session | June 25, 2013

Dear Twenty-five Mile Creek Watershed Stakeholders,

Thank you again to those who could attend the Twenty-five Mile Creek Watershed stakeholder meeting on June 25th. Below is a summary of the meeting held on 6/25/13, including some action items for various stakeholders. An important date to mention is the **grant deadline of September 23rd** - both Watershed Based Plans must be finished before that date! We will be getting drafts of the WBPs out to the stakeholders in the next month or so for your review and input. We want to be sure to include concerns and proposed ideas for all three counties, so please take the time to read and provide input on the WBPs. DHEC was extremely pleased with the information that we have been able to gather (thanks to our stakeholders!) and with the cooperation among all of our stakeholders. Thank you again for all of your help!

Macroinvertebrate Impairment

- Good news! DHEC has agreed to re-sample for macroinvertebrates in 25 Mile Creek at CW-080. Due to the rainy weather (resulting in abnormal creek levels), they are not sure whether they will be able to do so before the Watershed Based Plans need to be completed (September 23rd). But, because no TMDL has been written for macroinvertebrates in Twenty-five Mile Creek yet, this could potentially lead to the stream being delisted for macroinvertebrates prior to a TMDL bring written (a very good thing). But, if the results confirm that it is still impaired, we will have written a solid plan for addressing likely macroinvertebrate sources.

- The former Lugoff Municipal Landfill was mentioned again as a potential source of the macroinvertebrate impairment. It is being monitored by DHEC and Kershaw County is involved.

- Dirt roads (and ditches along dirt roads with lacking vegetation) in KC may be contributing to macroinvertebrate impairment. May include sediment tubes and/or hydroseeding in WBP. Dana started using a ditching attachment to avoid ripping up vegetation when ditches are being cleaned out.

- Kershaw County will consider temperature and volume monitoring (outside of grant) to see how these may be affecting macroinvertebrates.

Bacteria Impairment

- Include in WBP
  - public education about the need to disk-in turkey litter in Watershed Based Plan.
  - contacting realtors and home inspectors for recruitment of septic homeowners
  - cameras at road crossings to see who is dumping carcasses (in addition to signs with # to report). Seven Gaither says Fairfield uses "Groundhog" brand cameras. Palmetto Pride is a potential grant to pay for these
  - RC SWCD suggested a “Hog and Beaver Management” workshop to educate the public.

- Kershaw County is building a septic receiving station at their WWTP to accept septic (by the end of 2013) – currently septic waste has to be shipped to Florence or Aiken.

- Kershaw County accepts used cooking oil at recycle centers (Midlands Biofuel).

- Disposal of grease (from grease traps at restaurants) remains an issue (closest place to dispose is in Aiken). A rendering facility is supposed to open-up on Shop Road, but will likely take 2 years or more.
- Animal control (County?) incinerates for $30/carcass. Screaming Eagle landfill will accept carcasses at the cost of $60/carcass. Kershaw County C&D landfill will accept carcasses, but bad location (Cassett) and very limited hours (especially on the weekends when hunting occurs)

Action items for AMEC/stakeholders

- **AMEC** will investigate the Lake Carolina dam releases (procedure, consequences, necessity, etc)

- **Steven Gaither** will try to get monitoring results from Kennecott abandoned mine.

- **AMEC** has located the Kershaw County parcel data to complete the farm map using information provided by RC SWCD. AMEC (and **RC SWCD**?) will pursue crop farm and additional livestock farms from aerial and previous windshield survey for WBP.

- **Buddy Atkins** will pursue complete sewer/septic data for RC. We may be able to use the age of the building to determine potential septic areas. We can also can use age of commercial buildings to determine areas built before SW regulations.

- Dana stated that there are approximately 800 sewer customers in the KC portion of 25 Mile Creek Watershed. **AMEC** is looking into a way to determine the total # of parcels with buildings so we can subtract the number of sewer customers to calculate the number of septic systems in the KC portion of the watershed.

- KC (**Dana Reeder/Russell Wright**) to provide locations of former lagoons and potential SSOs in the watershed.

- RC (**Quinton Epps**) to consider doing some monitoring in the NW portion of Richland County.

- **AMEC** to contact C. Ray Miles to ask if we can use his farm as a demonstration (perhaps video) to incorporate in WBP.

- **AMEC** to determine dates of hydraulic soil group used in septic/soils map (strange lines in soil type at County lines)

- **AMEC** will research all landfills in the 3 counties to determine all disposal options/costs/hours, etc

- **AMEC** to contact processors to learn how they dispose of carcasses.

Thank you,

Angela

Angela Vandelay, EIT
Water Resources Scientist
AMEC Environment and Infrastructure
720 Gracern Road, Suite 132, Columbia, SC 29210, USA
Tel (803) 798-1200, Direct (803)798-1240 ext. 129, Fax (803) 750-1303
angela.vandelay@amec.com
amec.com

Appendix C

Org Name	Station ID	County	HUC	Generated HUC	Station Latitude	Station Longitude	Station Horizontal Datum
SC Dept. of Health Control	CW-080	KERSHAW	3050104	3050104	34.24375	-80.6733889	UNKWN

25 MILE CK AT S-28-5; 3.7 MI W OF CAMDEN

APPLIES TO ALL DATA 1999 AND AFTER

Activity Medium: Water

Activity Category-Rep Num: Routine Sample

BE CAREFUL WHEN COMPARING DATA BEFORE AND AFTER 1999**

Water Quality Numeric Criteria for the Protection of Aquatic Life and Human Health

Activity Start	*Characteristic Name*	*Sample Fraction*	*Value Type*	*Statistic Type*	*Result Value Status*	*Result Value as Text*	*Units*	*Analytical Proc ID*	**SPECIFIC STANDARD**	**CRITERIA*** ***CHECK UNITS AGAINST UNITS AND FOOTNOTES IN R.61-68 DOCUMENT				
										FRESHWATER AQUATIC LIFE		HUMAN HEALTH FOR CONSUMPTION OF		
										CMC (ug/L)	*CCC (ug/L)*	*water & org (ug/L)*	*org only (ug/L)*	*MCL (ug/L)*
12/4/2008	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	4.4	mg/l	APHA ~2320						
11/6/2008	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	7.4	mg/l	APHA ~2320						
10/23/2008	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	7.3	mg/l	APHA ~2320						
9/25/2008	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	9.3	mg/l	APHA ~2320						
8/27/2008	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	3.1	mg/l	APHA ~2320						
7/10/2008	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	*Present <QL		APHA ~2320						
6/19/2008	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	9.9	mg/l	APHA ~2320						
5/27/2008	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	12.0	mg/l	APHA ~2320						
4/24/2008	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	8.4	mg/l	APHA ~2320						
3/6/2008	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	0.0	mg/l	APHA ~2320						
2/7/2008	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	3.8	mg/l	APHA ~2320						
1/16/2008	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	3.2	mg/l	APHA ~2320						
12/5/2007	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	3.6	mg/l	APHA ~2320						
11/6/2007	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	4.9	mg/l	APHA ~2320						
10/29/2007	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	3.6	mg/l	APHA ~2320						
9/13/2007	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	11.0	mg/l	APHA ~2320						
8/16/2007	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	10.0	mg/l	APHA ~2320						
7/30/2007	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	6.3	mg/l	APHA ~2320						
6/20/2007	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	6.2	mg/l	APHA ~2320						
5/30/2007	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	9.2	mg/l	APHA ~2320						
4/24/2007	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	7.8	mg/l	APHA ~2320						
3/20/2007	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	6.0	mg/l	APHA ~2320						
2/5/2007	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	5.6	mg/l	APHA ~2320						
1/2/2007	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	5.4	mg/l	APHA ~2320						
12/11/2006	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	5.7	mg/l	APHA ~2320						
11/29/2006	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	5.9	mg/l	APHA ~2320						
10/30/2006	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	4.7	mg/l	APHA ~2320						
9/21/2006	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	5.3	mg/l	APHA ~2320						
8/24/2006	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	6.0	mg/l	APHA ~2320						
7/6/2006	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	16.0	mg/l	APHA ~2320						
6/28/2006	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	6.6	mg/l	APHA ~2320						
5/25/2006	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	8.3	mg/l	APHA ~2320						
4/27/2006	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	7.1	mg/l	APHA ~2320						
3/23/2006	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	5.2	mg/l	APHA ~2320						
2/2/2006	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	4.2	mg/l	APHA ~2320						
1/18/2006	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	3.6	mg/l	APHA ~2320						
12/7/2005	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	3.3	mg/l	APHA ~2320						
11/14/2005	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	4.9	mg/l	APHA ~2320						
10/6/2005	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	6.7	mg/l	APHA ~2320						
9/29/2005	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	7.4	mg/l	APHA ~2320						
8/30/2005	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	9.7	mg/l	APHA ~2320						
7/28/2005	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	9.6	mg/l	APHA ~2320						
6/30/2005	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	5.0	mg/l	APHA ~2320						
5/26/2005	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	7.3	mg/l	APHA ~2320						
4/7/2005	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	9.2	mg/l	APHA ~2320						
3/30/2005	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	3.6	mg/l	APHA ~2320						
2/3/2005	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	7.3	mg/l	APHA ~2320						
1/27/2005	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	8.0	mg/l	APHA ~2320						
12/2/2004	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	6.5	mg/l	APHA ~2320						
11/4/2004	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	9.0	mg/l	APHA ~2320						
10/20/2004	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	7.9	mg/l	APHA ~2320						
9/16/2004	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	8.4	mg/l	APHA ~2320						
8/5/2004	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	5.7	mg/l	APHA ~2320						
7/29/2004	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	5.1	mg/l	APHA ~2320						
6/10/2004	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	11.0	mg/l	APHA ~2320						
5/20/2004	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	8.9	mg/l	APHA ~2320						
4/8/2004	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	7.8	mg/l	APHA ~2320						
3/2/2004	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	5.2	mg/l	APHA ~2320						
1/8/2004	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	5.7	mg/l	APHA ~2320						
12/3/2003	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	6.3	mg/l	APHA ~2320						
10/9/2003	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	5.0	mg/l	APHA ~2320						
8/5/2003	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	6.6	mg/l	APHA ~2320						
6/5/2003	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	6.9	mg/l	APHA ~2320						
4/10/2003	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	4.8	mg/l	APHA ~2320						
2/10/2003	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	5.6	mg/l	APHA ~2320						
12/5/2002	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	5.6	mg/l	~						
10/16/2002	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	5.3	mg/l	~						
6/17/2002	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	11.0	mg/l	~						
4/9/2002	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	8.6	mg/l	~						
2/19/2002	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	6.0	mg/l	~						
12/6/2001	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	6.4	mg/l	~						
10/18/2001	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	7.4	mg/l	~						
8/15/2001	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	6.8	mg/l	~						
6/21/2001	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	5.8	mg/l	~						
6/20/2001	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	6.0	mg/l	~						
4/5/2001	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	7.0	mg/l	~						
1/3/2001	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	8.0	mg/l	~						
8/3/2000	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	8.0	mg/l	~						
7/18/2000	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	9.0	mg/l	~						
6/7/2000	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	7.0	mg/l	~						
5/9/2000	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	10.0	mg/l	~						
10/21/1999	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	6.0	mg/l	~						
9/2/1999	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	7.0	mg/l	~						
8/19/1999	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	10.0	mg/l	~						
7/8/1999	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	5.0	mg/l	~						
6/2/1999	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	8.0	mg/l	~						
5/19/1999	Alkalinity, Carbonate as CaCO3	Total	Actual		Final	11.0	mg/l	~						
10/21/1998	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1020	410		6.0		D						
9/24/1998	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1050	410		5.0		D						
8/5/1998	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1245	410		5.0		D						
7/30/1998	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1140	410		4.0		D						
6/18/1998	ALKALINITY, TOTAL (MG/L AS CACO3)	B	920	410		7.0		D						
5/27/1998	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1015	410		5.0		D						
4/2/1998	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1115	410		5.0		D						
3/9/1998	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1320	410		4.0		D						
7/5/1995	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1350	410		8.0		D						
9/8/1993	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1325	410		7.0		D						
8/18/1993	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1300	410		6.0		D						
7/13/1993	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1305	410		6.0		D						
6/2/1993	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1350	410		6.0		D						
5/18/1993	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1406	410		9.0		D						
4/1/1993	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1120	410		7.0		D						
3/4/1993	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1300	410		3.0		D						
2/11/1993	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1330	410		4.0		D						
1/19/1993	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1031	410		5.0		D						
12/8/1992	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1235	410		6.0		D						
11/18/1992	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1035	410		5.0		D						
10/21/1991	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1055	410		5.0		D						
5/11/1989	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1213	410		8.0		D						
10/11/1988	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1136	410		8.0		D						
9/12/1988	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1212	410		5.0		D						
7/13/1988	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1105	410		8.0		D						
5/4/1988	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1255	410		9.0		D						
10/5/1987	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1125	410		8.0		D						
9/3/1987	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1110	410		6.0		D						
8/17/1987	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1205	410		6.0		D						
7/14/1987	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1145	410		8.0		D						
6/2/1987	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1400	410		18.0		D						
5/13/1987	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1240	410		7.0		D						
5/3/1984	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1115	410		10.0		D						
8/8/1983	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1015	410		8.0		D						
8/23/1982	ALKALINITY, TOTAL (MG/L AS CACO3)	B	941	410		10.0		D						
8/23/1982	ALKALINITY, TOTAL (MG/L AS CACO3)	B	942	410		10.0		D						
8/23/1982	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1411	410		36.0		D						
8/23/1982	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1412	410		8.0		D						
8/23/1982	ALKALINITY, TOTAL (MG/L AS CACO3)	B	940	410		10.0		D						
8/23/1982	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1410	410		8.0		D						
10/16/1980	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1005	410		4.0		D						
9/8/1980	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1315	410		10.0		D						
8/25/1980	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1505	410		32.0		D						
7/24/1980	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1245	410		6.0		D						
6/17/1980	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1240	410		14.0		D						
5/19/1980	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1235	410		7.0		D						
10/26/1979	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1200	410		10.0		D						
9/27/1979	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1210	410		7.0		D						
8/22/1979	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1100	410		23.0		D						
7/10/1979	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1045	410		21.0		D						
5/7/1979	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1150	410		8.0		D						
10/24/1978	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1005	410		14.0		D						
9/8/1978	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1125	410		15.0		D						
8/9/1978	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1000	410		9.0		D						
7/13/1978	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1105	410		11.0		D						
6/27/1978	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1240	410		9.0		D						
5/3/1978	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1145	410		10.0		D						
10/27/1977	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1110	410		9.0		D						
9/14/1977	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1130	410		6.0		D						
8/10/1977	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1035	410		6.0		D						
7/22/1977	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1025	410		8.0		D						
6/14/1977	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1140	410		8.0		D						
5/6/1977	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1100	410		16.0		D						
9/28/1976	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1045	410		9.0		D						

9/1/1976	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1045	410		12.0		D							
7/30/1976	ALKALINITY, TOTAL (MG/L AS CACO3)	B	915	410		10.0		D							
6/29/1976	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1100	410		10.0		D							
4/23/1976	ALKALINITY, TOTAL (MG/L AS CACO3)	B	930	410		6.0		D							
10/17/1975	ALKALINITY, TOTAL (MG/L AS CACO3)	B	920	410		12.0		D							
8/29/1975	ALKALINITY, TOTAL (MG/L AS CACO3)	B	940	410		8.0		D							
8/5/1975	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1000	410		8.0		D							
7/3/1975	ALKALINITY, TOTAL (MG/L AS CACO3)	B	950	410		8.0		D							
5/7/1975	ALKALINITY, TOTAL (MG/L AS CACO3)	B	915	410		8.0		D							
11/4/1974	ALKALINITY, TOTAL (MG/L AS CACO3)	B	940	410		8.0		D							
9/24/1974	ALKALINITY, TOTAL (MG/L AS CACO3)	B	850	410		16.0		D							
9/3/1974	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1015	410		8.0		D							
8/1/1974	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1000	410		8.0		D							
6/25/1974	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1000	410		8.0		D							
5/3/1974	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1000	410		4.0		D							
9/25/1973	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1030	410		4.0		D							
4/20/1973	ALKALINITY, TOTAL (MG/L AS CACO3)	B	840	410		10.0		D							
3/13/1973	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1050	410		4.0		D							
11/30/1971	ALKALINITY, TOTAL (MG/L AS CACO3)	B	2500	410		10.0		D							
10/4/1971	ALKALINITY, TOTAL (MG/L AS CACO3)	B	2500	410		10.0		D							
8/7/1970	ALKALINITY, TOTAL (MG/L AS CACO3)	B	2500	410		6.0		D							
8/4/1970	ALKALINITY, TOTAL (MG/L AS CACO3)	B	2500	410		8.0		D							
8/3/1970	ALKALINITY, TOTAL (MG/L AS CACO3)	B	2500	410		6.0		D							
9/4/1968	ALKALINITY, TOTAL (MG/L AS CACO3)	B	2500	410		7.0		D							
9/3/1968	ALKALINITY, TOTAL (MG/L AS CACO3)	B	2500	410		7.0		D							
10/29/1963	ALKALINITY, TOTAL (MG/L AS CACO3)	B	2500	410		9.0		D							
10/28/1963	ALKALINITY, TOTAL (MG/L AS CACO3)	B	2500	410		8.0		D							
10/22/1963	ALKALINITY, TOTAL (MG/L AS CACO3)	B	2500	410		7.0		D							
6/19/1962	ALKALINITY, TOTAL (MG/L AS CACO3)	B	2500	410		7.0		D							
6/18/1962	ALKALINITY, TOTAL (MG/L AS CACO3)	B	2500	410		8.0		D							
												CRITERIA DEPENDENT ON Ph and TEMP			
12/4/2008	Ammonia as NH3	Total	Actual		Final	*Present <QL		USEPA	~350.2(B)						
11/6/2008	Ammonia as NH3	Total	Actual		Final	*Present <QL		USEPA	~350.2(B)						
10/23/2008	Ammonia as NH3	Total	Actual		Final	*Present <QL		USEPA	~350.2(B)						
9/25/2008	Ammonia as NH3	Total	Actual		Final	*Present <QL		USEPA	~350.2(B)						
8/27/2008	Ammonia as NH3	Total	Actual		Final	0.2	mg/l	USEPA	~350.2(B)						
7/10/2008	Ammonia as NH3	Total	Actual		Final	0.1	mg/l	USEPA	~350.2(B)						
6/19/2008	Ammonia as NH3	Total	Actual		Final	0.1	mg/l	USEPA	~350.2(B)						
5/27/2008	Ammonia as NH3	Total	Actual		Final	*Present <QL		USEPA	~350.2(B)						
4/24/2008	Ammonia as NH3	Total	Actual		Final	0.1	mg/l	USEPA	~350.2(B)						
3/6/2008	Ammonia as NH3	Total	Actual		Final	0.1	mg/l	USEPA	~350.2(B)						
2/7/2008	Ammonia as NH3	Total	Actual		Final	0.1	mg/l	USEPA	~350.2(B)						
1/16/2008	Ammonia as NH3	Total	Actual		Final	0.1	mg/l	USEPA	~350.2(B)						
12/5/2007	Ammonia as NH3	Total	Actual		Final	0.1	mg/l	USEPA	~350.2(B)						
10/29/2007	Ammonia as NH3	Total	Actual		Final	*Present <QL		USEPA	~350.2(B)						
9/13/2007	Ammonia as NH3	Total	Actual		Final	0.1	mg/l	USEPA	~350.2(B)						
8/20/2007	Ammonia as NH3	Total	Actual		Final	0.1	mg/l	USEPA	~350.2(B)						
8/16/2007	Ammonia as NH3	Total	Actual		Final	*Present <QL		USEPA	~350.2(B)						
7/30/2007	Ammonia as NH3	Total	Actual		Final	0.1	mg/l	USEPA	~350.2(B)						
6/20/2007	Ammonia as NH3	Total	Actual		Final	0.3	mg/l	USEPA	~350.2(B)						
4/24/2007	Ammonia as NH3	Total	Actual		Final	0.2	mg/l	USEPA	~350.2(B)						
2/5/2007	Ammonia as NH3	Total	Actual		Final	0.5	mg/l	USEPA	~350.2(B)						
1/2/2007	Ammonia as NH3	Total	Actual		Final	*Present <QL		USEPA	~350.2(B)						
11/29/2006	Ammonia as NH3	Total	Actual		Final	0.1	mg/l	USEPA	~350.2(B)						
10/30/2006	Ammonia as NH3	Total	Actual		Final	0.2	mg/l	USEPA	~350.2(B)						
8/24/2006	Ammonia as NH3	Total	Actual		Final	*Present <QL		USEPA	~350.2(B)						
7/6/2006	Ammonia as NH3	Total	Actual		Final	0.2	mg/l	USEPA	~350.2(B)						
6/28/2006	Ammonia as NH3	Total	Actual		Final	0.1	mg/l	USEPA	~350.2(B)						
5/25/2006	Ammonia as NH3	Total	Actual		Final	0.2	mg/l	USEPA	~350.2(B)						
4/27/2006	Ammonia as NH3	Total	Actual		Final	0.2	mg/l	USEPA	~350.2(B)						
3/23/2006	Ammonia as NH3	Total	Actual		Final	0.2	mg/l	USEPA	~350.2(B)						
2/2/2006	Ammonia as NH3	Total	Actual		Final	0.2	mg/l	USEPA	~350.2(B)						
1/18/2006	Ammonia as NH3	Total	Actual		Final	0.2	mg/l	USEPA	~350.2(B)						
12/7/2005	Ammonia as NH3	Total	Actual		Final	0.2	mg/l	USEPA	~350.2(B)						
11/14/2005	Ammonia as NH3	Total	Actual		Final	0.2	mg/l	USEPA	~350.2(B)						
10/6/2005	Ammonia as NH3	Total	Actual		Final	0.1	mg/l	USEPA	~350.2(B)						
9/29/2005	Ammonia as NH3	Total	Actual		Final	0.2	mg/l	USEPA	~350.2(B)						
8/30/2005	Ammonia as NH3	Total	Actual		Final	0.1	mg/l	USEPA	~350.2(B)						
7/28/2005	Ammonia as NH3	Total	Actual		Final	0.1	mg/l	USEPA	~350.2(B)						
6/30/2005	Ammonia as NH3	Total	Actual		Final	0.1	mg/l	USEPA	~350.2(B)						
5/26/2005	Ammonia as NH3	Total	Actual		Final	0.1	mg/l	USEPA	~350.2(B)						
4/7/2005	Ammonia as NH3	Total	Actual		Final	0.1	mg/l	USEPA	~350.2(B)						
3/30/2005	Ammonia as NH3	Total	Actual		Final	0.4	mg/l	USEPA	~350.2(B)						
2/3/2005	Ammonia as NH3	Total	Actual		Final	0.5	mg/l	USEPA	~350.2(B)						
1/27/2005	Ammonia as NH3	Total	Actual		Final	0.3	mg/l	USEPA	~350.2(B)						
12/2/2004	Ammonia as NH3	Total	Actual		Final	0.4	mg/l	USEPA	~350.2(B)						
11/4/2004	Ammonia as NH3	Total	Actual		Final	0.1	mg/l	USEPA	~350.2(B)						
10/20/2004	Ammonia as NH3	Total	Actual		Final	0.1	mg/l	USEPA	~350.2(B)						
9/16/2004	Ammonia as NH3	Total	Actual		Final	0.1	mg/l	USEPA	~350.2(B)						
8/5/2004	Ammonia as NH3	Total	Actual		Final	0.1	mg/l	USEPA	~350.2(B)						
7/29/2004	Ammonia as NH3	Total	Actual		Final	0.1	mg/l	USEPA	~350.2(B)						
6/10/2004	Ammonia as NH3	Total	Actual		Final	0.2	mg/l	USEPA	~350.2(B)						
5/20/2004	Ammonia as NH3	Total	Actual		Final	0.2	mg/l	USEPA	~350.2(B)						
4/8/2004	Ammonia as NH3	Total	Actual		Final	0.1	mg/l	USEPA	~350.2(B)						
3/2/2004	Ammonia as NH3	Total	Actual		Final	0.1	mg/l	USEPA	~350.2(B)						
1/8/2004	Ammonia as NH3	Total	Actual		Final	*Present <QL		USEPA	~350.2(B)						
12/3/2003	Ammonia as NH3	Total	Actual		Final	*Present <QL		USEPA	~350.2(B)						
10/9/2003	Ammonia as NH3	Total	Actual		Final	0.1	mg/l	USEPA	~350.2(B)						
8/5/2003	Ammonia as NH3	Total	Actual		Final	0.1	mg/l	USEPA	~350.2(B)						
6/5/2003	Ammonia as NH3	Total	Actual		Final	0.1	mg/l	USEPA	~350.2(B)						
4/10/2003	Ammonia as NH3	Total	Actual		Final	0.1	mg/l	USEPA	~350.2(B)						
2/10/2003	Ammonia as NH3	Total	Actual		Final	0.1	mg/l	USEPA	~350.2(B)						
12/5/2002	Ammonia as NH3	Total	Actual		Final	*Present <QL	mg/l	~							
10/16/2002	Ammonia as NH3	Total	Actual		Final	0.1	mg/l	~							
6/17/2002	Ammonia as NH3	Total	Actual		Final	*Present <QL	mg/l	~							
4/9/2002	Ammonia as NH3	Total	Actual		Final	*Present <QL	mg/l	~							
2/19/2002	Ammonia as NH3	Total	Actual		Final	0.1	mg/l	~							
12/6/2001	Ammonia as NH3	Total	Actual		Final	*Present <QL	mg/l	~							
10/18/2001	Ammonia as NH3	Total	Actual		Final	0.1	mg/l	~							
8/15/2001	Ammonia as NH3	Total	Actual		Final	0.2	mg/l	~							
6/21/2001	Ammonia as NH3	Total	Actual		Final	0.1	mg/l	~							
6/20/2001	Ammonia as NH3	Total	Actual		Final	0.1	mg/l	~							
4/5/2001	Ammonia as NH3	Total	Actual		Final	0.1	mg/l	~							
10/21/1999	Ammonia as NH3	Total	Actual		Final	*Present <QL	mg/l	~							
9/2/1999	Ammonia as NH3	Total	Actual		Final	*Present <QL	mg/l	~							
8/19/1999	Ammonia as NH3	Total	Actual		Final	0.1	mg/l	~							
7/8/1999	Ammonia as NH3	Total	Actual		Final	0.1	mg/l	~							
6/2/1999	Ammonia as NH3	Total	Actual		Final	*Present <QL	mg/l	~							
5/19/1999	Ammonia as NH3	Total	Actual		Final	0.1	mg/l	~							
10/21/1998	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (	B	1020	619		0.0	$	D							
9/24/1998	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (	B	1050	619		0.0	$	D							
8/5/1998	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (	B	1245	619		0.0	$	D							
7/30/1998	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (	B	1140	619		0.0	$	D							
6/18/1998	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (	B	920	619		0.0	$	D							
5/27/1998	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (	B	1015	619		0.0	$	D							
4/2/1998	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (	B	1115	619		0.0	$	D							
3/9/1998	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (	B	1320	619		0.0	$	D							
9/8/1993	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (	B	1325	619		0.0	$	D							
8/18/1993	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (	B	1300	619		0.0	$	D							
7/13/1993	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (	B	1305	619		0.0	$	D							
6/2/1993	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (	B	1350	619		0.0	$	D							
5/18/1993	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (	B	1406	619		0.0	$	D							
4/1/1993	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (	B	1120	619		0.0	$	D							
3/4/1993	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (	B	1300	619		0.0	$	D							
2/11/1993	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (	B	1330	619		0.0	$	D							
1/19/1993	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (	B	1031	619		0.0	$	D							
12/8/1992	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (	B	1235	619		0.0	$	D							
11/18/1992	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (	B	1035	619		0.0	$	D							
5/3/1984	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (	B	1115	619		0.0	$	D							
8/23/1982	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (	B	940	619		0.0	$	D							
8/23/1982	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (	B	1411	619		0.0	$	D							
8/23/1982	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (	B	1412	619		0.0	$	D							
8/23/1982	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (	B	942	619		0.0	$	D							
8/23/1982	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (	B	1410	619		0.0	$	D							
8/23/1982	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (	B	941	619		0.0	$	D							
10/21/1998	AMMONIA, UNIONZED (MG/L AS N)	B	1020	612		0.0	$	D							
9/24/1998	AMMONIA, UNIONZED (MG/L AS N)	B	1050	612		0.0	$	D							
8/5/1998	AMMONIA, UNIONZED (MG/L AS N)	B	1245	612		0.0	$	D							
7/30/1998	AMMONIA, UNIONZED (MG/L AS N)	B	1140	612		0.0	$	D							
6/18/1998	AMMONIA, UNIONZED (MG/L AS N)	B	920	612		0.0	$	D							
5/27/1998	AMMONIA, UNIONZED (MG/L AS N)	B	1015	612		0.0	$	D							
4/2/1998	AMMONIA, UNIONZED (MG/L AS N)	B	1115	612		0.0	$	D							
3/9/1998	AMMONIA, UNIONZED (MG/L AS N)	B	1320	612		0.0	$	D							
9/8/1993	AMMONIA, UNIONZED (MG/L AS N)	B	1325	612		0.0	$	D							
8/18/1993	AMMONIA, UNIONZED (MG/L AS N)	B	1300	612		0.0	$	D							
7/13/1993	AMMONIA, UNIONZED (MG/L AS N)	B	1305	612		0.0	$	D							
6/2/1993	AMMONIA, UNIONZED (MG/L AS N)	B	1350	612		0.0	$	D							
5/18/1993	AMMONIA, UNIONZED (MG/L AS N)	B	1406	612		0.0	$	D							
4/1/1993	AMMONIA, UNIONZED (MG/L AS N)	B	1120	612		0.0	$	D							
3/4/1993	AMMONIA, UNIONZED (MG/L AS N)	B	1300	612		0.0	$	D							
2/11/1993	AMMONIA, UNIONZED (MG/L AS N)	B	1330	612		0.0	$	D							
1/19/1993	AMMONIA, UNIONZED (MG/L AS N)	B	1031	612		0.0	$	D							
12/8/1992	AMMONIA, UNIONZED (MG/L AS N)	B	1235	612		0.0	$	D							
11/18/1992	AMMONIA, UNIONZED (MG/L AS N)	B	1035	612		0.0	$	D							
5/3/1984	AMMONIA, UNIONZED (MG/L AS N)	B	1115	612		0.0	$	D							
8/23/1982	AMMONIA, UNIONZED (MG/L AS N)	B	941	612		0.0	$	D							
8/23/1982	AMMONIA, UNIONZED (MG/L AS N)	B	1410	612		0.0	$	D							
8/23/1982	AMMONIA, UNIONZED (MG/L AS N)	B	940	612		0.0	$	D							
8/23/1982	AMMONIA, UNIONZED (MG/L AS N)	B	942	612		0.0	$	D							
8/23/1982	AMMONIA, UNIONZED (MG/L AS N)	B	1411	612		0.0	$	D							
8/23/1982	AMMONIA, UNIONZED (MG/L AS N)	B	1412	612		0.0	$	D							
10/21/1998	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	1020	610		0.1		D							
9/24/1998	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	1050	610		0.2		D							
8/5/1998	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	1245	610		0.1		D							
7/30/1998	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	1140	610		0.1		D							

6/18/1998	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	920	610		0.2		D						
5/27/1998	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	1015	610		0.1		D						
4/2/1998	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	1115	610		0.1		D						
3/9/1998	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	1320	610		0.1		D						
9/8/1993	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	1325	610		0.1	K	D						
8/18/1993	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	1300	610		0.1	K	D						
7/13/1993	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	1305	610		0.1	K	D						
6/2/1993	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	1350	610		0.1	K	D						
5/18/1993	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	1406	610		0.1	K	D						
4/1/1993	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	1120	610		0.1	K	D						
3/4/1993	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	1300	610		0.1	K	D						
2/11/1993	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	1330	610		0.1	K	D						
1/19/1993	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	1031	610		0.1	K	D						
12/8/1992	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	1235	610		0.1	K	D						
11/18/1992	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	1035	610		0.1	K	D						
5/3/1984	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	1115	610		0.5		D						
8/23/1982	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	1410	610		0.1		D						
8/23/1982	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	940	610		0.2		D						
8/23/1982	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	942	610		0.1	K	D						
8/23/1982	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	1411	610		0.1		D						
8/23/1982	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	941	610		0.1		D						
8/23/1982	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	1412	610		0.1		D						
12/5/2007	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL		APHA	~5210-B					
11/6/2007	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL		APHA	~5210-B					
10/29/2007	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL		APHA	~5210-B					
9/13/2007	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL		APHA	~5210-B					
8/16/2007	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL		APHA	~5210-B					
7/30/2007	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL		APHA	~5210-B					
6/20/2007	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL		APHA	~5210-B					
5/30/2007	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL		APHA	~5210-B					
4/24/2007	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL		APHA	~5210-B					
3/20/2007	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL		APHA	~5210-B					
2/5/2007	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL		APHA	~5210-B					
1/2/2007	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL		APHA	~5210-B					
12/11/2006	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL		APHA	~5210-B					
11/29/2006	Biochemical oxygen demand, standard conditions	Total	Actual		Final	2.8	mg/l	APHA	~5210-B					
10/30/2006	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL		APHA	~5210-B					
9/21/2006	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL		APHA	~5210-B					
8/24/2006	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL		APHA	~5210-B					
7/6/2006	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL		APHA	~5210-B					
6/28/2006	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL		APHA	~5210-B					
5/25/2006	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL		APHA	~5210-B					
4/27/2006	Biochemical oxygen demand, standard conditions	Total	Actual		Final	2.5	mg/l	APHA	~5210-B					
3/23/2006	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL		APHA	~5210-B					
2/2/2006	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL		APHA	~5210-B					
1/18/2006	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL		APHA	~5210-B					
12/7/2005	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL		APHA	~5210-B					
11/14/2005	Biochemical oxygen demand, standard conditions	Total	Actual		Final	2.4	mg/l	APHA	~5210-B					
10/6/2005	Biochemical oxygen demand, standard conditions	Total	Actual		Final	2.3	mg/l	APHA	~5210-B					
9/29/2005	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL		APHA	~5210-B					
8/30/2005	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL		APHA	~5210-B					
7/28/2005	Biochemical oxygen demand, standard conditions	Total	Actual		Final	3.8	mg/l	APHA	~5210-B					
6/30/2005	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL		APHA	~5210-B					
5/26/2005	Biochemical oxygen demand, standard conditions	Total	Actual		Final	2.6	mg/l	APHA	~5210-B					
4/7/2005	Biochemical oxygen demand, standard conditions	Total	Actual		Final	2.7	mg/l	APHA	~5210-B					
3/30/2005	Biochemical oxygen demand, standard conditions	Total	Actual		Final	2.2	mg/l	APHA	~5210-B					
2/3/2005	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL		APHA	~5210-B					
1/27/2005	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL		APHA	~5210-B					
12/2/2004	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL		APHA	~5210-B					
11/4/2004	Biochemical oxygen demand, standard conditions	Total	Actual		Final	2.5	mg/l	APHA	~5210-B					
10/20/2004	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL		APHA	~5210-B					
9/16/2004	Biochemical oxygen demand, standard conditions	Total	Actual		Final	3.5	mg/l	APHA	~5210-B					
8/5/2004	Biochemical oxygen demand, standard conditions	Total	Actual		Final	2.4	mg/l	APHA	~5210-B					
7/29/2004	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL		APHA	~5210-B					
6/10/2004	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL		APHA	~5210-B					
5/20/2004	Biochemical oxygen demand, standard conditions	Total	Actual		Final	2.3	mg/l	APHA	~5210-B					
4/8/2004	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL		APHA	~5210-B					
3/2/2004	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL		APHA	~5210-B					
1/8/2004	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL		APHA	~5210-B					
12/3/2003	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL		APHA	~5210-B					
11/6/2003	Biochemical oxygen demand, standard conditions	Total	Actual		Final	3.1	mg/l	APHA	~5210-B					
10/9/2003	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL		APHA	~5210-B					
9/2/2003	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL		APHA	~5210-B					
8/5/2003	Biochemical oxygen demand, standard conditions	Total	Actual		Final	3.5	mg/l	APHA	~5210-B					
7/1/2003	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL		APHA	~5210-B					
6/5/2003	Biochemical oxygen demand, standard conditions	Total	Actual		Final	2.2	mg/l	APHA	~5210-B					
5/15/2003	Biochemical oxygen demand, standard conditions	Total	Actual		Final	2.8	mg/l	APHA	~5210-B					
3/20/2003	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL		APHA	~5210-B					
2/10/2003	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL		APHA	~5210-B					
1/21/2003	Biochemical oxygen demand, standard conditions	Total	Actual		Final	3.0	mg/l	APHA	~5210-B					
12/5/2002	Biochemical oxygen demand, standard conditions	Total	Actual		Final	2.0	mg/l	~						
11/26/2002	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL	mg/l	~						
10/16/2002	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL	mg/l	~						
9/3/2002	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL	mg/l	~						
7/18/2002	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL	mg/l	~						
6/17/2002	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL	mg/l	~						
5/23/2002	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL	mg/l	~						
4/9/2002	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL	mg/l	~						
3/19/2002	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL	mg/l	~						
2/19/2002	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL	mg/l	~						
1/23/2002	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL	mg/l	~						
12/6/2001	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL	mg/l	~						
11/14/2001	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL	mg/l	~						
10/18/2001	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL	mg/l	~						
9/11/2001	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL	mg/l	~						
8/15/2001	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL	mg/l	~						
7/23/2001	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL	mg/l	~						
6/21/2001	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL	mg/l	~						
6/20/2001	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL	mg/l	~						
5/1/2001	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL	mg/l	~						
4/5/2001	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL	mg/l	~						
2/1/2001	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL	mg/l	~						
1/3/2001	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL	mg/l	~						
8/3/2000	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL	mg/l	~						
7/18/2000	Biochemical oxygen demand, standard conditions	Total	Actual		Final	*Present <QL	mg/l	~						
6/7/2000	Biochemical oxygen demand, standard conditions	Total	Actual		Final	1.6	mg/l	~						
5/9/2000	Biochemical oxygen demand, standard conditions	Total	Actual		Final	1.6	mg/l	~						
10/21/1999	Biochemical oxygen demand, standard conditions	Total	Actual		Final	0.8	mg/l	~						
9/2/1999	Biochemical oxygen demand, standard conditions	Total	Actual		Final	0.5	mg/l	~						
8/19/1999	Biochemical oxygen demand, standard conditions	Total	Actual		Final	1.7	mg/l	~						
7/8/1999	Biochemical oxygen demand, standard conditions	Total	Actual		Final	1.8	mg/l	~						
6/2/1999	Biochemical oxygen demand, standard conditions	Total	Actual		Final	0.8	mg/l	~						
5/19/1999	Biochemical oxygen demand, standard conditions	Total	Actual		Final	2.7	mg/l	~						
10/21/1998	BOD, 5 DAY, 20 DEG C	MG/L	B	1020	310		1.3		D					
9/24/1998	BOD, 5 DAY, 20 DEG C	MG/L	B	1050	310		1.4		D					
8/5/1998	BOD, 5 DAY, 20 DEG C	MG/L	B	1245	310		4.0		D					
7/30/1998	BOD, 5 DAY, 20 DEG C	MG/L	B	1140	310		2.1		D					
6/18/1998	BOD, 5 DAY, 20 DEG C	MG/L	B	920	310		1.2		D					
5/27/1998	BOD, 5 DAY, 20 DEG C	MG/L	B	1015	310		1.2		D					
4/2/1998	BOD, 5 DAY, 20 DEG C	MG/L	B	1115	310		1.8		D					
10/9/1997	BOD, 5 DAY, 20 DEG C	MG/L	B	1110	310		0.8		D					
9/2/1997	BOD, 5 DAY, 20 DEG C	MG/L	B	1340	310		0.9		D					
8/5/1997	BOD, 5 DAY, 20 DEG C	MG/L	B	1330	310		1.5		D					
7/1/1997	BOD, 5 DAY, 20 DEG C	MG/L	B	1155	310		1.2		D					
6/19/1997	BOD, 5 DAY, 20 DEG C	MG/L	B	1045	310		1.3		D					
5/14/1997	BOD, 5 DAY, 20 DEG C	MG/L	B	1150	310		0.6		D					
10/10/1996	BOD, 5 DAY, 20 DEG C	MG/L	B	1109	310		1.6		D					
8/5/1996	BOD, 5 DAY, 20 DEG C	MG/L	B	1130	310		1.3		D					
7/22/1996	BOD, 5 DAY, 20 DEG C	MG/L	B	1405	310		1.4		D					
6/26/1996	BOD, 5 DAY, 20 DEG C	MG/L	B	1345	310		0.8		D					
5/14/1996	BOD, 5 DAY, 20 DEG C	MG/L	B	1050	310		0.5		D					
9/20/1995	BOD, 5 DAY, 20 DEG C	MG/L	B	1401	310		1.1		D					
8/16/1995	BOD, 5 DAY, 20 DEG C	MG/L	B	1430	310		1.0		D					
7/5/1995	BOD, 5 DAY, 20 DEG C	MG/L	B	1350	310		0.4		D					
6/13/1995	BOD, 5 DAY, 20 DEG C	MG/L	B	1450	310		1.8		D					
5/9/1995	BOD, 5 DAY, 20 DEG C	MG/L	B	1335	310		0.5		D					
10/18/1994	BOD, 5 DAY, 20 DEG C	MG/L	B	1150	310		1.3		D					
9/15/1994	BOD, 5 DAY, 20 DEG C	MG/L	B	1120	310		0.9		D					
8/25/1994	BOD, 5 DAY, 20 DEG C	MG/L	B	1115	310		0.9		D					
8/9/1994	BOD, 5 DAY, 20 DEG C	MG/L	B	1150	310		0.5		D					
6/8/1994	BOD, 5 DAY, 20 DEG C	MG/L	B	1125	310		1.0		D					
5/5/1994	BOD, 5 DAY, 20 DEG C	MG/L	B	1445	310		2.2		D					
9/8/1993	BOD, 5 DAY, 20 DEG C	MG/L	B	1325	310		1.1		D					
8/18/1993	BOD, 5 DAY, 20 DEG C	MG/L	B	1300	310		0.9		D					
7/13/1993	BOD, 5 DAY, 20 DEG C	MG/L	B	1305	310		0.9		D					
6/2/1993	BOD, 5 DAY, 20 DEG C	MG/L	B	1350	310		0.4		D					
5/18/1993	BOD, 5 DAY, 20 DEG C	MG/L	B	1406	310		0.8		D					
4/1/1993	BOD, 5 DAY, 20 DEG C	MG/L	B	1120	310		1.1		D					
3/4/1993	BOD, 5 DAY, 20 DEG C	MG/L	B	1300	310		4.3		D					
2/11/1993	BOD, 5 DAY, 20 DEG C	MG/L	B	1330	310		1.1		D					
1/19/1993	BOD, 5 DAY, 20 DEG C	MG/L	B	1031	310		1.7		D					
12/8/1992	BOD, 5 DAY, 20 DEG C	MG/L	B	1235	310		1.0		D					
11/18/1992	BOD, 5 DAY, 20 DEG C	MG/L	B	1035	310		1.2		D					
10/22/1992	BOD, 5 DAY, 20 DEG C	MG/L	B	1035	310		1.7		D					
9/15/1992	BOD, 5 DAY, 20 DEG C	MG/L	B	1045	310		1.1		D					
8/26/1992	BOD, 5 DAY, 20 DEG C	MG/L	B	1035	310		0.7		D					
7/28/1992	BOD, 5 DAY, 20 DEG C	MG/L	B	1125	310		0.9		D					
6/17/1992	BOD, 5 DAY, 20 DEG C	MG/L	B	1045	310		0.8		D					
5/20/1992	BOD, 5 DAY, 20 DEG C	MG/L	B	1259	310		0.5		D					
10/21/1991	BOD, 5 DAY, 20 DEG C	MG/L	B	1055	310		1.2		D					
9/11/1991	BOD, 5 DAY, 20 DEG C	MG/L	B	1200	310		1.1		D					
8/12/1991	BOD, 5 DAY, 20 DEG C	MG/L	B	1320	310		1.2		D					
7/2/1991	BOD, 5 DAY, 20 DEG C	MG/L	B	1120	310		0.7		D					
6/12/1991	BOD, 5 DAY, 20 DEG C	MG/L	B	1050	310		0.6		D					

5/29/1991	BOD, 5 DAY, 20 DEG C	MG/L	B	1200	310		2.0		D							
10/16/1990	BOD, 5 DAY, 20 DEG C	MG/L	B	1345	310		1.4		D							
9/18/1990	BOD, 5 DAY, 20 DEG C	MG/L	B	1305	310		1.3		D							
8/7/1990	BOD, 5 DAY, 20 DEG C	MG/L	B	1143	310		1.8		D							
7/16/1990	BOD, 5 DAY, 20 DEG C	MG/L	B	1326	310		1.0		D							
6/12/1990	BOD, 5 DAY, 20 DEG C	MG/L	B	1205	310		1.1		D							
5/21/1990	BOD, 5 DAY, 20 DEG C	MG/L	B	1230	310		0.7		D							
10/16/1989	BOD, 5 DAY, 20 DEG C	MG/L	B	1253	310		1.2		D							
9/5/1989	BOD, 5 DAY, 20 DEG C	MG/L	B	1349	310		0.7		D							
8/8/1989	BOD, 5 DAY, 20 DEG C	MG/L	B	1218	310		0.9		D							
7/25/1989	BOD, 5 DAY, 20 DEG C	MG/L	B	1220	310		1.3		D							
6/8/1989	BOD, 5 DAY, 20 DEG C	MG/L	B	1248	310		1.1		D							
5/11/1989	BOD, 5 DAY, 20 DEG C	MG/L	B	1213	310		1.8		D							
10/11/1988	BOD, 5 DAY, 20 DEG C	MG/L	B	1136	310		0.7		D							
9/12/1988	BOD, 5 DAY, 20 DEG C	MG/L	B	1212	310		0.8		D							
6/14/1988	BOD, 5 DAY, 20 DEG C	MG/L	B	1253	310		0.8		D							
5/4/1988	BOD, 5 DAY, 20 DEG C	MG/L	B	1255	310		1.4		D							
10/5/1987	BOD, 5 DAY, 20 DEG C	MG/L	B	1125	310		0.8		D							
9/3/1987	BOD, 5 DAY, 20 DEG C	MG/L	B	1110	310		1.2		D							
8/17/1987	BOD, 5 DAY, 20 DEG C	MG/L	B	1205	310		0.8		D							
7/14/1987	BOD, 5 DAY, 20 DEG C	MG/L	B	1145	310		0.8		D							
6/2/1987	BOD, 5 DAY, 20 DEG C	MG/L	B	1400	310		1.2		D							
5/13/1987	BOD, 5 DAY, 20 DEG C	MG/L	B	1240	310		1.0		D							
10/13/1986	BOD, 5 DAY, 20 DEG C	MG/L	B	1155	310		0.9		D							
9/24/1986	BOD, 5 DAY, 20 DEG C	MG/L	B	1025	310		1.6		D							
8/7/1986	BOD, 5 DAY, 20 DEG C	MG/L	B	1110	310		3.2		D							
6/18/1986	BOD, 5 DAY, 20 DEG C	MG/L	B	1030	310		4.5		D							
10/29/1985	BOD, 5 DAY, 20 DEG C	MG/L	B	1055	310		1.2		D							
9/27/1985	BOD, 5 DAY, 20 DEG C	MG/L	B	1145	310		2.1		D							
8/26/1985	BOD, 5 DAY, 20 DEG C	MG/L	B	1030	310		0.9		D							
7/18/1985	BOD, 5 DAY, 20 DEG C	MG/L	B	1130	310		1.7		D							
6/10/1985	BOD, 5 DAY, 20 DEG C	MG/L	B	1205	310		3.2		D							
5/21/1985	BOD, 5 DAY, 20 DEG C	MG/L	B	1045	310		0.6		D							
10/25/1984	BOD, 5 DAY, 20 DEG C	MG/L	B	1030	310		2.8		D							
9/11/1984	BOD, 5 DAY, 20 DEG C	MG/L	B	1100	310		1.9		D							
8/23/1984	BOD, 5 DAY, 20 DEG C	MG/L	B	1110	310		1.8		D							
7/17/1984	BOD, 5 DAY, 20 DEG C	MG/L	B	1335	310		0.5		D							
6/25/1984	BOD, 5 DAY, 20 DEG C	MG/L	B	1040	310		2.9		D							
5/3/1984	BOD, 5 DAY, 20 DEG C	MG/L	B	1115	310		1.5		D							
8/8/1983	BOD, 5 DAY, 20 DEG C	MG/L	B	1015	310		2.0		D							
8/23/1982	BOD, CARBONACEOUS, 10 DAY, 20 DEG C	M	B	940	80084		4.1		D							
8/23/1982	BOD, CARBONACEOUS, 10 DAY, 20 DEG C	M	B	1410	80084		3.6		D							
8/23/1982	BOD, CARBONACEOUS, 10 DAY, 20 DEG C	M	B	1412	80084		3.6		D							
8/23/1982	BOD, CARBONACEOUS, 10 DAY, 20 DEG C	M	B	942	80084		4.3		D							
8/23/1982	BOD, CARBONACEOUS, 10 DAY, 20 DEG C	M	B	1411	80084		3.7		D							
8/23/1982	BOD, CARBONACEOUS, 10 DAY, 20 DEG C	M	B	941	80084		3.6		D							
8/23/1982	BOD, CARBONACEOUS, 12 DAY, 20 DEG C	M	B	941	80085		3.9		D							
8/23/1982	BOD, CARBONACEOUS, 12 DAY, 20 DEG C	M	B	940	80085		4.2		D							
8/23/1982	BOD, CARBONACEOUS, 12 DAY, 20 DEG C	M	B	1412	80085		3.6		D							
8/23/1982	BOD, CARBONACEOUS, 12 DAY, 20 DEG C	M	B	1410	80085		3.9		D							
8/23/1982	BOD, CARBONACEOUS, 12 DAY, 20 DEG C	M	B	1411	80085		3.8		D							
8/23/1982	BOD, CARBONACEOUS, 12 DAY, 20 DEG C	M	B	942	80085		4.4		D							
8/23/1982	BOD, CARBONACEOUS, 15 DAY, 20 DEG C	M	B	1412	80086		4.2		D							
8/23/1982	BOD, CARBONACEOUS, 15 DAY, 20 DEG C	M	B	1410	80086		4.2		D							
8/23/1982	BOD, CARBONACEOUS, 15 DAY, 20 DEG C	M	B	1411	80086		4.4		D							
8/23/1982	BOD, CARBONACEOUS, 15 DAY, 20 DEG C	M	B	940	80086		4.7		D							
8/23/1982	BOD, CARBONACEOUS, 15 DAY, 20 DEG C	M	B	942	80086		5.0		D							
8/23/1982	BOD, CARBONACEOUS, 15 DAY, 20 DEG C	M	B	941	80086		4.1		D							
8/23/1982	BOD, CARBONACEOUS, 20 DAY, 20 DEG C	M	B	940	80087		5.0		D							
8/23/1982	BOD, CARBONACEOUS, 20 DAY, 20 DEG C	M	B	942	80087		5.3		D							
8/23/1982	BOD, CARBONACEOUS, 20 DAY, 20 DEG C	M	B	1410	80087		4.8		D							
8/23/1982	BOD, CARBONACEOUS, 20 DAY, 20 DEG C	M	B	1411	80087		5.4		D							
8/23/1982	BOD, CARBONACEOUS, 20 DAY, 20 DEG C	M	B	1412	80087		4.8		D							
8/23/1982	BOD, CARBONACEOUS, 20 DAY, 20 DEG C	M	B	941	80087		4.4		D							
8/23/1982	BOD, CARBONACEOUS, 25 DAY, 20 DEG C	M	B	940	80273		5.7		D							
8/23/1982	BOD, CARBONACEOUS, 25 DAY, 20 DEG C	M	B	942	80273		6.0		D							
8/23/1982	BOD, CARBONACEOUS, 25 DAY, 20 DEG C	M	B	1412	80273		4.9		D							
8/23/1982	BOD, CARBONACEOUS, 25 DAY, 20 DEG C	M	B	941	80273		4.9		D							
8/23/1982	BOD, CARBONACEOUS, 25 DAY, 20 DEG C	M	B	1410	80273		5.0		D							
8/23/1982	BOD, CARBONACEOUS, 25 DAY, 20 DEG C	M	B	1411	80273		5.9		D							
8/23/1982	BOD, CARBONACEOUS, 3 DAY, 20 DEG C	M	B	942	80081		2.5		D							
8/23/1982	BOD, CARBONACEOUS, 3 DAY, 20 DEG C	M	B	940	80081		2.0		D							
8/23/1982	BOD, CARBONACEOUS, 3 DAY, 20 DEG C	M	B	1410	80081		1.8		D							
8/23/1982	BOD, CARBONACEOUS, 3 DAY, 20 DEG C	M	B	1411	80081		1.8		D							
8/23/1982	BOD, CARBONACEOUS, 3 DAY, 20 DEG C	M	B	941	80081		1.9		D							
8/23/1982	BOD, CARBONACEOUS, 3 DAY, 20 DEG C	M	B	1412	80081		1.7		D							
8/23/1982	BOD, CARBONACEOUS, 5 DAY, 20 DEG C	M	B	1410	80082		2.1		D							
8/23/1982	BOD, CARBONACEOUS, 5 DAY, 20 DEG C	M	B	940	80082		2.3		D							
8/23/1982	BOD, CARBONACEOUS, 5 DAY, 20 DEG C	M	B	1411	80082		2.2		D							
8/23/1982	BOD, CARBONACEOUS, 5 DAY, 20 DEG C	M	B	1412	80082		2.1		D							
8/23/1982	BOD, CARBONACEOUS, 5 DAY, 20 DEG C	M	B	941	80082		2.3		D							
8/23/1982	BOD, CARBONACEOUS, 5 DAY, 20 DEG C	M	B	942	80082		2.6		D							
8/23/1982	BOD, CARBONACEOUS, 7 DAY, 20 DEG C	M	B	942	80083		3.2		D							
8/23/1982	BOD, CARBONACEOUS, 7 DAY, 20 DEG C	M	B	1410	80083		3.0		D							
8/23/1982	BOD, CARBONACEOUS, 7 DAY, 20 DEG C	M	B	940	80083		2.7		D							
8/23/1982	BOD, CARBONACEOUS, 7 DAY, 20 DEG C	M	B	941	80083		2.7		D							
8/23/1982	BOD, CARBONACEOUS, 7 DAY, 20 DEG C	M	B	1412	80083		2.6		D							
8/23/1982	BOD, CARBONACEOUS, 7 DAY, 20 DEG C	M	B	1411	80083		3.1		D							
10/16/1980	BOD, 5 DAY, 20 DEG C	MG/L	B	1005	310		1.7		D							
9/8/1980	BOD, 5 DAY, 20 DEG C	MG/L	B	1315	310		4.0		D							
8/25/1980	BOD, 5 DAY, 20 DEG C	MG/L	B	1505	310		1.8		D							
7/24/1980	BOD, 5 DAY, 20 DEG C	MG/L	B	1245	310		1.8		D							
6/17/1980	BOD, 5 DAY, 20 DEG C	MG/L	B	1240	310		3.5		D							
5/19/1980	BOD, 5 DAY, 20 DEG C	MG/L	B	1235	310		1.6		D							
10/26/1979	BOD, 5 DAY, 20 DEG C	MG/L	B	1200	310		2.0		D							
9/27/1979	BOD, 5 DAY, 20 DEG C	MG/L	B	1210	310		1.2		D							
8/22/1979	BOD, 5 DAY, 20 DEG C	MG/L	B	1100	310		1.3		D							
7/10/1979	BOD, 5 DAY, 20 DEG C	MG/L	B	1045	310		0.5		D							
6/26/1979	BOD, 5 DAY, 20 DEG C	MG/L	B	1110	310		0.8		D							
5/7/1979	BOD, 5 DAY, 20 DEG C	MG/L	B	1150	310		1.6		D							
10/24/1978	BOD, 5 DAY, 20 DEG C	MG/L	B	1005	310		3.5		D							
9/8/1978	BOD, 5 DAY, 20 DEG C	MG/L	B	1125	310		1.7		D							
8/9/1978	BOD, 5 DAY, 20 DEG C	MG/L	B	1000	310		1.3		D							
7/13/1978	BOD, 5 DAY, 20 DEG C	MG/L	B	1105	310		2.6		D							
6/27/1978	BOD, 5 DAY, 20 DEG C	MG/L	B	1240	310		2.0		D							
5/3/1978	BOD, 5 DAY, 20 DEG C	MG/L	B	1145	310		2.1		D							
10/27/1977	BOD, 5 DAY, 20 DEG C	MG/L	B	1110	310		4.5		D							
9/14/1977	BOD, 5 DAY, 20 DEG C	MG/L	B	1130	310		1.9		D							
8/10/1977	BOD, 5 DAY, 20 DEG C	MG/L	B	1035	310		2.1		D							
7/22/1977	BOD, 5 DAY, 20 DEG C	MG/L	B	1025	310		3.3		D							
6/14/1977	BOD, 5 DAY, 20 DEG C	MG/L	B	1140	310		5.0		D							
9/28/1976	BOD, 5 DAY, 20 DEG C	MG/L	B	1045	310		2.7		D							
9/1/1976	BOD, 5 DAY, 20 DEG C	MG/L	B	1045	310		2.3		D							
7/30/1976	BOD, 5 DAY, 20 DEG C	MG/L	B	915	310		3.4		D							
6/29/1976	BOD, 5 DAY, 20 DEG C	MG/L	B	1100	310		2.1		D							
5/26/1976	BOD, 5 DAY, 20 DEG C	MG/L	B	845	310		1.0		D							
4/23/1976	BOD, 5 DAY, 20 DEG C	MG/L	B	930	310		1.8		D							
10/17/1975	BOD, 5 DAY, 20 DEG C	MG/L	B	920	310		2.2		D							
8/29/1975	BOD, 5 DAY, 20 DEG C	MG/L	B	940	310		2.4		D							
8/5/1975	BOD, 5 DAY, 20 DEG C	MG/L	B	1000	310		1.2		D							
7/3/1975	BOD, 5 DAY, 20 DEG C	MG/L	B	950	310		2.0		D							
5/7/1975	BOD, 5 DAY, 20 DEG C	MG/L	B	915	310		2.1		D							
11/4/1974	BOD, 5 DAY, 20 DEG C	MG/L	B	940	310		2.2		D							
9/24/1974	BOD, 5 DAY, 20 DEG C	MG/L	B	850	310		2.9		D							
9/3/1974	BOD, 5 DAY, 20 DEG C	MG/L	B	1015	310		3.8		D							
6/25/1974	BOD, 5 DAY, 20 DEG C	MG/L	B	1000	310		6.0		D							
5/3/1974	BOD, 5 DAY, 20 DEG C	MG/L	B	1000	310		2.9		D							
4/20/1973	BOD, 5 DAY, 20 DEG C	MG/L	B	840	310		1.2		D							
3/13/1973	BOD, 5 DAY, 20 DEG C	MG/L	B	1050	310		0.4		D							
11/30/1971	BOD, 5 DAY, 20 DEG C	MG/L	B	2500	310		2.9		D							
10/4/1971	BOD, 5 DAY, 20 DEG C	MG/L	B	2500	310		1.0		D							
8/7/1970	BOD, 5 DAY, 20 DEG C	MG/L	B	2500	310		1.1		D							
8/4/1970	BOD, 5 DAY, 20 DEG C	MG/L	B	2500	310		1.4		D							
8/3/1970	BOD, 5 DAY, 20 DEG C	MG/L	B	2500	310		2.7		D							
9/4/1968	BOD, 5 DAY, 20 DEG C	MG/L	B	2500	310		0.8		D							
9/3/1968	BOD, 5 DAY, 20 DEG C	MG/L	B	2500	310		0.6		D							
10/29/1963	BOD, 5 DAY, 20 DEG C	MG/L	B	2500	310		2.0		D							
10/28/1963	BOD, 5 DAY, 20 DEG C	MG/L	B	2500	310		0.8		D							
10/22/1963	BOD, 5 DAY, 20 DEG C	MG/L	B	2500	310		1.8		D							
6/19/1962	BOD, 5 DAY, 20 DEG C	MG/L	B	2500	310		1.1		D							
6/18/1962	BOD, 5 DAY, 20 DEG C	MG/L	B	2500	310		1.0		D							
											0.53	0.1			5	
11/6/2008	Cadmium		Total	Actual		Final	*Present <QL		APHA	~3120						
8/27/2008	Cadmium		Total	Actual		Final	*Present <QL		APHA	~3120						
5/27/2008	Cadmium		Total	Actual		Final	*Present <QL		APHA	~3120						
2/7/2008	Cadmium		Total	Actual		Final	*Present <QL		APHA	~3120						
11/6/2007	Cadmium		Total	Actual		Final	*Present <QL		APHA	~3120						
8/16/2007	Cadmium		Total	Actual		Final	*Present <QL		APHA	~3120						
5/30/2007	Cadmium		Total	Actual		Final	*Present <QL		APHA	~3120						
2/5/2007	Cadmium		Total	Actual		Final	*Present <QL		APHA	~3120						
11/29/2006	Cadmium		Total	Actual		Final	*Present <QL		APHA	~3120						
8/24/2006	Cadmium		Total	Actual		Final	*Present <QL		APHA	~3120						
5/25/2006	Cadmium		Total	Actual		Final	*Present <QL		APHA	~3120						
2/2/2006	Cadmium		Total	Actual		Final	*Present <QL		APHA	~3120						
11/14/2005	Cadmium		Total	Actual		Final	*Present <QL		APHA	~3120						
8/30/2005	Cadmium		Total	Actual		Final	*Present <QL		APHA	~3120						
5/26/2005	Cadmium		Total	Actual		Final	*Present <QL		APHA	~3120						
2/3/2005	Cadmium		Total	Actual		Final	*Present <QL		APHA	~3120						
11/4/2004	Cadmium		Total	Actual		Final	*Present <QL		APHA	~3120						
8/5/2004	Cadmium		Total	Actual		Final	*Present <QL		APHA	~3120						
5/20/2004	Cadmium		Total	Actual		Final	*Present <QL		APHA	~3120						
2/12/2004	Cadmium		Total	Actual		Final	*Present <QL		APHA	~3120						
11/6/2003	Cadmium		Total	Actual		Final	*Present <QL		APHA	~3120						
8/5/2003	Cadmium		Total	Actual		Final	*Present <QL		APHA	~3120						
5/15/2003	Cadmium		Total	Actual		Final	*Present <QL		APHA	~3120						

2/10/2003	Cadmium	Total	Actual		Final	*Present <QL		APHA ~3120						
11/26/2002	Cadmium	Total	Actual		Final	*Present <QL	ug/l	APHA ~3120						
5/23/2002	Cadmium	Total	Actual		Final	*Present <QL	ug/l	APHA ~3120						
2/19/2002	Cadmium	Total	Actual		Final	*Present <QL	ug/l	APHA ~3120						
11/14/2001	Cadmium	Total	Actual		Final	*Present <QL	ug/l	APHA ~3120						
8/15/2001	Cadmium	Total	Actual		Final	*Present <QL	ug/l	APHA ~3120						
5/1/2001	Cadmium	Total	Actual		Final	*Present <QL	ug/l	APHA ~3120						
8/19/1999	Cadmium	Total	Actual		Final	*Present <QL	ug/l	APHA ~3120						
5/19/1999	Cadmium	Total	Actual		Final	*Present <QL	ug/l	APHA ~3120						
8/5/1998	CADMIUM, TOTAL (UG/L AS CD)	B	1245	1027		10.0	K	D						
5/27/1998	CADMIUM, TOTAL (UG/L AS CD)	B	1015	1027		10.0	K	D						
9/8/1993	CADMIUM, TOTAL (UG/L AS CD)	B	1325	1027		10.0	K	D						
6/2/1993	CADMIUM, TOTAL (UG/L AS CD)	B	1350	1027		10.0	K	D						
3/4/1993	CADMIUM, TOTAL (UG/L AS CD)	B	1300	1027		10.0	K	D						
12/8/1992	CADMIUM, TOTAL (UG/L AS CD)	B	1235	1027		10.0	K	D						
9/25/1973	CADMIUM, DISSOLVED (UG/L AS CD)	B	2500	1025		100.0	K	D						
11/6/2008	Carbon, Total Organic (Toc)	Total	Actual		Final	5.0	mg/l	USEPA ~415.1						
8/27/2008	Carbon, Total Organic (Toc)	Total	Actual		Final	6.7	mg/l	USEPA ~415.1						
5/27/2008	Carbon, Total Organic (Toc)	Total	Actual		Final	7.8	mg/l	USEPA ~415.1						
2/7/2008	Carbon, Total Organic (Toc)	Total	Actual		Final	5.3	mg/l	USEPA ~415.1						
11/6/2007	Carbon, Total Organic (Toc)	Total	Actual		Final	4.9	mg/l	USEPA ~415.1						
8/16/2007	Carbon, Total Organic (Toc)	Total	Actual		Final	5.4	mg/l	USEPA ~415.1						
5/30/2007	Carbon, Total Organic (Toc)	Total	Actual		Final	5.6	mg/l	USEPA ~415.1						
2/5/2007	Carbon, Total Organic (Toc)	Total	Actual		Final	5.8	mg/l	USEPA ~415.1						
11/29/2006	Carbon, Total Organic (Toc)	Total	Actual		Final	7.0	mg/l	USEPA ~415.1						
5/25/2006	Carbon, Total Organic (Toc)	Total	Actual		Final	4.3	mg/l	USEPA ~415.1						
2/2/2006	Carbon, Total Organic (Toc)	Total	Actual		Final	4.6	mg/l	USEPA ~415.1						
11/14/2005	Carbon, Total Organic (Toc)	Total	Actual		Final	7.4	mg/l	USEPA ~415.1						
8/30/2005	Carbon, Total Organic (Toc)	Total	Actual		Final	6.6	mg/l	USEPA ~415.1						
5/26/2005	Carbon, Total Organic (Toc)	Total	Actual		Final	8.1	mg/l	USEPA ~415.1						
2/3/2005	Carbon, Total Organic (Toc)	Total	Actual		Final	5.1	mg/l	USEPA ~415.1						
12/2/2004	Carbon, Total Organic (Toc)	Total	Actual		Final	7.1	mg/l	USEPA ~415.1						
11/4/2004	Carbon, Total Organic (Toc)	Total	Actual		Final	7.8	mg/l	USEPA ~415.1						
8/5/2004	Carbon, Total Organic (Toc)	Total	Actual		Final	7.4	mg/l	USEPA ~415.1						
5/20/2004	Carbon, Total Organic (Toc)	Total	Actual		Final	6.5	mg/l	USEPA ~415.1						
2/12/2004	Carbon, Total Organic (Toc)	Total	Actual		Final	4.9	mg/l	USEPA ~415.1						
11/6/2003	Carbon, Total Organic (Toc)	Total	Actual		Final	8.6	mg/l	USEPA ~415.1						
8/5/2003	Carbon, Total Organic (Toc)	Total	Actual		Final	11.0	mg/l	USEPA ~415.1						
5/15/2003	Carbon, Total Organic (Toc)	Total	Actual		Final	9.8	mg/l	USEPA ~415.1						
2/10/2003	Carbon, Total Organic (Toc)	Total	Actual		Final	6.7	mg/l	USEPA ~415.1						
11/26/2002	Carbon, Total Organic (Toc)	Total	Actual		Final	6.2	mg/l	~						
5/23/2002	Carbon, Total Organic (Toc)	Total	Actual		Final	6.5	mg/l	~						
2/19/2002	Carbon, Total Organic (Toc)	Total	Actual		Final	4.3	mg/l	~						
11/14/2001	Carbon, Total Organic (Toc)	Total	Actual		Final	5.3	mg/l	~						
8/15/2001	Carbon, Total Organic (Toc)	Total	Actual		Final	5.8	mg/l	~						
5/1/2001	Carbon, Total Organic (Toc)	Total	Actual		Final	4.9	mg/l	~						
8/19/1999	Carbon, Total Organic (Toc)	Total	Actual		Final	4.3	mg/l	~						
5/19/1999	Carbon, Total Organic (Toc)	Total	Actual		Final	4.2	mg/l	~						
8/5/1998	CARBON, TOTAL ORGANIC (MG/L AS C)	B	1245	680		7.3		D						
6/2/1993	CARBON, TOTAL ORGANIC (MG/L AS C)	B	1350	680		5.0		D						
3/4/1993	CARBON, TOTAL ORGANIC (MG/L AS C)	B	1300	680		11.3		D						
9/8/1993	CARBON, TOTAL ORGANIC (MG/L AS C)	B	1325	680		6.7		D						
12/8/1992	CARBON, TOTAL ORGANIC (MG/L AS C)	B	1235	680		6.7		D						
11/6/2008	Chromium	Total	Actual		Final	*Present <QL		APHA ~3120		Chromium III				
8/27/2008	Chromium	Total	Actual		Final	*Present <QL		APHA ~3120		580	28			100 total
5/27/2008	Chromium	Total	Actual		Final	*Present <QL		APHA ~3120						
2/7/2008	Chromium	Total	Actual		Final	*Present <QL		APHA ~3120		Chromium VI				
11/6/2007	Chromium	Total	Actual		Final	*Present <QL		APHA ~3120		16	11			100 total
8/16/2007	Chromium	Total	Actual		Final	*Present <QL		APHA ~3120						
5/30/2007	Chromium	Total	Actual		Final	*Present <QL		APHA ~3120						
2/5/2007	Chromium	Total	Actual		Final	*Present <QL		APHA ~3120						
11/29/2006	Chromium	Total	Actual		Final	*Present <QL		APHA ~3120						
8/24/2006	Chromium	Total	Actual		Final	120.0	ug/l	APHA ~3120						
5/25/2006	Chromium	Total	Actual		Final	*Present <QL		APHA ~3120						
2/2/2006	Chromium	Total	Actual		Final	*Present <QL		APHA ~3120						
11/14/2005	Chromium	Total	Actual		Final	*Present <QL		APHA ~3120						
8/30/2005	Chromium	Total	Actual		Final	*Present <QL		APHA ~3120						
5/26/2005	Chromium	Total	Actual		Final	*Present <QL		APHA ~3120						
2/3/2005	Chromium	Total	Actual		Final	*Present <QL		APHA ~3120						
11/4/2004	Chromium	Total	Actual		Final	*Present <QL		APHA ~3120						
8/5/2004	Chromium	Total	Actual		Final	16.0	ug/l	APHA ~3120						
5/20/2004	Chromium	Total	Actual		Final	*Present <QL		APHA ~3120						
2/12/2004	Chromium	Total	Actual		Final	*Present <QL		APHA ~3120						
11/6/2003	Chromium	Total	Actual		Final	*Present <QL		APHA ~3120						
8/5/2003	Chromium	Total	Actual		Final	*Present <QL		APHA ~3120						
5/15/2003	Chromium	Total	Actual		Final	*Present <QL		APHA ~3120						
2/10/2003	Chromium	Total	Actual		Final	*Present <QL		APHA ~3120						
11/26/2002	Chromium	Total	Actual		Final	*Present <QL	ug/l	APHA ~3120						
5/23/2002	Chromium	Total	Actual		Final	*Present <QL	ug/l	APHA ~3120						
2/19/2002	Chromium	Total	Actual		Final	*Present <QL	ug/l	APHA ~3120						
11/14/2001	Chromium	Total	Actual		Final	*Present <QL	ug/l	APHA ~3120						
8/15/2001	Chromium	Total	Actual		Final	*Present <QL	ug/l	APHA ~3120						
5/1/2001	Chromium	Total	Actual		Final	*Present <QL	ug/l	APHA ~3120						
8/19/1999	Chromium	Total	Actual		Final	*Present <QL	ug/l	APHA ~3120						
5/19/1999	Chromium	Total	Actual		Final	*Present <QL	ug/l	APHA ~3120						
8/5/1998	CHROMIUM, TOTAL (UG/L AS CR)	B	1245	1034		10.0	K	D						
5/27/1998	CHROMIUM, TOTAL (UG/L AS CR)	B	1015	1034		10.0	K	D						
9/8/1993	CHROMIUM, TOTAL (UG/L AS CR)	B	1325	1034		10.0	K	D						
6/2/1993	CHROMIUM, TOTAL (UG/L AS CR)	B	1350	1034		10.0	K	D						
3/4/1993	CHROMIUM, TOTAL (UG/L AS CR)	B	1300	1034		10.0	K	D						
12/8/1992	CHROMIUM, TOTAL (UG/L AS CR)	B	1235	1034		10.0	K	D						
9/25/1973	CHROMIUM, DISSOLVED (UG/L AS CR)	B	2500	1030		100.0	K	D						
										3.8	2.9	1300		
11/6/2008	Copper	Total	Actual		Final	*Present <QL		APHA ~3120						
8/27/2008	Copper	Total	Actual		Final	*Present <QL		APHA ~3120						
5/27/2008	Copper	Total	Actual		Final	*Present <QL		APHA ~3120						
2/7/2008	Copper	Total	Actual		Final	*Present <QL		APHA ~3120						
11/6/2007	Copper	Total	Actual		Final	*Present <QL		APHA ~3120						
8/16/2007	Copper	Total	Actual		Final	*Present <QL		APHA ~3120						
5/30/2007	Copper	Total	Actual		Final	*Present <QL		APHA ~3120						
2/5/2007	Copper	Total	Actual		Final	*Present <QL		APHA ~3120						
11/29/2006	Copper	Total	Actual		Final	*Present <QL		APHA ~3120						
8/24/2006	Copper	Total	Actual		Final	*Present <QL		APHA ~3120						
5/25/2006	Copper	Total	Actual		Final	11.0	ug/l	APHA ~3120						
2/2/2006	Copper	Total	Actual		Final	*Present <QL		APHA ~3120						
11/14/2005	Copper	Total	Actual		Final	*Present <QL		APHA ~3120						
8/30/2005	Copper	Total	Actual		Final	*Present <QL		APHA ~3120						
5/26/2005	Copper	Total	Actual		Final	*Present <QL		APHA ~3120						
2/3/2005	Copper	Total	Actual		Final	*Present <QL		APHA ~3120						
11/4/2004	Copper	Total	Actual		Final	*Present <QL		APHA ~3120						
8/5/2004	Copper	Total	Actual		Final	*Present <QL		APHA ~3120						
5/20/2004	Copper	Total	Actual		Final	*Present <QL		APHA ~3120						
2/12/2004	Copper	Total	Actual		Final	*Present <QL		APHA ~3120						
11/6/2003	Copper	Total	Actual		Final	*Present <QL		APHA ~3120						
8/5/2003	Copper	Total	Actual		Final	*Present <QL		APHA ~3120						
5/15/2003	Copper	Total	Actual		Final	*Present <QL		APHA ~3120						
2/10/2003	Copper	Total	Actual		Final	*Present <QL		APHA ~3120						
11/26/2002	Copper	Total	Actual		Final	*Present <QL	ug/l	APHA ~3120						
5/23/2002	Copper	Total	Actual		Final	*Present <QL	ug/l	APHA ~3120						
2/19/2002	Copper	Total	Actual		Final	*Present <QL	ug/l	APHA ~3120						
11/14/2001	Copper	Total	Actual		Final	*Present <QL	ug/l	APHA ~3120						
8/15/2001	Copper	Total	Actual		Final	*Present <QL	ug/l	APHA ~3120						
5/1/2001	Copper	Total	Actual		Final	*Present <QL	ug/l	APHA ~3120						
8/19/1999	Copper	Total	Actual		Final	*Present <QL	ug/l	APHA ~3120						
5/19/1999	Copper	Total	Actual		Final	*Present <QL	ug/l	APHA ~3120						
8/5/1998	COPPER, TOTAL (UG/L AS CU)	B	1245	1042		10.0	K	D						
5/27/1998	COPPER, TOTAL (UG/L AS CU)	B	1015	1042		10.0	K	D						
9/8/1993	COPPER, TOTAL (UG/L AS CU)	B	1325	1042		10.0	K	D						
6/2/1993	COPPER, TOTAL (UG/L AS CU)	B	1350	1042		10.0		D						
3/4/1993	COPPER, TOTAL (UG/L AS CU)	B	1300	1042		10.0		D						
12/8/1992	COPPER, TOTAL (UG/L AS CU)	B	1235	1042		10.0	K	D						
9/25/1973	COPPER, DISSOLVED (UG/L AS CU)	B	2500	1040		50.0	K	D						
12/5/2007	Depth		Actual		Final	0.3	m	~						
11/6/2007	Depth		Actual		Final	0.3	m	~						
2/5/2007	Depth		Actual		Final	0.3	m	~						
1/2/2007	Depth		Actual		Final	0.3	m	~						
12/11/2006	Depth		Actual		Final	0.3	m	~						
11/29/2006	Depth		Actual		Final	0.3	m	~						
10/30/2006	Depth		Actual		Final	0.3	m	~						
9/21/2006	Depth		Actual		Final	0.3	m	~						
8/24/2006	Depth		Actual		Final	0.3	m	~						
7/6/2006	Depth		Actual		Final	0.3	m	~						
6/28/2006	Depth		Actual		Final	0.3	m	~						
5/25/2006	Depth		Actual		Final	0.3	m	~						
4/27/2006	Depth		Actual		Final	0.3	m	~						
3/23/2006	Depth		Actual		Final	0.3	m	~						
2/2/2006	Depth		Actual		Final	0.3	m	~						
1/18/2006	Depth		Actual		Final	0.3	m	~						
12/7/2005	Depth		Actual		Final	0.3	m	~						
11/14/2005	Depth		Actual		Final	0.3	m	~						
10/6/2005	Depth		Actual		Final	0.3	m	~						
9/29/2005	Depth		Actual		Final	0.3	m	~						
8/30/2005	Depth		Actual		Final	0.3	m	~						
7/28/2005	Depth		Actual		Final	0.3	m	~						
6/30/2005	Depth		Actual		Final	0.3	m	~						
5/26/2005	Depth		Actual		Final	0.3	m	~						
4/7/2005	Depth		Actual		Final	0.3	m	~						
3/30/2005	Depth		Actual		Final	0.3	m	~						
2/3/2005	Depth		Actual		Final	0.3	m	~						
1/27/2005	Depth		Actual		Final	0.3	m	~						
12/2/2004	Depth		Actual		Final	0.3	m	~						
11/4/2004	Depth		Actual		Final	0.3	m	~						

10/20/2004	Depth		Actual		Final	0.3	m	~						
9/16/2004	Depth		Actual		Final	0.3	m	~						
8/5/2004	Depth		Actual		Final	0.3	m	~						
7/29/2004	Depth		Actual		Final	0.3	m	~						
6/10/2004	Depth		Actual		Final	0.3	m	~						
5/20/2004	Depth		Actual		Final	0.3	m	~						
4/8/2004	Depth		Actual		Final	0.3	m	~						
3/2/2004	Depth		Actual		Final	0.3	m	~						
2/12/2004	Depth		Actual		Final	0.3	m	~						
1/8/2004	Depth		Actual		Final	0.3	m	~						
12/3/2003	Depth		Actual		Final	0.3	m	~						
11/6/2003	Depth		Actual		Final	0.3	m	~						
10/9/2003	Depth		Actual		Final	0.3	m	~						
9/2/2003	Depth		Actual		Final	0.3	m	~						
8/5/2003	Depth		Actual		Final	0.3	m	~						
7/1/2003	Depth		Actual		Final	0.3	m	~						
6/5/2003	Depth		Actual		Final	0.3	m	~						
5/15/2003	Depth		Actual		Final	0.3	m	~						
4/10/2003	Depth		Actual		Final	0.3	m	~						
3/20/2003	Depth		Actual		Final	0.3	m	~						
2/10/2003	Depth		Actual		Final	0.3	m	~						
1/21/2003	Depth		Actual		Final	0.3	m	~						
12/5/2002	Depth		Actual		Final	0.3	m	~						
11/26/2002	Depth		Actual		Final	0.3	m	~						
10/16/2002	Depth		Actual		Final	0.3	m	~						
9/3/2002	Depth		Actual		Final	0.3	m	~						
7/18/2002	Depth		Actual		Final	0.3	m	~						
6/17/2002	Depth		Actual		Final	0.3	m	~						
5/23/2002	Depth		Actual		Final	0.3	m	~						
4/9/2002	Depth		Actual		Final	0.3	m	~						
3/19/2002	Depth		Actual		Final	0.3	m	~						
2/19/2002	Depth		Actual		Final	0.3	m	~						
1/23/2002	Depth		Actual		Final	0.3	m	~						
12/6/2001	Depth		Actual		Final	0.3	m	~						
11/14/2001	Depth		Actual		Final	0.3	m	~						
10/18/2001	Depth		Actual		Final	0.3	m	~						
9/11/2001	Depth		Actual		Final	0.3	m	~						
8/15/2001	Depth		Actual		Final	0.3	m	~						
7/23/2001	Depth		Actual		Final	0.3	m	~						
6/21/2001	Depth		Actual		Final	0.3	m	~						
4/5/2001	Depth		Actual		Final	0.3	m	~						
3/8/2001	Depth		Actual		Final	0.3	m	~						
2/1/2001	Depth		Actual		Final	0.3	m	~						
1/3/2001	Depth		Actual		Final	0.3	m	~						
8/3/2000	Depth		Actual		Final	0.3	m	~						
7/18/2000	Depth		Actual		Final	0.3	m	~						
6/7/2000	Depth		Actual		Final	0.3	m	~						
5/9/2000	Depth		Actual		Final	0.3	m	~						
10/21/1999	Depth		Actual		Final	0.3	m	~						
9/2/1999	Depth		Actual		Final	0.3	m	~						
8/19/1999	Depth		Actual		Final	0.3	m	~						
7/8/1999	Depth		Actual		Final	0.3	m	~						
6/2/1999	Depth		Actual		Final	0.3	m	~						
5/19/1999	Depth		Actual		Final	0.3	m	~						
10/21/1998	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1020	82048		0.3		D						
9/24/1998	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1050	82048		0.3		D						
8/5/1998	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1245	82048		0.3		D						
7/30/1998	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1140	82048		0.3		D						
6/18/1998	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	920	82048		0.3		D						
5/27/1998	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1015	82048		0.3		D						
4/2/1998	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1115	82048		0.3		D						
3/9/1998	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1320	82048		0.3		D						
10/9/1997	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1110	82048		0.3		D						
9/2/1997	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1340	82048		0.3		D						
8/5/1997	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1330	82048		0.3		D						
7/1/1997	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1155	82048		0.3		D						
6/19/1997	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1045	82048		0.3		D						
5/14/1997	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1150	82048		0.3		D						
10/10/1996	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1109	82048		0.3		D						
7/22/1996	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1405	82048		0.3		D						
6/26/1996	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1345	82048		0.3		D						
5/14/1996	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1050	82048		0.3		D						
10/4/1995	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1200	82048		0.3		D						
9/20/1995	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1401	82048		0.3		D						
8/16/1995	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1430	82048		0.3		D						
7/5/1995	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1350	82048		0.3		D						
6/13/1995	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1450	82048		0.3		D						
5/9/1995	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1335	82048		0.3		D						
10/18/1994	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1150	82048		0.3		D						
9/15/1994	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1120	82048		0.3		D						
8/25/1994	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1115	82048		0.8		D						
8/9/1994	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1150	82048		0.3		D						
6/8/1994	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1125	82048		0.3		D						
5/5/1994	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1445	82048		0.3		D						
9/8/1993	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1325	82048		0.3		D						
8/18/1993	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1300	82048		0.3		D						
7/13/1993	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1305	82048		0.3		D						
6/2/1993	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1350	82048		0.3		D						
5/18/1993	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1406	82048		0.3		D						
4/1/1993	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1120	82048		0.3		D						
3/4/1993	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1300	82048		0.3		D						
2/11/1993	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1330	82048		0.3		D						
1/19/1993	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1031	82048		0.3		D						
12/8/1992	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1235	82048		0.3		D						
11/18/1992	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1035	82048		0.3		D						
10/22/1992	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1035	82048		0.3		D						
9/15/1992	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1045	82048		0.3		D						
8/26/1992	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1035	82048		0.3		D						
7/28/1992	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1125	82048		0.3		D						
6/17/1992	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1045	82048		0.3		D						
5/20/1992	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1259	82048		0.3		D						
10/21/1991	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1055	82048		0.3		D						
9/11/1991	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1200	82048		0.3		D						
8/12/1991	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1320	82048		0.3		D						
7/2/1991	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1120	82048		0.3		D						
6/12/1991	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1050	82048		0.3		D						
5/29/1991	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1200	82048		0.3		D						
10/16/1990	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1345	82048		0.3		D						
9/18/1990	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1305	82048		0.3		D						
8/7/1990	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1143	82048		0.3		D						
7/16/1990	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1326	82048		0.3		D						
6/12/1990	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1205	82048		0.3		D						
5/21/1990	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1230	82048		0.3		D						
10/16/1989	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1253	82048		0.3		D						
9/5/1989	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1349	82048		0.3		D						
8/8/1989	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1218	82048		0.3		D						
7/25/1989	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1220	82048		0.3		D						
6/8/1989	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1248	82048		0.3		D						
5/11/1989	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1213	82048		0.3		D						
10/11/1988	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1136	82048		0.3		D						
9/12/1988	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1212	82048		0.3		D						
7/13/1988	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1105	82048		1.0		D						
6/14/1988	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1253	82048		0.3		D						
5/4/1988	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1255	82048		0.3		D						
10/5/1987	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1125	82048		0.3		D						
9/3/1987	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1110	82048		0.3		D						
8/17/1987	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1205	82048		0.3		D						
7/14/1987	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1145	82048		0.3		D						
6/2/1987	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1400	82048		0.3		D						
5/13/1987	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1240	82048		0.3		D						
10/13/1986	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1155	82048		0.3		D						
9/24/1986	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1025	82048		0.3		D						
8/7/1986	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1110	82048		0.3		D						
6/18/1986	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1030	82048		0.3		D						
10/29/1985	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1055	82048		0.3		D						
9/27/1985	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1145	82048		0.3		D						
8/26/1985	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1030	82048		0.3		D						
7/18/1985	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1130	82048		0.3		D						
6/10/1985	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1205	82048		0.3		D						
5/21/1985	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1045	82048		0.3		D						
10/25/1984	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1030	82048		0.3		D						
9/11/1984	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1100	82048		0.3		D						
8/23/1984	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1110	82048		0.3		D						
7/17/1984	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1335	82048		0.3		D						
6/25/1984	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1040	82048		0.3		D						
5/3/1984	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1115	82048		0.3		D						
5/19/1980	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1235	82048		0.3		D						
10/26/1979	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1200	82048		0.3		D						
9/27/1979	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1210	82048		0.3		D						
8/22/1979	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1100	82048		0.3		D						
7/10/1979	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1045	82048		0.3		D						
6/26/1979	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1110	82048		0.3		D						
5/7/1979	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1150	82048		0.3		D						
10/24/1978	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1005	82048		0.3		D						
9/8/1978	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1125	82048		0.3		D						
9/8/1978	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	2500	82048		0.3		D						
8/9/1978	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1000	82048		0.3		D						
8/9/1978	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	2500	82048		0.3		D						
7/13/1978	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1105	82048		0.3		D						
6/27/1978	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1240	82048		0.3		D						
5/3/1978	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1145	82048		0.3		D						
10/27/1977	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1110	82048		0.3		D						
9/14/1977	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1130	82048		0.3		D						
8/10/1977	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1035	82048		0.3		D						
7/22/1977	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL	B	1025	82048		0.3		D						

6/14/1977	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL		B	1140	82048		0.3		D					
5/6/1977	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL		B	1100	82048		0.3		D					
9/28/1976	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL		B	1045	82048		0.3		D					
9/1/1976	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL		B	1045	82048		0.3		D					
7/30/1976	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL		B	915	82048		0.3		D					
6/29/1976	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL		B	1100	82048		0.3		D					
5/26/1976	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL		B	845	82048		0.3		D					
4/23/1976	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL		B	930	82048		0.3		D					
10/17/1975	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL		B	920	82048		0.3		D					
8/29/1975	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL		B	940	82048		0.3		D					
8/5/1975	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL		B	1000	82048		0.3		D					
7/3/1975	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL		B	950	82048		0.3		D					
5/7/1975	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL		B	915	82048		0.3		D					
11/4/1974	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL		B	940	82048		0.3		D					
9/24/1974	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL		B	850	82048		0.6		D					
9/3/1974	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL		B	1015	82048		0.5		D					
8/1/1974	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL		B	1000	82048		0.3		D					
6/25/1974	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL		B	1000	82048		0.3		D					
5/3/1974	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL		B	1000	82048		0.6		D					
9/25/1973	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL		B	1030	82048		0.3		D					
4/20/1973	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL		B	840	82048		1.2		D					
3/13/1973	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL		B	1050	82048		1.2		D					
									Daily average no less than 5.0, with a low of 4.0					
12/4/2008	Dissolved oxygen (DO)		Dissolved	Actual		Final	12.4	mg/l	~					
11/6/2008	Dissolved oxygen (DO)		Dissolved	Actual		Final	9.7	mg/l	~					
10/23/2008	Dissolved oxygen (DO)		Dissolved	Actual		Final	10.0	mg/l	~					
9/25/2008	Dissolved oxygen (DO)		Dissolved	Actual		Final	8.3	mg/l	~					
8/27/2008	Dissolved oxygen (DO)		Dissolved	Actual		Final	6.9	mg/l	~					
7/10/2008	Dissolved oxygen (DO)		Dissolved	Actual		Final	6.2	mg/l	~					
6/19/2008	Dissolved oxygen (DO)		Dissolved	Actual		Final	7.5	mg/l	~					
5/27/2008	Dissolved oxygen (DO)		Dissolved	Actual		Final	8.0	mg/l	~					
4/24/2008	Dissolved oxygen (DO)		Dissolved	Actual		Final	8.9	mg/l	~					
3/6/2008	Dissolved oxygen (DO)		Dissolved	Actual		Final	9.3	mg/l	~					
2/7/2008	Dissolved oxygen (DO)		Dissolved	Actual		Final	9.6	mg/l	~					
1/16/2008	Dissolved oxygen (DO)		Dissolved	Actual		Final	11.5	mg/l	~					
12/5/2007	Dissolved oxygen (DO)		Dissolved	Actual		Final	10.7	mg/l	~					
11/6/2007	Dissolved oxygen (DO)		Dissolved	Actual		Final	9.8	mg/l	~					
10/29/2007	Dissolved oxygen (DO)		Dissolved	Actual		Final	8.6	mg/l	~					
9/13/2007	Dissolved oxygen (DO)		Dissolved	Actual		Final	4.6	mg/l	~					
8/16/2007	Dissolved oxygen (DO)		Dissolved	Actual		Final	5.0	mg/l	~					
7/30/2007	Dissolved oxygen (DO)		Dissolved	Actual		Final	7.0	mg/l	~					
6/20/2007	Dissolved oxygen (DO)		Dissolved	Actual		Final	7.0	mg/l	~					
5/30/2007	Dissolved oxygen (DO)		Dissolved	Actual		Final	7.7	mg/l	~					
4/24/2007	Dissolved oxygen (DO)		Dissolved	Actual		Final	8.3	mg/l	~					
3/20/2007	Dissolved oxygen (DO)		Dissolved	Actual		Final	9.7	mg/l	~					
2/5/2007	Dissolved oxygen (DO)		Dissolved	Actual		Final	10.7	mg/l	~					
1/2/2007	Dissolved oxygen (DO)		Dissolved	Actual		Final	9.7	mg/l	~					
12/11/2006	Dissolved oxygen (DO)		Dissolved	Actual		Final	11.8	mg/l	~					
11/29/2006	Dissolved oxygen (DO)		Dissolved	Actual		Final	9.7	mg/l	~					
10/30/2006	Dissolved oxygen (DO)		Dissolved	Actual		Final	8.1	mg/l	~					
9/21/2006	Dissolved oxygen (DO)		Dissolved	Actual		Final	8.2	mg/l	~					
8/24/2006	Dissolved oxygen (DO)		Dissolved	Actual		Final	6.6	mg/l	~					
7/6/2006	Dissolved oxygen (DO)		Dissolved	Actual		Final	6.4	mg/l	~					
6/28/2006	Dissolved oxygen (DO)		Dissolved	Actual		Final	6.6	mg/l	~					
5/25/2006	Dissolved oxygen (DO)		Dissolved	Actual		Final	7.0	mg/l	~					
4/27/2006	Dissolved oxygen (DO)		Dissolved	Actual		Final	7.3	mg/l	~					
3/23/2006	Dissolved oxygen (DO)		Dissolved	Actual		Final	11.0	mg/l	~					
2/2/2006	Dissolved oxygen (DO)		Dissolved	Actual		Final	9.8	mg/l	~					
1/18/2006	Dissolved oxygen (DO)		Dissolved	Actual		Final	9.6	mg/l	~					
12/7/2005	Dissolved oxygen (DO)		Dissolved	Actual		Final	9.2	mg/l	~					
11/14/2005	Dissolved oxygen (DO)		Dissolved	Actual		Final	8.0	mg/l	~					
10/6/2005	Dissolved oxygen (DO)		Dissolved	Actual		Final	6.1	mg/l	~					
9/29/2005	Dissolved oxygen (DO)		Dissolved	Actual		Final	6.6	mg/l	~					
8/30/2005	Dissolved oxygen (DO)		Dissolved	Actual		Final	7.1	mg/l	~					
7/28/2005	Dissolved oxygen (DO)		Dissolved	Actual		Final	6.7	mg/l	~					
6/30/2005	Dissolved oxygen (DO)		Dissolved	Actual		Final	5.7	mg/l	~					
5/26/2005	Dissolved oxygen (DO)		Dissolved	Actual		Final	8.5	mg/l	~					
4/7/2005	Dissolved oxygen (DO)		Dissolved	Actual		Final	8.8	mg/l	~					
3/30/2005	Dissolved oxygen (DO)		Dissolved	Actual		Final	7.7	mg/l	~					
2/3/2005	Dissolved oxygen (DO)		Dissolved	Actual		Final	12.1	mg/l	~					
1/27/2005	Dissolved oxygen (DO)		Dissolved	Actual		Final	11.1	mg/l	~					
12/2/2004	Dissolved oxygen (DO)		Dissolved	Actual		Final	10.1	mg/l	~					
11/4/2004	Dissolved oxygen (DO)		Dissolved	Actual		Final	7.6	mg/l	~					
10/20/2004	Dissolved oxygen (DO)		Dissolved	Actual		Final	8.3	mg/l	~					
9/16/2004	Dissolved oxygen (DO)		Dissolved	Actual		Final	1.7	mg/l	~					
8/5/2004	Dissolved oxygen (DO)		Dissolved	Actual		Final	6.9	mg/l	~					
7/29/2004	Dissolved oxygen (DO)		Dissolved	Actual		Final	7.4	mg/l	~					
6/10/2004	Dissolved oxygen (DO)		Dissolved	Actual		Final	7.5	mg/l	~					
5/20/2004	Dissolved oxygen (DO)		Dissolved	Actual		Final	8.0	mg/l	~					
4/8/2004	Dissolved oxygen (DO)		Dissolved	Actual		Final	10.5	mg/l	~					
3/2/2004	Dissolved oxygen (DO)		Dissolved	Actual		Final	9.9	mg/l	~					
2/12/2004	Dissolved oxygen (DO)		Dissolved	Actual		Final	11.4	mg/l	~					
1/8/2004	Dissolved oxygen (DO)		Dissolved	Actual		Final	11.7	mg/l	~					
12/3/2003	Dissolved oxygen (DO)		Dissolved	Actual		Final	11.7	mg/l	~					
11/6/2003	Dissolved oxygen (DO)		Dissolved	Actual		Final	7.7	mg/l	~					
10/9/2003	Dissolved oxygen (DO)		Dissolved	Actual		Final	8.0	mg/l	~					
9/2/2003	Dissolved oxygen (DO)		Dissolved	Actual		Final	6.6	mg/l	~					
8/5/2003	Dissolved oxygen (DO)		Dissolved	Actual		Final	6.7	mg/l	~					
7/1/2003	Dissolved oxygen (DO)		Dissolved	Actual		Final	7.0	mg/l	~					
6/5/2003	Dissolved oxygen (DO)		Dissolved	Actual		Final	7.7	mg/l	~					
5/15/2003	Dissolved oxygen (DO)		Dissolved	Actual		Final	8.2	mg/l	~					
4/10/2003	Dissolved oxygen (DO)		Dissolved	Actual		Final	9.3	mg/l	~					
3/20/2003	Dissolved oxygen (DO)		Dissolved	Actual		Final	9.0	mg/l	~					
2/10/2003	Dissolved oxygen (DO)		Dissolved	Actual		Final	12.2	mg/l	~					
1/21/2003	Dissolved oxygen (DO)		Dissolved	Actual		Final	12.1	mg/l	~					
12/5/2002	Dissolved oxygen (DO)		Dissolved	Actual		Final	12.0	mg/l	~					
11/26/2002	Dissolved oxygen (DO)		Dissolved	Actual		Final	11.5	mg/l	~					
10/16/2002	Dissolved oxygen (DO)		Dissolved	Actual		Final	8.2	mg/l	~					
9/3/2002	Dissolved oxygen (DO)		Dissolved	Actual		Final	7.2	mg/l	~					
7/18/2002	Dissolved oxygen (DO)		Dissolved	Actual		Final	6.7	mg/l	~					
6/17/2002	Dissolved oxygen (DO)		Dissolved	Actual		Final	7.2	mg/l	~					
5/23/2002	Dissolved oxygen (DO)		Dissolved	Actual		Final	10.1	mg/l	~					
4/9/2002	Dissolved oxygen (DO)		Dissolved	Actual		Final	9.2	mg/l	~					
3/19/2002	Dissolved oxygen (DO)		Dissolved	Actual		Final	9.2	mg/l	~					
2/19/2002	Dissolved oxygen (DO)		Dissolved	Actual		Final	11.9	mg/l	~					
1/23/2002	Dissolved oxygen (DO)		Dissolved	Actual		Final	12.0	mg/l	~					
12/6/2001	Dissolved oxygen (DO)		Dissolved	Actual		Final	9.9	mg/l	~					
11/14/2001	Dissolved oxygen (DO)		Dissolved	Actual		Final	10.8	mg/l	~					
10/18/2001	Dissolved oxygen (DO)		Dissolved	Actual		Final	9.6	mg/l	~					
9/11/2001	Dissolved oxygen (DO)		Dissolved	Actual		Final	7.1	mg/l	~					
8/15/2001	Dissolved oxygen (DO)		Dissolved	Actual		Final	7.1	mg/l	~					
7/23/2001	Dissolved oxygen (DO)		Dissolved	Actual		Final	6.8	mg/l	~					
6/21/2001	Dissolved oxygen (DO)		Dissolved	Actual		Final	7.5	mg/l	~					
4/5/2001	Dissolved oxygen (DO)		Dissolved	Actual		Final	9.5	mg/l	~					
3/8/2001	Dissolved oxygen (DO)		Dissolved	Actual		Final	11.3	mg/l	~					
2/1/2001	Dissolved oxygen (DO)		Dissolved	Actual		Final	10.8	mg/l	~					
1/3/2001	Dissolved oxygen (DO)		Dissolved	Actual		Final	14.1	mg/l	~					
8/3/2000	Dissolved oxygen (DO)		Dissolved	Actual		Final	7.3	mg/l	~					
7/18/2000	Dissolved oxygen (DO)		Dissolved	Actual		Final	7.2	mg/l	~					
6/7/2000	Dissolved oxygen (DO)		Dissolved	Actual		Final	7.7	mg/l	~					
5/9/2000	Dissolved oxygen (DO)		Dissolved	Actual		Final	7.3	mg/l	~					
10/21/1999	Dissolved oxygen (DO)		Dissolved	Actual		Final	9.1	mg/l	~					
9/2/1999	Dissolved oxygen (DO)		Dissolved	Actual		Final	8.2	mg/l	~					
8/19/1999	Dissolved oxygen (DO)		Dissolved	Actual		Final	6.9	mg/l	~					
7/8/1999	Dissolved oxygen (DO)		Dissolved	Actual		Final	7.1	mg/l	~					
6/2/1999	Dissolved oxygen (DO)		Dissolved	Actual		Final	8.0	mg/l	~					
5/19/1999	Dissolved oxygen (DO)		Dissolved	Actual		Final	7.7	mg/l	~					
10/21/1998	OXYGEN, DISSOLVED	MG/L	B	1020	300		8.4		D					
9/24/1998	OXYGEN, DISSOLVED	MG/L	B	1050	300		8.6		D					
8/5/1998	OXYGEN, DISSOLVED	MG/L	B	1245	300		8.0		D					
7/30/1998	OXYGEN, DISSOLVED	MG/L	B	1140	300		7.2		D					
6/18/1998	OXYGEN, DISSOLVED	MG/L	B	920	300		7.7		D					
5/27/1998	OXYGEN, DISSOLVED	MG/L	B	1015	300		7.3		D					
4/2/1998	OXYGEN, DISSOLVED	MG/L	B	1115	300		8.4		D					
3/9/1998	OXYGEN, DISSOLVED	MG/L	B	1320	300		9.3		D					
10/9/1997	OXYGEN, DISSOLVED	MG/L	B	1110	300		8.3		D					
9/2/1997	OXYGEN, DISSOLVED	MG/L	B	1340	300		8.0		D					
8/5/1997	OXYGEN, DISSOLVED	MG/L	B	1330	300		8.4		D					
7/1/1997	OXYGEN, DISSOLVED	MG/L	B	1155	300		6.8		D					
6/19/1997	OXYGEN, DISSOLVED	MG/L	B	1045	300		7.0		D					
5/14/1997	OXYGEN, DISSOLVED	MG/L	B	1150	300		8.1		D					
10/10/1996	OXYGEN, DISSOLVED	MG/L	B	1109	300		9.5		D					
8/5/1996	OXYGEN, DISSOLVED	MG/L	B	1130	300		7.0		D					
7/22/1996	OXYGEN, DISSOLVED	MG/L	B	1405	300		7.4		D					
6/26/1996	OXYGEN, DISSOLVED	MG/L	B	1345	300		7.2		D					
5/14/1996	OXYGEN, DISSOLVED	MG/L	B	1050	300		8.5		D					
10/4/1995	OXYGEN, DISSOLVED	MG/L	B	1200	300		7.9		D					
9/20/1995	OXYGEN, DISSOLVED	MG/L	B	1401	300		7.1		D					
8/16/1995	OXYGEN, DISSOLVED	MG/L	B	1430	300		8.1		D					
7/5/1995	OXYGEN, DISSOLVED	MG/L	B	1350	300		7.2		D					
6/13/1995	OXYGEN, DISSOLVED	MG/L	B	1450	300		8.0		D					
5/9/1995	OXYGEN, DISSOLVED	MG/L	B	1335	300		8.5		D					
10/18/1994	OXYGEN, DISSOLVED	MG/L	B	1150	300		9.3		D					
9/15/1994	OXYGEN, DISSOLVED	MG/L	B	1120	300		7.7		D					
8/25/1994	OXYGEN, DISSOLVED	MG/L	B	1115	300		7.4		D					
8/9/1994	OXYGEN, DISSOLVED	MG/L	B	1150	300		9.0		D					
6/8/1994	OXYGEN, DISSOLVED	MG/L	B	1125	300		7.5		D					
5/5/1994	OXYGEN, DISSOLVED	MG/L	B	1445	300		9.0		D					
9/8/1993	OXYGEN, DISSOLVED	MG/L	B	1325	300		6.2		D					
8/18/1993	OXYGEN, DISSOLVED	MG/L	B	1300	300		6.8		D					
7/13/1993	OXYGEN, DISSOLVED	MG/L	B	1305	300		7.0		D					
6/2/1993	OXYGEN, DISSOLVED	MG/L	B	1350	300		7.2		D					
5/18/1993	OXYGEN, DISSOLVED	MG/L	B	1406	300		8.3		D					
4/1/1993	OXYGEN, DISSOLVED	MG/L	B	1120	300		8.0		D					
3/4/1993	OXYGEN, DISSOLVED	MG/L	B	1300	300		10.0		D					

2/11/1993	OXYGEN, DISSOLVED	MG/L	B	1330	300		10.8		D							
1/19/1993	OXYGEN, DISSOLVED	MG/L	B	1031	300		10.6		D							
12/8/1992	OXYGEN, DISSOLVED	MG/L	B	1235	300		9.9		D							
11/18/1992	OXYGEN, DISSOLVED	MG/L	B	1035	300		11.0		D							
10/22/1992	OXYGEN, DISSOLVED	MG/L	B	1035	300		10.4		D							
9/15/1992	OXYGEN, DISSOLVED	MG/L	B	1045	300		7.4		D							
8/26/1992	OXYGEN, DISSOLVED	MG/L	B	1035	300		7.2		D							
7/28/1992	OXYGEN, DISSOLVED	MG/L	B	1125	300		6.3		D							
6/17/1992	OXYGEN, DISSOLVED	MG/L	B	1045	300		6.8		D							
5/20/1992	OXYGEN, DISSOLVED	MG/L	B	1259	300		8.3		D							
10/21/1991	OXYGEN, DISSOLVED	MG/L	B	1055	300		10.3		D							
9/11/1991	OXYGEN, DISSOLVED	MG/L	B	1200	300		7.5		D							
8/12/1991	OXYGEN, DISSOLVED	MG/L	B	1320	300		6.8		D							
7/2/1991	OXYGEN, DISSOLVED	MG/L	B	1120	300		6.8		D							
6/12/1991	OXYGEN, DISSOLVED	MG/L	B	1050	300		7.5		D							
5/29/1991	OXYGEN, DISSOLVED	MG/L	B	1200	300		7.2		D							
10/16/1990	OXYGEN, DISSOLVED	MG/L	B	1345	300		7.6		D							
9/18/1990	OXYGEN, DISSOLVED	MG/L	B	1305	300		8.3		D							
8/7/1990	OXYGEN, DISSOLVED	MG/L	B	1143	300		6.7		D							
7/16/1990	OXYGEN, DISSOLVED	MG/L	B	1326	300		6.9		D							
6/12/1990	OXYGEN, DISSOLVED	MG/L	B	1205	300		7.6		D							
5/21/1990	OXYGEN, DISSOLVED	MG/L	B	1230	300		7.4		D							
10/16/1989	OXYGEN, DISSOLVED	MG/L	B	1253	300		7.0		D							
9/5/1989	OXYGEN, DISSOLVED	MG/L	B	1349	300		7.7		D							
8/8/1989	OXYGEN, DISSOLVED	MG/L	B	1218	300		7.1		D							
7/25/1989	OXYGEN, DISSOLVED	MG/L	B	1220	300		7.1		D							
6/8/1989	OXYGEN, DISSOLVED	MG/L	B	1248	300		7.3		D							
5/11/1989	OXYGEN, DISSOLVED	MG/L	B	1213	300		8.1		D							
10/11/1988	OXYGEN, DISSOLVED	MG/L	B	1136	300		10.0		D							
9/12/1988	OXYGEN, DISSOLVED	MG/L	B	1212	300		7.7		D							
7/13/1988	OXYGEN, DISSOLVED	MG/L	B	1105	300		6.8		D							
6/14/1988	OXYGEN, DISSOLVED	MG/L	B	1253	300		8.7		D							
5/4/1988	OXYGEN, DISSOLVED	MG/L	B	1255	300		7.3		D							
10/5/1987	OXYGEN, DISSOLVED	MG/L	B	1125	300		8.9		D							
9/3/1987	OXYGEN, DISSOLVED	MG/L	B	1110	300		7.3		D							
8/17/1987	OXYGEN, DISSOLVED	MG/L	B	1205	300		6.9		D							
7/14/1987	OXYGEN, DISSOLVED	MG/L	B	1145	300		8.1		D							
6/2/1987	OXYGEN, DISSOLVED	MG/L	B	1400	300		5.6		D							
5/13/1987	OXYGEN, DISSOLVED	MG/L	B	1240	300		8.2		D							
10/13/1986	OXYGEN, DISSOLVED	MG/L	B	1155	300		8.3		D							
9/24/1986	OXYGEN, DISSOLVED	MG/L	B	1025	300		7.9		D							
8/7/1986	OXYGEN, DISSOLVED	MG/L	B	1110	300		4.9		D							
6/18/1986	OXYGEN, DISSOLVED	MG/L	B	1030	300		7.0		D							
10/29/1985	OXYGEN, DISSOLVED	MG/L	B	1055	300		9.8		D							
9/27/1985	OXYGEN, DISSOLVED	MG/L	B	1145	300		7.9		D							
8/26/1985	OXYGEN, DISSOLVED	MG/L	B	1030	300		7.6		D							
7/18/1985	OXYGEN, DISSOLVED	MG/L	B	1130	300		7.4		D							
6/10/1985	OXYGEN, DISSOLVED	MG/L	B	1205	300		6.8		D							
5/21/1985	OXYGEN, DISSOLVED	MG/L	B	1045	300		8.0		D							
10/25/1984	OXYGEN, DISSOLVED	MG/L	B	1030	300		7.4		D							
9/11/1984	OXYGEN, DISSOLVED	MG/L	B	1100	300		7.8		D							
8/23/1984	OXYGEN, DISSOLVED	MG/L	B	1110	300		6.6		D							
7/17/1984	OXYGEN, DISSOLVED	MG/L	B	1335	300		6.0		D							
6/25/1984	OXYGEN, DISSOLVED	MG/L	B	1040	300		6.4		D							
5/3/1984	OXYGEN, DISSOLVED	MG/L	B	1115	300		7.7		D							
8/8/1983	OXYGEN, DISSOLVED	MG/L	B	1015	300		6.6		D							
8/23/1982	OXYGEN, DISSOLVED	MG/L	B	940	300		6.7		D							
8/23/1982	OXYGEN, DISSOLVED	MG/L	B	1411	300		6.5		D							
8/23/1982	OXYGEN, DISSOLVED	MG/L	B	1412	300		6.5		D							
8/23/1982	OXYGEN, DISSOLVED	MG/L	B	942	300		6.7		D							
8/23/1982	OXYGEN, DISSOLVED	MG/L	B	1410	300		6.5		D							
8/23/1982	OXYGEN, DISSOLVED	MG/L	B	941	300		6.7		D							
10/16/1980	OXYGEN, DISSOLVED	MG/L	B	1005	300		8.2		D							
9/8/1980	OXYGEN, DISSOLVED	MG/L	B	1315	300		7.3		D							
8/25/1980	OXYGEN, DISSOLVED	MG/L	B	1505	300		7.1		D							
7/24/1980	OXYGEN, DISSOLVED	MG/L	B	1245	300		7.0		D							
6/17/1980	OXYGEN, DISSOLVED	MG/L	B	1240	300		8.0		D							
5/19/1980	OXYGEN, DISSOLVED	MG/L	B	1235	300		7.3		D							
10/26/1979	OXYGEN, DISSOLVED	MG/L	B	1200	300		8.6		D							
9/27/1979	OXYGEN, DISSOLVED	MG/L	B	1210	300		7.9		D							
7/10/1979	OXYGEN, DISSOLVED	MG/L	B	1045	300		7.6		D							
6/26/1979	OXYGEN, DISSOLVED	MG/L	B	1110	300		7.8		D							
5/7/1979	OXYGEN, DISSOLVED	MG/L	B	1150	300		7.8		D							
10/24/1978	OXYGEN, DISSOLVED	MG/L	B	1005	300		9.0		D							
9/8/1978	OXYGEN, DISSOLVED	MG/L	B	1125	300		7.0		D							
8/9/1978	OXYGEN, DISSOLVED	MG/L	B	1000	300		7.0		D							
7/13/1978	OXYGEN, DISSOLVED	MG/L	B	1105	300		5.8		D							
6/27/1978	OXYGEN, DISSOLVED	MG/L	B	1240	300		7.4		D							
5/3/1978	OXYGEN, DISSOLVED	MG/L	B	1145	300		8.4		D							
10/27/1977	OXYGEN, DISSOLVED	MG/L	B	1110	300		7.4		D							
9/14/1977	OXYGEN, DISSOLVED	MG/L	B	1130	300		7.8		D							
8/10/1977	OXYGEN, DISSOLVED	MG/L	B	1035	300		6.4		D							
7/22/1977	OXYGEN, DISSOLVED	MG/L	B	1025	300		6.3		D							
6/14/1977	OXYGEN, DISSOLVED	MG/L	B	1140	300		5.9		D							
5/6/1977	OXYGEN, DISSOLVED	MG/L	B	1100	300		7.7		D							
9/28/1976	OXYGEN, DISSOLVED	MG/L	B	1045	300		7.8		D							
9/1/1976	OXYGEN, DISSOLVED	MG/L	B	1045	300		7.5		D							
7/30/1976	OXYGEN, DISSOLVED	MG/L	B	915	300		6.4		D							
6/29/1976	OXYGEN, DISSOLVED	MG/L	B	1100	300		6.0		D							
5/26/1976	OXYGEN, DISSOLVED	MG/L	B	845	300		8.4		D							
4/23/1976	OXYGEN, DISSOLVED	MG/L	B	930	300		8.2		D							
10/17/1975	OXYGEN, DISSOLVED	MG/L	B	920	300		8.2		D							
8/5/1975	OXYGEN, DISSOLVED	MG/L	B	1000	300		6.7		D							
7/3/1975	OXYGEN, DISSOLVED	MG/L	B	950	300		7.6		D							
5/7/1975	OXYGEN, DISSOLVED	MG/L	B	915	300		8.1		D							
11/4/1974	OXYGEN, DISSOLVED	MG/L	B	940	300		8.4		D							
9/24/1974	OXYGEN, DISSOLVED	MG/L	B	850	300		9.8		D							
9/3/1974	OXYGEN, DISSOLVED	MG/L	B	1015	300		6.6		D							
8/1/1974	OXYGEN, DISSOLVED	MG/L	B	1000	300		7.5		D							
6/25/1974	OXYGEN, DISSOLVED	MG/L	B	1000	300		8.2		D							
5/3/1974	OXYGEN, DISSOLVED	MG/L	B	1000	300		8.2		D							
9/25/1973	OXYGEN, DISSOLVED	MG/L	B	1030	300		8.0		D							
4/20/1973	OXYGEN, DISSOLVED	MG/L	B	840	300		8.1		D							
3/13/1973	OXYGEN, DISSOLVED	MG/L	B	1050	300		9.7		D							
11/30/1971	OXYGEN, DISSOLVED	MG/L	B	2500	300		9.5		D							
10/4/1971	OXYGEN, DISSOLVED	MG/L	B	2500	300		7.2		D							
8/7/1970	OXYGEN, DISSOLVED	MG/L	B	2500	300		7.1		D							
8/4/1970	OXYGEN, DISSOLVED	MG/L	B	2500	300		6.2		D							
8/3/1970	OXYGEN, DISSOLVED	MG/L	B	2500	300		6.3		D							
9/4/1968	OXYGEN, DISSOLVED	MG/L	B	2500	300		7.6		D							
9/3/1968	OXYGEN, DISSOLVED	MG/L	B	2500	300		7.9		D							
10/29/1963	OXYGEN, DISSOLVED	MG/L	B	2500	300		6.3		D							
10/28/1963	OXYGEN, DISSOLVED	MG/L	B	2500	300		8.0		D							
10/22/1963	OXYGEN, DISSOLVED	MG/L	B	2500	300		8.4		D							
6/19/1962	OXYGEN, DISSOLVED	MG/L	B	2500	300		7.5		D							
6/18/1962	OXYGEN, DISSOLVED	MG/L	B	2500	300		7.2		D							
12/4/2008	Enterococcus Group Bacteria		Total	Actual	MPN	Final	19.9	#/100ml	~							
11/6/2008	Enterococcus Group Bacteria		Total	Actual	MPN	Final	75.4	#/100ml	~							
10/23/2008	Enterococcus Group Bacteria		Total	Actual	MPN	Final	65.7	#/100ml	~							
9/25/2008	Enterococcus Group Bacteria		Total	Actual	MPN	Final	178.5	#/100ml	~							
8/27/2008	Enterococcus Group Bacteria		Total	Actual	MPN	Final	579.4	#/100ml	~							
7/10/2008	Enterococcus Group Bacteria		Total	Actual	MPN	Final	365.4	#/100ml	~							
6/19/2008	Enterococcus Group Bacteria		Total	Actual	MPN	Final	105.4	#/100ml	~							
5/27/2008	Enterococcus Group Bacteria		Total	Actual	MPN	Final	139.1	#/100ml	~							
4/24/2008	Enterococcus Group Bacteria		Total	Actual	MPN	Final	5.2	#/100ml	~							
3/6/2008	Enterococcus Group Bacteria		Total	Actual	MPN	Final	261.3	#/100ml	~							
2/7/2008	Enterococcus Group Bacteria		Total	Actual	MPN	Final	20.1	#/100ml	~							
1/16/2008	Enterococcus Group Bacteria		Total	Actual	MPN	Final	8.6	#/100ml	~							
12/5/2007	Enterococcus Group Bacteria		Total	Actual	MPN	Final	86.5	#/100ml	~							
11/6/2007	Enterococcus Group Bacteria		Total	Actual	MPN	Final	46.5	#/100ml	~							
10/29/2007	Enterococcus Group Bacteria		Total	Actual	MPN	Final	84.2	#/100ml	~							
9/13/2007	Enterococcus Group Bacteria		Total	Actual	MPN	Final	56.3	#/100ml	~							
8/16/2007	Enterococcus Group Bacteria		Total	Actual	MPN	Final	142.1	#/100ml	~							
7/30/2007	Enterococcus Group Bacteria		Total	Actual	MPN	Final	410.6	#/100ml	~							
6/20/2007	Enterococcus Group Bacteria		Total	Actual	MPN	Final	178.5	#/100ml	~							
5/30/2007	Enterococcus Group Bacteria		Total	Actual	MPN	Final	52.0	#/100ml	~							
4/24/2007	Enterococcus Group Bacteria		Total	Actual	MPN	Final	34.5	#/100ml	~							
3/20/2007	Enterococcus Group Bacteria		Total	Actual	MPN	Final	11.0	#/100ml	~							
2/5/2007	Enterococcus Group Bacteria		Total	Actual	MPN	Final	15.0	#/100ml	~							
1/2/2007	Enterococcus Group Bacteria		Total	Actual	MPN	Final	66.0	#/100ml	~							
12/11/2006	Enterococcus Group Bacteria		Total	Actual	MPN	Final	42.0	#/100ml	~							
11/29/2006	Enterococcus Group Bacteria		Total	Actual	MPN	Final	140.0	#/100ml	~							
10/30/2006	Enterococcus Group Bacteria		Total	Actual	MPN	Final	68.0	#/100ml	~							
9/21/2006	Enterococcus Group Bacteria		Total	Actual	MPN	Final	160.0	#/100ml	~							
8/24/2006	Enterococcus Group Bacteria		Total	Actual	MPN	Final	320.0	#/100ml	~							
7/6/2006	Enterococcus Group Bacteria		Total	Actual	MPN	Final	280.0	#/100ml	~							
6/28/2006	Enterococcus Group Bacteria		Total	Actual	MPN	Final	480.0	#/100ml	~							
5/25/2006	Enterococcus Group Bacteria		Total	Actual	MPN	Final	130.0	#/100ml	~							
4/27/2006	Enterococcus Group Bacteria		Total	Actual	MPN	Final	*Present >QL		~							
3/23/2006	Enterococcus Group Bacteria		Total	Actual	MPN	Final	130.0	#/100ml	~							
2/2/2006	Enterococcus Group Bacteria		Total	Actual	MPN	Final	26.0	#/100ml	~							
1/18/2006	Enterococcus Group Bacteria		Total	Actual	MPN	Final	610.0	#/100ml	~							
12/7/2005	Enterococcus Group Bacteria		Total	Actual	MPN	Final	1000.0	#/100ml	~							
11/14/2005	Enterococcus Group Bacteria		Total	Actual	MPN	Final	240.0	#/100ml	~							
10/6/2005	Enterococcus Group Bacteria		Total	Actual	MPN	Final	1700.0	#/100ml	~							
9/29/2005	Enterococcus Group Bacteria		Total	Actual	MPN	Final	260.0	#/100ml	~							
8/30/2005	Enterococcus Group Bacteria		Total	Actual	MPN	Final	1300.0	#/100ml	~							
7/28/2005	Enterococcus Group Bacteria		Total	Actual	MPN	Final	920.0	#/100ml	~							
6/30/2005	Enterococcus Group Bacteria		Total	Actual	MPN	Final	1100.0	#/100ml	~							
5/26/2005	Enterococcus Group Bacteria		Total	Actual	MPN	Final	58.0	#/100ml	~							
4/7/2005	Enterococcus Group Bacteria		Total	Actual	MPN	Final	60.0	#/100ml	~							
3/30/2005	Enterococcus Group Bacteria		Total	Actual	MPN	Final	550.0	#/100ml	~							
2/3/2005	Enterococcus Group Bacteria		Total	Actual	MPN	Final	43.0	#/100ml	~							
6/20/2001	Enterococcus Group Bacteria		Total	Actual	MPN	Final	260.0	#/100ml	~							

5/1/2001	Enterococcus Group Bacteria	Total	Actual	MPN	Final	67.0	#/100ml	~							
4/5/2001	Enterococcus Group Bacteria	Total	Actual	MPN	Final	52.0	#/100ml	~							
2/1/2001	Enterococcus Group Bacteria	Total	Actual	MPN	Final	19.0	#/100ml	~							
1/3/2001	Enterococcus Group Bacteria	Total	Actual	MPN	Final	28.0	#/100ml	~							
8/3/2000	Enterococcus Group Bacteria	Total	Actual	MPN	Final	370.0	#/100ml	~							
7/18/2000	Enterococcus Group Bacteria	Total	Actual	MPN	Final	180.0	#/100ml	~							
6/7/2000	Enterococcus Group Bacteria	Total	Actual	MPN	Final	170.0	#/100ml	~							
5/9/2000	Enterococcus Group Bacteria	Total	Actual	MPN	Final	38.0	#/100ml	~							
10/21/1999	Enterococcus Group Bacteria	Total	Actual	MPN	Final	170.0	#/100ml	~							
9/2/1999	Enterococcus Group Bacteria	Total	Actual	MPN	Final	550.0	#/100ml	~							
8/19/1999	Enterococcus Group Bacteria	Total	Actual	MPN	Final	370.0	#/100ml	~							
7/8/1999	Enterococcus Group Bacteria	Total	Actual	MPN	Final	920.0	#/100ml	~							
6/2/1999	Enterococcus Group Bacteria	Total	Actual	MPN	Final	58.0	#/100ml	~							
5/19/1999	Enterococcus Group Bacteria	Total	Actual	MPN	Final	82.0	#/100ml	~							
10/21/1998	ENTEROCOCCI,ENTEROLERT,41C,24HR #/1	B	1020	50589		260.0		D							
9/24/1998	ENTEROCOCCI,ENTEROLERT,41C,24HR #/1	B	1050	50589		150.0		D							
8/5/1998	ENTEROCOCCI,ENTEROLERT,41C,24HR #/1	B	1245	50589		180.0		D							
7/30/1998	ENTEROCOCCI,ENTEROLERT,41C,24HR #/1	B	1140	50589		2000.0		D							
6/18/1998	ENTEROCOCCI,ENTEROLERT,41C,24HR #/1	B	920	50589		170.0		D							
5/27/1998	ENTEROCOCCI,ENTEROLERT,41C,24HR #/1	B	1015	50589		69.0		D							
4/2/1998	ENTEROCOCCI,ENTEROLERT,41C,24HR #/1	B	1115	50589		370.0		D							
3/9/1998	ENTEROCOCCI,ENTEROLERT,41C,24HR #/1	B	1320	50589		520.0		D							
12/4/2008	Fecal Coliform	Total	Actual		Final	160.0	#/100ml	APHA	~9222-D						
11/6/2008	Fecal Coliform	Total	Actual		Final	240.0	#/100ml	APHA	~9222-D						
10/23/2008	Fecal Coliform	Total	Actual		Final	260.0	#/100ml	APHA	~9222-D						
9/25/2008	Fecal Coliform	Total	Actual		Final	210.0	#/100ml	APHA	~9222-D						
8/27/2008	Fecal Coliform	Total	Actual		Final	1100.0	#/100ml	APHA	~9222-D						
7/10/2008	Fecal Coliform	Total	Actual		Final	580.0	#/100ml	APHA	~9222-D						
6/19/2008	Fecal Coliform	Total	Actual		Final	83.0	#/100ml	APHA	~9222-D						
5/27/2008	Fecal Coliform	Total	Actual		Final	450.0	#/100ml	APHA	~9222-D						
4/24/2008	Fecal Coliform	Total	Actual		Final	130.0	#/100ml	APHA	~9222-D						
3/6/2008	Fecal Coliform	Total	Estimat		Final	760.0	#/100ml	APHA	~9222-D						
2/7/2008	Fecal Coliform	Total	Actual		Final	130.0	#/100ml	APHA	~9222-D						
1/16/2008	Fecal Coliform	Total	Actual		Final	110.0	#/100ml	APHA	~9222-D						
12/5/2007	Fecal Coliform	Total	Actual		Final	190.0	#/100ml	APHA	~9222-D						
11/6/2007	Fecal Coliform	Total	Actual		Final	550.0	#/100ml	APHA	~9222-D						
10/29/2007	Fecal Coliform	Total	Estimat		Final	930.0	#/100ml	APHA	~9222-D						
9/13/2007	Fecal Coliform	Total	Actual		Final	91.0	#/100ml	APHA	~9222-D						
8/16/2007	Fecal Coliform	Total	Actual		Final	120.0	#/100ml	APHA	~9222-D						
7/30/2007	Fecal Coliform	Total	Actual		Final	280.0	#/100ml	APHA	~9222-D						
6/20/2007	Fecal Coliform	Total	Actual		Final	97.0	#/100ml	APHA	~9222-D						
5/30/2007	Fecal Coliform	Total	Actual		Final	170.0	#/100ml	APHA	~9222-D						
4/24/2007	Fecal Coliform	Total	Actual		Final	73.0	#/100ml	APHA	~9222-D						
3/20/2007	Fecal Coliform	Total	Actual		Final	93.0	#/100ml	APHA	~9222-D						
2/5/2007	Fecal Coliform	Total	Actual		Final	68.0	#/100ml	APHA	~9222-D						
1/2/2007	Fecal Coliform	Total	Actual		Final	250.0	#/100ml	APHA	~9222-D						
12/11/2006	Fecal Coliform	Total	Actual		Final	120.0	#/100ml	APHA	~9222-D						
11/29/2006	Fecal Coliform	Total	Actual		Final	340.0	#/100ml	APHA	~9222-D						
10/30/2006	Fecal Coliform	Total	Actual		Final	240.0	#/100ml	APHA	~9222-D						
9/21/2006	Fecal Coliform	Total	Actual		Final	340.0	#/100ml	APHA	~9222-D						
8/24/2006	Fecal Coliform	Total	Actual		Final	380.0	#/100ml	APHA	~9222-D						
7/6/2006	Fecal Coliform	Total	Actual		Final	160.0	#/100ml	APHA	~9222-D						
6/28/2006	Fecal Coliform	Total	Estimat		Final	180.0	#/100ml	APHA	~9222-D						
5/25/2006	Fecal Coliform	Total	Actual		Final	180.0	#/100ml	APHA	~9222-D						
4/27/2006	Fecal Coliform	Total	Actual		Final	2800.0	#/100ml	APHA	~9222-D						
3/23/2006	Fecal Coliform	Total	Actual		Final	140.0	#/100ml	APHA	~9222-D						
2/2/2006	Fecal Coliform	Total	Actual		Final	200.0	#/100ml	APHA	~9222-D						
1/18/2006	Fecal Coliform	Total	Actual		Final	920.0	#/100ml	APHA	~9222-D						
12/7/2005	Fecal Coliform	Total	Actual		Final	680.0	#/100ml	APHA	~9222-D						
11/14/2005	Fecal Coliform	Total	Actual		Final	500.0	#/100ml	APHA	~9222-D						
10/6/2005	Fecal Coliform	Total	Actual		Final	1200.0	#/100ml	APHA	~9222-D						
9/29/2005	Fecal Coliform	Total	Actual		Final	300.0	#/100ml	APHA	~9222-D						
8/30/2005	Fecal Coliform	Total	Actual		Final	160.0	#/100ml	APHA	~9222-D						
7/28/2005	Fecal Coliform	Total	Actual		Final	110.0	#/100ml	APHA	~9222-D						
6/30/2005	Fecal Coliform	Total	Actual		Final	470.0	#/100ml	APHA	~9222-D						
5/26/2005	Fecal Coliform	Total	Actual		Final	54.0	#/100ml	APHA	~9222-D						
4/7/2005	Fecal Coliform	Total	Actual		Final	120.0	#/100ml	APHA	~9222-D						
3/30/2005	Fecal Coliform	Total	Actual		Final	760.0	#/100ml	APHA	~9222-D						
2/3/2005	Fecal Coliform	Total	Actual		Final	150.0	#/100ml	APHA	~9222-D						
1/27/2005	Fecal Coliform	Total	Actual		Final	700.0	#/100ml	APHA	~9222-D						
12/2/2004	Fecal Coliform	Total	Actual		Final	77.0	#/100ml	APHA	~9222-D						
11/4/2004	Fecal Coliform	Total	Actual		Final	270.0	#/100ml	APHA	~9222-D						
10/20/2004	Fecal Coliform	Total	Actual		Final	320.0	#/100ml	APHA	~9222-D						
9/16/2004	Fecal Coliform	Total	Estimat		Final	350.0	#/100ml	APHA	~9222-D						
8/5/2004	Fecal Coliform	Total	Actual		Final	310.0	#/100ml	APHA	~9222-D						
7/29/2004	Fecal Coliform	Total	Actual		Final	420.0	#/100ml	APHA	~9222-D						
6/10/2004	Fecal Coliform	Total	Actual		Final	150.0	#/100ml	APHA	~9222-D						
5/20/2004	Fecal Coliform	Total	Actual		Final	160.0	#/100ml	APHA	~9222-D						
4/8/2004	Fecal Coliform	Total	Actual		Final	110.0	#/100ml	APHA	~9222-D						
3/2/2004	Fecal Coliform	Total	Estimat		Final	60.0	#/100ml	APHA	~9222-D						
2/12/2004	Fecal Coliform	Total	Actual		Final	330.0	#/100ml	APHA	~9222-D						
1/8/2004	Fecal Coliform	Total	Actual		Final	220.0	#/100ml	APHA	~9222-D						
12/3/2003	Fecal Coliform	Total	Actual		Final	170.0	#/100ml	APHA	~9222-D						
11/6/2003	Fecal Coliform	Total	Actual		Final	470.0	#/100ml	APHA	~9222-D						
10/9/2003	Fecal Coliform	Total	Actual		Final	680.0	#/100ml	APHA	~9222-D						
9/2/2003	Fecal Coliform	Total	Actual		Final	460.0	#/100ml	APHA	~9222-D						
8/5/2003	Fecal Coliform	Total	Estimat		Final	5000.0	#/100ml	APHA	~9222-D						
7/1/2003	Fecal Coliform	Total	Actual		Final	300.0	#/100ml	APHA	~9222-D						
6/5/2003	Fecal Coliform	Total	Actual	MPN	Final	510.0	#/100ml	APHA	~9221-E						
5/15/2003	Fecal Coliform	Total	Estimat	MPN	Final	100.0	#/100ml	APHA	~9221-E						
4/10/2003	Fecal Coliform	Total	Actual	MPN	Final	1300.0	#/100ml	APHA	~9221-E						
3/20/2003	Fecal Coliform	Total	Actual	MPN	Final	1200.0	#/100ml	APHA	~9221-E						
2/10/2003	Fecal Coliform	Total	Actual	MPN	Final	190.0	#/100ml	APHA	~9221-E						
1/21/2003	Fecal Coliform	Total	Actual	MPN	Final	180.0	#/100ml	APHA	~9221-E						
12/5/2002	Fecal Coliform	Total	Actual	MPN	Final	150.0	#/100ml	APHA	~9221-E						
11/26/2002	Fecal Coliform	Total	Actual	MPN	Final	120.0	#/100ml	APHA	~9221-E						
10/16/2002	Fecal Coliform	Total	Actual	MPN	Final	620.0	#/100ml	APHA	~9221-E						
9/3/2002	Fecal Coliform	Total	Actual	MPN	Final	260.0	#/100ml	APHA	~9221-E						
7/18/2002	Fecal Coliform	Total	Actual	MPN	Final	420.0	#/100ml	APHA	~9221-E						
6/17/2002	Fecal Coliform	Total	Actual	MPN	Final	260.0	#/100ml	APHA	~9221-E						
5/23/2002	Fecal Coliform	Total	Actual	MPN	Final	370.0	#/100ml	APHA	~9221-E						
4/9/2002	Fecal Coliform	Total	Actual	MPN	Final	240.0	#/100ml	APHA	~9221-E						
3/19/2002	Fecal Coliform	Total	Actual	MPN	Final	190.0	#/100ml	APHA	~9221-E						
2/19/2002	Fecal Coliform	Total	Actual	MPN	Final	200.0	#/100ml	APHA	~9221-E						
1/23/2002	Fecal Coliform	Total	Actual	MPN	Final	310.0	#/100ml	APHA	~9221-E						
12/6/2001	Fecal Coliform	Total	Actual	MPN	Final	310.0	#/100ml	APHA	~9221-E						
11/14/2001	Fecal Coliform	Total	Actual	MPN	Final	320.0	#/100ml	APHA	~9221-E						
10/18/2001	Fecal Coliform	Total	Actual	MPN	Final	150.0	#/100ml	APHA	~9221-E						
9/11/2001	Fecal Coliform	Total	Actual	MPN	Final	380.0	#/100ml	APHA	~9221-E						
8/15/2001	Fecal Coliform	Total	Actual	MPN	Final	1400.0	#/100ml	APHA	~9221-E						
7/23/2001	Fecal Coliform	Total	Actual	MPN	Final	120.0	#/100ml	APHA	~9221-E						
6/21/2001	Fecal Coliform	Total	Actual	MPN	Final	120.0	#/100ml	APHA	~9221-E						
6/20/2001	Fecal Coliform	Total	Actual		Final	120.0	#/100ml	~							
5/1/2001	Fecal Coliform	Total	Actual		Final	120.0	#/100ml	~							
4/5/2001	Fecal Coliform	Total	Actual		Final	97.0	#/100ml	~							
2/1/2001	Fecal Coliform	Total	Actual		Final	130.0	#/100ml	~							
1/3/2001	Fecal Coliform	Total	Actual		Final	160.0	#/100ml	~							
8/3/2000	Fecal Coliform	Total	Actual		Final	130.0	#/100ml	~							
7/18/2000	Fecal Coliform	Total	Actual		Final	110.0	#/100ml	~							
6/7/2000	Fecal Coliform	Total	Actual		Final	420.0	#/100ml	~							
5/9/2000	Fecal Coliform	Total	Actual		Final	140.0	#/100ml	~							
10/21/1999	Fecal Coliform	Total	Actual		Final	190.0	#/100ml	~							
9/2/1999	Fecal Coliform	Total	Actual		Final	460.0	#/100ml	~							
8/19/1999	Fecal Coliform	Total	Actual		Final	290.0	#/100ml	~							
7/8/1999	Fecal Coliform	Total	Actual		Final	860.0	#/100ml	~							
6/2/1999	Fecal Coliform	Total	Actual		Final	110.0	#/100ml	~							
5/19/1999	Fecal Coliform	Total	Actual		Final	140.0	#/100ml	~							
10/21/1998	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1020	31616		220.0		D							
9/24/1998	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1050	31616		190.0		D							
8/5/1998	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1245	31616		220.0		D							
7/30/1998	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1140	31616		1100.0		D							
6/18/1998	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	920	31616		90.0	J	D							
5/27/1998	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1015	31616		190.0		D							
4/2/1998	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1115	31616		740.0		D							
3/9/1998	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1320	31616		820.0		D							
10/9/1997	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1110	31616		300.0		D							
9/2/1997	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1340	31616		150.0	J	D							
8/5/1997	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1330	31616		110.0		D							
7/1/1997	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1155	31616		80.0	J	D							
6/19/1997	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1045	31616		200.0		D							
5/14/1997	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1150	31616		100.0	J	D							
10/10/1996	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1109	31616		780.0		D							
8/5/1996	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1130	31616		100.0		D							
7/22/1996	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1405	31616		170.0	J	D							
6/26/1996	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1345	31616		160.0	J	D							
5/14/1996	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1050	31616		160.0	J	D							
10/4/1995	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1200	31616		3900.0	J	D							
9/20/1995	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1401	31616		290.0		D							
8/16/1995	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1430	31616		200.0		D							
7/5/1995	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1350	31616		240.0		D							
6/13/1995	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1450	31616		1100.0		D							
5/9/1995	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1335	31616		110.0	J	D							
10/18/1994	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1150	31616		120.0	J	D							
9/15/1994	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1120	31616		60.0	J	D							
8/25/1994	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1115	31616		170.0	J	D							
8/9/1994	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1150	31616		170.0	J	D							
6/8/1994	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1125	31616		400.0		D							
5/5/1994	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1445	31616		1700.0		D							
9/8/1993	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1325	31616		320.0		D							
8/18/1993	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1300	31616		480.0		D							
7/13/1993	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1305	31616		100.0	J	D							
6/2/1993	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1350	31616		150.0	J	D							
5/18/1993	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1406	31616		140.0	J	D							
4/1/1993	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1120	31616		140.0	J	D							

3/4/1993	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1300	31616		360.0		D							
2/11/1993	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1330	31616		110.0	J	D							
1/19/1993	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1031	31616		100.0	J	D							
12/8/1992	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1235	31616		180.0		D							
11/18/1992	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1035	31616		110.0		D							
10/22/1992	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1035	31616		60.0	J	D							
9/15/1992	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1045	31616		150.0	J	D							
8/26/1992	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1035	31616		1200.0	J	D							
7/28/1992	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1125	31616		110.0	J	D							
6/17/1992	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1045	31616		150.0	J	D							
5/20/1992	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1259	31616		120.0	J	D							
10/21/1991	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1055	31616		460.0		D							
9/11/1991	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1200	31616		250.0		D							
8/12/1991	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1320	31616		5500.0	J	D							
7/2/1991	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1120	31616		110.0	J	D							
6/12/1991	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1050	31616		190.0	J	D							
5/29/1991	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1200	31616		2200.0	J	D							
10/16/1990	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1345	31616		230.0		D							
9/18/1990	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1305	31616		160.0	J	D							
8/7/1990	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1143	31616		220.0	J	D							
7/16/1990	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1326	31616		120.0		D							
6/12/1990	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1205	31616		95.0	J	D							
5/21/1990	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1230	31616		160.0		D							
10/16/1989	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1253	31616		80.0	J	D							
9/5/1989	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1349	31616		160.0	J	D							
8/8/1989	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1218	31616		200.0		D							
7/25/1989	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1220	31616		170.0	J	D							
6/8/1989	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1248	31616		120.0	J	D							
5/11/1989	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1213	31616		440.0		D							
10/11/1988	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1136	31616		400.0		D							
9/12/1988	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1212	31616		200.0		D							
7/13/1988	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1105	31616		540.0		D							
6/14/1988	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1253	31616		95.0	J	D							
5/4/1988	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1255	31616		180.0	J	D							
10/5/1987	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1125	31616		170.0	J	D							
9/3/1987	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1110	31616		460.0		D							
8/17/1987	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1205	31616		180.0		D							
7/14/1987	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1145	31616		240.0		D							
6/2/1987	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1400	31616		530.0		D							
5/13/1987	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1240	31616		180.0		D							
10/13/1986	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1155	31616		200.0		D							
9/24/1986	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1025	31616		80.0	J	D							
8/7/1986	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1110	31616		150.0	J	D							
6/18/1986	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1030	31616		840.0		D							
10/29/1985	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1055	31616		120.0		D							
9/27/1985	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1145	31616		130.0	J	D							
8/26/1985	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1030	31616		200.0	J	D							
7/18/1985	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1130	31616		600.0	L	D							
6/10/1985	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1205	31616		280.0		D							
5/21/1985	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1045	31616		360.0		D							
10/25/1984	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1030	31616		150.0		D							
9/11/1984	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1100	31616		95.0	J	D							
8/23/1984	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1110	31616		105.0		D							
7/17/1984	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1335	31616		70.0	J	D							
6/25/1984	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1040	31616		150.0	J	D							
5/3/1984	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1115	31616		440.0		D							
8/8/1983	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1015	31616		70.0	J	D							
8/23/1982	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1411	31616		340.0		D							
8/23/1982	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	940	31616		166.0	J	D							
8/23/1982	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1412	31616		257.0		D							
8/23/1982	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	941	31616		120.0	J	D							
8/23/1982	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1410	31616		100.0	J	D							
8/23/1982	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	942	31616		200.0	J	D							
10/16/1980	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1005	31616		280.0	J	D							
9/8/1980	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1315	31616		480.0		D							
8/25/1980	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1505	31616		330.0		D							
7/24/1980	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1245	31616		120.0	J	D							
6/17/1980	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1240	31616		450.0		D							
5/19/1980	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1235	31616		165.0		D							
10/26/1979	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1200	31616		300.0	J	D							
9/27/1979	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1210	31616		190.0	J	D							
8/22/1979	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1100	31616		240.0		D							
7/10/1979	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1045	31616		130.0	J	D							
6/26/1979	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1110	31616		95.0	J	D							
5/7/1979	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1150	31616		160.0	J	D							
10/24/1978	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1005	31616		550.0		D							
9/8/1978	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	2500	31616		200.0		D							
8/9/1978	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	2500	31616		165.0		D							
7/13/1978	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	2500	31616		95.0	J	D							
6/27/1978	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1240	31616		145.0		D							
5/3/1978	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1145	31616		290.0		D							
10/27/1977	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1110	31616		5800.0		D							
9/14/1977	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1130	31616		530.0	J	D							
8/10/1977	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1035	31616		660.0		D							
7/22/1977	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1025	31616		190.0	J	D							
6/14/1977	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1140	31616		450.0		D							
5/6/1977	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1100	31616		200.0		D							
9/28/1976	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1045	31616		150.0	J	D							
9/1/1976	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1045	31616		240.0		D							
7/30/1976	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	915	31616		190.0		D							
6/29/1976	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1100	31616		60.0		D							
4/23/1976	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	930	31616		50.0		D							
10/17/1975	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	920	31616		800.0	L	D							
8/29/1975	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	940	31616		320.0		D							
8/5/1975	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1000	31616		300.0		D							
7/3/1975	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	950	31616		75.0		D							
5/7/1975	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	915	31616		80.0		D							
9/24/1974	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	850	31616		70.0		D							
9/3/1974	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1015	31616		270.0		D							
5/3/1974	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1000	31616		130.0		D							
4/20/1973	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	840	31616		15.0		D							
3/13/1973	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	1050	31616		10.0	K	D							
11/30/1971	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,4	B	2500	31616		790.0		D							
11/30/1971	FECAL COLIFORM,MPN,EC MED,44.5C (TUBE 3161	B	2500	31615		790.0		D							
9/4/1968	FECAL COLIFORM,MPN,EC MED,44.5C (TUBE 3161	B	2500	31615		330.0		D							
9/3/1968	FECAL COLIFORM,MPN,EC MED,44.5C (TUBE 3161	B	2500	31615		230.0		D							
8/16/2007	Hardness, Ca + Mg	Total	Actual		Final	3.0	mg/l	APHA	~2340B						
5/30/2007	Hardness, Ca + Mg	Total	Actual		Final	9.7	mg/l	APHA	~2340B						
2/5/2007	Hardness, Ca + Mg	Total	Actual		Final	8.8	mg/l	APHA	~2340B						
2/2/2006	Hardness, Ca + Mg	Total	Actual		Final	8.2	mg/l	APHA	~2340B						
2/3/2005	Hardness, Ca + Mg	Total	Actual		Final	8.9	mg/l	APHA	~2340B						
5/27/1998	HARDNESS, TOTAL (MG/L AS CACO3)	B	1015	900		8.0		D							
											SEE TEXT FOR NARRATIVE STATEMENT AND NUMERIC CRITERIA FOR TOT/					
12/4/2008	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.0	mg/l	~							
11/6/2008	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.0	mg/l	~							
10/23/2008	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~							
9/25/2008	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.0	mg/l	~							
8/27/2008	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~							
7/10/2008	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~							
6/19/2008	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~							
5/27/2008	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~							
4/24/2008	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~							
3/6/2008	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~							
2/7/2008	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~							
1/16/2008	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~							
12/5/2007	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	*Present <QL		~							
11/6/2007	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~							
10/29/2007	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.2	mg/l	~							
9/13/2007	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~							
8/20/2007	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~							
8/16/2007	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~							
7/30/2007	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~							
6/20/2007	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~							
5/30/2007	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.2	mg/l	~							
3/20/2007	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~							
2/5/2007	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~							
1/2/2007	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~							
12/11/2006	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~							
11/29/2006	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~							
10/30/2006	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~							
9/21/2006	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~							
8/24/2006	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~							
7/6/2006	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~							
6/28/2006	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~							
5/25/2006	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~							
4/27/2006	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.2	mg/l	~							
3/23/2006	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~							
2/2/2006	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~							
1/18/2006	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.2	mg/l	~							
12/7/2005	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.2	mg/l	~							
11/14/2005	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	*Present <QL		~							
10/6/2005	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.0	mg/l	~							
9/29/2005	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~							
8/30/2005	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.2	mg/l	~							
7/28/2005	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.2	mg/l	~							
6/30/2005	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~							
5/26/2005	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.2	mg/l	~							
4/7/2005	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~							
3/30/2005	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~							
2/3/2005	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~							
1/27/2005	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.2	mg/l	~							
12/2/2004	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~							
11/4/2004	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.0	mg/l	~							
10/20/2004	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~							

9/16/2004	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.0	mg/l	~						
8/5/2004	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~						
7/29/2004	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~						
6/10/2004	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~						
5/20/2004	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~						
4/8/2004	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~						
3/2/2004	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~						
2/12/2004	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~						
1/8/2004	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~						
12/3/2003	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~						
11/6/2003	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.0	mg/l	~						
10/9/2003	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~						
9/2/2003	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~						
8/5/2003	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.0	mg/l	~						
7/1/2003	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~						
6/5/2003	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~						
5/15/2003	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~						
4/10/2003	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.0	mg/l	~						
3/20/2003	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~						
2/10/2003	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~						
1/21/2003	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~						
12/5/2002	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~						
11/26/2002	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.0	mg/l	~						
10/16/2002	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.0	mg/l	~						
9/3/2002	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~						
7/18/2002	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~						
6/17/2002	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~						
5/23/2002	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~						
4/9/2002	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~						
3/19/2002	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~						
2/19/2002	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.2	mg/l	~						
1/23/2002	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.2	mg/l	~						
12/6/2001	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.0	mg/l	~						
11/14/2001	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	*Present <QL	mg/l	~						
10/18/2001	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	*Present <QL	mg/l	~						
9/11/2001	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~						
8/15/2001	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.2	mg/l	~						
7/23/2001	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~						
6/21/2001	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~						
6/20/2001	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~						
5/1/2001	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.2	mg/l	~						
4/5/2001	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~						
2/1/2001	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~						
1/3/2001	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.2	mg/l	~						
8/3/2000	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~						
7/18/2000	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.2	mg/l	~						
6/7/2000	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.2	mg/l	~						
5/9/2000	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~						
10/21/1999	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~						
9/2/1999	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~						
8/19/1999	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~						
7/8/1999	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.0	mg/l	~						
6/2/1999	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~						
5/19/1999	Inorganic nitrogen (nitrate and nitrite) as N	Total	Actual		Final	0.1	mg/l	~						
10/21/1998	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1020	630		0.3		D						
9/24/1998	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1050	630		0.1		D						
8/5/1998	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1245	630		0.2		D						
7/30/1998	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1140	630		0.2		D						
5/27/1998	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1015	630		0.2		D						
4/2/1998	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1115	630		0.1		D						
3/9/1998	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1320	630		0.1		D						
10/9/1997	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1110	630		0.1		D						
9/2/1997	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1340	630		0.1		D						
8/5/1997	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1330	630		0.3		D						
7/1/1997	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1155	630		0.1		D						
6/19/1997	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1045	630		0.1		D						
5/14/1997	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1150	630		0.2		D						
10/10/1996	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1109	630		0.2		D						
8/5/1996	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1130	630		0.2		D						
7/22/1996	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1405	630		0.3		D						
6/26/1996	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1345	630		0.2		D						
5/14/1996	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1050	630		0.3		D						
10/4/1995	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1200	630		0.3		D						
9/20/1995	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1401	630		0.1		D						
8/16/1995	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1430	630		0.3		D						
7/5/1995	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1350	630		0.5		D						
6/13/1995	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1450	630		0.2		D						
5/9/1995	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1335	630		0.3		D						
10/18/1994	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1150	630		0.1		D						
9/15/1994	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1120	630		0.2		D						
8/25/1994	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1115	630		0.2		D						
8/9/1994	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1150	630		0.3		D						
6/8/1994	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1125	630		0.2		D						
5/5/1994	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1445	630		0.1		D						
9/8/1993	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1325	630		0.2		D						
8/18/1993	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1300	630		0.1		D						
7/13/1993	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1305	630		0.2		D						
6/2/1993	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1350	630		0.2		D						
5/18/1993	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1406	630		0.2		D						
4/1/1993	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1120	630		0.1		D						
3/4/1993	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1300	630		0.1		D						
2/11/1993	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1330	630		0.1		D						
1/19/1993	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1031	630		0.1		D						
12/8/1992	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1235	630		0.1		D						
11/18/1992	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1035	630		0.1		D						
10/22/1992	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1035	630		0.1		D						
9/15/1992	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1045	630		0.1		D						
8/26/1992	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1035	630		0.1		D						
7/28/1992	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1125	630		0.2		D						
6/17/1992	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1045	630		0.1		D						
5/20/1992	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1259	630		0.2		D						
10/21/1991	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1055	630		0.3		D						
9/11/1991	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1200	630		0.1		D						
8/12/1991	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1320	630		0.1		D						
7/2/1991	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1120	630		0.2		D						
6/12/1991	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1050	630		0.2		D						
5/29/1991	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1200	630		0.1		D						
10/16/1990	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1345	630		0.1		D						
9/18/1990	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1305	630		0.1		D						
8/7/1990	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1143	630		0.1		D						
7/16/1990	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1326	630		0.1		D						
6/12/1990	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1205	630		0.2		D						
5/21/1990	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1230	630		0.1		D						
9/5/1989	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1349	630		0.1		D						
8/8/1989	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1218	630		0.1		D						
7/25/1989	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1220	630		0.1		D						
6/8/1989	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1248	630		0.1		D						
10/11/1988	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1136	630		0.1		D						
9/12/1988	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1212	630		0.1		D						
7/13/1988	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1105	630		0.2		D						
6/14/1988	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1253	630		0.3		D						
4/5/1988	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1255	630		0.1		D						
10/4/1987	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1125	630		0.1		D						
9/3/1987	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1110	630		0.2		D						
8/17/1987	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1205	630		0.2		D						
7/14/1987	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1125	630		0.1		D						
6/2/1987	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1400	630		0.1		D						
5/13/1987	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1240	630		0.2		D						
10/13/1986	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1155	630		0.1		D						
9/24/1986	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1025	630		0.1		D						
8/7/1986	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1110	630		0.1		D						
6/18/1986	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1030	630		0.2		D						
10/29/1985	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1055	630		0.1		D						
9/27/1985	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1145	630		0.1		D						
8/26/1985	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1030	630		0.2		D						
7/18/1985	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1130	630		0.1		D						
6/10/1985	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1205	630		0.2		D						
5/21/1985	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1045	630		0.2		D						
10/25/1984	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1030	630		0.1		D						
9/11/1984	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1100	630		0.2		D						
8/23/1984	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1110	630		0.1		D						
7/17/1984	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1335	630		0.2		D						
6/25/1984	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1040	630		0.1		D						
5/3/1984	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1115	630		0.1		D						
8/23/1982	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	942	630		0.1		D						
8/23/1982	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	940	630		0.1		D						
8/23/1982	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	941	630		0.1		D						
8/23/1982	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1410	630		0.1		D						
8/23/1982	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1411	630		0.1		D						
8/23/1982	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1412	630		0.1		D						
10/27/1977	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1110	630		0.1		D						
9/14/1977	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1130	630		0.1		D						
8/10/1977	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1035	630		0.2		D						
7/22/1977	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1025	630		0.2		D						
6/14/1977	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1140	630		0.1		D						
5/6/1977	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1300	630		0.2		D						
9/28/1976	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1045	630		0.1		D						
9/1/1976	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1045	630		0.1		D						
7/30/1976	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	915	630		0.2		D						
6/29/1976	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	1100	630		0.1		D						
5/26/1976	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	845	630		0.1		D						
4/23/1976	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	930	630		0.1		D						
10/17/1975	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	2500	630		0.1		D						
8/29/1975	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	2500	630		0.1		D						
8/5/1975	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	2500	630		0.1		D						

7/3/1975	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	2500	630		0.1		D						
5/29/1975	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	2500	630		0.1		D						
5/7/1975	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	2500	630		0.1		D						
11/4/1974	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	2500	630		0.0		D						
9/24/1974	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	2500	630		0.1		D						
9/3/1974	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	2500	630		0.1		D						
8/1/1974	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	2500	630		0.4		D						
6/25/1974	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	2500	630		0.2		D						
9/25/1973	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	2500	630		0.2		D						
4/20/1973	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	2500	630		0.4		D						
3/23/1973	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N	B	2500	630		0.0		D						
11/6/2008	Iron	Total	Actual		Final	0.8	ug/l	APHA	~3120					
8/27/2008	Iron	Total	Actual		Final	3.6	ug/l	APHA	~3120					
5/27/2008	Iron	Total	Actual		Final	2.0	ug/l	APHA	~3120					
2/7/2008	Iron	Total	Actual		Final	0.7	ug/l	APHA	~3120					
11/6/2007	Iron	Total	Actual		Final	0.8	ug/l	APHA	~3120					
8/16/2007	Iron	Total	Actual		Final	1.4	ug/l	APHA	~3120					
5/30/2007	Iron	Total	Actual		Final	1.6	ug/l	APHA	~3120					
2/5/2007	Iron	Total	Actual		Final	0.8	ug/l	APHA	~3120					
11/29/2006	Iron	Total	Actual		Final	1100.0	ug/l	APHA	~3120					
8/24/2006	Iron	Total	Actual		Final	2200.0	ug/l	APHA	~3120					
5/25/2006	Iron	Total	Actual		Final	2100.0	ug/l	APHA	~3120					
2/2/2006	Iron	Total	Actual		Final	780.0	ug/l	APHA	~3120					
11/14/2005	Iron	Total	Actual		Final	510.0	ug/l	APHA	~3120					
8/30/2005	Iron	Total	Actual		Final	1800.0	ug/l	APHA	~3120					
5/26/2005	Iron	Total	Actual		Final	940.0	ug/l	APHA	~3120					
2/3/2005	Iron	Total	Actual		Final	910.0	ug/l	APHA	~3120					
11/4/2004	Iron	Total	Actual		Final	1000.0	ug/l	APHA	~3120					
8/5/2004	Iron	Total	Actual		Final	1600.0	ug/l	APHA	~3120					
5/20/2004	Iron	Total	Actual		Final	2200.0	ug/l	APHA	~3120					
2/12/2004	Iron	Total	Actual		Final	1600.0	ug/l	APHA	~3120					
11/6/2003	Iron	Total	Actual		Final	1100.0	ug/l	APHA	~3120					
8/5/2003	Iron	Total	Actual		Final	3100.0	ug/l	APHA	~3120					
5/15/2003	Iron	Total	Actual		Final	2100.0	ug/l	APHA	~3120					
2/10/2003	Iron	Total	Actual		Final	800.0	ug/l	APHA	~3120					
11/26/2002	Iron	Total	Actual		Final	800.0	ug/l	APHA	~3120					
5/23/2002	Iron	Total	Actual		Final	1200.0	ug/l	APHA	~3120					
2/19/2002	Iron	Total	Actual		Final	530.0	ug/l	APHA	~3120					
11/14/2001	Iron	Total	Actual		Final	380.0	ug/l	APHA	~3120					
8/15/2001	Iron	Total	Actual		Final	1600.0	ug/l	APHA	~3120					
5/1/2001	Iron	Total	Actual		Final	1300.0	ug/l	APHA	~3120					
8/19/1999	Iron	Total	Actual		Final	1800.0	ug/l	APHA	~3120					
5/19/1999	Iron	Total	Actual		Final	1500.0	ug/l	APHA	~3120					
8/5/1998	IRON, TOTAL (UG/L AS FE)	B	1245	1045		930.0		D						
5/27/1998	IRON, TOTAL (UG/L AS FE)	B	1015	1045		1400.0		D						
9/8/1993	IRON, TOTAL (UG/L AS FE)	B	1325	1045		1400.0		D						
6/2/1993	IRON, TOTAL (UG/L AS FE)	B	1350	1045		1200.0		D						
3/4/1993	IRON, TOTAL (UG/L AS FE)	B	1300	1045		1100.0		D						
12/8/1992	IRON, TOTAL (UG/L AS FE)	B	1235	1045		1000.0		D						
9/25/1973	IRON, DISSOLVED (UG/L AS FE)	B	2500	1046		1394.0		D						
4/20/1973	IRON, DISSOLVED (UG/L AS FE)	B	2500	1046		198.0		D						
3/23/1973	IRON, DISSOLVED (UG/L AS FE)	B	2500	1046		553.0		D						
12/4/2008	Kjeldahl nitrogen	Total	Actual		Final	0.3	mg/l	~						
11/6/2008	Kjeldahl nitrogen	Total	Actual		Final	0.3	mg/l	~						
10/23/2008	Kjeldahl nitrogen	Total	Actual		Final	0.3	mg/l	~						
9/25/2008	Kjeldahl nitrogen	Total	Actual		Final	0.3	mg/l	~						
8/27/2008	Kjeldahl nitrogen	Total	Actual		Final	0.3	mg/l	~						
7/10/2008	Kjeldahl nitrogen	Total	Actual		Final	0.3	mg/l	~						
6/19/2008	Kjeldahl nitrogen	Total	Actual		Final	1.0	mg/l	~						
5/27/2008	Kjeldahl nitrogen	Total	Actual		Final	0.2	mg/l	~						
4/24/2008	Kjeldahl nitrogen	Total	Actual		Final	0.5	mg/l	~						
3/6/2008	Kjeldahl nitrogen	Total	Actual		Final	0.3	mg/l	~						
2/7/2008	Kjeldahl nitrogen	Total	Actual		Final	0.2	mg/l	~						
1/16/2008	Kjeldahl nitrogen	Total	Actual		Final	0.2	mg/l	~						
12/5/2007	Kjeldahl nitrogen	Total	Actual		Final	0.1	mg/l	~						
9/13/2007	Kjeldahl nitrogen	Total	Actual		Final	0.3	mg/l	~						
8/20/2007	Kjeldahl nitrogen	Total	Actual		Final	0.4	mg/l	~						
8/16/2007	Kjeldahl nitrogen	Total	Actual		Final	0.4	mg/l	~						
7/30/2007	Kjeldahl nitrogen	Total	Actual		Final	0.2	mg/l	~						
6/20/2007	Kjeldahl nitrogen	Total	Actual		Final	1.8	mg/l	~						
4/24/2007	Kjeldahl nitrogen	Total	Actual		Final	0.3	mg/l	~						
2/5/2007	Kjeldahl nitrogen	Total	Actual		Final	0.6	mg/l	~						
1/2/2007	Kjeldahl nitrogen	Total	Actual		Final	1.8	mg/l	~						
12/11/2006	Kjeldahl nitrogen	Total	Actual		Final	0.4	mg/l	~						
11/29/2006	Kjeldahl nitrogen	Total	Actual		Final	0.6	mg/l	~						
10/30/2006	Kjeldahl nitrogen	Total	Actual		Final	0.5	mg/l	~						
9/21/2006	Kjeldahl nitrogen	Total	Actual		Final	0.6	mg/l	~						
8/24/2006	Kjeldahl nitrogen	Total	Actual		Final	0.2	mg/l	~						
7/6/2006	Kjeldahl nitrogen	Total	Actual		Final	0.4	mg/l	~						
6/28/2006	Kjeldahl nitrogen	Total	Actual		Final	*Present <QL		~						
5/25/2006	Kjeldahl nitrogen	Total	Actual		Final	0.4	mg/l	~						
4/27/2006	Kjeldahl nitrogen	Total	Actual		Final	0.5	mg/l	~						
3/23/2006	Kjeldahl nitrogen	Total	Actual		Final	0.3	mg/l	~						
2/2/2006	Kjeldahl nitrogen	Total	Actual		Final	0.2	mg/l	~						
1/18/2006	Kjeldahl nitrogen	Total	Actual		Final	0.4	mg/l	~						
11/14/2005	Kjeldahl nitrogen	Total	Actual		Final	0.5	mg/l	~						
10/6/2005	Kjeldahl nitrogen	Total	Actual		Final	0.5	mg/l	~						
9/29/2005	Kjeldahl nitrogen	Total	Actual		Final	0.6	mg/l	~						
8/30/2005	Kjeldahl nitrogen	Total	Actual		Final	0.3	mg/l	~						
7/28/2005	Kjeldahl nitrogen	Total	Actual		Final	1.0	mg/l	~						
6/30/2005	Kjeldahl nitrogen	Total	Actual		Final	0.3	mg/l	~						
5/26/2005	Kjeldahl nitrogen	Total	Actual		Final	0.8	mg/l	~						
4/7/2005	Kjeldahl nitrogen	Total	Actual		Final	0.7	mg/l	~						
3/30/2005	Kjeldahl nitrogen	Total	Actual		Final	0.6	mg/l	~						
2/3/2005	Kjeldahl nitrogen	Total	Actual		Final	0.6	mg/l	~						
1/27/2005	Kjeldahl nitrogen	Total	Actual		Final	0.5	mg/l	~						
12/2/2004	Kjeldahl nitrogen	Total	Actual		Final	0.5	mg/l	~						
11/4/2004	Kjeldahl nitrogen	Total	Actual		Final	0.6	mg/l	~						
10/20/2004	Kjeldahl nitrogen	Total	Actual		Final	0.3	mg/l	~						
9/16/2004	Kjeldahl nitrogen	Total	Actual		Final	0.8	mg/l	~						
8/5/2004	Kjeldahl nitrogen	Total	Actual		Final	0.8	mg/l	~						
7/29/2004	Kjeldahl nitrogen	Total	Actual		Final	0.6	mg/l	~						
6/10/2004	Kjeldahl nitrogen	Total	Actual		Final	0.7	mg/l	~						
5/20/2004	Kjeldahl nitrogen	Total	Actual		Final	1.2	mg/l	~						
4/8/2004	Kjeldahl nitrogen	Total	Actual		Final	0.4	mg/l	~						
3/2/2004	Kjeldahl nitrogen	Total	Actual		Final	0.5	mg/l	~						
1/8/2004	Kjeldahl nitrogen	Total	Actual		Final	1.0	mg/l	~						
12/3/2003	Kjeldahl nitrogen	Total	Actual		Final	1.0	mg/l	~						
10/9/2003	Kjeldahl nitrogen	Total	Actual		Final	0.9	mg/l	~						
8/5/2003	Kjeldahl nitrogen	Total	Actual		Final	0.9	mg/l	~						
6/5/2003	Kjeldahl nitrogen	Total	Actual		Final	0.8	mg/l	~						
4/10/2003	Kjeldahl nitrogen	Total	Actual		Final	0.8	mg/l	~						
2/10/2003	Kjeldahl nitrogen	Total	Actual		Final	0.5	mg/l	~						
12/5/2002	Kjeldahl nitrogen	Total	Actual		Final	0.1	mg/l	~						
10/16/2002	Kjeldahl nitrogen	Total	Actual		Final	0.2	mg/l	~						
6/17/2002	Kjeldahl nitrogen	Total	Actual		Final	0.3	mg/l	~						
4/9/2002	Kjeldahl nitrogen	Total	Actual		Final	0.3	mg/l	~						
2/19/2002	Kjeldahl nitrogen	Total	Actual		Final	0.3	mg/l	~						
12/6/2001	Kjeldahl nitrogen	Total	Actual		Final	0.3	mg/l	~						
10/18/2001	Kjeldahl nitrogen	Total	Actual		Final	0.3	mg/l	~						
8/15/2001	Kjeldahl nitrogen	Total	Actual		Final	0.5	mg/l	~						
6/21/2001	Kjeldahl nitrogen	Total	Actual		Final	0.4	mg/l	~						
6/20/2001	Kjeldahl nitrogen	Total	Actual		Final	0.4	mg/l	~						
4/5/2001	Kjeldahl nitrogen	Total	Actual		Final	0.3	mg/l	~						
10/21/1999	Kjeldahl nitrogen	Total	Actual		Final	0.3	mg/l	~						
9/2/1999	Kjeldahl nitrogen	Total	Actual		Final	0.1	mg/l	~						
8/19/1999	Kjeldahl nitrogen	Total	Actual		Final	0.4	mg/l	~						
7/8/1999	Kjeldahl nitrogen	Total	Actual		Final	0.6	mg/l	~						
6/2/1999	Kjeldahl nitrogen	Total	Actual		Final	0.5	mg/l	~						
5/19/1999	Kjeldahl nitrogen	Total	Actual		Final	0.8	mg/l	~						
10/21/1998	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	1020	625		0.1		D						
9/24/1998	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	1050	625		0.3		D						
8/5/1998	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	1245	625		0.7		D						
7/30/1998	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	1140	625		0.8		D						
6/18/1998	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	920	625		0.4		D						
5/27/1998	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	1015	625		0.8		D						
4/2/1998	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	1115	625		0.5		D						
3/9/1998	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	1320	625		0.6		D						
9/8/1993	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	1325	625		0.4		D						
8/18/1993	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	1300	625		0.4		D						
7/13/1993	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	1305	625		0.3		D						
6/2/1993	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	1350	625		0.3		D						
5/18/1993	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	1406	625		0.4		D						
4/1/1993	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	1120	625		0.3		D						
3/4/1993	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	1300	625		0.2		D						
2/11/1993	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	1330	625		0.3		D						
1/19/1993	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	1031	625		0.3		D						
12/8/1992	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	1235	625		0.3		D						
11/18/1992	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	1035	625		0.6		D						
5/3/1984	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	1115	625		1.0		D						
8/23/1982	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	1410	625		1.1		D						
8/23/1982	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	941	625		1.1		D						
8/23/1982	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	940	625		1.0		D						
8/23/1982	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	1412	625		0.7		D						
8/23/1982	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	942	625		1.1		D						
8/23/1982	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	1411	625		1.1		D						
										14	0.54			
11/6/2008	Lead	Total	Actual		Final	*Present <QL		APHA	~3120					
8/27/2008	Lead	Total	Actual		Final	*Present <QL		APHA	~3120					
5/27/2008	Lead	Total	Actual		Final	*Present <QL		APHA	~3120					
2/7/2008	Lead	Total	Actual		Final	*Present <QL		APHA	~3120					
11/6/2007	Lead	Total	Actual		Final	*Present <QL		APHA	~3120					
8/16/2007	Lead	Total	Actual		Final	*Present <QL		APHA	~3120					

5/30/2007	Lead	Total	Actual		Final	*Present <QL		APHA ~3120						
2/5/2007	Lead	Total	Actual		Final	*Present <QL		APHA ~3120						
11/29/2006	Lead	Total	Actual		Final	*Present <QL		APHA ~3120						
8/24/2006	Lead	Total	Actual		Final	*Present <QL		APHA ~3120						
5/25/2006	Lead	Total	Actual		Final	*Present <QL		APHA ~3120						
2/2/2006	Lead	Total	Actual		Final	*Present <QL		APHA ~3120						
11/14/2005	Lead	Total	Actual		Final	*Present <QL		APHA ~3120						
8/30/2005	Lead	Total	Actual		Final	*Present <QL		APHA ~3120						
5/26/2005	Lead	Total	Actual		Final	*Present <QL		APHA ~3120						
2/3/2005	Lead	Total	Actual		Final	*Present <QL		APHA ~3120						
11/4/2004	Lead	Total	Actual		Final	*Present <QL		APHA ~3120						
8/5/2004	Lead	Total	Actual		Final	*Present <QL		APHA ~3120						
5/20/2004	Lead	Total	Actual		Final	*Present <QL		APHA ~3120						
2/12/2004	Lead	Total	Actual		Final	*Present <QL		APHA ~3120						
11/6/2003	Lead	Total	Actual		Final	*Present <QL		APHA ~3120						
8/5/2003	Lead	Total	Actual		Final	*Present <QL		APHA ~3120						
5/15/2003	Lead	Total	Actual		Final	*Present <QL		APHA ~3120						
2/10/2003	Lead	Total	Actual		Final	*Present <QL		APHA ~3120						
11/26/2002	Lead	Total	Actual		Final	*Present <QL	ug/l	APHA ~3120						
5/23/2002	Lead	Total	Actual		Final	*Present <QL	ug/l	APHA ~3120						
2/19/2002	Lead	Total	Actual		Final	*Present <QL	ug/l	APHA ~3120						
11/14/2001	Lead	Total	Actual		Final	*Present <QL	ug/l	APHA ~3120						
8/15/2001	Lead	Total	Actual		Final	*Present <QL	ug/l	APHA ~3120						
5/1/2001	Lead	Total	Actual		Final	*Present <QL	ug/l	APHA ~3120						
8/19/1999	Lead	Total	Actual		Final	*Present <QL	ug/l	APHA ~3120						
5/19/1999	Lead	Total	Actual		Final	*Present <QL	ug/l	APHA ~3120						
8/5/1998	LEAD, TOTAL (UG/L AS PB)	B	1245	1051		50.0	K	D						
5/27/1998	LEAD, TOTAL (UG/L AS PB)	B	1015	1051		50.0	K	D						
9/8/1993	LEAD, TOTAL (UG/L AS PB)	B	1325	1051		50.0	K	D						
6/2/1993	LEAD, TOTAL (UG/L AS PB)	B	1350	1051		50.0	K	D						
3/4/1993	LEAD, TOTAL (UG/L AS PB)	B	1300	1051		50.0	K	D						
12/8/1992	LEAD, TOTAL (UG/L AS PB)	B	1235	1051		50.0	K	D						
9/25/1973	LEAD, DISSOLVED (UG/L AS PB)	B	2500	1049		100.0	K	D						
11/6/2008	Manganese	Total	Actual		Final	0.0	ug/l	APHA ~3120						
8/27/2008	Manganese	Total	Actual		Final	0.2	ug/l	APHA ~3120						
5/27/2008	Manganese	Total	Actual		Final	0.1	ug/l	APHA ~3120						
2/7/2008	Manganese	Total	Actual		Final	0.0	ug/l	APHA ~3120						
11/6/2007	Manganese	Total	Actual		Final	0.0	ug/l	APHA ~3120						
8/16/2007	Manganese	Total	Actual		Final	0.0	ug/l	APHA ~3120						
5/30/2007	Manganese	Total	Actual		Final	0.1	ug/l	APHA ~3120						
2/5/2007	Manganese	Total	Actual		Final	0.4	ug/l	APHA ~3120						
11/29/2006	Manganese	Total	Actual		Final	59.0	ug/l	APHA ~3120						
8/24/2006	Manganese	Total	Actual		Final	75.0	ug/l	APHA ~3120						
5/25/2006	Manganese	Total	Actual		Final	130.0	ug/l	APHA ~3120						
2/2/2006	Manganese	Total	Actual		Final	41.0	ug/l	APHA ~3120						
11/14/2005	Manganese	Total	Actual		Final	27.0	ug/l	APHA ~3120						
8/30/2005	Manganese	Total	Actual		Final	81.0	ug/l	APHA ~3120						
5/26/2005	Manganese	Total	Actual		Final	57.0	ug/l	APHA ~3120						
2/3/2005	Manganese	Total	Actual		Final	34.0	ug/l	APHA ~3120						
11/4/2004	Manganese	Total	Actual		Final	46.0	ug/l	APHA ~3120						
8/5/2004	Manganese	Total	Actual		Final	84.0	ug/l	APHA ~3120						
5/20/2004	Manganese	Total	Actual		Final	130.0	ug/l	APHA ~3120						
2/12/2004	Manganese	Total	Actual		Final	99.0	ug/l	APHA ~3120						
11/6/2003	Manganese	Total	Actual		Final	60.0	ug/l	APHA ~3120						
8/5/2003	Manganese	Total	Actual		Final	200.0	ug/l	APHA ~3120						
5/15/2003	Manganese	Total	Actual		Final	79.0	ug/l	APHA ~3120						
2/10/2003	Manganese	Total	Actual		Final	54.0	ug/l	APHA ~3120						
11/26/2002	Manganese	Total	Actual		Final	44.0	ug/l	APHA ~3120						
5/23/2002	Manganese	Total	Actual		Final	36.0	ug/l	APHA ~3120						
2/19/2002	Manganese	Total	Actual		Final	130.0	ug/l	APHA ~3120						
11/14/2001	Manganese	Total	Actual		Final	17.0	ug/l	APHA ~3120						
8/15/2001	Manganese	Total	Actual		Final	67.0	ug/l	APHA ~3120						
5/1/2001	Manganese	Total	Actual		Final	60.0	ug/l	APHA ~3120						
8/19/1999	Manganese	Total	Actual		Final	110.0	ug/l	APHA ~3120						
5/19/1999	Manganese	Total	Actual		Final	50.0	ug/l	APHA ~3120						
8/5/1998	MANGANESE, TOTAL (UG/L AS MN)	B	1245	1055		40.0		D						
5/27/1998	MANGANESE, TOTAL (UG/L AS MN)	B	1015	1055		50.0		D						
9/8/1993	MANGANESE, TOTAL (UG/L AS MN)	B	1325	1055		70.0		D						
6/2/1993	MANGANESE, TOTAL (UG/L AS MN)	B	1350	1055		50.0		D						
3/4/1993	MANGANESE, TOTAL (UG/L AS MN)	B	1300	1055		70.0		D						
12/8/1992	MANGANESE, TOTAL (UG/L AS MN)	B	1235	1055		40.0		D						
										1.6	0.91	0.05	0.051	2
11/6/2008	Mercury	Total	Actual		Final	*Present <QL		USEPA ~245.1_M						
8/27/2008	Mercury	Total	Actual		Final	*Present <QL		USEPA ~245.1_M						
5/27/2008	Mercury	Total	Actual		Final	*Present <QL		USEPA ~245.1_M						
2/7/2008	Mercury	Total	Actual		Final	*Present <QL		USEPA ~245.1_M						
11/6/2007	Mercury	Total	Actual		Final	*Present <QL		USEPA ~245.1_M						
8/16/2007	Mercury	Total	Actual		Final	*Present <QL		USEPA ~245.1_M						
5/30/2007	Mercury	Total	Actual		Final	*Present <QL		USEPA ~245.1_M						
2/5/2007	Mercury	Total	Actual		Final	*Present <QL		USEPA ~245.1_M						
11/29/2006	Mercury	Total	Actual		Final	*Present <QL		USEPA ~245.1_M						
8/24/2006	Mercury	Total	Actual		Final	*Present <QL		USEPA ~245.1_M						
5/25/2006	Mercury	Total	Actual		Final	*Present <QL		USEPA ~245.1_M						
2/2/2006	Mercury	Total	Actual		Final	*Present <QL		USEPA ~245.1_M						
11/14/2005	Mercury	Total	Actual		Final	*Present <QL		USEPA ~245.1_M						
8/30/2005	Mercury	Total	Actual		Final	*Present <QL		USEPA ~245.1_M						
5/26/2005	Mercury	Total	Actual		Final	*Present <QL		USEPA ~245.1_M						
2/3/2005	Mercury	Total	Actual		Final	*Present <QL		USEPA ~245.1_M						
11/4/2004	Mercury	Total	Actual		Final	*Present <QL		USEPA ~245.1_M						
8/5/2004	Mercury	Total	Actual		Final	*Present <QL		USEPA ~245.1_M						
5/20/2004	Mercury	Total	Actual		Final	*Present <QL		USEPA ~245.1_M						
2/12/2004	Mercury	Total	Actual		Final	*Present <QL		USEPA ~245.1_M						
11/6/2003	Mercury	Total	Actual		Final	*Present <QL		USEPA ~245.1_M						
8/5/2003	Mercury	Total	Actual		Final	*Present <QL		USEPA ~245.1_M						
5/15/2003	Mercury	Total	Actual		Final	*Present <QL		USEPA ~245.1_M						
2/10/2003	Mercury	Total	Actual		Final	*Present <QL		USEPA ~245.1_M						
11/26/2002	Mercury	Total	Actual		Final	*Present <QL	ug/l	USEPA ~245.1_M						
5/23/2002	Mercury	Total	Actual		Final	*Present <QL	ug/l	USEPA ~245.1_M						
2/19/2002	Mercury	Total	Actual		Final	*Present <QL	ug/l	USEPA ~245.1_M						
11/14/2001	Mercury	Total	Actual		Final	*Present <QL	ug/l	USEPA ~245.1_M						
8/15/2001	Mercury	Total	Actual		Final	*Present <QL	ug/l	USEPA ~245.1_M						
5/1/2001	Mercury	Total	Actual		Final	*Present <QL	ug/l	USEPA ~245.1_M						
8/19/1999	Mercury	Total	Actual		Final	*Present <QL	ug/l	USEPA ~245.1_M						
5/19/1999	Mercury	Total	Actual		Final	*Present <QL	ug/l	USEPA ~245.1_M						
8/5/1998	MERCURY, TOTAL (UG/L AS HG)	B	1245	71900		0.2	K	D						
5/27/1998	MERCURY, TOTAL (UG/L AS HG)	B	1015	71900		0.2	K	D						
9/8/1993	MERCURY, TOTAL (UG/L AS HG)	B	1325	71900		0.2	K	D						
6/2/1993	MERCURY, TOTAL (UG/L AS HG)	B	1350	71900		0.2	K	D						
12/8/1992	MERCURY, TOTAL (UG/L AS HG)	B	1235	71900		0.2	K	D						
9/25/1973	MERCURY, TOTAL (UG/L AS HG)	B	2500	71900		4.0		D						
4/20/1973	MERCURY, TOTAL (UG/L AS HG)	B	2500	71900		0.4		D						
3/23/1973	MERCURY, TOTAL (UG/L AS HG)	B	2500	71900		0.3		D						
										150	16	610	4600	
11/6/2008	Nickel	Total	Actual		Final	*Present <QL		APHA ~3120						
8/27/2008	Nickel	Total	Actual		Final	*Present <QL		APHA ~3120						
5/27/2008	Nickel	Total	Actual		Final	*Present <QL		APHA ~3120						
2/7/2008	Nickel	Total	Actual		Final	*Present <QL		APHA ~3120						
11/6/2007	Nickel	Total	Actual		Final	*Present <QL		APHA ~3120						
8/16/2007	Nickel	Total	Actual		Final	*Present <QL		APHA ~3120						
5/30/2007	Nickel	Total	Actual		Final	*Present <QL		APHA ~3120						
2/5/2007	Nickel	Total	Actual		Final	*Present <QL		APHA ~3120						
11/29/2006	Nickel	Total	Actual		Final	*Present <QL		APHA ~3120						
8/24/2006	Nickel	Total	Actual		Final	*Present <QL		APHA ~3120						
5/25/2006	Nickel	Total	Actual		Final	*Present <QL		APHA ~3120						
2/2/2006	Nickel	Total	Actual		Final	*Present <QL		APHA ~3120						
11/14/2005	Nickel	Total	Actual		Final	*Present <QL		APHA ~3120						
8/30/2005	Nickel	Total	Actual		Final	*Present <QL		APHA ~3120						
5/26/2005	Nickel	Total	Actual		Final	*Present <QL		APHA ~3120						
2/3/2005	Nickel	Total	Actual		Final	*Present <QL		APHA ~3120						
11/4/2004	Nickel	Total	Actual		Final	*Present <QL		APHA ~3120						
8/5/2004	Nickel	Total	Actual		Final	*Present <QL		APHA ~3120						
5/20/2004	Nickel	Total	Actual		Final	*Present <QL		APHA ~3120						
2/12/2004	Nickel	Total	Actual		Final	*Present <QL		APHA ~3120						
11/6/2003	Nickel	Total	Actual		Final	*Present <QL		APHA ~3120						
8/5/2003	Nickel	Total	Actual		Final	*Present <QL		APHA ~3120						
5/15/2003	Nickel	Total	Actual		Final	*Present <QL		APHA ~3120						
2/10/2003	Nickel	Total	Actual		Final	*Present <QL		APHA ~3120						
11/26/2002	Nickel	Total	Actual		Final	*Present <QL	ug/l	APHA ~3120						
5/23/2002	Nickel	Total	Actual		Final	*Present <QL	ug/l	APHA ~3120						
2/19/2002	Nickel	Total	Actual		Final	*Present <QL	ug/l	APHA ~3120						
11/14/2001	Nickel	Total	Actual		Final	*Present <QL	ug/l	APHA ~3120						
8/15/2001	Nickel	Total	Actual		Final	*Present <QL	ug/l	APHA ~3120						
5/1/2001	Nickel	Total	Actual		Final	*Present <QL	ug/l	APHA ~3120						
8/19/1999	Nickel	Total	Actual		Final	*Present <QL	ug/l	APHA ~3120						
5/19/1999	Nickel	Total	Actual		Final	*Present <QL	ug/l	APHA ~3120						
8/5/1998	NICKEL, TOTAL (UG/L AS NI)	B	1245	1067		20.0	K	D						
5/27/1998	NICKEL, TOTAL (UG/L AS NI)	B	1015	1067		20.0	K	D						
9/8/1993	NICKEL, TOTAL (UG/L AS NI)	B	1325	1067		20.0	K	D						
6/2/1993	NICKEL, TOTAL (UG/L AS NI)	B	1350	1067		20.0	K	D						
3/4/1993	NICKEL, TOTAL (UG/L AS NI)	B	1300	1067		20.0	K	D						
12/8/1992	NICKEL, TOTAL (UG/L AS NI)	B	1235	1067		20.0	K	D						
									BETWEEN 6.0 AND 8.5					**SEE TEXT**
12/4/2008	pH		Actual		Final	6.5	None	21SC60WQ ~FIELD PARMS						
11/6/2008	pH		Actual		Final	6.8	None	21SC60WQ ~FIELD PARMS						
10/23/2008	pH		Actual		Final	6.8	None	21SC60WQ ~FIELD PARMS						
9/25/2008	pH		Actual		Final	6.7	None	21SC60WQ ~FIELD PARMS						
8/27/2008	pH		Actual		Final	6.6	None	21SC60WQ ~FIELD PARMS						
7/10/2008	pH		Actual		Final	6.6	None	21SC60WQ ~FIELD PARMS						
6/19/2008	pH		Actual		Final	6.8	None	21SC60WQ ~FIELD PARMS						
5/27/2008	pH		Actual		Final	6.8	None	21SC60WQ ~FIELD PARMS						
4/24/2008	pH		Actual		Final	6.7	None	21SC60WQ ~FIELD PARMS						
3/6/2008	pH		Actual		Final	6.6	None	21SC60WQ ~FIELD PARMS						
2/7/2008	pH		Actual		Final	6.7	None	21SC60WQ ~FIELD PARMS						
1/16/2008	pH		Actual		Final	7.1	None	21SC60WQ ~FIELD PARMS						

12/5/2007	pH		Actual		Final	7.0	None	21SC60WQ ~FIELD PARMS						
11/6/2007	pH		Actual		Final	6.9	None	21SC60WQ ~FIELD PARMS						
10/29/2007	pH		Actual		Final	7.3	None	21SC60WQ ~FIELD PARMS						
9/13/2007	pH		Actual		Final	6.8	None	21SC60WQ ~FIELD PARMS						
8/16/2007	pH		Actual		Final	6.7	None	21SC60WQ ~FIELD PARMS						
7/30/2007	pH		Actual		Final	6.9	None	21SC60WQ ~FIELD PARMS						
6/20/2007	pH		Actual		Final	7.0	None	21SC60WQ ~FIELD PARMS						
5/30/2007	pH		Actual		Final	6.9	None	21SC60WQ ~FIELD PARMS						
4/24/2007	pH		Actual		Final	6.9	None	21SC60WQ ~FIELD PARMS						
3/20/2007	pH		Actual		Final	6.7	None	21SC60WQ ~FIELD PARMS						
2/5/2007	pH		Actual		Final	7.3	None	21SC60WQ ~FIELD PARMS						
1/2/2007	pH		Actual		Final	6.8	None	21SC60WQ ~FIELD PARMS						
12/11/2006	pH		Actual		Final	7.0	None	21SC60WQ ~FIELD PARMS						
11/29/2006	pH		Actual		Final	6.8	None	21SC60WQ ~FIELD PARMS						
10/30/2006	pH		Actual		Final	6.8	None	21SC60WQ ~FIELD PARMS						
9/21/2006	pH		Actual		Final	6.8	None	21SC60WQ ~FIELD PARMS						
8/24/2006	pH		Actual		Final	6.9	None	21SC60WQ ~FIELD PARMS						
7/6/2006	pH		Actual		Final	6.5	None	21SC60WQ ~FIELD PARMS						
6/28/2006	pH		Actual		Final	6.8	None	21SC60WQ ~FIELD PARMS						
5/25/2006	pH		Actual		Final	7.0	None	21SC60WQ ~FIELD PARMS						
4/27/2006	pH		Actual		Final	6.7	None	21SC60WQ ~FIELD PARMS						
3/23/2006	pH		Actual		Final	6.7	None	21SC60WQ ~FIELD PARMS						
2/2/2006	pH		Actual		Final	6.6	None	21SC60WQ ~FIELD PARMS						
1/18/2006	pH		Actual		Final	6.6	None	21SC60WQ ~FIELD PARMS						
12/7/2005	pH		Actual		Final	6.7	None	21SC60WQ ~FIELD PARMS						
11/14/2005	pH		Actual		Final	7.3	None	21SC60WQ ~FIELD PARMS						
10/6/2005	pH		Actual		Final	6.5	None	21SC60WQ ~FIELD PARMS						
9/29/2005	pH		Actual		Final	6.6	None	21SC60WQ ~FIELD PARMS						
8/30/2005	pH		Actual		Final	6.7	None	21SC60WQ ~FIELD PARMS						
7/28/2005	pH		Actual		Final	6.6	None	21SC60WQ ~FIELD PARMS						
6/30/2005	pH		Actual		Final	6.5	None	21SC60WQ ~FIELD PARMS						
5/26/2005	pH		Actual		Final	6.7	None	21SC60WQ ~FIELD PARMS						
4/7/2005	pH		Actual		Final	7.1	None	21SC60WQ ~FIELD PARMS						
3/30/2005	pH		Actual		Final	6.3	None	21SC60WQ ~FIELD PARMS						
2/3/2005	pH		Actual		Final	7.1	None	21SC60WQ ~FIELD PARMS						
1/27/2005	pH		Actual		Final	7.4	None	21SC60WQ ~FIELD PARMS						
12/2/2004	pH		Actual		Final	7.0	None	21SC60WQ ~FIELD PARMS						
11/4/2004	pH		Actual		Final	6.8	None	21SC60WQ ~FIELD PARMS						
10/20/2004	pH		Actual		Final	7.1	None	21SC60WQ ~FIELD PARMS						
9/16/2004	pH		Actual		Final	6.2	None	21SC60WQ ~FIELD PARMS						
8/5/2004	pH		Actual		Final	6.8	None	21SC60WQ ~FIELD PARMS						
7/29/2004	pH		Actual		Final	6.6	None	21SC60WQ ~FIELD PARMS						
6/10/2004	pH		Actual		Final	6.9	None	21SC60WQ ~FIELD PARMS						
5/20/2004	pH		Actual		Final	6.7	None	21SC60WQ ~FIELD PARMS						
4/8/2004	pH		Actual		Final	7.0	None	21SC60WQ ~FIELD PARMS						
3/2/2004	pH		Actual		Final	7.0	None	21SC60WQ ~FIELD PARMS						
2/12/2004	pH		Actual		Final	7.4	None	21SC60WQ ~FIELD PARMS						
1/8/2004	pH		Actual		Final	7.8	None	21SC60WQ ~FIELD PARMS						
12/3/2003	pH		Actual		Final	7.4	None	21SC60WQ ~FIELD PARMS						
11/6/2003	pH		Actual		Final	6.7	None	21SC60WQ ~FIELD PARMS						
10/9/2003	pH		Actual		Final	7.0	None	21SC60WQ ~FIELD PARMS						
9/2/2003	pH		Actual		Final	6.5	None	21SC60WQ ~FIELD PARMS						
8/5/2003	pH		Actual		Final	6.6	None	21SC60WQ ~FIELD PARMS						
7/1/2003	pH		Actual		Final	7.1	None	21SC60WQ ~FIELD PARMS						
6/5/2003	pH		Actual		Final	7.9	None	21SC60WQ ~FIELD PARMS						
5/15/2003	pH		Actual		Final	7.2	None	21SC60WQ ~FIELD PARMS						
4/10/2003	pH		Actual		Final	6.5	None	21SC60WQ ~FIELD PARMS						
3/20/2003	pH		Actual		Final	6.6	None	21SC60WQ ~FIELD PARMS						
2/10/2003	pH		Actual		Final	9.0	None	21SC60WQ ~FIELD PARMS						
1/21/2003	pH		Actual		Final	7.7	None	21SC60WQ ~FIELD PARMS						
12/5/2002	pH		Actual		Final	6.8	None	~						
11/26/2002	pH		Actual		Final	7.5	None	~						
10/16/2002	pH		Actual		Final	8.3	None	~						
9/3/2002	pH		Actual		Final	6.9	None	~						
7/18/2002	pH		Actual		Final	7.6	None	~						
6/17/2002	pH		Actual		Final	7.0	None	~						
5/23/2002	pH		Actual		Final	6.9	None	~						
4/9/2002	pH		Actual		Final	6.8	None	~						
3/19/2002	pH		Actual		Final	6.5	None	~						
2/19/2002	pH		Actual		Final	6.6	None	~						
1/23/2002	pH		Actual		Final	6.9	None	~						
12/6/2001	pH		Actual		Final	6.1	None	~						
11/14/2001	pH		Actual		Final	4.6	None	~						
10/18/2001	pH		Actual		Final	6.8	None	~						
9/11/2001	pH		Actual		Final	8.1	None	~						
8/15/2001	pH		Actual		Final	7.1	None	~						
7/23/2001	pH		Actual		Final	6.9	None	~						
6/20/2001	pH		Actual		Final	7.0	None	~						
4/5/2001	pH		Actual		Final	7.5	None	~						
3/8/2001	pH		Actual		Final	6.6	None	~						
2/1/2001	pH		Actual		Final	7.4	None	~						
1/3/2001	pH		Actual		Final	4.2	None	~						
8/3/2000	pH		Actual		Final	8.0	None	~						
7/18/2000	pH		Actual		Final	7.6	None	~						
6/7/2000	pH		Actual		Final	7.6	None	~						
5/9/2000	pH		Actual		Final	8.0	None	~						
10/21/1999	pH		Actual		Final	7.9	None	~						
9/2/1999	pH		Actual		Final	8.3	None	~						
8/19/1999	pH		Actual		Final	7.6	None	~						
7/8/1999	pH		Actual		Final	7.6	None	~						
6/2/1999	pH		Actual		Final	7.8	None	~						
5/19/1999	pH		Actual		Final	7.2	None	~						
10/21/1998	PH (STANDARD UNITS)		B	1020	400		6.5		D					
9/24/1998	PH (STANDARD UNITS)		B	1050	400		7.5		D					
8/5/1998	PH (STANDARD UNITS)		B	1245	400		6.5		D					
7/30/1998	PH (STANDARD UNITS)		B	1140	400		6.2		D					
6/18/1998	PH (STANDARD UNITS)		B	920	400		6.6		D					
5/27/1998	PH (STANDARD UNITS)		B	1015	400		5.9		D					
4/2/1998	PH (STANDARD UNITS)		B	1115	400		6.1		D					
3/9/1998	PH (STANDARD UNITS)		B	1320	400		5.7		D					
10/9/1997	PH (STANDARD UNITS)		B	1110	400		6.6		D					
9/2/1997	PH (STANDARD UNITS)		B	1340	400		7.1		D					
8/5/1997	PH (STANDARD UNITS)		B	1330	400		6.9		D					
7/1/1997	PH (STANDARD UNITS)		B	1155	400		6.4		D					
6/19/1997	PH (STANDARD UNITS)		B	1045	400		6.8		D					
5/14/1997	PH (STANDARD UNITS)		B	1150	400		6.8		D					
10/10/1996	PH (STANDARD UNITS)		B	1109	400		7.3		D					
8/5/1996	PH (STANDARD UNITS)		B	1130	400		6.9		D					
7/22/1996	PH (STANDARD UNITS)		B	1405	400		6.7		D					
6/26/1996	PH (STANDARD UNITS)		B	1345	400		6.5		D					
5/14/1996	PH (STANDARD UNITS)		B	1050	400		6.4		D					
10/4/1995	PH (STANDARD UNITS)		B	1200	400		5.5		D					
9/20/1995	PH (STANDARD UNITS)		B	1401	400		6.3		D					
8/16/1995	PH (STANDARD UNITS)		B	1430	400		6.6		D					
7/5/1995	PH (STANDARD UNITS)		B	1350	400		6.9		D					
7/5/1995	PH, LAB, STANDARD UNITS	SU	B	1350	403		6.4		D					
6/13/1995	PH (STANDARD UNITS)		B	1450	400		5.8		D					
5/9/1995	PH (STANDARD UNITS)		B	1335	400		7.0		D					
10/18/1994	PH (STANDARD UNITS)		B	1150	400		5.8		D					
9/15/1994	PH (STANDARD UNITS)		B	1120	400		6.3		D					
8/25/1994	PH (STANDARD UNITS)		B	1115	400		6.4		D					
8/9/1994	PH (STANDARD UNITS)		B	1150	400		7.0		D					
6/8/1994	PH (STANDARD UNITS)		B	1125	400		5.9		D					
5/5/1994	PH (STANDARD UNITS)		B	1445	400		6.1		D					
9/8/1993	PH (STANDARD UNITS)		B	1325	400		7.1		D					
9/8/1993	PH, LAB, STANDARD UNITS	SU	B	1325	403		6.9		D					
8/18/1993	PH (STANDARD UNITS)		B	1300	400		7.0		D					
8/18/1993	PH, LAB, STANDARD UNITS	SU	B	1300	403		7.0		D					
7/13/1993	PH (STANDARD UNITS)		B	1305	400		7.6		D					
7/13/1993	PH, LAB, STANDARD UNITS	SU	B	1305	403		6.7		D					
6/2/1993	PH (STANDARD UNITS)		B	1350	400		6.2		D					
6/2/1993	PH, LAB, STANDARD UNITS	SU	B	1350	403		6.5		D					
5/18/1993	PH (STANDARD UNITS)		B	1406	400		7.2		D					
5/18/1993	PH, LAB, STANDARD UNITS	SU	B	1406	403		6.7		D					
4/1/1993	PH (STANDARD UNITS)		B	1120	400		6.2		D					
4/1/1993	PH, LAB, STANDARD UNITS	SU	B	1120	403		6.7		D					
3/4/1993	PH (STANDARD UNITS)		B	1300	400		6.3		D					
3/4/1993	PH, LAB, STANDARD UNITS	SU	B	1300	403		6.1		D					
2/11/1993	PH (STANDARD UNITS)		B	1330	400		6.6		D					
2/11/1993	PH, LAB, STANDARD UNITS	SU	B	1330	403		6.2		D					
1/19/1993	PH (STANDARD UNITS)		B	1031	400		7.3		D					
1/19/1993	PH, LAB, STANDARD UNITS	SU	B	1031	403		7.0		D					
12/8/1992	PH (STANDARD UNITS)		B	1235	400		6.8		D					
12/8/1992	PH, LAB, STANDARD UNITS	SU	B	1235	403		6.6		D					
11/18/1992	PH (STANDARD UNITS)		B	1035	400		6.5		D					
11/18/1992	PH, LAB, STANDARD UNITS	SU	B	1035	403		6.8		D					
10/22/1992	PH (STANDARD UNITS)		B	1035	400		7.0		D					
9/15/1992	PH (STANDARD UNITS)		B	1045	400		7.0		D					
8/26/1992	PH (STANDARD UNITS)		B	1035	400		6.0		D					
7/28/1992	PH (STANDARD UNITS)		B	1125	400		6.7		D					
6/17/1992	PH (STANDARD UNITS)		B	1045	400		6.5		D					
5/20/1992	PH (STANDARD UNITS)		B	1259	400		6.6		D					
10/21/1991	PH (STANDARD UNITS)		B	1055	400		6.5		D					
10/21/1991	PH, LAB, STANDARD UNITS	SU	B	1055	403		6.8		D					
9/11/1991	PH (STANDARD UNITS)		B	1200	400		6.4		D					
8/12/1991	PH (STANDARD UNITS)		B	1320	400		6.0		D					
7/2/1991	PH (STANDARD UNITS)		B	1120	400		6.2		D					
6/12/1991	PH (STANDARD UNITS)		B	1050	400		6.7		D					
5/29/1991	PH (STANDARD UNITS)		B	1200	400		7.1		D					
10/16/1990	PH (STANDARD UNITS)		B	1345	400		5.7		D					
9/18/1990	PH (STANDARD UNITS)		B	1305	400		6.2		D					
8/7/1990	PH (STANDARD UNITS)		B	1143	400		7.2		D					
7/16/1990	PH (STANDARD UNITS)		B	1326	400		6.3		D					
6/12/1990	PH (STANDARD UNITS)		B	1205	400		6.7		D					
5/21/1990	PH (STANDARD UNITS)		B	1230	400		7.0		D					

10/16/1989	PH (STANDARD UNITS)		B	1253	400		6.3		D						
9/5/1989	PH (STANDARD UNITS)		B	1349	400		6.6		D						
8/8/1989	PH (STANDARD UNITS)		B	1218	400		6.4		D						
7/25/1989	PH (STANDARD UNITS)		B	1220	400		6.9		D						
6/8/1989	PH (STANDARD UNITS)		B	1248	400		6.5		D						
5/11/1989	PH (STANDARD UNITS)		B	1213	400		6.4		D						
5/11/1989	PH, LAB, STANDARD UNITS	SU	B	1213	403		6.8		D						
10/11/1988	PH (STANDARD UNITS)		B	1136	400		6.8		D						
10/11/1988	PH, LAB, STANDARD UNITS	SU	B	1136	403		6.5		D						
9/12/1988	PH (STANDARD UNITS)		B	1212	400		6.4		D						
9/12/1988	PH, LAB, STANDARD UNITS	SU	B	1212	403		6.5		D						
7/13/1988	PH (STANDARD UNITS)		B	1105	400		6.6		D						
7/13/1988	PH, LAB, STANDARD UNITS	SU	B	1105	403		6.4		D						
6/14/1988	PH (STANDARD UNITS)		B	1253	400		7.6		D						
5/4/1988	PH (STANDARD UNITS)		B	1255	400		7.7		D						
5/4/1988	PH, LAB, STANDARD UNITS	SU	B	1255	403		6.6		D						
10/5/1987	PH (STANDARD UNITS)		B	1125	400		7.1		D						
10/5/1987	PH, LAB, STANDARD UNITS	SU	B	1125	403		6.0		D						
9/3/1987	PH (STANDARD UNITS)		B	1110	400		6.3		D						
9/3/1987	PH, LAB, STANDARD UNITS	SU	B	1110	403		6.1		D						
8/17/1987	PH (STANDARD UNITS)		B	1205	400		7.0		D						
8/17/1987	PH, LAB, STANDARD UNITS	SU	B	1205	403		6.3		D						
7/14/1987	PH (STANDARD UNITS)		B	1145	400		7.2		D						
7/14/1987	PH, LAB, STANDARD UNITS	SU	B	1145	403		6.2		D						
6/2/1987	PH (STANDARD UNITS)		B	1400	400		6.0		D						
6/2/1987	PH, LAB, STANDARD UNITS	SU	B	1400	403		6.0		D						
5/13/1987	PH, LAB, STANDARD UNITS	SU	B	1240	403		6.2		D						
10/13/1986	PH (STANDARD UNITS)		B	1155	400		6.3		D						
9/24/1986	PH (STANDARD UNITS)		B	1025	400		6.5		D						
8/7/1986	PH (STANDARD UNITS)		B	1110	400		6.5		D						
6/18/1986	PH (STANDARD UNITS)		B	1030	400		7.2		D						
10/29/1985	PH (STANDARD UNITS)		B	1055	400		6.6		D						
9/27/1985	PH (STANDARD UNITS)		B	1145	400		6.4		D						
8/26/1985	PH (STANDARD UNITS)		B	1030	400		6.5		D						
7/18/1985	PH (STANDARD UNITS)		B	1130	400		6.2		D						
6/10/1985	PH (STANDARD UNITS)		B	1205	400		6.3		D						
5/21/1985	PH (STANDARD UNITS)		B	1045	400		6.3		D						
10/25/1984	PH (STANDARD UNITS)		B	1030	400		6.5		D						
9/11/1984	PH (STANDARD UNITS)		B	1100	400		7.3		D						
8/23/1984	PH (STANDARD UNITS)		B	1110	400		7.1		D						
7/17/1984	PH (STANDARD UNITS)		B	1335	400		7.0		D						
6/25/1984	PH (STANDARD UNITS)		B	1040	400		6.0		D						
5/3/1984	PH (STANDARD UNITS)		B	1115	400		6.3		D						
5/3/1984	PH, LAB, STANDARD UNITS	SU	B	1115	403		6.0		D						
8/8/1983	PH (STANDARD UNITS)		B	1015	400		5.9		D						
8/8/1983	PH, LAB, STANDARD UNITS	SU	B	1015	403		6.3		D						
8/23/1982	PH (STANDARD UNITS)		B	941	400		6.2		D						
8/23/1982	PH (STANDARD UNITS)		B	940	400		6.2		D						
8/23/1982	PH (STANDARD UNITS)		B	1410	400		6.3		D						
8/23/1982	PH (STANDARD UNITS)		B	1411	400		6.3		D						
8/23/1982	PH (STANDARD UNITS)		B	942	400		6.2		D						
8/23/1982	PH (STANDARD UNITS)		B	1412	400		6.3		D						
8/23/1982	PH, LAB, STANDARD UNITS	SU	B	942	403		6.0		D						
8/23/1982	PH, LAB, STANDARD UNITS	SU	B	1412	403		6.5		D						
8/23/1982	PH, LAB, STANDARD UNITS	SU	B	940	403		6.0		D						
8/23/1982	PH, LAB, STANDARD UNITS	SU	B	941	403		6.1		D						
8/23/1982	PH, LAB, STANDARD UNITS	SU	B	1411	403		6.8		D						
8/23/1982	PH, LAB, STANDARD UNITS	SU	B	1410	403		5.7		D						
10/16/1980	PH (STANDARD UNITS)		B	1005	400		7.4		D						
10/16/1980	PH, LAB, STANDARD UNITS	SU	B	1005	403		6.0		D						
9/8/1980	PH (STANDARD UNITS)		B	1315	400		6.5		D						
9/8/1980	PH, LAB, STANDARD UNITS	SU	B	1315	403		6.2		D						
8/25/1980	PH (STANDARD UNITS)		B	1505	400		6.3		D						
8/25/1980	PH, LAB, STANDARD UNITS	SU	B	1505	403		6.3		D						
7/24/1980	PH (STANDARD UNITS)		B	1245	400		6.8		D						
7/24/1980	PH, LAB, STANDARD UNITS	SU	B	1245	403		6.5		D						
6/17/1980	PH (STANDARD UNITS)		B	1240	400		6.3		D						
6/17/1980	PH, LAB, STANDARD UNITS	SU	B	1240	403		6.4		D						
5/19/1980	PH (STANDARD UNITS)		B	1235	400		6.9		D						
5/19/1980	PH, LAB, STANDARD UNITS	SU	B	1235	403		6.3		D						
10/26/1979	PH (STANDARD UNITS)		B	1200	400		7.0		D						
10/26/1979	PH, LAB, STANDARD UNITS	SU	B	1200	403		6.4		D						
9/27/1979	PH (STANDARD UNITS)		B	1210	400		6.3		D						
9/27/1979	PH, LAB, STANDARD UNITS	SU	B	1210	403		6.0		D						
8/22/1979	PH (STANDARD UNITS)		B	1100	400		6.6		D						
8/22/1979	PH, LAB, STANDARD UNITS	SU	B	1100	403		6.7		D						
7/10/1979	PH (STANDARD UNITS)		B	1045	400		7.0		D						
7/10/1979	PH, LAB, STANDARD UNITS	SU	B	1045	403		6.5		D						
6/26/1979	PH (STANDARD UNITS)		B	1110	400		4.9		D						
5/7/1979	PH (STANDARD UNITS)		B	1150	400		6.7		D						
5/7/1979	PH, LAB, STANDARD UNITS	SU	B	1150	403		6.5		D						
10/24/1978	PH (STANDARD UNITS)		B	1005	400		6.7		D						
10/24/1978	PH, LAB, STANDARD UNITS	SU	B	1005	403		6.0		D						
9/8/1978	PH (STANDARD UNITS)		B	1125	400		6.6		D						
9/8/1978	PH, LAB, STANDARD UNITS	SU	B	1125	403		5.8		D						
8/9/1978	PH (STANDARD UNITS)		B	1000	400		7.0		D						
8/9/1978	PH, LAB, STANDARD UNITS	SU	B	1000	403		6.5		D						
7/13/1978	PH (STANDARD UNITS)		B	1105	400		6.6		D						
7/13/1978	PH, LAB, STANDARD UNITS	SU	B	1105	403		6.5		D						
6/27/1978	PH (STANDARD UNITS)		B	1240	400		6.2		D						
6/27/1978	PH, LAB, STANDARD UNITS	SU	B	1240	403		6.5		D						
5/3/1978	PH, LAB, STANDARD UNITS	SU	B	1145	403		6.3		D						
10/27/1977	PH (STANDARD UNITS)		B	1110	400		6.3		D						
10/27/1977	PH, LAB, STANDARD UNITS	SU	B	1110	403		5.8		D						
9/14/1977	PH (STANDARD UNITS)		B	1130	400		7.2		D						
9/14/1977	PH, LAB, STANDARD UNITS	SU	B	1130	403		6.3		D						
8/10/1977	PH (STANDARD UNITS)		B	1035	400		6.8		D						
8/10/1977	PH, LAB, STANDARD UNITS	SU	B	1035	403		6.2		D						
7/22/1977	PH (STANDARD UNITS)		B	1025	400		6.7		D						
7/22/1977	PH, LAB, STANDARD UNITS	SU	B	1025	403		6.3		D						
6/14/1977	PH (STANDARD UNITS)		B	1140	400		6.8		D						
6/14/1977	PH, LAB, STANDARD UNITS	SU	B	1140	403		6.8		D						
5/6/1977	PH (STANDARD UNITS)		B	1100	400		5.7		D						
5/6/1977	PH, LAB, STANDARD UNITS	SU	B	1100	403		6.1		D						
9/28/1976	PH, LAB, STANDARD UNITS	SU	B	1045	403		6.1		D						
9/1/1976	PH (STANDARD UNITS)		B	1045	400		7.2		D						
9/1/1976	PH, LAB, STANDARD UNITS	SU	B	1045	403		6.4		D						
7/30/1976	PH (STANDARD UNITS)		B	915	400		6.7		D						
7/30/1976	PH, LAB, STANDARD UNITS	SU	B	915	403		6.2		D						
6/29/1976	PH (STANDARD UNITS)		B	1100	400		6.2		D						
6/29/1976	PH, LAB, STANDARD UNITS	SU	B	1100	403		6.2		D						
5/26/1976	PH (STANDARD UNITS)		B	845	400		6.9		D						
5/26/1976	PH, LAB, STANDARD UNITS	SU	B	845	403		3.8		D						
4/23/1976	PH (STANDARD UNITS)		B	930	400		6.2		D						
4/23/1976	PH, LAB, STANDARD UNITS	SU	B	930	403		6.4		D						
10/17/1975	PH (STANDARD UNITS)		B	920	400		6.8		D						
10/17/1975	PH, LAB, STANDARD UNITS	SU	B	920	403		5.9		D						
8/29/1975	PH (STANDARD UNITS)		B	940	400		6.6		D						
8/29/1975	PH, LAB, STANDARD UNITS	SU	B	940	403		5.9		D						
8/5/1975	PH (STANDARD UNITS)		B	1000	400		7.4		D						
8/5/1975	PH, LAB, STANDARD UNITS	SU	B	1000	403		6.1		D						
7/3/1975	PH (STANDARD UNITS)		B	950	400		7.0		D						
7/3/1975	PH, LAB, STANDARD UNITS	SU	B	950	403		6.0		D						
5/7/1975	PH (STANDARD UNITS)		B	915	400		6.7		D						
5/7/1975	PH, LAB, STANDARD UNITS	SU	B	915	403		5.8		D						
11/4/1974	PH (STANDARD UNITS)		B	940	400		7.0		D						
11/4/1974	PH, LAB, STANDARD UNITS	SU	B	940	403		6.1		D						
9/24/1974	PH (STANDARD UNITS)		B	850	400		7.7		D						
9/24/1974	PH, LAB, STANDARD UNITS	SU	B	850	403		6.1		D						
9/3/1974	PH (STANDARD UNITS)		B	1015	400		6.4		D						
9/3/1974	PH, LAB, STANDARD UNITS	SU	B	1015	403		6.2		D						
8/1/1974	PH (STANDARD UNITS)		B	1000	400		6.6		D						
8/1/1974	PH, LAB, STANDARD UNITS	SU	B	1000	403		6.0		D						
6/25/1974	PH (STANDARD UNITS)		B	1000	400		6.4		D						
6/25/1974	PH, LAB, STANDARD UNITS	SU	B	1000	403		6.5		D						
5/3/1974	PH (STANDARD UNITS)		B	1000	400		7.0		D						
5/3/1974	PH, LAB, STANDARD UNITS	SU	B	1000	403		5.9		D						
9/25/1973	PH (STANDARD UNITS)		B	1030	400		6.2		D						
9/25/1973	PH, LAB, STANDARD UNITS	SU	B	1030	403		5.9		D						
4/20/1973	PH, LAB, STANDARD UNITS	SU	B	840	403		5.9		D						
3/13/1973	PH, LAB, STANDARD UNITS	SU	B	1050	403		5.6		D						
11/30/1971	PH, LAB, STANDARD UNITS	SU	B	2500	403		6.1		D						
10/4/1971	PH, LAB, STANDARD UNITS	SU	B	2500	403		5.3		D						
8/7/1970	PH, LAB, STANDARD UNITS	SU	B	2500	403		6.3		D						
8/4/1970	PH, LAB, STANDARD UNITS	SU	B	2500	403		6.5		D						
8/3/1970	PH, LAB, STANDARD UNITS	SU	B	2500	403		6.2		D						
9/4/1968	PH, LAB, STANDARD UNITS	SU	B	2500	403		6.6		D						
9/3/1968	PH, LAB, STANDARD UNITS	SU	B	2500	403		6.7		D						
10/29/1963	PH, LAB, STANDARD UNITS	SU	B	2500	403		6.0		D						
10/28/1963	PH, LAB, STANDARD UNITS	SU	B	2500	403		6.2		D						
10/22/1963	PH, LAB, STANDARD UNITS	SU	B	2500	403		6.5		D						
6/19/1962	PH, LAB, STANDARD UNITS	SU	B	2500	403		6.1		D						
6/18/1962	PH, LAB, STANDARD UNITS	SU	B	2500	403		6.3		D						
											NARRATIVE CRITERIA					
12/4/2008	Phosphate-phosphorus as P		Total	Actual		Final	0.0	mg/l	~						
11/6/2008	Phosphate-phosphorus as P		Total	Actual		Final	0.0	mg/l	~						
10/23/2008	Phosphate-phosphorus as P		Total	Actual		Final	*Present <QL		~						
9/25/2008	Phosphate-phosphorus as P		Total	Actual		Final	0.0	mg/l	~						
8/27/2008	Phosphate-phosphorus as P		Total	Actual		Final	0.1	mg/l	~						
7/10/2008	Phosphate-phosphorus as P		Total	Actual		Final	0.0	mg/l	~						
6/19/2008	Phosphate-phosphorus as P		Total	Actual		Final	0.1	mg/l	~						
5/27/2008	Phosphate-phosphorus as P		Total	Actual		Final	0.0	mg/l	~						
4/24/2008	Phosphate-phosphorus as P		Total	Actual		Final	*Present <QL		~						
3/6/2008	Phosphate-phosphorus as P		Total	Actual		Final	0.1	mg/l	~						
2/7/2008	Phosphate-phosphorus as P		Total	Actual		Final	*Present <QL		~						

1/16/2008	Phosphate-phosphorus as P	Total	Actual		Final	*Present <QL		~						
12/5/2007	Phosphate-phosphorus as P	Total	Actual		Final	0.2	mg/l	~						
11/6/2007	Phosphate-phosphorus as P	Total	Actual		Final	*Present <QL		~						
10/29/2007	Phosphate-phosphorus as P	Total	Actual		Final	0.0	mg/l	~						
9/13/2007	Phosphate-phosphorus as P	Total	Actual		Final	*Present <QL		~						
8/20/2007	Phosphate-phosphorus as P	Total	Actual		Final	0.0	mg/l	~						
8/16/2007	Phosphate-phosphorus as P	Total	Actual		Final	*Present <QL		~						
7/30/2007	Phosphate-phosphorus as P	Total	Actual		Final	0.0	mg/l	~						
6/20/2007	Phosphate-phosphorus as P	Total	Actual		Final	0.0	mg/l	~						
5/30/2007	Phosphate-phosphorus as P	Total	Actual		Final	0.0	mg/l	~						
4/24/2007	Phosphate-phosphorus as P	Total	Actual		Final	*Present <QL		~						
3/20/2007	Phosphate-phosphorus as P	Total	Actual		Final	*Present <QL		~						
2/5/2007	Phosphate-phosphorus as P	Total	Actual		Final	0.0	mg/l	~						
1/2/2007	Phosphate-phosphorus as P	Total	Actual		Final	*Present <QL		~						
12/11/2006	Phosphate-phosphorus as P	Total	Actual		Final	*Present <QL		~						
11/29/2006	Phosphate-phosphorus as P	Total	Actual		Final	*Present <QL		~						
10/30/2006	Phosphate-phosphorus as P	Total	Actual		Final	0.0	mg/l	~						
9/21/2006	Phosphate-phosphorus as P	Total	Actual		Final	*Present <QL		~						
8/24/2006	Phosphate-phosphorus as P	Total	Actual		Final	0.0	mg/l	~						
7/6/2006	Phosphate-phosphorus as P	Total	Actual		Final	0.1	mg/l	~						
6/28/2006	Phosphate-phosphorus as P	Total	Actual		Final	0.0	mg/l	~						
5/25/2006	Phosphate-phosphorus as P	Total	Actual		Final	0.0	mg/l	~						
4/27/2006	Phosphate-phosphorus as P	Total	Actual		Final	0.1	mg/l	~						
3/23/2006	Phosphate-phosphorus as P	Total	Actual		Final	*Present <QL		~						
2/2/2006	Phosphate-phosphorus as P	Total	Actual		Final	0.0	mg/l	~						
1/18/2006	Phosphate-phosphorus as P	Total	Actual		Final	*Present <QL		~						
12/7/2005	Phosphate-phosphorus as P	Total	Actual		Final	0.0	mg/l	~						
11/14/2005	Phosphate-phosphorus as P	Total	Actual		Final	*Present <QL		~						
10/6/2005	Phosphate-phosphorus as P	Total	Actual		Final	0.1	mg/l	~						
9/29/2005	Phosphate-phosphorus as P	Total	Actual		Final	0.0	mg/l	~						
8/30/2005	Phosphate-phosphorus as P	Total	Actual		Final	0.0	mg/l	~						
7/28/2005	Phosphate-phosphorus as P	Total	Actual		Final	0.0	mg/l	~						
6/30/2005	Phosphate-phosphorus as P	Total	Actual		Final	0.0	mg/l	~						
5/26/2005	Phosphate-phosphorus as P	Total	Actual		Final	0.0	mg/l	~						
4/7/2005	Phosphate-phosphorus as P	Total	Actual		Final	0.0	mg/l	~						
3/30/2005	Phosphate-phosphorus as P	Total	Actual		Final	0.1	mg/l	~						
2/3/2005	Phosphate-phosphorus as P	Total	Actual		Final	*Present <QL		~						
1/27/2005	Phosphate-phosphorus as P	Total	Actual		Final	*Present <QL		~						
12/2/2004	Phosphate-phosphorus as P	Total	Actual		Final	*Present <QL		~						
11/4/2004	Phosphate-phosphorus as P	Total	Actual		Final	0.0	mg/l	~						
10/20/2004	Phosphate-phosphorus as P	Total	Actual		Final	0.0	mg/l	~						
9/16/2004	Phosphate-phosphorus as P	Total	Actual		Final	0.1	mg/l	~						
8/5/2004	Phosphate-phosphorus as P	Total	Actual		Final	0.0	mg/l	~						
7/29/2004	Phosphate-phosphorus as P	Total	Actual		Final	0.0	mg/l	~						
6/10/2004	Phosphate-phosphorus as P	Total	Actual		Final	0.0	mg/l	~						
5/20/2004	Phosphate-phosphorus as P	Total	Actual		Final	0.0	mg/l	~						
4/8/2004	Phosphate-phosphorus as P	Total	Actual		Final	*Present <QL		~						
3/2/2004	Phosphate-phosphorus as P	Total	Actual		Final	0.0	mg/l	~						
2/12/2004	Phosphate-phosphorus as P	Total	Actual		Final	*Present <QL		~						
1/8/2004	Phosphate-phosphorus as P	Total	Actual		Final	*Present <QL		~						
12/3/2003	Phosphate-phosphorus as P	Total	Actual		Final	*Present <QL		~						
11/6/2003	Phosphate-phosphorus as P	Total	Actual		Final	*Present <QL		~						
10/9/2003	Phosphate-phosphorus as P	Total	Actual		Final	*Present <QL		~						
9/2/2003	Phosphate-phosphorus as P	Total	Actual		Final	0.0	mg/l	~						
8/5/2003	Phosphate-phosphorus as P	Total	Actual		Final	0.1	mg/l	~						
7/1/2003	Phosphate-phosphorus as P	Total	Actual		Final	*Present <QL		~						
6/5/2003	Phosphate-phosphorus as P	Total	Actual		Final	0.0	mg/l	~						
5/15/2003	Phosphate-phosphorus as P	Total	Actual		Final	*Present <QL		~						
4/10/2003	Phosphate-phosphorus as P	Total	Actual		Final	0.0	mg/l	~						
3/20/2003	Phosphate-phosphorus as P	Total	Actual		Final	0.0	mg/l	~						
2/10/2003	Phosphate-phosphorus as P	Total	Actual		Final	*Present <QL		~						
1/21/2003	Phosphate-phosphorus as P	Total	Actual		Final	*Present <QL		~						
12/5/2002	Phosphate-phosphorus as P	Total	Actual		Final	*Present <QL	mg/l	~						
11/26/2002	Phosphate-phosphorus as P	Total	Actual		Final	*Present <QL	mg/l	~						
10/16/2002	Phosphate-phosphorus as P	Total	Actual		Final	*Present <QL	mg/l	~						
9/3/2002	Phosphate-phosphorus as P	Total	Actual		Final	*Present <QL	mg/l	~						
7/18/2002	Phosphate-phosphorus as P	Total	Actual		Final	*Present <QL	mg/l	~						
6/17/2002	Phosphate-phosphorus as P	Total	Actual		Final	*Present <QL	mg/l	~						
5/23/2002	Phosphate-phosphorus as P	Total	Actual		Final	*Present <QL	mg/l	~						
4/9/2002	Phosphate-phosphorus as P	Total	Actual		Final	*Present <QL	mg/l	~						
3/19/2002	Phosphate-phosphorus as P	Total	Actual		Final	*Present <QL	mg/l	~						
2/19/2002	Phosphate-phosphorus as P	Total	Actual		Final	*Present <QL	mg/l	~						
1/23/2002	Phosphate-phosphorus as P	Total	Actual		Final	0.0	mg/l	~						
6/18/1998	PHOSPHORUS, TOTAL (MG/L AS P)	B	920	665		0.1		D						
5/27/1998	PHOSPHORUS, TOTAL (MG/L AS P)	B	1015	665		0.0	K	D						
4/2/1998	PHOSPHORUS, TOTAL (MG/L AS P)	B	1115	665		0.1		D						
3/9/1998	PHOSPHORUS, TOTAL (MG/L AS P)	B	1320	665		0.1		D						
10/9/1997	PHOSPHORUS, TOTAL (MG/L AS P)	B	1110	665		0.0	K	D						
9/2/1997	PHOSPHORUS, TOTAL (MG/L AS P)	B	1340	665		0.0	K	D						
8/5/1997	PHOSPHORUS, TOTAL (MG/L AS P)	B	1330	665		0.1		D						
7/1/1997	PHOSPHORUS, TOTAL (MG/L AS P)	B	1155	665		0.1		D						
6/19/1997	PHOSPHORUS, TOTAL (MG/L AS P)	B	1045	665		0.0		D						
5/14/1997	PHOSPHORUS, TOTAL (MG/L AS P)	B	1150	665		0.0	K	D						
10/10/1996	PHOSPHORUS, TOTAL (MG/L AS P)	B	1109	665		0.0		D						
8/5/1996	PHOSPHORUS, TOTAL (MG/L AS P)	B	1130	665		0.0		D						
7/22/1996	PHOSPHORUS, TOTAL (MG/L AS P)	B	1405	665		0.0	K	D						
6/26/1996	PHOSPHORUS, TOTAL (MG/L AS P)	B	1345	665		4.0		D						
5/14/1996	PHOSPHORUS, TOTAL (MG/L AS P)	B	1050	665		0.0		D						
10/4/1995	PHOSPHORUS, TOTAL (MG/L AS P)	B	1200	665		0.1		D						
9/20/1995	PHOSPHORUS, TOTAL (MG/L AS P)	B	1401	665		0.0		D						
8/16/1995	PHOSPHORUS, TOTAL (MG/L AS P)	B	1430	665		0.0		D						
7/5/1995	PHOSPHORUS, TOTAL (MG/L AS P)	B	1350	665		0.0		D						
6/13/1995	PHOSPHORUS, TOTAL (MG/L AS P)	B	1450	665		0.1		D						
5/9/1995	PHOSPHORUS, TOTAL (MG/L AS P)	B	1335	665		0.0		D						
10/18/1994	PHOSPHORUS, TOTAL (MG/L AS P)	B	1150	665		0.0	K	D						
9/15/1994	PHOSPHORUS, TOTAL (MG/L AS P)	B	1120	665		0.0	K	D						
8/25/1994	PHOSPHORUS, TOTAL (MG/L AS P)	B	1115	665		0.0		D						
8/9/1994	PHOSPHORUS, TOTAL (MG/L AS P)	B	1150	665		0.0	K	D						
6/8/1994	PHOSPHORUS, TOTAL (MG/L AS P)	B	1125	665		0.0		D						
5/5/1994	PHOSPHORUS, TOTAL (MG/L AS P)	B	1445	665		0.1		D						
9/8/1993	PHOSPHORUS, TOTAL (MG/L AS P)	B	1325	665		0.0	K	D						
8/18/1993	PHOSPHORUS, TOTAL (MG/L AS P)	B	1300	665		0.0		D						
7/13/1993	PHOSPHORUS, TOTAL (MG/L AS P)	B	1305	665		0.1		D						
6/2/1993	PHOSPHORUS, TOTAL (MG/L AS P)	B	1350	665		0.0	K	D						
5/18/1993	PHOSPHORUS, TOTAL (MG/L AS P)	B	1406	665		0.0		D						
4/1/1993	PHOSPHORUS, TOTAL (MG/L AS P)	B	1120	665		0.0		D						
3/4/1993	PHOSPHORUS, TOTAL (MG/L AS P)	B	1300	665		0.0		D						
2/11/1993	PHOSPHORUS, TOTAL (MG/L AS P)	B	1330	665		0.0	K	D						
1/19/1993	PHOSPHORUS, TOTAL (MG/L AS P)	B	1031	665		0.0	K	D						
12/8/1992	PHOSPHORUS, TOTAL (MG/L AS P)	B	1235	665		0.0		D						
11/18/1992	PHOSPHORUS, TOTAL (MG/L AS P)	B	1035	665		0.0	K	D						
10/22/1992	PHOSPHORUS, TOTAL (MG/L AS P)	B	1035	665		0.0		D						
9/15/1992	PHOSPHORUS, TOTAL (MG/L AS P)	B	1045	665		0.0		D						
8/26/1992	PHOSPHORUS, TOTAL (MG/L AS P)	B	1035	665		0.0		D						
7/28/1992	PHOSPHORUS, TOTAL (MG/L AS P)	B	1125	665		0.1		D						
5/20/1992	PHOSPHORUS, TOTAL (MG/L AS P)	B	1259	665		0.1		D						
10/21/1991	PHOSPHORUS, TOTAL (MG/L AS P)	B	1055	665		0.1		D						
9/11/1991	PHOSPHORUS, TOTAL (MG/L AS P)	B	1200	665		0.0	K	D						
8/12/1991	PHOSPHORUS, TOTAL (MG/L AS P)	B	1320	665		0.1		D						
7/2/1991	PHOSPHORUS, TOTAL (MG/L AS P)	B	1120	665		0.0		D						
6/12/1991	PHOSPHORUS, TOTAL (MG/L AS P)	B	1050	665		0.0		D						
5/29/1991	PHOSPHORUS, TOTAL (MG/L AS P)	B	1200	665		0.1		D						
10/16/1990	PHOSPHORUS, TOTAL (MG/L AS P)	B	1345	665		0.0		D						
9/18/1990	PHOSPHORUS, TOTAL (MG/L AS P)	B	1305	665		0.0		D						
8/7/1990	PHOSPHORUS, TOTAL (MG/L AS P)	B	1143	665		0.1		D						
7/16/1990	PHOSPHORUS, TOTAL (MG/L AS P)	B	1326	665		0.0		D						
6/12/1990	PHOSPHORUS, TOTAL (MG/L AS P)	B	1205	665		0.0		D						
5/21/1990	PHOSPHORUS, TOTAL (MG/L AS P)	B	1230	665		0.0		D						
9/5/1989	PHOSPHORUS, TOTAL (MG/L AS P)	B	1349	665		0.0		D						
8/8/1989	PHOSPHORUS, TOTAL (MG/L AS P)	B	1218	665		0.0		D						
7/25/1989	PHOSPHORUS, TOTAL (MG/L AS P)	B	1220	665		0.0		D						
6/8/1989	PHOSPHORUS, TOTAL (MG/L AS P)	B	1248	665		0.0		D						
10/11/1988	PHOSPHORUS, TOTAL (MG/L AS P)	B	1136	665		0.1		D						
9/12/1988	PHOSPHORUS, TOTAL (MG/L AS P)	B	1212	665		0.1		D						
7/13/1988	PHOSPHORUS, TOTAL (MG/L AS P)	B	1105	665		0.1	K	D						
6/14/1988	PHOSPHORUS, TOTAL (MG/L AS P)	B	1253	665		0.1	K	D						
4/5/1988	PHOSPHORUS, TOTAL (MG/L AS P)	B	1255	665		0.1	K	D						
10/4/1987	PHOSPHORUS, TOTAL (MG/L AS P)	B	1125	665		0.1	K	D						
9/3/1987	PHOSPHORUS, TOTAL (MG/L AS P)	B	1110	665		0.1	K	D						
8/17/1987	PHOSPHORUS, TOTAL (MG/L AS P)	B	1205	665		0.1	K	D						
7/14/1987	PHOSPHORUS, TOTAL (MG/L AS P)	B	1125	665		0.1	K	D						
6/2/1987	PHOSPHORUS, TOTAL (MG/L AS P)	B	1400	665		0.1		D						
5/13/1987	PHOSPHORUS, TOTAL (MG/L AS P)	B	1240	665		0.1		D						
10/13/1986	PHOSPHORUS, TOTAL (MG/L AS P)	B	1155	665		0.1	K	D						
9/24/1986	PHOSPHORUS, TOTAL (MG/L AS P)	B	1025	665		0.1		D						
8/7/1986	PHOSPHORUS, TOTAL (MG/L AS P)	B	1110	665		0.4		D						
6/18/1986	PHOSPHORUS, TOTAL (MG/L AS P)	B	1030	665		0.1		D						
10/29/1985	PHOSPHORUS, TOTAL (MG/L AS P)	B	1055	665		0.1	K	D						
9/27/1985	PHOSPHORUS, TOTAL (MG/L AS P)	B	1145	665		0.1		D						
8/26/1985	PHOSPHORUS, TOTAL (MG/L AS P)	B	1030	665		0.1		D						
7/18/1985	PHOSPHORUS, TOTAL (MG/L AS P)	B	1130	665		0.2		D						
6/10/1985	PHOSPHORUS,IN TOTAL ORTHOPHOSPHATE (MG	B	1205	70507		0.1		D						
5/21/1985	PHOSPHORUS, TOTAL (MG/L AS P)	B	1045	665		0.1		D						
10/25/1984	PHOSPHORUS, TOTAL (MG/L AS P)	B	1030	665		0.1	K	D						
9/11/1984	PHOSPHORUS, TOTAL (MG/L AS P)	B	1100	665		0.1		D						
8/23/1984	PHOSPHORUS, TOTAL (MG/L AS P)	B	1110	665		0.1		D						
7/17/1984	PHOSPHORUS, TOTAL (MG/L AS P)	B	1335	665		0.1		D						
6/25/1984	PHOSPHORUS, TOTAL (MG/L AS P)	B	1040	665		0.3		D						
5/3/1984	PHOSPHORUS, TOTAL (MG/L AS P)	B	1115	665		0.1		D						
8/23/1982	PHOSPHORUS, TOTAL (MG/L AS P)	B	940	665		0.2		D						
8/23/1982	PHOSPHORUS, TOTAL (MG/L AS P)	B	941	665		0.3		D						
8/23/1982	PHOSPHORUS, TOTAL (MG/L AS P)	B	942	665		0.1	K	D						
8/23/1982	PHOSPHORUS, TOTAL (MG/L AS P)	B	1410	665		0.2		D						
8/23/1982	PHOSPHORUS, TOTAL (MG/L AS P)	B	1412	665		0.2		D						
8/23/1982	PHOSPHORUS, TOTAL (MG/L AS P)	B	1411	665		0.3		D						

8/23/1982	PHOSPHORUS,IN TOTAL ORTHOPHOSPHATE (MG	B	1410	70507		0.0		D						
8/23/1982	PHOSPHORUS,IN TOTAL ORTHOPHOSPHATE (MG	B	1412	70507		0.0		D						
8/23/1982	PHOSPHORUS,IN TOTAL ORTHOPHOSPHATE (MG	B	940	70507		0.0		D						
8/23/1982	PHOSPHORUS,IN TOTAL ORTHOPHOSPHATE (MG	B	942	70507		0.0		D						
8/23/1982	PHOSPHORUS,IN TOTAL ORTHOPHOSPHATE (MG	B	941	70507		0.0		D						
8/23/1982	PHOSPHORUS,IN TOTAL ORTHOPHOSPHATE (MG	B	1411	70507		0.0		D						
10/27/1977	PHOSPHORUS,IN TOTAL ORTHOPHOSPHATE (MG	B	1110	70507		0.2		D						
9/14/1977	PHOSPHORUS,IN TOTAL ORTHOPHOSPHATE (MG	B	1130	70507		0.0	K	D						
8/10/1977	PHOSPHORUS,IN TOTAL ORTHOPHOSPHATE (MG	B	1035	70507		0.0		D						
7/22/1977	PHOSPHORUS,IN TOTAL ORTHOPHOSPHATE (MG	B	1025	70507		0.0	K	D						
6/14/1977	PHOSPHORUS,IN TOTAL ORTHOPHOSPHATE (MG	B	1140	70507		0.0		D						
5/6/1977	PHOSPHORUS,IN TOTAL ORTHOPHOSPHATE (MG	B	1300	70507		0.0	K	D						
9/28/1976	PHOSPHORUS,IN TOTAL ORTHOPHOSPHATE (MG	B	1045	70507		0.0	K	D						
9/1/1976	PHOSPHORUS,IN TOTAL ORTHOPHOSPHATE (MG	B	1045	70507		0.0	K	D						
7/30/1976	PHOSPHORUS,IN TOTAL ORTHOPHOSPHATE (MG	B	915	70507		0.0	K	D						
6/29/1976	PHOSPHORUS,IN TOTAL ORTHOPHOSPHATE (MG	B	1100	70507		0.0	K	D						
5/26/1976	PHOSPHORUS,IN TOTAL ORTHOPHOSPHATE (MG	B	845	70507		0.0	K	D						
4/23/1976	PHOSPHORUS,IN TOTAL ORTHOPHOSPHATE (MG	B	930	70507		0.0	K	D						
10/17/1975	PHOSPHATE, ORTHO (MG/L AS PO4)	B	2500	660		0.0	K	D						
8/29/1975	PHOSPHORUS,IN TOTAL ORTHOPHOSPHATE (MG	B	2500	70507		0.0	K	D						
8/5/1975	PHOSPHORUS,IN TOTAL ORTHOPHOSPHATE (MG	B	2500	70507		0.0	K	D						
7/3/1975	PHOSPHORUS,IN TOTAL ORTHOPHOSPHATE (MG	B	2500	70507		0.0	K	D						
5/29/1975	PHOSPHORUS,IN TOTAL ORTHOPHOSPHATE (MG	B	2500	70507		0.0	K	D						
5/7/1975	PHOSPHATE, ORTHO (MG/L AS PO4)	B	2500	660		0.1	K	D						
11/4/1974	PHOSPHATE, ORTHO (MG/L AS PO4)	B	2500	660		0.0		D						
9/24/1974	PHOSPHATE, ORTHO (MG/L AS PO4)	B	2500	660		0.0		D						
9/3/1974	PHOSPHATE, ORTHO (MG/L AS PO4)	B	2500	660		0.0		D						
8/1/1974	PHOSPHATE, ORTHO (MG/L AS PO4)	B	2500	660		0.4		D						
6/25/1974	PHOSPHATE, ORTHO (MG/L AS PO4)	B	2500	660		0.1		D						
9/25/1973	PHOSPHATE, ORTHO (MG/L AS PO4)	B	2500	660		0.0		D						
4/20/1973	PHOSPHATE, ORTHO (MG/L AS PO4)	B	2500	660		0.1		D						
3/23/1973	PHOSPHATE, ORTHO (MG/L AS PO4)	B	2500	660		0.1		D						
12/5/2002	Solids, Fixed	Suspended	Actual		Final	1.6	mg/l	~						
12/4/2008	Temperature, air		Actual		Final	15.0	deg C	~						
11/6/2008	Temperature, air		Actual		Final	20.0	deg C	~						
10/23/2008	Temperature, air		Actual		Final	13.0	deg C	~						
9/25/2008	Temperature, air		Actual		Final	18.0	deg C	~						
8/27/2008	Temperature, air		Actual		Final	27.0	deg C	~						
7/10/2008	Temperature, air		Actual		Final	26.0	deg C	~						
6/19/2008	Temperature, air		Actual		Final	29.0	deg C	~						
5/27/2008	Temperature, air		Actual		Final	23.0	deg C	~						
4/24/2008	Temperature, air		Actual		Final	25.0	deg C	~						
1/16/2008	Temperature, air		Actual		Final	5.5	deg C	~						
12/5/2007	Temperature, air		Actual		Final	8.5	deg C	~						
11/6/2007	Temperature, air		Actual		Final	24.0	deg C	~						
10/29/2007	Temperature, air		Actual		Final	13.0	deg C	~						
9/13/2007	Temperature, air		Actual		Final	26.0	deg C	~						
7/30/2007	Temperature, air		Actual		Final	29.0	deg C	~						
6/20/2007	Temperature, air		Actual		Final	27.0	deg C	~						
5/30/2007	Temperature, air		Actual		Final	27.0	deg C	~						
4/24/2007	Temperature, air		Actual		Final	20.0	deg C	~						
3/20/2007	Temperature, air		Actual		Final	17.0	deg C	~						
2/5/2007	Temperature, air		Actual		Final	12.0	deg C	~						
1/2/2007	Temperature, air		Actual		Final	10.0	deg C	~						
12/11/2006	Temperature, air		Actual		Final	9.0	deg C	~						
11/29/2006	Temperature, air		Actual		Final	18.0	deg C	~						
10/30/2006	Temperature, air		Actual		Final	18.0	deg C	~						
9/21/2006	Temperature, air		Actual		Final	17.0	deg C	~						
7/6/2006	Temperature, air		Actual		Final	28.0	deg C	~						
6/28/2006	Temperature, air		Actual		Final	28.0	deg C	~						
3/23/2006	Temperature, air		Actual		Final	8.0	deg C	~						
2/2/2006	Temperature, air		Actual		Final	10.5	deg C	~						
1/18/2006	Temperature, air		Actual		Final	10.5	deg C	~						
12/7/2005	Temperature, air		Actual		Final	5.5	deg C	~						
11/14/2005	Temperature, air		Actual		Final	26.0	deg C	~						
10/6/2005	Temperature, air		Actual		Final	22.5	deg C	~						
9/29/2005	Temperature, air		Actual		Final	27.0	deg C	~						
8/30/2005	Temperature, air		Actual		Final	30.0	deg C	~						
7/28/2005	Temperature, air		Actual		Final	34.0	deg C	~						
6/30/2005	Temperature, air		Actual		Final	31.5	deg C	~						
4/7/2005	Temperature, air		Actual		Final	21.0	deg C	~						
3/30/2005	Temperature, air		Actual		Final	22.5	deg C	~						
2/3/2005	Temperature, air		Actual		Final	5.0	deg C	~						
1/27/2005	Temperature, air		Actual		Final	9.0	deg C	~						
12/2/2004	Temperature, air		Actual		Final	18.0	deg C	~						
11/4/2004	Temperature, air		Actual		Final	24.0	deg C	~						
10/20/2004	Temperature, air		Actual		Final	23.0	deg C	~						
9/16/2004	Temperature, air		Actual		Final	28.0	deg C	~						
8/5/2004	Temperature, air		Actual		Final	34.8	deg C	~						
7/29/2004	Temperature, air		Actual		Final	29.0	deg C	~						
6/10/2004	Temperature, air		Actual		Final	29.0	deg C	~						
5/20/2004	Temperature, air		Actual		Final	29.0	deg C	~						
4/8/2004	Temperature, air		Actual		Final	21.5	deg C	~						
3/2/2004	Temperature, air		Actual		Final	19.0	deg C	~						
2/12/2004	Temperature, air		Actual		Final	4.5	deg C	~						
1/8/2004	Temperature, air		Actual		Final	9.0	deg C	~						
12/3/2003	Temperature, air		Actual		Final	6.0	deg C	~						
11/6/2003	Temperature, air		Actual		Final	22.5	deg C	~						
10/9/2003	Temperature, air		Actual		Final	19.0	deg C	~						
9/2/2003	Temperature, air		Actual		Final	26.0	deg C	~						
8/5/2003	Temperature, air		Actual		Final	27.5	deg C	~						
7/1/2003	Temperature, air		Actual		Final	24.0	deg C	~						
6/5/2003	Temperature, air		Actual		Final	26.5	deg C	~						
5/15/2003	Temperature, air		Actual		Final	20.0	deg C	~						
4/10/2003	Temperature, air		Actual		Final	7.5	deg C	~						
3/20/2003	Temperature, air		Actual		Final	11.5	deg C	~						
2/10/2003	Temperature, air		Actual		Final	8.0	deg C	~						
1/21/2003	Temperature, air		Actual		Final	20.0	deg C	~						
12/5/2002	Temperature, air		Actual		Final	3.0	deg C	~						
11/26/2002	Temperature, air		Actual		Final	21.5	deg C	~						
10/16/2002	Temperature, air		Actual		Final	19.5	deg C	~						
9/3/2002	Temperature, air		Actual		Final	28.5	deg C	~						
7/18/2002	Temperature, air		Actual		Final	30.0	deg C	~						
6/17/2002	Temperature, air		Actual		Final	27.0	deg C	~						
5/23/2002	Temperature, air		Actual		Final	25.5	deg C	~						
4/9/2002	Temperature, air		Actual		Final	26.0	deg C	~						
3/19/2002	Temperature, air		Actual		Final	22.0	deg C	~						
2/19/2002	Temperature, air		Actual		Final	20.5	deg C	~						
1/23/2002	Temperature, air		Actual		Final	13.0	deg C	~						
12/6/2001	Temperature, air		Actual		Final	22.0	deg C	~						
11/14/2001	Temperature, air		Actual		Final	13.0	deg C	~						
10/18/2001	Temperature, air		Actual		Final	14.5	deg C	~						
9/11/2001	Temperature, air		Actual		Final	27.0	deg C	~						
8/15/2001	Temperature, air		Actual		Final	26.0	deg C	~						
7/23/2001	Temperature, air		Actual		Final	25.5	deg C	~						
6/21/2001	Temperature, air		Actual		Final	27.0	deg C	~						
4/5/2001	Temperature, air		Actual		Final	16.0	deg C	~						
3/8/2001	Temperature, air		Actual		Final	11.5	deg C	~						
2/1/2001	Temperature, air		Actual		Final	12.0	deg C	~						
1/3/2001	Temperature, air		Actual		Final	1.0	deg C	~						
8/3/2000	Temperature, air		Actual		Final	32.0	deg C	~						
7/18/2000	Temperature, air		Actual		Final	34.5	deg C	~						
6/7/2000	Temperature, air		Actual		Final	24.5	deg C	~						
5/9/2000	Temperature, air		Actual		Final	36.0	deg C	~						
10/21/1999	Temperature, air		Actual		Final	21.5	deg C	~						
9/2/1999	Temperature, air		Actual		Final	32.0	deg C	~						
8/19/1999	Temperature, air		Actual		Final	37.0	deg C	~						
7/8/1999	Temperature, air		Actual		Final	28.0	deg C	~						
6/2/1999	Temperature, air		Actual		Final	27.0	deg C	~						
5/19/1999	Temperature, air		Actual		Final	27.0	deg C	~						
10/21/1998	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1020	20		19.0		D						
9/24/1998	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1050	20		25.0		D						
8/5/1998	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1245	20		36.9		D						
7/30/1998	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1140	20		39.5		D						
6/18/1998	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	920	20		28.0		D						
5/27/1998	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1015	20		33.0		D						
4/2/1998	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1115	20		28.0		D						
3/9/1998	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1320	20		18.0		D						
10/9/1997	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1110	20		24.0		D						
9/2/1997	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1340	20		30.0		D						
8/5/1997	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1330	20		34.0		D						
7/1/1997	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1155	20		28.0		D						
6/19/1997	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1045	20		31.0		D						
5/14/1997	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1150	20		28.0		D						
10/10/1996	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1109	20		16.0		D						
8/5/1996	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1130	20		30.0		D						
7/22/1996	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1405	20		32.0		D						
6/26/1996	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1345	20		28.0		D						
5/14/1996	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1050	20		17.0		D						
10/4/1995	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1200	20		25.0		D						
9/20/1995	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1401	20		27.0		D						
8/16/1995	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1430	20		32.0		D						
7/5/1995	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1350	20		35.0		D						
6/13/1995	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1450	20		26.0		D						
5/9/1995	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1335	20		28.0		D						
10/18/1994	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1150	20		20.0		D						
9/15/1994	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1120	20		24.0		D						
8/25/1994	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1115	20		22.0		D						
8/9/1994	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1150	20		25.0		D						
6/8/1994	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1125	20		25.0		D						
5/5/1994	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1445	20		25.0		D						
9/8/1993	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1325	20		31.0		D						
8/18/1993	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1300	20		34.0		D						

7/13/1993	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1305	20		35.0		D						
6/2/1993	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1350	20		26.5		D						
5/18/1993	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1406	20		30.0		D						
4/1/1993	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1120	20		21.0		D						
3/4/1993	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1300	20		15.0		D						
2/11/1993	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1330	20		20.0		D						
1/19/1993	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1031	20		8.0		D						
12/8/1992	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1235	20		7.0		D						
11/18/1992	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1035	20		22.0		D						
10/22/1992	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1035	20		22.0		D						
9/15/1992	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1045	20		25.0		D						
8/26/1992	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1035	20		30.0		D						
7/28/1992	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1125	20		29.0		D						
6/17/1992	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1045	20		28.0		D						
5/20/1992	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1259	20		26.0		D						
10/21/1991	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1055	20		24.0		D						
9/11/1991	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1200	20		35.0		D						
8/12/1991	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1320	20		25.0		D						
7/2/1991	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1120	20		38.0		D						
6/12/1991	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1050	20		30.0		D						
5/29/1991	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1200	20		31.0		D						
10/16/1990	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1345	20		21.5		D						
9/18/1990	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1305	20		21.0		D						
8/7/1990	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1143	20		27.0		D						
7/16/1990	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1326	20		32.5		D						
6/12/1990	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1205	20		27.0		D						
5/21/1990	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1230	20		25.0		D						
10/16/1989	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1253	20		26.0		D						
9/5/1989	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1349	20		24.0		D						
8/8/1989	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1218	20		25.5		D						
7/25/1989	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1220	20		31.0		D						
6/8/1989	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1248	20		28.5		D						
10/11/1988	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1136	20		15.5		D						
9/12/1988	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1212	20		30.1		D						
7/13/1988	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1105	20		30.5		D						
6/14/1988	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1253	20		28.5		D						
5/4/1988	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1255	20		32.0		D						
10/5/1987	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1125	20		26.0		D						
9/3/1987	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1110	20		27.0		D						
8/17/1987	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1205	20		35.0		D						
7/14/1987	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1145	20		33.0		D						
6/2/1987	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1400	20		36.0		D						
5/13/1987	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1240	20		26.0		D						
10/13/1986	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1155	20		20.0		D						
9/24/1986	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1025	20		25.0		D						
8/7/1986	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1110	20		24.0		D						
6/18/1986	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1030	20		28.0		D						
10/29/1985	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1055	20		12.0		D						
9/27/1985	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1145	20		24.0		D						
8/26/1985	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1030	20		22.0		D						
7/18/1985	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1130	20		32.5		D						
6/10/1985	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1205	20		30.0		D						
5/21/1985	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1045	20		23.0		D						
10/25/1984	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1030	20		21.0		D						
9/11/1984	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1100	20		21.0		D						
8/23/1984	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1110	20		24.0		D						
7/17/1984	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1335	20		28.0		D						
6/25/1984	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1040	20		26.0		D						
5/3/1984	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1115	20		21.0		D						
8/8/1983	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1015	20		25.0		D						
8/23/1982	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1410	20		34.0		D						
8/23/1982	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1411	20		34.0		D						
8/23/1982	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	940	20		28.0		D						
8/23/1982	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	941	20		26.0		D						
8/23/1982	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1412	20		34.0		D						
8/23/1982	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	942	20		28.0		D						
8/25/1980	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1505	20		29.0		D						
6/17/1980	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1240	20		21.0		D						
5/19/1980	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1235	20		22.0		D						
									SEE SECTION E-12 OF r.61-68		**SPECIES DEPENDENT CRITERIA - SEE TEXT**			
12/4/2008	Temperature, water		Actual		Final	6.9	deg C	~						
11/6/2008	Temperature, water		Actual		Final	13.5	deg C	~						
10/23/2008	Temperature, water		Actual		Final	11.4	deg C	~						
9/25/2008	Temperature, water		Actual		Final	17.8	deg C	~						
8/27/2008	Temperature, water		Actual		Final	24.7	deg C	~						
7/10/2008	Temperature, water		Actual		Final	24.3	deg C	~						
6/19/2008	Temperature, water		Actual		Final	21.7	deg C	~						
5/27/2008	Temperature, water		Actual		Final	19.5	deg C	~						
4/24/2008	Temperature, water		Actual		Final	16.9	deg C	~						
3/6/2008	Temperature, water		Actual		Final	12.4	deg C	~						
2/7/2008	Temperature, water		Actual		Final	13.2	deg C	~						
1/16/2008	Temperature, water		Actual		Final	6.3	deg C	~						
12/5/2007	Temperature, water		Actual		Final	7.2	deg C	~						
11/6/2007	Temperature, water		Actual		Final	14.9	deg C	~						
10/29/2007	Temperature, water		Actual		Final	14.4	deg C	~						
9/13/2007	Temperature, water		Actual		Final	24.5	deg C	~						
8/16/2007	Temperature, water		Actual		Final	26.5	deg C	~						
7/30/2007	Temperature, water		Actual		Final	24.1	deg C	~						
6/20/2007	Temperature, water		Actual		Final	23.6	deg C	~						
5/30/2007	Temperature, water		Actual		Final	19.9	deg C	~						
4/24/2007	Temperature, water		Actual		Final	18.1	deg C	~						
3/20/2007	Temperature, water		Actual		Final	12.0	deg C	~						
2/5/2007	Temperature, water		Actual		Final	5.9	deg C	~						
1/2/2007	Temperature, water		Actual		Final	11.4	deg C	~						
12/11/2006	Temperature, water		Actual		Final	6.9	deg C	~						
11/29/2006	Temperature, water		Actual		Final	13.1	deg C	~						
10/30/2006	Temperature, water		Actual		Final	14.2	deg C	~						
9/21/2006	Temperature, water		Actual		Final	19.1	deg C	~						
8/24/2006	Temperature, water		Actual		Final	24.9	deg C	~						
7/6/2006	Temperature, water		Actual		Final	25.1	deg C	~						
6/28/2006	Temperature, water		Actual		Final	24.1	deg C	~						
5/25/2006	Temperature, water		Actual		Final	20.3	deg C	~						
4/27/2006	Temperature, water		Actual		Final	18.4	deg C	~						
3/23/2006	Temperature, water		Actual		Final	9.5	deg C	~						
2/2/2006	Temperature, water		Actual		Final	9.0	deg C	~						
1/18/2006	Temperature, water		Actual		Final	10.5	deg C	~						
12/7/2005	Temperature, water		Actual		Final	8.7	deg C	~						
11/14/2005	Temperature, water		Actual		Final	13.7	deg C	~						
10/6/2005	Temperature, water		Actual		Final	21.5	deg C	~						
9/29/2005	Temperature, water		Actual		Final	21.2	deg C	~						
8/30/2005	Temperature, water		Actual		Final	26.0	deg C	~						
7/28/2005	Temperature, water		Actual		Final	26.5	deg C	~						
6/30/2005	Temperature, water		Actual		Final	33.1	deg C	~						
5/26/2005	Temperature, water		Actual		Final	18.4	deg C	~						
4/7/2005	Temperature, water		Actual		Final	17.5	deg C	~						
3/30/2005	Temperature, water		Actual		Final	15.5	deg C	~						
2/3/2005	Temperature, water		Actual		Final	6.3	deg C	~						
1/27/2005	Temperature, water		Actual		Final	7.1	deg C	~						
12/2/2004	Temperature, water		Actual		Final	9.5	deg C	~						
11/4/2004	Temperature, water		Actual		Final	20.5	deg C	~						
10/20/2004	Temperature, water		Actual		Final	18.7	deg C	~						
9/16/2004	Temperature, water		Actual		Final	23.0	deg C	~						
8/5/2004	Temperature, water		Actual		Final	26.1	deg C	~						
7/29/2004	Temperature, water		Actual		Final	25.0	deg C	~						
6/10/2004	Temperature, water		Actual		Final	22.5	deg C	~						
5/20/2004	Temperature, water		Actual		Final	22.3	deg C	~						
4/8/2004	Temperature, water		Actual		Final	14.7	deg C	~						
3/2/2004	Temperature, water		Actual		Final	13.5	deg C	~						
2/12/2004	Temperature, water		Actual		Final	8.3	deg C	~						
1/8/2004	Temperature, water		Actual		Final	7.0	deg C	~						
12/3/2003	Temperature, water		Actual		Final	7.0	deg C	~						
11/6/2003	Temperature, water		Actual		Final	19.5	deg C	~						
10/9/2003	Temperature, water		Actual		Final	18.5	deg C	~						
9/2/2003	Temperature, water		Actual		Final	24.3	deg C	~						
8/5/2003	Temperature, water		Actual		Final	24.3	deg C	~						
7/1/2003	Temperature, water		Actual		Final	23.0	deg C	~						
6/5/2003	Temperature, water		Actual		Final	21.3	deg C	~						
5/15/2003	Temperature, water		Actual		Final	18.9	deg C	~						
4/10/2003	Temperature, water		Actual		Final	10.7	deg C	~						
3/20/2003	Temperature, water		Actual		Final	13.2	deg C	~						
2/10/2003	Temperature, water		Actual		Final	7.4	deg C	~						
1/21/2003	Temperature, water		Actual		Final	7.1	deg C	~						
12/5/2002	Temperature, water		Actual		Final	4.5	deg C	~						
11/26/2002	Temperature, water		Actual		Final	9.1	deg C	~						
10/16/2002	Temperature, water		Actual		Final	16.7	deg C	~						
9/3/2002	Temperature, water		Actual		Final	22.8	deg C	~						
7/18/2002	Temperature, water		Actual		Final	24.8	deg C	~						
6/17/2002	Temperature, water		Actual		Final	21.3	deg C	~						
5/23/2002	Temperature, water		Actual		Final	16.0	deg C	~						
4/9/2002	Temperature, water		Actual		Final	15.8	deg C	~						
3/19/2002	Temperature, water		Actual		Final	16.2	deg C	~						
2/19/2002	Temperature, water		Actual		Final	8.0	deg C	~						
1/23/2002	Temperature, water		Actual		Final	8.0	deg C	~						
12/6/2001	Temperature, water		Actual		Final	12.0	deg C	~						
11/14/2001	Temperature, water		Actual		Final	8.6	deg C	~						
10/18/2001	Temperature, water		Actual		Final	10.9	deg C	~						
9/11/2001	Temperature, water		Actual		Final	23.5	deg C	~						
8/15/2001	Temperature, water		Actual		Final	23.7	deg C	~						
7/23/2001	Temperature, water		Actual		Final	25.5	deg C	~						
6/21/2001	Temperature, water		Actual		Final	22.8	deg C	~						
4/5/2001	Temperature, water		Actual		Final	14.1	deg C	~						
3/8/2001	Temperature, water		Actual		Final	8.4	deg C	~						
2/1/2001	Temperature, water		Actual		Final	9.8	deg C	~						
1/3/2001	Temperature, water		Actual		Final	2.8	deg C	~						
8/3/2000	Temperature, water		Actual		Final	25.5	deg C	~						

7/18/2000	Temperature, water		Actual		Final	25.5	deg C	~						
6/7/2000	Temperature, water		Actual		Final	20.5	deg C	~						
5/9/2000	Temperature, water		Actual		Final	21.5	deg C	~						
10/21/1999	Temperature, water		Actual		Final	18.5	deg C	~						
9/2/1999	Temperature, water		Actual		Final	22.0	deg C	~						
8/19/1999	Temperature, water		Actual		Final	27.5	deg C	~						
7/8/1999	Temperature, water		Actual		Final	24.0	deg C	~						
6/2/1999	Temperature, water		Actual		Final	20.5	deg C	~						
5/19/1999	Temperature, water		Actual		Final	20.0	deg C	~						
10/21/1998	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1020	10		17.0		D						
9/24/1998	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1050	10		22.5		D						
8/5/1998	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1245	10		24.0		D						
7/30/1998	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1140	10		26.5		D						
6/18/1998	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	920	10		24.0		D						
5/27/1998	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1015	10		24.5		D						
4/2/1998	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1115	10		19.0		D						
3/9/1998	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1320	10		14.0		D						
10/9/1997	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1110	10		20.0		D						
9/2/1997	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1340	10		24.0		D						
8/5/1997	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1330	10		26.0		D						
7/1/1997	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1155	10		25.0		D						
6/19/1997	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1045	10		21.0		D						
5/14/1997	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1150	10		17.0		D						
10/10/1996	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1109	10		16.5		D						
8/5/1996	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1130	10		24.0		D						
7/22/1996	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1405	10		28.0		D						
6/26/1996	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1345	10		26.0		D						
5/14/1996	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1050	10		16.0		D						
10/4/1995	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1200	10		20.0		D						
9/20/1995	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1401	10		22.0		D						
8/16/1995	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1430	10		25.0		D						
7/5/1995	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1350	10		26.0		D						
6/13/1995	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1450	10		20.0		D						
5/9/1995	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1335	10		19.0		D						
10/18/1994	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1150	10		12.0		D						
9/15/1994	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1120	10		21.0		D						
8/25/1994	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1115	10		20.5		D						
8/9/1994	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1150	10		21.0		D						
6/8/1994	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1125	10		22.0		D						
5/5/1994	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1445	10		15.0		D						
9/8/1993	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1325	10		23.0		D						
8/18/1993	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1300	10		25.0		D						
7/13/1993	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1305	10		26.0		D						
6/2/1993	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1350	10		21.0		D						
5/18/1993	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1406	10		20.0		D						
4/1/1993	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1120	10		11.0		D						
3/4/1993	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1300	10		10.5		D						
2/11/1993	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1330	10		9.0		D						
1/19/1993	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1031	10		9.0		D						
12/8/1992	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1235	10		8.0		D						
11/18/1992	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1035	10		8.0		D						
10/22/1992	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1035	10		12.0		D						
9/15/1992	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1045	10		19.0		D						
8/26/1992	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1035	10		23.0		D						
7/28/1992	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1125	10		26.0		D						
6/17/1992	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1045	10		22.0		D						
5/20/1992	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1259	10		20.5		D						
10/21/1991	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1055	10		12.0		D						
9/11/1991	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1200	10		21.0		D						
8/12/1991	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1320	10		22.5		D						
7/2/1991	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1120	10		25.0		D						
6/12/1991	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1050	10		20.0		D						
5/29/1991	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1200	10		24.0		D						
10/16/1990	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1345	10		20.0		D						
9/18/1990	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1305	10		20.0		D						
8/7/1990	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1143	10		25.0		D						
7/16/1990	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1326	10		25.0		D						
6/12/1990	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1205	10		24.0		D						
5/21/1990	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1230	10		20.0		D						
10/16/1989	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1253	10		19.0		D						
9/5/1989	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1349	10		23.0		D						
8/8/1989	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1218	10		23.5		D						
7/25/1989	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1220	10		25.0		D						
6/8/1989	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1248	10		23.0		D						
5/11/1989	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1213	10		16.0		D						
10/11/1988	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1136	10		12.0		D						
9/12/1988	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1212	10		22.0		D						
7/13/1988	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1105	10		24.0		D						
6/14/1988	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1253	10		19.0		D						
5/4/1988	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1255	10		17.0		D						
10/5/1987	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1125	10		15.0		D						
9/3/1987	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1110	10		22.5		D						
8/17/1987	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1205	10		25.0		D						
7/14/1987	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1145	10		24.5		D						
6/2/1987	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1400	10		25.0		D						
5/13/1987	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1240	10		19.0		D						
10/13/1986	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1155	10		18.5		D						
9/24/1986	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1025	10		22.5		D						
8/7/1986	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1110	10		24.0		D						
6/18/1986	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1030	10		24.0		D						
10/29/1985	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1055	10		15.0		D						
9/27/1985	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1145	10		20.0		D						
8/26/1985	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1030	10		23.0		D						
7/18/1985	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1130	10		24.5		D						
6/10/1985	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1205	10		25.0		D						
5/21/1985	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1045	10		19.0		D						
10/25/1984	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1030	10		19.0		D						
9/11/1984	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1100	10		20.5		D						
8/23/1984	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1110	10		24.5		D						
7/17/1984	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1335	10		29.0		D						
6/25/1984	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1040	10		23.5		D						
5/3/1984	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1115	10		19.0		D						
8/8/1983	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1015	10		25.0		D						
8/23/1982	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	941	10		24.0		D						
8/23/1982	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1411	10		25.0		D						
8/23/1982	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	940	10		24.0		D						
8/23/1982	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	942	10		24.0		D						
8/23/1982	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1410	10		25.0		D						
8/23/1982	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1412	10		25.0		D						
10/16/1980	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1005	10		15.0		D						
9/8/1980	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1315	10		27.0		D						
8/25/1980	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1505	10		27.0		D						
7/24/1980	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1245	10		27.0		D						
6/17/1980	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1240	10		26.0		D						
5/19/1980	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1235	10		23.0		D						
10/26/1979	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1200	10		16.0		D						
9/27/1979	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1210	10		10.0		D						
8/22/1979	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1100	10		24.0		D						
7/10/1979	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1045	10		22.0		D						
6/26/1979	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1110	10		22.5		D						
5/7/1979	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1150	10		17.0		D						
10/24/1978	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1005	10		18.0		D						
9/8/1978	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1125	10		21.0		D						
7/13/1978	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1105	10		26.0		D						
6/27/1978	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1240	10		28.0		D						
5/3/1978	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1145	10		16.0		D						
10/27/1977	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1110	10		20.0		D						
9/14/1977	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1130	10		22.0		D						
8/10/1977	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1035	10		27.0		D						
7/22/1977	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1025	10		28.0		D						
6/14/1977	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1140	10		23.0		D						
5/6/1977	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1100	10		25.0		D						
9/28/1976	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1045	10		21.0		D						
9/1/1976	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1045	10		21.0		D						
7/30/1976	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	915	10		25.0		D						
6/29/1976	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1100	10		24.0		D						
5/26/1976	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	845	10		18.0		D						
4/23/1976	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	930	10		18.0		D						
10/17/1975	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	920	10		21.0		D						
8/29/1975	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	940	10		19.0		D						
8/5/1975	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1000	10		26.0		D						
7/3/1975	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	950	10		23.0		D						
5/7/1975	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	915	10		17.0		D						
11/4/1974	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	940	10		15.0		D						
9/24/1974	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	850	10		17.0		D						
9/3/1974	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1015	10		24.0		D						
8/1/1974	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1000	10		25.0		D						
6/25/1974	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1000	10		22.0		D						
5/3/1974	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1000	10		20.0		D						
9/25/1973	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1030	10		22.5		D						
4/20/1973	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	840	10		18.0		D						
3/13/1973	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	1050	10		12.0		D						
11/30/1971	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	2500	10		10.0		D						
10/4/1971	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	2500	10		23.0		D						
8/7/1970	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	2500	10		23.5		D						
8/4/1970	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	2500	10		26.0		D						
8/3/1970	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	2500	10		26.5		D						
9/4/1968	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	2500	10		21.0		D						
9/3/1968	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	2500	10		20.5		D						
10/29/1963	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	2500	10		16.5		D						
10/28/1963	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	2500	10		17.5		D						
10/22/1963	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	2500	10		16.5		D						
6/19/1962	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	2500	10		22.5		D						
6/18/1962	TEMPERATURE, WATER (DEGREES CENTIGRADE	B	2500	10		23.0		D						
								NOT TO EXCEED 50 NTUs PROVIDED EXISTING USES ARE MAINTAINED						

12/4/2008	Turbidity		Actual		Final	12.0	NTU	APHA	~2120-B						
11/6/2008	Turbidity		Actual		Final	3.6	NTU	APHA	~2120-B						
10/23/2008	Turbidity		Actual		Final	5.7	NTU	APHA	~2120-B						
9/25/2008	Turbidity		Actual		Final	8.7	NTU	APHA	~2120-B						
8/27/2008	Turbidity		Actual		Final	70.0	NTU	APHA	~2120-B						
7/10/2008	Turbidity		Actual		Final	14.0	NTU	APHA	~2120-B						
6/19/2008	Turbidity		Actual		Final	19.0	NTU	APHA	~2120-B						
5/27/2008	Turbidity		Actual		Final	8.8	NTU	APHA	~2120-B						
4/24/2008	Turbidity		Actual		Final	8.4	NTU	APHA	~2120-B						
3/6/2008	Turbidity		Actual		Final	75.0	NTU	APHA	~2120-B						
2/7/2008	Turbidity		Actual		Final	6.6	NTU	APHA	~2120-B						
1/16/2008	Turbidity		Actual		Final	6.9	NTU	APHA	~2120-B						
12/5/2007	Turbidity		Actual		Final	2.6	NTU	APHA	~2120-B						
11/6/2007	Turbidity		Actual		Final	3.1	NTU	APHA	~2120-B						
10/29/2007	Turbidity		Actual		Final	7.5	NTU	APHA	~2120-B						
9/13/2007	Turbidity		Actual		Final	5.7	NTU	APHA	~2120-B						
8/16/2007	Turbidity		Actual		Final	9.3	NTU	APHA	~2120-B						
7/30/2007	Turbidity		Actual		Final	13.0	NTU	APHA	~2120-B						
6/20/2007	Turbidity		Actual		Final	13.0	NTU	APHA	~2120-B						
5/30/2007	Turbidity		Actual		Final	7.8	NTU	APHA	~2120-B						
4/24/2007	Turbidity		Actual		Final	13.0	NTU	APHA	~2120-B						
3/20/2007	Turbidity		Actual		Final	14.0	NTU	APHA	~2120-B						
2/5/2007	Turbidity		Actual		Final	9.1	NTU	APHA	~2120-B						
1/2/2007	Turbidity		Actual		Final	11.0	NTU	APHA	~2120-B						
12/11/2006	Turbidity		Actual		Final	6.8	NTU	APHA	~2120-B						
11/29/2006	Turbidity		Actual		Final	9.4	NTU	APHA	~2120-B						
10/30/2006	Turbidity		Actual		Final	5.9	NTU	APHA	~2120-B						
9/21/2006	Turbidity		Actual		Final	6.2	NTU	APHA	~2120-B						
8/24/2006	Turbidity		Actual		Final	7.8	NTU	APHA	~2120-B						
7/6/2006	Turbidity		Actual		Final	11.0	NTU	APHA	~2120-B						
6/28/2006	Turbidity		Actual		Final	11.0	NTU	APHA	~2120-B						
5/25/2006	Turbidity		Actual		Final	20.0	NTU	APHA	~2120-B						
4/27/2006	Turbidity		Actual		Final	32.0	NTU	APHA	~2120-B						
3/23/2006	Turbidity		Actual		Final	4.9	NTU	APHA	~2120-B						
2/2/2006	Turbidity		Actual		Final	4.4	NTU	APHA	~2120-B						
1/18/2006	Turbidity		Actual		Final	6.6	NTU	APHA	~2120-B						
12/7/2005	Turbidity		Actual		Final	15.0	NTU	APHA	~2120-B						
11/14/2005	Turbidity		Actual		Final	3.6	NTU	APHA	~2120-B						
10/6/2005	Turbidity		Actual		Final	11.0	NTU	APHA	~2120-B						
9/29/2005	Turbidity		Actual		Final	6.7	NTU	APHA	~2120-B						
8/30/2005	Turbidity		Actual		Final	7.9	NTU	APHA	~2120-B						
6/30/2005	Turbidity		Actual		Final	32.0	NTU	APHA	~2120-B						
5/26/2005	Turbidity		Actual		Final	13.0	NTU	APHA	~2120-B						
4/7/2005	Turbidity		Actual		Final	7.8	NTU	APHA	~2120-B						
3/30/2005	Turbidity		Actual		Final	35.0	NTU	APHA	~2120-B						
2/3/2005	Turbidity		Actual		Final	10.0	NTU	APHA	~2120-B						
1/27/2005	Turbidity		Actual		Final	5.7	NTU	APHA	~2120-B						
12/2/2004	Turbidity		Actual		Final	6.6	NTU	APHA	~2120-B						
11/4/2004	Turbidity		Actual		Final	7.6	NTU	APHA	~2120-B						
10/20/2004	Turbidity		Actual		Final	8.9	NTU	APHA	~2120-B						
9/16/2004	Turbidity		Actual		Final	13.0	NTU	APHA	~2120-B						
8/5/2004	Turbidity		Actual		Final	15.0	NTU	APHA	~2120-B						
7/29/2004	Turbidity		Actual		Final	31.0	NTU	APHA	~2120-B						
6/10/2004	Turbidity		Actual		Final	16.0	NTU	APHA	~2120-B						
5/20/2004	Turbidity		Actual		Final	10.0	NTU	APHA	~2120-B						
4/8/2004	Turbidity		Actual		Final	6.6	NTU	APHA	~2120-B						
3/2/2004	Turbidity		Actual		Final	15.0	NTU	APHA	~2120-B						
2/12/2004	Turbidity		Actual		Final	26.0	NTU	APHA	~2120-B						
1/8/2004	Turbidity		Actual		Final	6.2	NTU	APHA	~2120-B						
12/3/2003	Turbidity		Actual		Final	4.4	NTU	APHA	~2120-B						
11/6/2003	Turbidity		Actual		Final	5.2	NTU	APHA	~2120-B						
10/9/2003	Turbidity		Actual		Final	10.0	NTU	APHA	~2120-B						
9/2/2003	Turbidity		Actual		Final	9.3	NTU	APHA	~2120-B						
8/5/2003	Turbidity		Actual		Final	67.0	NTU	APHA	~2120-B						
7/1/2003	Turbidity		Actual		Final	26.0	NTU	APHA	~2120-B						
6/5/2003	Turbidity		Actual		Final	39.0	NTU	APHA	~2120-B						
5/15/2003	Turbidity		Actual		Final	14.0	NTU	APHA	~2120-B						
4/10/2003	Turbidity		Actual		Final	26.0	NTU	APHA	~2120-B						
3/20/2003	Turbidity		Actual		Final	21.0	NTU	APHA	~2120-B						
2/10/2003	Turbidity		Actual		Final	7.6	NTU	APHA	~2120-B						
1/21/2003	Turbidity		Actual		Final	6.4	NTU	APHA	~2120-B						
12/5/2002	Turbidity		Actual		Final	3.3	NTU	~							
11/26/2002	Turbidity		Actual		Final	5.3	NTU	~							
10/16/2002	Turbidity		Actual		Final	7.5	NTU	~							
9/3/2002	Turbidity		Actual		Final	4.9	NTU	~							
7/18/2002	Turbidity		Actual		Final	11.0	NTU	~							
6/17/2002	Turbidity		Actual		Final	7.6	NTU	~							
5/23/2002	Turbidity		Actual		Final	7.2	NTU	~							
4/9/2002	Turbidity		Actual		Final	5.5	NTU	~							
3/19/2002	Turbidity		Actual		Final	4.3	NTU	~							
2/19/2002	Turbidity		Actual		Final	4.0	NTU	~							
1/23/2002	Turbidity		Actual		Final	4.8	NTU	~							
12/6/2001	Turbidity		Actual		Final	4.4	NTU	~							
11/14/2001	Turbidity		Actual		Final	3.1	NTU	~							
10/18/2001	Turbidity		Actual		Final	3.2	NTU	~							
9/11/2001	Turbidity		Actual		Final	6.3	NTU	~							
8/15/2001	Turbidity		Actual		Final	28.0	NTU	~							
7/23/2001	Turbidity		Actual		Final	7.1	NTU	~							
6/21/2001	Turbidity		Actual		Final	13.0	NTU	~							
6/20/2001	Turbidity		Actual		Final	13.0	NTU	~							
5/1/2001	Turbidity		Actual		Final	8.2	NTU	~							
4/5/2001	Turbidity		Actual		Final	12.0	NTU	~							
2/1/2001	Turbidity		Actual		Final	5.6	NTU	~							
1/3/2001	Turbidity		Actual		Final	3.4	NTU	~							
8/3/2000	Turbidity		Actual		Final	9.3	NTU	~							
7/18/2000	Turbidity		Actual		Final	7.3	NTU	~							
6/7/2000	Turbidity		Actual		Final	17.0	NTU	~							
5/9/2000	Turbidity		Actual		Final	8.2	NTU	~							
10/21/1999	Turbidity		Actual		Final	6.1	NTU	~							
9/2/1999	Turbidity		Actual		Final	7.4	NTU	~							
8/19/1999	Turbidity		Actual		Final	8.0	NTU	~							
7/8/1999	Turbidity		Actual		Final	95.0	NTU	~							
6/2/1999	Turbidity		Actual		Final	9.5	NTU	~							
5/19/1999	Turbidity		Actual		Final	10.0	NTU	~							
10/21/1998	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1020	76		6.4		D							
9/24/1998	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1050	76		7.0		D							
8/5/1998	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1245	76		7.9		D							
7/30/1998	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1140	76		22.0		D							
6/18/1998	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	920	76		8.4		D							
5/27/1998	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1015	76		8.9		D							
4/2/1998	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1115	76		30.0		D							
3/9/1998	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1320	76		41.0		D							
10/9/1997	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1110	76		7.9		D							
9/2/1997	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1340	76		7.8		D							
8/5/1997	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1330	76		39.0		D							
7/1/1997	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1155	76		27.0		D							
6/19/1997	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1045	76		24.0		D							
5/14/1997	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1150	76		10.0		D							
10/10/1996	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1109	76		37.0		D							
8/5/1996	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1130	76		14.0		D							
7/22/1996	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1405	76		17.0		D							
6/26/1996	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1345	76		11.0		D							
5/14/1996	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1050	76		9.8		D							
9/20/1995	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1401	76		13.0		D							
8/16/1995	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1430	76		5.5		D							
7/5/1995	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1350	76		12.0		D							
6/13/1995	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1450	76		44.0		D							
5/9/1995	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1335	76		8.0		D							
10/18/1994	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1150	76		16.0		D							
9/15/1994	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1120	76		6.4		D							
8/25/1994	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1115	76		22.0		D							
8/9/1994	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1150	76		12.0		D							
6/8/1994	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1125	76		22.0		D							
5/5/1994	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1445	76		38.0		D							
9/8/1993	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1325	76		11.0		D							
8/18/1993	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1300	76		6.3		D							
7/13/1993	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1305	76		9.8		D							
6/2/1993	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1350	76		8.2		D							
5/18/1993	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1406	76		9.5		D							
4/1/1993	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1120	76		12.0		D							
3/4/1993	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1300	76		26.0		D							
2/11/1993	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1330	76		18.0		D							
1/19/1993	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1031	76		14.0		D							
12/8/1992	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1235	76		11.0		D							
11/18/1992	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1035	76		12.0		D							
10/22/1992	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1035	76		5.2		D							
9/15/1992	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1045	76		9.2		D							
8/26/1992	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1035	76		9.7		D							
7/28/1992	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1125	76		8.0		D							
6/17/1992	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1045	76		12.0		D							
5/20/1992	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1259	76		2.9		D							
10/21/1991	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1055	76		5.6		D							
9/11/1991	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1200	76		7.4		D							
8/12/1991	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1320	76		58.0		D							
7/2/1991	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1120	76		8.7		D							
6/12/1991	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1050	76		11.0		D							
5/29/1991	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1200	76		60.0		D							
10/16/1990	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1345	76		14.0		D							
9/18/1990	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1305	76		6.0		D							
8/7/1990	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1143	76		7.0		D							
7/16/1990	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1326	76		15.0		D							
6/12/1990	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1205	76		11.0		D							
5/21/1990	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1230	76		7.1		D							
10/16/1989	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1253	76		8.4		D							
9/5/1989	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1349	76		7.7		D							

8/8/1989	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1218	76		9.4		D							
7/25/1989	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1220	76		26.0		D							
5/11/1989	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1213	76		56.0		D							
10/11/1988	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1136	76		14.0		D							
9/12/1988	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1212	76		39.0		D							
7/13/1988	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1105	76		11.0		D							
5/4/1988	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1255	76		10.0		D							
10/5/1987	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1125	76		6.5		D							
9/3/1987	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1110	76		29.0		D							
8/17/1987	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1205	76		5.6		D							
7/14/1987	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1145	76		11.0		D							
6/2/1987	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1400	76		11.0		D							
5/13/1987	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1240	76		7.6		D							
9/24/1986	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1025	76		6.4		D							
8/7/1986	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1110	76		17.0		D							
6/18/1986	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1030	76		11.0		D							
10/29/1985	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1055	76		6.7		D							
9/27/1985	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1145	76		6.3		D							
8/26/1985	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1030	76		14.0		D							
7/18/1985	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1130	76		26.0		D							
6/10/1985	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1205	76		10.0		D							
5/21/1985	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1045	76		8.4		D							
10/25/1984	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1030	76		2.0		D							
9/11/1984	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1100	76		4.0		D							
8/23/1984	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1110	76		10.0		D							
7/17/1984	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1335	76		9.0		D							
6/25/1984	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1040	76		5.0		D							
5/3/1984	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1115	76		27.0		D							
8/8/1983	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1015	76		5.0		D							
10/16/1980	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1005	76		6.0		D							
9/8/1980	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1315	76		5.0		D							
8/25/1980	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1505	76		9.0		D							
7/24/1980	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1245	76		6.0		D							
6/17/1980	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1240	76		7.0		D							
5/19/1980	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1235	76		8.0		D							
10/26/1979	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1200	76		3.0		D							
9/27/1979	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1210	76		4.0		D							
8/22/1979	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1100	76		4.0		D							
7/10/1979	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1045	76		5.0		D							
6/26/1979	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1110	76		36.0		D							
5/7/1979	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1150	76		6.0		D							
10/24/1978	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1005	76		2.0		D							
9/8/1978	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1125	76		5.0		D							
8/9/1978	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1000	76		3.0		D							
7/13/1978	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1105	76		4.0		D							
6/27/1978	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1240	76		3.0		D							
5/3/1978	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1145	76		13.0		D							
10/27/1977	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1110	76		16.0		D							
9/14/1977	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1130	76		1.0		D							
8/10/1977	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1035	76		4.0		D							
7/22/1977	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1025	76		5.0		D							
6/14/1977	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1140	76		6.0		D							
5/6/1977	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1100	76		5.0		D							
9/28/1976	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1045	76		6.0		D							
9/1/1976	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1045	76		6.0		D							
7/30/1976	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	915	76		11.0		D							
6/29/1976	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1100	76		12.0		D							
5/26/1976	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	845	76		10.0		D							
4/23/1976	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	930	76		6.0		D							
10/17/1975	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	920	76		6.0		D							
8/29/1975	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	940	76		9.0		D							
8/5/1975	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1000	76		7.0		D							
7/3/1975	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	950	76		6.0		D							
5/7/1975	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	915	76		11.0		D							
11/4/1974	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	940	76		2.0		D							
9/24/1974	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	850	76		5.0		D							
9/3/1974	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1015	76		8.0		D							
8/1/1974	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1000	76		7.0		D							
6/25/1974	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1000	76		5.0		D							
5/3/1974	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TUR	B	1000	76		2.0		D							
9/25/1973	TURBIDITY, HELLIGE (PPM AS SILICON DIOXIDE)	B	1030	75		10.0		D							
4/20/1973	TURBIDITY, HELLIGE (PPM AS SILICON DIOXIDE)	B	840	75		18.0		D							
3/13/1973	TURBIDITY, HELLIGE (PPM AS SILICON DIOXIDE)	B	1050	75		24.0		D							
11/30/1971	TURBIDITY, (JACKSON CANDLE UNITS)	B	2500	70		28.0		D							
10/4/1971	TURBIDITY, (JACKSON CANDLE UNITS)	B	2500	70		32.0		D							
8/7/1970	TURBIDITY, HELLIGE (PPM AS SILICON DIOXIDE)	B	2500	75		9.0		D							
8/4/1970	TURBIDITY, HELLIGE (PPM AS SILICON DIOXIDE)	B	2500	75		18.0		D							
8/3/1970	TURBIDITY, (JACKSON CANDLE UNITS)	B	2500	70		42.0		D							
9/4/1968	TURBIDITY, HELLIGE (PPM AS SILICON DIOXIDE)	B	2500	75		6.0		D							
9/3/1968	TURBIDITY, HELLIGE (PPM AS SILICON DIOXIDE)	B	2500	75		7.0		D							
10/29/1963	TURBIDITY, (JACKSON CANDLE UNITS)	B	2500	70		25.0	K	D							
10/28/1963	TURBIDITY, (JACKSON CANDLE UNITS)	B	2500	70		25.0	K	D							
10/22/1963	TURBIDITY, (JACKSON CANDLE UNITS)	B	2500	70		25.0	K	D							
12/5/2007	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
11/6/2007	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
5/30/2007	Weather condition (WMO code 4501) (choice list)				Final	0.0		~							
2/5/2007	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
1/2/2007	Weather condition (WMO code 4501) (choice list)				Final	0.0		~							
12/11/2006	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
11/29/2006	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
10/30/2006	Weather condition (WMO code 4501) (choice list)				Final	0.0		~							
9/21/2006	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
8/24/2006	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
7/6/2006	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
6/28/2006	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
5/25/2006	Weather condition (WMO code 4501) (choice list)				Final	0.0		~							
4/27/2006	Weather condition (WMO code 4501) (choice list)				Final	6.0		~							
3/23/2006	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
2/2/2006	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
1/18/2006	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
12/7/2005	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
11/14/2005	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
10/6/2005	Weather condition (WMO code 4501) (choice list)				Final	6.0		~							
9/29/2005	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
8/30/2005	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
7/28/2005	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
6/30/2005	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
5/26/2005	Weather condition (WMO code 4501) (choice list)				Final	0.0		~							
4/7/2005	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
3/30/2005	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
2/3/2005	Weather condition (WMO code 4501) (choice list)				Final	6.0		~							
1/27/2005	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
12/2/2004	Weather condition (WMO code 4501) (choice list)				Final	0.0		~							
11/4/2004	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
10/20/2004	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
9/16/2004	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
8/5/2004	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
7/29/2004	Weather condition (WMO code 4501) (choice list)				Final	6.0		~							
6/10/2004	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
5/20/2004	Weather condition (WMO code 4501) (choice list)				Final	0.0		~							
4/8/2004	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
3/2/2004	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
2/12/2004	Weather condition (WMO code 4501) (choice list)				Final	6.0		~							
1/8/2004	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
12/3/2003	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
11/6/2003	Weather condition (WMO code 4501) (choice list)				Final	6.0		~							
10/9/2003	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
9/2/2003	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
8/5/2003	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
7/1/2003	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
6/5/2003	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
5/15/2003	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
4/10/2003	Weather condition (WMO code 4501) (choice list)				Final	6.0		~							
3/20/2003	Weather condition (WMO code 4501) (choice list)				Final	6.0		~							
2/10/2003	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
1/21/2003	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
12/5/2002	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
11/26/2002	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
10/16/2002	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
9/3/2002	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
7/18/2002	Weather condition (WMO code 4501) (choice list)				Final	0.0		~							
6/17/2002	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
5/23/2002	Weather condition (WMO code 4501) (choice list)				Final	0.0		~							
4/9/2002	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
3/19/2002	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
2/19/2002	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
1/23/2002	Weather condition (WMO code 4501) (choice list)				Final	6.0		~							
12/6/2001	Weather condition (WMO code 4501) (choice list)				Final	0.0		~							
11/14/2001	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
10/18/2001	Weather condition (WMO code 4501) (choice list)				Final	0.0		~							
9/11/2001	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
8/15/2001	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
7/23/2001	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
6/21/2001	Weather condition (WMO code 4501) (choice list)				Final	0.0		~							
4/5/2001	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
3/8/2001	Weather condition (WMO code 4501) (choice list)				Final	0.0		~							
2/1/2001	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
1/3/2001	Weather condition (WMO code 4501) (choice list)				Final	0.0		~							
8/3/2000	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
7/18/2000	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
6/7/2000	Weather condition (WMO code 4501) (choice list)				Final	0.0		~							
5/9/2000	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
10/21/1999	Weather condition (WMO code 4501) (choice list)				Final	1.0		~							
9/2/1999	Weather condition (WMO code 4501) (choice list)				Final	0.0		~							

8/19/1999	Weather condition (WMO code 4501) (choice list)				Final	1.0		~						
7/8/1999	Weather condition (WMO code 4501) (choice list)				Final	0.0		~						
6/2/1999	Weather condition (WMO code 4501) (choice list)				Final	1.0		~						
5/19/1999	Weather condition (WMO code 4501) (choice list)				Final	1.0		~						
10/21/1998	WEATHER (WMO CODE 4501)	B	1020	41		1.0		D						
9/24/1998	WEATHER (WMO CODE 4501)	B	1050	41		0.0		D						
8/5/1998	WEATHER (WMO CODE 4501)	B	1245	41		1.0		D						
7/30/1998	WEATHER (WMO CODE 4501)	B	1140	41		1.0		D						
6/18/1998	WEATHER (WMO CODE 4501)	B	920	41		0.0		D						
5/27/1998	WEATHER (WMO CODE 4501)	B	1015	41		1.0		D						
4/2/1998	WEATHER (WMO CODE 4501)	B	1115	41		0.0		D						
3/9/1998	WEATHER (WMO CODE 4501)	B	1320	41		2.0		D						
10/9/1997	WEATHER (WMO CODE 4501)	B	1110	41		1.0		D						
9/2/1997	WEATHER (WMO CODE 4501)	B	1340	41		1.0		D						
8/5/1997	WEATHER (WMO CODE 4501)	B	1330	41		1.0		D						
7/1/1997	WEATHER (WMO CODE 4501)	B	1155	41		1.0		D						
6/19/1997	WEATHER (WMO CODE 4501)	B	1045	41		1.0		D						
5/14/1997	WEATHER (WMO CODE 4501)	B	1150	41		1.0		D						
10/10/1996	WEATHER (WMO CODE 4501)	B	1109	41		1.0		D						
8/5/1996	WEATHER (WMO CODE 4501)	B	1130	41		2.0		D						
7/22/1996	WEATHER (WMO CODE 4501)	B	1405	41		1.0		D						
6/26/1996	WEATHER (WMO CODE 4501)	B	1345	41		0.0		D						
5/14/1996	WEATHER (WMO CODE 4501)	B	1050	41		2.0		D						
10/4/1995	WEATHER (WMO CODE 4501)	B	1200	41		2.0		D						
9/20/1995	WEATHER (WMO CODE 4501)	B	1401	41		1.0		D						
8/16/1995	WEATHER (WMO CODE 4501)	B	1430	41		1.0		D						
7/5/1995	WEATHER (WMO CODE 4501)	B	1350	41		1.0		D						
6/13/1995	WEATHER (WMO CODE 4501)	B	1450	41		1.0		D						
5/9/1995	WEATHER (WMO CODE 4501)	B	1335	41		1.0		D						
10/18/1994	WEATHER (WMO CODE 4501)	B	1150	41		1.0		D						
9/15/1994	WEATHER (WMO CODE 4501)	B	1120	41		0.0		D						
8/25/1994	WEATHER (WMO CODE 4501)	B	1115	41		0.0		D						
8/9/1994	WEATHER (WMO CODE 4501)	B	1150	41		0.0		D						
6/8/1994	WEATHER (WMO CODE 4501)	B	1125	41		2.0		D						
5/5/1994	WEATHER (WMO CODE 4501)	B	1445	41		1.0		D						
9/8/1993	WEATHER (WMO CODE 4501)	B	1325	41		0.0		D						
8/18/1993	WEATHER (WMO CODE 4501)	B	1300	41		1.0		D						
7/13/1993	WEATHER (WMO CODE 4501)	B	1305	41		0.0		D						
6/2/1993	WEATHER (WMO CODE 4501)	B	1350	41		2.0		D						
5/18/1993	WEATHER (WMO CODE 4501)	B	1406	41		1.0		D						
4/1/1993	WEATHER (WMO CODE 4501)	B	1120	41		0.0		D						
3/4/1993	WEATHER (WMO CODE 4501)	B	1300	41		2.0		D						
2/11/1993	WEATHER (WMO CODE 4501)	B	1330	41		2.0		D						
1/19/1993	WEATHER (WMO CODE 4501)	B	1031	41		22.0		D						
12/8/1992	WEATHER (WMO CODE 4501)	B	1235	41		2.0		D						
11/18/1992	WEATHER (WMO CODE 4501)	B	1035	41		1.0		D						
10/22/1992	WEATHER (WMO CODE 4501)	B	1035	41		1.0		D						
9/15/1992	WEATHER (WMO CODE 4501)	B	1045	41		1.0		D						
8/26/1992	WEATHER (WMO CODE 4501)	B	1035	41		1.0		D						
7/28/1992	WEATHER (WMO CODE 4501)	B	1125	41		2.0		D						
6/17/1992	WEATHER (WMO CODE 4501)	B	1045	41		1.0		D						
5/20/1992	WEATHER (WMO CODE 4501)	B	1259	41		0.0		D						
10/21/1991	WEATHER (WMO CODE 4501)	B	1055	41		2.0		D						
9/11/1991	WEATHER (WMO CODE 4501)	B	1200	41		2.0		D						
8/12/1991	WEATHER (WMO CODE 4501)	B	1320	41		2.0		D						
7/2/1991	WEATHER (WMO CODE 4501)	B	1120	41		1.0		D						
6/12/1991	WEATHER (WMO CODE 4501)	B	1050	41		2.0		D						
5/29/1991	WEATHER (WMO CODE 4501)	B	1200	41		0.0		D						
10/16/1990	WEATHER (WMO CODE 4501)	B	1345	41		0.0		D						
9/18/1990	WEATHER (WMO CODE 4501)	B	1305	41		1.0		D						
8/7/1990	WEATHER (WMO CODE 4501)	B	1143	41		2.0		D						
7/16/1990	WEATHER (WMO CODE 4501)	B	1326	41		2.0		D						
6/12/1990	WEATHER (WMO CODE 4501)	B	1205	41		0.0		D						
5/21/1990	WEATHER (WMO CODE 4501)	B	1230	41		2.0		D						
10/16/1989	WEATHER (WMO CODE 4501)	B	1253	41		1.0		D						
9/5/1989	WEATHER (WMO CODE 4501)	B	1349	41		2.0		D						
8/8/1989	WEATHER (WMO CODE 4501)	B	1218	41		2.0		D						
7/25/1989	WEATHER (WMO CODE 4501)	B	1220	41		1.0		D						
6/8/1989	WEATHER (WMO CODE 4501)	B	1248	41		0.0		D						
5/11/1989	WEATHER (WMO CODE 4501)	B	1213	41		1.0		D						
10/11/1988	WEATHER (WMO CODE 4501)	B	1136	41		0.0		D						
9/12/1988	WEATHER (WMO CODE 4501)	B	1212	41		2.0		D						
7/13/1988	WEATHER (WMO CODE 4501)	B	1105	41		0.0		D						
6/14/1988	WEATHER (WMO CODE 4501)	B	1253	41		0.0		D						
5/4/1988	WEATHER (WMO CODE 4501)	B	1255	41		1.0		D						
10/5/1987	WEATHER (WMO CODE 4501)	B	1125	41		0.0		D						
9/3/1987	WEATHER (WMO CODE 4501)	B	1110	41		1.0		D						
8/17/1987	WEATHER (WMO CODE 4501)	B	1205	41		0.0		D						
7/14/1987	WEATHER (WMO CODE 4501)	B	1145	41		0.0		D						
6/2/1987	WEATHER (WMO CODE 4501)	B	1400	41		0.0		D						
5/13/1987	WEATHER (WMO CODE 4501)	B	1240	41		0.0		D						
10/13/1986	WEATHER (WMO CODE 4501)	B	1155	41		2.0		D						
9/24/1986	WEATHER (WMO CODE 4501)	B	1025	41		0.0		D						
8/7/1986	WEATHER (WMO CODE 4501)	B	1110	41		2.0		D						
6/18/1986	WEATHER (WMO CODE 4501)	B	1030	41		0.0		D						
10/29/1985	WEATHER (WMO CODE 4501)	B	1055	41		2.0		D						
9/27/1985	WEATHER (WMO CODE 4501)	B	1145	41		0.0		D						
8/26/1985	WEATHER (WMO CODE 4501)	B	1030	41		2.0		D						
7/18/1985	WEATHER (WMO CODE 4501)	B	1130	41		1.0		D						
6/10/1985	WEATHER (WMO CODE 4501)	B	1205	41		0.0		D						
5/21/1985	WEATHER (WMO CODE 4501)	B	1045	41		1.0		D						
10/25/1984	WEATHER (WMO CODE 4501)	B	1030	41		0.0		D						
9/11/1984	WEATHER (WMO CODE 4501)	B	1100	41		2.0		D						
8/23/1984	WEATHER (WMO CODE 4501)	B	1110	41		0.0		D						
7/17/1984	WEATHER (WMO CODE 4501)	B	1335	41		1.0		D						
6/25/1984	WEATHER (WMO CODE 4501)	B	1040	41		0.0		D						
5/3/1984	WEATHER (WMO CODE 4501)	B	1115	41		2.0		D						
8/8/1983	WEATHER (WMO CODE 4501)	B	1015	41		0.0		D						
8/23/1982	WEATHER (WMO CODE 4501)	B	942	41		0.0		D						
8/23/1982	WEATHER (WMO CODE 4501)	B	1410	41		0.0		D						
8/23/1982	WEATHER (WMO CODE 4501)	B	940	41		0.0		D						
8/23/1982	WEATHER (WMO CODE 4501)	B	1412	41		0.0		D						
8/23/1982	WEATHER (WMO CODE 4501)	B	941	41		0.0		D						
8/23/1982	WEATHER (WMO CODE 4501)	B	1411	41		0.0		D						
10/16/1980	WEATHER (WMO CODE 4501)	B	1005	41		0.0		D						
9/8/1980	WEATHER (WMO CODE 4501)	B	1315	41		0.0		D						
8/25/1980	WEATHER (WMO CODE 4501)	B	1505	41		0.0		D						
6/17/1980	WEATHER (WMO CODE 4501)	B	1240	41		2.0		D						
5/19/1980	WEATHER (WMO CODE 4501)	B	1235	41		2.0		D						
											37	37	7400	26000
11/6/2008	Zinc	Total	Actual		Final	*Present <QL		APHA	~3120					
8/27/2008	Zinc	Total	Actual		Final	*Present <QL		APHA	~3120					
5/27/2008	Zinc	Total	Actual		Final	*Present <QL		APHA	~3120					
2/7/2008	Zinc	Total	Actual		Final	0.0	ug/l	APHA	~3120					
11/6/2007	Zinc	Total	Actual		Final	*Present <QL		APHA	~3120					
8/16/2007	Zinc	Total	Actual		Final	0.0	ug/l	APHA	~3120					
5/30/2007	Zinc	Total	Actual		Final	*Present <QL		APHA	~3120					
2/5/2007	Zinc	Total	Actual		Final	*Present <QL		APHA	~3120					
11/29/2006	Zinc	Total	Actual		Final	22.0	ug/l	APHA	~3120					
8/24/2006	Zinc	Total	Actual		Final	14.0	ug/l	APHA	~3120					
5/25/2006	Zinc	Total	Actual		Final	38.0	ug/l	APHA	~3120					
2/2/2006	Zinc	Total	Actual		Final	*Present <QL		APHA	~3120					
11/14/2005	Zinc	Total	Actual		Final	16.0	ug/l	APHA	~3120					
8/30/2005	Zinc	Total	Actual		Final	*Present <QL		APHA	~3120					
5/26/2005	Zinc	Total	Actual		Final	21.0	ug/l	APHA	~3120					
2/3/2005	Zinc	Total	Actual		Final	*Present <QL		APHA	~3120					
11/4/2004	Zinc	Total	Actual		Final	11.0	ug/l	APHA	~3120					
8/5/2004	Zinc	Total	Actual		Final	16.0	ug/l	APHA	~3120					
5/20/2004	Zinc	Total	Actual		Final	*Present <QL		APHA	~3120					
2/12/2004	Zinc	Total	Actual		Final	65.0	ug/l	APHA	~3120					
11/6/2003	Zinc	Total	Actual		Final	15.0	ug/l	APHA	~3120					
8/5/2003	Zinc	Total	Actual		Final	27.0	ug/l	APHA	~3120					
5/15/2003	Zinc	Total	Actual		Final	26.0	ug/l	APHA	~3120					
2/10/2003	Zinc	Total	Actual		Final	*Present <QL		APHA	~3120					
11/26/2002	Zinc	Total	Actual		Final	14.0	ug/l	APHA	~3120					
5/23/2002	Zinc	Total	Actual		Final	11.0	ug/l	APHA	~3120					
2/19/2002	Zinc	Total	Actual		Final	*Present <QL	ug/l	APHA	~3120					
11/14/2001	Zinc	Total	Actual		Final	*Present <QL	ug/l	APHA	~3120					
8/15/2001	Zinc	Total	Actual		Final	*Present <QL	ug/l	APHA	~3120					
5/1/2001	Zinc	Total	Actual		Final	30.0	ug/l	APHA	~3120					
8/19/1999	Zinc	Total	Actual		Final	20.0	ug/l	APHA	~3120					
5/19/1999	Zinc	Total	Actual		Final	10.0	ug/l	APHA	~3120					
8/5/1998	ZINC, TOTAL (UG/L AS ZN)	B	1245	1092		30.0		D						
5/27/1998	ZINC, TOTAL (UG/L AS ZN)	B	1015	1092		10.0	K	D						
9/8/1993	ZINC, TOTAL (UG/L AS ZN)	B	1325	1092		10.0	K	D						
6/2/1993	ZINC, TOTAL (UG/L AS ZN)	B	1350	1092		10.0	K	D						
3/4/1993	ZINC, TOTAL (UG/L AS ZN)	B	1300	1092		10.0	K	D						
12/8/1992	ZINC, TOTAL (UG/L AS ZN)	B	1235	1092		10.0	K	D						
Start Date	Parameter Long Name	Composite M	Start Ti	Parameter Code		Result Value	Remark C	Composite Statistic Code						
8/23/1982	COD, .025N K2CR2O7 MG/L	B	1411	335		23.0		D						
8/23/1982	COD, .025N K2CR2O7 MG/L	B	1410	335		22.0		D						
8/23/1982	COD, .025N K2CR2O7 MG/L	B	1412	335		23.0		D						
8/23/1982	COD, .025N K2CR2O7 MG/L	B	941	335		12.0		D						
8/23/1982	COD, .025N K2CR2O7 MG/L	B	942	335		12.0		D						
8/23/1982	COD, .025N K2CR2O7 MG/L	B	940	335		9.3		D						
10/28/1963	COLIFORM, UNCONFIRMED RESULTS, UNACCEPT	B	2500	71205		330.0		D						
6/18/1962	COLIFORM, UNCONFIRMED RESULTS, UNACCEPT	B	2500	71205		2200.0		D						
6/19/1962	COLIFORM, UNCONFIRMED RESULTS, UNACCEPT	B	2500	71205		220.0		D						
10/22/1963	COLIFORM, UNCONFIRMED RESULTS, UNACCEPT	B	2500	71205		330.0		D						
10/29/1963	COLIFORM, UNCONFIRMED RESULTS, UNACCEPT	B	2500	71205		330.0		D						
8/29/1975	COLOR (PLATINUM-COBALT UNITS)	B	940	80		70.0		D						
4/23/1976	COLOR (PLATINUM-COBALT UNITS)	B	930	80		50.0		D						
10/22/1963	COLOR (PLATINUM-COBALT UNITS)	B	2500	80		50.0		D						
8/7/1970	COLOR (PLATINUM-COBALT UNITS)	B	2500	80		70.0		D						
11/4/1974	COLOR (PLATINUM-COBALT UNITS)	B	940	80		60.0		D						

5/7/1975	COLOR (PLATINUM-COBALT UNITS)	B	915	80		70.0		D						
8/3/1970	COLOR (PLATINUM-COBALT UNITS)	B	2500	80		100.0		D						
9/3/1974	COLOR (PLATINUM-COBALT UNITS)	B	1015	80		90.0		D						
10/28/1963	COLOR (PLATINUM-COBALT UNITS)	B	2500	80		60.0		D						
10/29/1963	COLOR (PLATINUM-COBALT UNITS)	B	2500	80		60.0		D						
9/4/1968	COLOR (PLATINUM-COBALT UNITS)	B	2500	80		70.0		D						
8/4/1970	COLOR (PLATINUM-COBALT UNITS)	B	2500	80		60.0		D						
10/4/1971	COLOR (PLATINUM-COBALT UNITS)	B	2500	80		55.0		D						
11/30/1971	COLOR (PLATINUM-COBALT UNITS)	B	2500	80		45.0		D						
4/20/1973	COLOR (PLATINUM-COBALT UNITS)	B	840	80		65.0		D						
3/13/1973	COLOR (PLATINUM-COBALT UNITS)	B	1050	80		65.0		D						
9/3/1968	COLOR (PLATINUM-COBALT UNITS)	B	2500	80		70.0		D						
6/25/1974	COLOR (PLATINUM-COBALT UNITS)	B	1000	80		90.0		D						
8/1/1974	COLOR (PLATINUM-COBALT UNITS)	B	1000	80		5.0		D						
7/3/1975	COLOR (PLATINUM-COBALT UNITS)	B	950	80		60.0		D						
8/5/1975	COLOR (PLATINUM-COBALT UNITS)	B	1000	80		70.0		D						
10/17/1975	COLOR (PLATINUM-COBALT UNITS)	B	920	80		80.0		D						
5/26/1976	COLOR (PLATINUM-COBALT UNITS)	B	845	80		50.0		D						
8/23/1982	FLOW, STREAM, INSTANTANEOUS CFS	B	1411	61		32.0		D						
8/23/1982	FLOW, STREAM, INSTANTANEOUS CFS	B	941	61		32.0		D						
8/23/1982	FLOW, STREAM, INSTANTANEOUS CFS	B	1412	61		32.0		D						
8/23/1982	FLOW, STREAM, INSTANTANEOUS CFS	B	942	61		32.0		D						
8/23/1982	FLOW, STREAM, INSTANTANEOUS CFS	B	940	61		32.0		D						
8/23/1982	FLOW, STREAM, INSTANTANEOUS CFS	B	1410	61		32.0		D						
8/23/1982	INTENSIVE SURVEY IDENTIFICATION NUMBER	B	1410	116		824502.0		D						
8/23/1982	INTENSIVE SURVEY IDENTIFICATION NUMBER	B	1411	116		824502.0		D						
8/23/1982	INTENSIVE SURVEY IDENTIFICATION NUMBER	B	942	116		824502.0		D						
8/23/1982	INTENSIVE SURVEY IDENTIFICATION NUMBER	B	940	116		824502.0		D						
8/23/1982	INTENSIVE SURVEY IDENTIFICATION NUMBER	B	941	116		824502.0		D						
8/23/1982	INTENSIVE SURVEY IDENTIFICATION NUMBER	B	1412	116		824502.0		D						
3/23/1973	NUMBER USED IN SAMPLE ACCOUNTING PROCE	B	1050	8		2.0		D						
3/23/1973	NUMBER USED IN SAMPLE ACCOUNTING PROCE	B	2500	8		2.0		D						
4/20/1973	NUMBER USED IN SAMPLE ACCOUNTING PROCE	B	840	8		2.0		D						
4/20/1973	NUMBER USED IN SAMPLE ACCOUNTING PROCE	B	2500	8		2.0		D						
9/25/1973	NUMBER USED IN SAMPLE ACCOUNTING PROCE	B	2500	8		2.0		D						
8/3/1970	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	2500	301		78.0		D						
11/30/1971	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	2500	301		84.0		D						
4/20/1973	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	840	301		85.3	$	D						
8/1/1974	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1000	301		89.3	$	D						
5/7/1975	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	915	301		83.5	$	D						
7/30/1976	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	915	301		76.2	$	D						
5/6/1977	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1100	301		91.7	$	D						
8/10/1977	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1035	301		79.0	$	D						
10/27/1977	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1110	301		80.4	$	D						
5/3/1978	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1145	301		84.0	$	D						
9/27/1979	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1210	301		69.9	$	D						
7/24/1980	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1245	301		86.4	$	D						
10/16/1980	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1005	301		80.4	$	D						
5/21/1985	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1045	301		85.1	$	D						
6/8/1989	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1248	301		83.3	$	D						
7/25/1989	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1220	301		83.9	$	D						
10/16/1990	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1345	301		82.6	$	D						
5/29/1991	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1200	301		84.7	$	D						
7/28/1992	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1125	301		76.8	$	D						
11/18/1992	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1035	301		92.4	$	D						
8/18/1993	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1300	301		81.0	$	D						
5/5/1994	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1445	301		88.2	$	D						
9/15/1994	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1120	301		85.6	$	D						
6/13/1995	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1450	301		87.0	$	D						
7/22/1996	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1405	301		93.7	$	D						
9/3/1974	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1015	301		77.6	$	D						
11/4/1974	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	940	301		82.4	$	D						
7/13/1978	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1105	301		70.7	$	D						
6/18/1986	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1030	301		81.8	$	D						
9/24/1986	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1025	301		89.8	$	D						
9/12/1988	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1212	301		87.5	$	D						
6/12/1990	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1205	301		89.4	$	D						
5/20/1992	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1259	301		90.2	$	D						
9/15/1992	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1045	301		78.7	$	D						
3/4/1993	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1300	301		88.5	$	D						
6/2/1993	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1350	301		80.0	$	D						
5/14/1996	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1050	301		85.0	$	D						
8/5/1996	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1130	301		82.4	$	D						
10/10/1996	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1109	301		95.0	$	D						
7/1/1997	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1155	301		81.0	$	D						
9/3/1968	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	2500	301		86.0		D						
8/5/1975	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1000	301		81.7	$	D						
10/17/1975	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	920	301		91.1	$	D						
4/23/1976	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	930	301		86.3	$	D						
5/7/1979	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1150	301		80.4	$	D						
6/26/1979	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1110	301		88.6	$	D						
8/23/1982	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1412	301		77.4	$	D						
8/23/1984	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1110	301		77.6	$	D						
9/27/1985	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1145	301		85.9	$	D						
8/7/1986	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1110	301		57.6	$	D						
8/17/1987	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1205	301		82.1	$	D						
9/3/1987	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1110	301		83.0	$	D						
10/5/1987	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1125	301		87.3	$	D						
10/18/1994	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1150	301		86.1	$	D						
7/5/1995	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1350	301		87.8	$	D						
9/4/1968	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	2500	301		84.0		D						
6/25/1974	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1000	301		93.2	$	D						
9/24/1974	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	850	301		101.0	$	D						
5/26/1976	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	845	301		88.4	$	D						
9/28/1976	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1045	301		86.7	$	D						
9/8/1978	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1125	301		77.8	$	D						
6/17/1980	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1240	301		97.6	$	D						
8/23/1982	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1410	301		77.4	$	D						
10/25/1984	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1030	301		78.7	$	D						
9/18/1990	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1305	301		90.2	$	D						
9/8/1993	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1325	301		71.3	$	D						
8/9/1994	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1150	301		100.0	$	D						
8/16/1995	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1430	301		96.4	$	D						
9/20/1995	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1401	301		80.7	$	D						
10/4/1995	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1200	301		85.9	$	D						
9/2/1997	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1340	301		94.1	$	D						
3/9/1998	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1320	301		88.9	$	D						
6/18/1998	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	920	301		90.6	$	D						
8/4/1970	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	2500	301		75.0		D						
9/25/1973	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1030	301		90.9	$	D						
7/3/1975	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	950	301		87.4	$	D						
6/29/1976	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1100	301		70.6	$	D						
9/14/1977	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1130	301		88.6	$	D						
6/27/1978	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1240	301		93.7	$	D						
8/8/1983	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1015	301		78.6	$	D						
8/26/1985	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1030	301		87.4	$	D						
6/14/1988	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1253	301		92.0	$	D						
8/8/1989	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1218	301		81.6	$	D						
7/16/1990	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1326	301		81.5	$	D						
12/8/1992	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1235	301		83.2	$	D						
2/11/1993	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1330	301		93.1	$	D						
5/18/1993	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1406	301		90.2	$	D						
8/25/1994	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1115	301		80.4	$	D						
5/9/1995	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1335	301		90.4	$	D						
7/30/1998	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1140	301		87.2	$	D						
10/28/1963	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	2500	301		82.0		D						
8/7/1970	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	2500	301		83.0		D						
10/24/1978	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1005	301		94.7	$	D						
5/19/1980	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1235	301		83.9	$	D						
8/25/1980	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1505	301		87.7	$	D						
9/8/1980	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1315	301		90.1	$	D						
8/23/1982	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	940	301		78.8	$	D						
8/23/1982	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1411	301		77.4	$	D						
5/3/1984	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1115	301		81.9	$	D						
6/25/1984	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1040	301		73.6	$	D						
10/29/1985	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1055	301		96.1	$	D						
10/13/1986	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1155	301		87.4	$	D						
5/4/1988	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1255	301		74.7	$	D						
5/11/1989	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1213	301		81.0	$	D						
6/12/1991	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1050	301		81.5	$	D						
9/11/1991	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1200	301		83.3	$	D						
6/17/1992	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1045	301		77.3	$	D						
8/26/1992	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1035	301		82.8	$	D						
10/22/1992	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1035	301		96.3	$	D						
4/1/1993	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1120	301		72.1	$	D						
6/26/1996	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1345	301		87.8	$	D						
6/19/1997	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1045	301		77.8	$	D						
10/9/1997	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1110	301		90.2	$	D						
6/19/1962	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	2500	301		85.7		D						
10/22/1963	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	2500	301		85.0		D						
10/29/1963	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	2500	301		64.0		D						
10/4/1971	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	2500	301		82.0		D						
5/3/1974	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1000	301		89.1	$	D						
10/26/1979	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1200	301		86.0	$	D						
8/23/1982	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	942	301		78.8	$	D						
7/17/1984	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1335	301		76.9	$	D						
6/10/1985	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1205	301		81.0	$	D						
5/13/1987	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1240	301		87.2	$	D						
6/2/1987	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1400	301		66.7	$	D						
7/14/1987	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1145	301		95.3	$	D						
7/13/1988	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1105	301		79.4	$	D						
10/11/1988	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1136	301		92.6	$	D						
5/21/1990	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1230	301		80.4	$	D						
7/2/1991	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1120	301		81.0	$	D						
1/19/1993	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1031	301		91.4	$	D						

8/5/1997	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1330	301		102.4	$	D							
5/27/1998	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1015	301		85.9	$	D							
9/24/1998	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1050	301		97.7	$	D							
10/21/1998	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1020	301		86.6	$	D							
6/18/1962	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	2500	301		83.0		D							
3/13/1973	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1050	301		89.8	$	D							
9/1/1976	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1045	301		83.3	$	D							
6/14/1977	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1140	301		67.8	$	D							
7/22/1977	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1025	301		79.7	$	D							
7/10/1979	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1045	301		86.4	$	D							
8/23/1982	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	941	301		78.8	$	D							
9/11/1984	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1100	301		84.8	$	D							
7/18/1985	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1130	301		87.1	$	D							
9/5/1989	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1349	301		87.9	$	D							
10/16/1989	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1253	301		74.5	$	D							
8/7/1990	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1143	301		79.8	$	D							
8/12/1991	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1320	301		76.7	$	D							
10/21/1991	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1055	301		95.4	$	D							
7/13/1993	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1305	301		85.4	$	D							
6/8/1994	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1125	301		85.2	$	D							
5/14/1997	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1150	301		83.5	$	D							
4/2/1998	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1115	301		88.8	$	D							
8/5/1998	OXYGEN, DISSOLVED, PERCENT OF SATURATION	B	1245	301		93.5	$	D							
8/23/1982	RESIDUE, TOTAL NONFILTRABLE (MG/L)	B	940	530		2.0		D							
6/8/1989	RESIDUE, TOTAL NONFILTRABLE (MG/L)	B	1248	530		8.3		D							
8/23/1982	RESIDUE, TOTAL NONFILTRABLE (MG/L)	B	1411	530		13.0		D							
8/23/1982	RESIDUE, TOTAL NONFILTRABLE (MG/L)	B	1410	530		6.0		D							
8/23/1982	RESIDUE, TOTAL NONFILTRABLE (MG/L)	B	942	530		9.0		D							
8/23/1982	RESIDUE, TOTAL NONFILTRABLE (MG/L)	B	1412	530		27.0		D							
8/23/1982	RESIDUE,TOTAL FILTRABLE (DRIED AT 180C),MG/	B	942	70300		26.0		D							
8/23/1982	SPECIFIC CONDUCTANCE,NON-TEMPERATURE C	B	1410	402		35.0		D							
8/23/1982	SPECIFIC CONDUCTANCE,NON-TEMPERATURE C	B	1411	402		35.0		D							
8/23/1982	SPECIFIC CONDUCTANCE,NON-TEMPERATURE C	B	941	402		40.0		D							
8/23/1982	SPECIFIC CONDUCTANCE,NON-TEMPERATURE C	B	940	402		40.0		D							
8/23/1982	SPECIFIC CONDUCTANCE,NON-TEMPERATURE C	B	1412	402		35.0		D							
8/23/1982	SPECIFIC CONDUCTANCE,NON-TEMPERATURE C	B	942	402		40.0		D							
9/3/1974	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1015	2		20.0		D							
7/3/1975	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	950	2		50.0		D							
10/17/1975	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	920	2		50.0		D							
5/6/1977	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1100	2		50.0		D							
7/13/1978	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	2500	2		50.0		D							
9/8/1978	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1125	2		50.0		D							
9/27/1979	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1210	2		50.0		D							
7/24/1980	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1245	2		50.0		D							
8/23/1982	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1411	2		50.0		D							
10/25/1984	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1030	2		50.0		D							
10/13/1986	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1155	2		50.0		D							
7/14/1987	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1145	2		50.0		D							
8/17/1987	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1205	2		50.0		D							
5/4/1988	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1255	2		50.0		D							
8/8/1989	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1218	2		50.0		D							
6/12/1990	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1205	2		50.0		D							
9/18/1990	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1305	2		50.0		D							
8/26/1992	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1035	2		50.0		D							
8/18/1993	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1300	2		50.0		D							
8/9/1994	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1150	2		50.0		D							
4/2/1998	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1115	2		50.0		D							
6/29/1976	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1100	2		50.0		D							
9/1/1976	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1045	2		50.0		D							
9/14/1977	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1130	2		50.0		D							
10/27/1977	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1110	2		50.0		D							
10/24/1978	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1005	2		50.0		D							
9/8/1980	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1315	2		50.0		D							
8/23/1982	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	940	2		50.0		D							
6/25/1984	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1040	2		50.0		D							
7/18/1985	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1130	2		50.0		D							
9/24/1986	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1025	2		50.0		D							
9/12/1988	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1212	2		50.0		D							
5/11/1989	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1213	2		50.0		D							
5/20/1992	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1259	2		50.0		D							
10/22/1992	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1035	2		50.0		D							
6/2/1993	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1350	2		50.0		D							
10/4/1995	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1200	2		50.0		D							
10/10/1996	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1109	2		50.0		D							
7/1/1997	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1155	2		50.0		D							
8/5/1998	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1245	2		50.0		D							
6/27/1978	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1240	2		50.0		D							
10/26/1979	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1200	2		50.0		D							
8/25/1980	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1505	2		50.0		D							
8/23/1984	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1110	2		50.0		D							
10/29/1985	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1055	2		50.0		D							
6/18/1986	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1030	2		50.0		D							
9/3/1987	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1110	2		50.0		D							
7/13/1988	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1105	2		50.0		D							
10/11/1988	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1136	2		50.0		D							
10/16/1990	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1345	2		50.0		D							
6/17/1992	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1045	2		50.0		D							
7/28/1992	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1125	2		50.0		D							
12/8/1992	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1235	2		50.0		D							
9/8/1993	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1325	2		50.0		D							
8/16/1995	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1430	2		50.0		D							
9/20/1995	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1401	2		50.0		D							
5/27/1998	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1015	2		50.0		D							
3/13/1973	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1050	2		50.0		D							
9/25/1973	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1030	2		50.0		D							
9/24/1974	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	850	2		50.0		D							
5/7/1975	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	915	2		50.0		D							
6/17/1980	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1240	2		50.0		D							
8/23/1982	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	941	2		50.0		D							
8/23/1982	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1412	2		50.0		D							
8/8/1983	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1015	2		50.0		D							
7/17/1984	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1335	2		50.0		D							
6/10/1985	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1205	2		50.0		D							
6/8/1989	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1248	2		50.0		D							
10/21/1991	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1055	2		50.0		D							
9/15/1992	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1045	2		50.0		D							
2/11/1993	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1330	2		50.0		D							
6/13/1995	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1450	2		50.0		D							
7/5/1995	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1350	2		50.0		D							
3/9/1998	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1320	2		50.0		D							
6/25/1974	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1000	2		70.0		D							
8/1/1974	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1000	2		50.0		D							
8/5/1975	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1000	2		50.0		D							
8/29/1975	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	940	2		50.0		D							
5/26/1976	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	845	2		50.0		D							
7/22/1977	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1025	2		50.0		D							
5/3/1978	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1145	2		50.0		D							
8/9/1978	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	2500	2		50.0		D							
5/19/1980	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1235	2		50.0		D							
5/13/1987	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1240	2		50.0		D							
7/2/1991	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1120	2		50.0		D							
8/12/1991	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1320	2		50.0		D							
4/1/1993	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1120	2		50.0		D							
6/8/1994	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1125	2		50.0		D							
8/25/1994	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1115	2		50.0		D							
9/15/1994	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1120	2		50.0		D							
10/18/1994	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1150	2		50.0		D							
6/26/1996	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1345	2		50.0		D							
6/19/1997	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1045	2		50.0		D							
10/21/1998	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1020	2		50.0		D							
5/3/1974	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1000	2		50.0		D							
11/4/1974	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	940	2		50.0		D							
4/23/1976	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	930	2		50.0		D							
9/28/1976	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1045	2		50.0		D							
6/14/1977	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1140	2		50.0		D							
8/22/1979	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1100	2		50.0		D							
8/23/1982	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	942	2		50.0		D							
9/27/1985	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1145	2		50.0		D							
9/5/1989	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1349	2		50.0		D							
7/16/1990	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1326	2		50.0		D							
1/19/1993	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1031	2		50.0		D							
7/13/1993	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1305	2		50.0		D							
5/14/1997	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1150	2		50.0		D							
7/30/1998	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1140	2		50.0		D							
9/24/1998	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1050	2		50.0		D							
7/30/1976	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	915	2		50.0		D							
8/10/1977	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1035	2		50.0		D							
7/13/1978	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1105	2		50.0		D							
6/26/1979	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1110	2		50.0		D							
7/10/1979	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1045	2		50.0		D							
10/16/1980	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1005	2		50.0		D							
5/3/1984	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1115	2		50.0		D							
5/21/1985	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1045	2		50.0		D							
8/26/1985	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1030	2		50.0		D							
5/21/1990	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1230	2		50.0		D							
5/29/1991	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1200	2		50.0		D							
6/12/1991	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1050	2		50.0		D							
9/11/1991	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1200	2		50.0		D							
11/18/1992	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1035	2		50.0		D							
3/4/1993	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1300	2		50.0		D							
5/5/1994	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1445	2		50.0		D							
8/5/1997	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1330	2		50.0		D							
6/18/1998	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	920	2		50.0		D							
4/20/1973	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	840	2		50.0		D							
8/9/1978	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1000	2		50.0		D							

9/8/1978	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	2500	2		50.0		D						
5/7/1979	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1150	2		50.0		D						
8/23/1982	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1410	2		50.0		D						
9/11/1984	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1100	2		50.0		D						
8/7/1986	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1110	2		50.0		D						
6/2/1987	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1400	2		50.0		D						
10/5/1987	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1125	2		50.0		D						
6/14/1988	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1253	2		50.0		D						
7/25/1989	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1220	2		50.0		D						
10/16/1989	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1253	2		50.0		D						
8/7/1990	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1143	2		50.0		D						
5/18/1993	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1406	2		50.0		D						
5/9/1995	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1335	2		50.0		D						
5/14/1996	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1050	2		50.0		D						
7/22/1996	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1405	2		50.0		D						
9/2/1997	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1340	2		50.0		D						
10/9/1997	X-SEC. LOC., HORIZ (% FROM R BANK LOOK UPS	B	1110	2		50.0		D						

Appendix D

State	HUC	Station Horizontal Datum	Organization Name	Primary Station ID	Station Location Name	Station Location Name 2	Station Location Name 3	State
SOUTH CAROLINA	3050104	UNKWN	SC DEPT HEALTH & ENV CON	CW-229	BEAR CREEK AT S-40-82	SOUTHEAST	SANTEE-COOPER	South Carolina

					Water Quality Numeric Criteria for the Protection of Aquatic Life and Human Health				
					CRITERIA***				
Activity Start	*Characteristic Name*	*Sample Fraction*	*Result Value as Text*	*Units*	***CHECK UNITS AGAINST UNITS AND FOOTNOTES IN R.61-68 DOCUMENT				
							HUMAN HEALTH		
					FRESHWATER AQUATIC LIFE		FOR CONSUMPTION OF		
					SPECIFIC STANDARD	*CMC (ug/L)*	*CCC (ug/L)*	*water & org (ug/L)*	*org only (ug/L)*	*MCL (ug/L)*
7/12/2007	Alkalinity, Carbonate as CaCO3	Total	51	mg/l						
6/14/2007	Alkalinity, Carbonate as CaCO3	Total	15	mg/l						
5/17/2007	Alkalinity, Carbonate as CaCO3	Total	21	mg/l						
4/12/2007	Alkalinity, Carbonate as CaCO3	Total	13	mg/l						
3/15/2007	Alkalinity, Carbonate as CaCO3	Total	11	mg/l						
2/15/2007	Alkalinity, Carbonate as CaCO3	Total	8.6	mg/l						
1/25/2007	Alkalinity, Carbonate as CaCO3	Total	10	mg/l						
12/9/2002	Alkalinity, Carbonate as CaCO3	Total	13	mg/l						
4/30/2002	Alkalinity, Carbonate as CaCO3	Total	34	mg/l						
2/26/2002	Alkalinity, Carbonate as CaCO3	Total	11	mg/l						
12/5/2000	Alkalinity, Carbonate as CaCO3	Total	14	mg/l						
11/6/2000	Alkalinity, Carbonate as CaCO3	Total	47	mg/l						
10/19/2000	Alkalinity, Carbonate as CaCO3	Total	33	mg/l						
9/21/2000	Alkalinity, Carbonate as CaCO3	Total	36	mg/l						
8/3/2000	Alkalinity, Carbonate as CaCO3	Total	21	mg/l						
7/13/2000	Alkalinity, Carbonate as CaCO3	Total	22	mg/l						
6/7/2000	Alkalinity, Carbonate as CaCO3	Total	34	mg/l						
5/9/2000	Alkalinity, Carbonate as CaCO3	Total	20	mg/l						
4/12/2000	Alkalinity, Carbonate as CaCO3	Total	14	mg/l						
3/9/2000	Alkalinity, Carbonate as CaCO3	Total	8	mg/l						
2/3/2000	Alkalinity, Carbonate as CaCO3	Total	5	mg/l						
1/6/2000	Alkalinity, Carbonate as CaCO3	Total	9	mg/l						
12/28/1999	Alkalinity, Carbonate as CaCO3	Total	9	mg/l						
11/4/1999	Alkalinity, Carbonate as CaCO3	Total	11	mg/l						
10/21/1999	Alkalinity, Carbonate as CaCO3	Total	10	mg/l						
8/19/1999	Alkalinity, Carbonate as CaCO3	Total	41	mg/l						
7/8/1999	Alkalinity, Carbonate as CaCO3	Total	14	mg/l						
6/2/1999	Alkalinity, Carbonate as CaCO3	Total	20	mg/l						
5/6/1999	Alkalinity, Carbonate as CaCO3	Total	15	mg/l						
4/1/1999	Alkalinity, Carbonate as CaCO3	Total	12	mg/l						
2/11/1999	Alkalinity, Carbonate as CaCO3	Total	11	mg/l						
1/7/1999	Alkalinity, Carbonate as CaCO3	Total	11	mg/l						
12/3/1998	ALKALINITY, TOTAL (MG/L AS CACO3)	B	13							
11/19/1998	ALKALINITY, TOTAL (MG/L AS CACO3)	B	13							
10/8/1998	ALKALINITY, TOTAL (MG/L AS CACO3)	B	8							
9/14/1998	ALKALINITY, TOTAL (MG/L AS CACO3)	B	11							
8/6/1998	ALKALINITY, TOTAL (MG/L AS CACO3)	B	28							
7/16/1998	ALKALINITY, TOTAL (MG/L AS CACO3)	B	42							
6/10/1998	ALKALINITY, TOTAL (MG/L AS CACO3)	B	1							
5/7/1998	ALKALINITY, TOTAL (MG/L AS CACO3)	B	12							
4/15/1998	ALKALINITY, TOTAL (MG/L AS CACO3)	B	13							
3/5/1998	ALKALINITY, TOTAL (MG/L AS CACO3)	B	10							
2/24/1998	ALKALINITY, TOTAL (MG/L AS CACO3)	B	10							
1/14/1998	ALKALINITY, TOTAL (MG/L AS CACO3)	B	20							
12/4/1997	ALKALINITY, TOTAL (MG/L AS CACO3)	B	11							
11/6/1997	ALKALINITY, TOTAL (MG/L AS CACO3)	B	14							
10/16/1997	ALKALINITY, TOTAL (MG/L AS CACO3)	B	16							
9/2/1997	ALKALINITY, TOTAL (MG/L AS CACO3)	B	22							
8/5/1997	ALKALINITY, TOTAL (MG/L AS CACO3)	B	17							
7/17/1997	ALKALINITY, TOTAL (MG/L AS CACO3)	B	20							
6/5/1997	ALKALINITY, TOTAL (MG/L AS CACO3)	B	20							
5/1/1997	ALKALINITY, TOTAL (MG/L AS CACO3)	B	15							
4/9/1997	ALKALINITY, TOTAL (MG/L AS CACO3)	B	20							
3/6/1997	ALKALINITY, TOTAL (MG/L AS CACO3)	B	18							
2/6/1997	ALKALINITY, TOTAL (MG/L AS CACO3)	B	13							
1/2/1997	ALKALINITY, TOTAL (MG/L AS CACO3)	B	20							
12/5/1996	ALKALINITY, TOTAL (MG/L AS CACO3)	B	14							
10/17/1996	ALKALINITY, TOTAL (MG/L AS CACO3)	B	20							
9/19/1996	ALKALINITY, TOTAL (MG/L AS CACO3)	B	31							
8/15/1996	ALKALINITY, TOTAL (MG/L AS CACO3)	B	16							
6/20/1996	ALKALINITY, TOTAL (MG/L AS CACO3)	B	22							
5/16/1996	ALKALINITY, TOTAL (MG/L AS CACO3)	B	22							
4/25/1996	ALKALINITY, TOTAL (MG/L AS CACO3)	B	22							
3/21/1996	ALKALINITY, TOTAL (MG/L AS CACO3)	B	17							
2/15/1996	ALKALINITY, TOTAL (MG/L AS CACO3)	B	15							
1/11/1996	ALKALINITY, TOTAL (MG/L AS CACO3)	B	16							
12/7/1995	ALKALINITY, TOTAL (MG/L AS CACO3)	B	17							
11/2/1995	ALKALINITY, TOTAL (MG/L AS CACO3)	B	17							
10/12/1995	ALKALINITY, TOTAL (MG/L AS CACO3)	B	21							
9/5/1995	ALKALINITY, TOTAL (MG/L AS CACO3)	B	21							
8/3/1995	ALKALINITY, TOTAL (MG/L AS CACO3)	B	20							
7/6/1995	ALKALINITY, TOTAL (MG/L AS CACO3)	B	18							
6/29/1995	ALKALINITY, TOTAL (MG/L AS CACO3)	B	11							
5/11/1995	ALKALINITY, TOTAL (MG/L AS CACO3)	B	29							
4/18/1995	ALKALINITY, TOTAL (MG/L AS CACO3)	B	18							
3/2/1995	ALKALINITY, TOTAL (MG/L AS CACO3)	B	10							
2/2/1995	ALKALINITY, TOTAL (MG/L AS CACO3)	B	19							
1/6/1995	ALKALINITY, TOTAL (MG/L AS CACO3)	B	22							
12/2/1994	ALKALINITY, TOTAL (MG/L AS CACO3)	B	18							
11/3/1994	ALKALINITY, TOTAL (MG/L AS CACO3)	B	15							
10/21/1994	ALKALINITY, TOTAL (MG/L AS CACO3)	B	15							
9/2/1994	ALKALINITY, TOTAL (MG/L AS CACO3)	B	16							
8/11/1994	ALKALINITY, TOTAL (MG/L AS CACO3)	B	22							
7/28/1994	ALKALINITY, TOTAL (MG/L AS CACO3)	B	23							
6/16/1994	ALKALINITY, TOTAL (MG/L AS CACO3)	B	21							
5/31/1994	ALKALINITY, TOTAL (MG/L AS CACO3)	B	22							
4/1/1994	ALKALINITY, TOTAL (MG/L AS CACO3)	B	13							
3/11/1994	ALKALINITY, TOTAL (MG/L AS CACO3)	B	10							
2/25/1994	ALKALINITY, TOTAL (MG/L AS CACO3)	B	10							
1/27/1994	ALKALINITY, TOTAL (MG/L AS CACO3)	B	12							
12/9/1993	ALKALINITY, TOTAL (MG/L AS CACO3)	B	12							
11/18/1993	ALKALINITY, TOTAL (MG/L AS CACO3)	B	16							
10/26/1993	ALKALINITY, TOTAL (MG/L AS CACO3)	B	17							
6/25/1993	ALKALINITY, TOTAL (MG/L AS CACO3)	B	39							
5/13/1993	ALKALINITY, TOTAL (MG/L AS CACO3)	B	38							
4/2/1993	ALKALINITY, TOTAL (MG/L AS CACO3)	B	12							
3/11/1993	ALKALINITY, TOTAL (MG/L AS CACO3)	B	14							
2/5/1993	ALKALINITY, TOTAL (MG/L AS CACO3)	B	13							
1/15/1993	ALKALINITY, TOTAL (MG/L AS CACO3)	B	12							
12/4/1992	ALKALINITY, TOTAL (MG/L AS CACO3)	B	7							
11/20/1992	ALKALINITY, TOTAL (MG/L AS CACO3)	B	16							
10/1/1992	ALKALINITY, TOTAL (MG/L AS CACO3)	B	22							
9/4/1992	ALKALINITY, TOTAL (MG/L AS CACO3)	B	13							
8/28/1992	ALKALINITY, TOTAL (MG/L AS CACO3)	B	27							
7/2/1992	ALKALINITY, TOTAL (MG/L AS CACO3)	B	24							
6/12/1992	ALKALINITY, TOTAL (MG/L AS CACO3)	B	20							
5/14/1992	ALKALINITY, TOTAL (MG/L AS CACO3)	B	19							
4/30/1992	ALKALINITY, TOTAL (MG/L AS CACO3)	B	23							
3/6/1992	ALKALINITY, TOTAL (MG/L AS CACO3)	B	17							
2/7/1992	ALKALINITY, TOTAL (MG/L AS CACO3)	B	23							
1/17/1992	ALKALINITY, TOTAL (MG/L AS CACO3)	B	19							
12/13/1991	ALKALINITY, TOTAL (MG/L AS CACO3)	B	20							
11/20/1991	ALKALINITY, TOTAL (MG/L AS CACO3)	B	23							
10/25/1991	ALKALINITY, TOTAL (MG/L AS CACO3)	B	29							
9/27/1991	ALKALINITY, TOTAL (MG/L AS CACO3)	B	21							
8/8/1991	ALKALINITY, TOTAL (MG/L AS CACO3)	B	18							
7/5/1991	ALKALINITY, TOTAL (MG/L AS CACO3)	B	28							
6/20/1991	ALKALINITY, TOTAL (MG/L AS CACO3)	B	10							
5/23/1991	ALKALINITY, TOTAL (MG/L AS CACO3)	B	28							
4/12/1991	ALKALINITY, TOTAL (MG/L AS CACO3)	B	13							
3/14/1991	ALKALINITY, TOTAL (MG/L AS CACO3)	B	9							
2/1/1991	ALKALINITY, TOTAL (MG/L AS CACO3)	B	10							
1/3/1991	ALKALINITY, TOTAL (MG/L AS CACO3)	B	15							
12/6/1990	ALKALINITY, TOTAL (MG/L AS CACO3)	B	14							
11/16/1990	ALKALINITY, TOTAL (MG/L AS CACO3)	B	12							
10/19/1990	ALKALINITY, TOTAL (MG/L AS CACO3)	B	4							
9/14/1990	ALKALINITY, TOTAL (MG/L AS CACO3)	B	18							
8/10/1990	ALKALINITY, TOTAL (MG/L AS CACO3)	B	14							
7/12/2007	Ammonia as NH3	Total	0.93	mg/l	CRITERIA DEPENDENT ON Ph and TEMP					
6/14/2007	Ammonia as NH3	Total	0.15	mg/l						
4/12/2007	Ammonia as NH3	Total	*Present <QL							
3/15/2007	Ammonia as NH3	Total	0.21	mg/l						
2/15/2007	Ammonia as NH3	Total	0.14	mg/l						
1/25/2007	Ammonia as NH3	Total	*Present <QL							
12/9/2002	Ammonia as NH3	Total	*Present <QL	mg/l						
4/30/2002	Ammonia as NH3	Total	*Present <QL	mg/l						
2/26/2002	Ammonia as NH3	Total	*Present <QL	mg/l						
12/5/2000	Ammonia as NH3	Total	*Present <QL	mg/l						
11/6/2000	Ammonia as NH3	Total	0.13	mg/l						
10/19/2000	Ammonia as NH3	Total	*Present <QL	mg/l						
9/21/2000	Ammonia as NH3	Total	0.12	mg/l						
8/3/2000	Ammonia as NH3	Total	0.15	mg/l						
7/13/2000	Ammonia as NH3	Total	0.12	mg/l						
6/7/2000	Ammonia as NH3	Total	0.13	mg/l						
5/9/2000	Ammonia as NH3	Total	0.06	mg/l						
4/12/2000	Ammonia as NH3	Total	*Present <QL	mg/l						
3/9/2000	Ammonia as NH3	Total	*Present <QL	mg/l						
2/3/2000	Ammonia as NH3	Total	*Present <QL	mg/l						
1/6/2000	Ammonia as NH3	Total	*Present <QL	mg/l						
11/4/1999	Ammonia as NH3	Total	*Present <QL	mg/l						
10/21/1999	Ammonia as NH3	Total	*Present <QL	mg/l						
8/19/1999	Ammonia as NH3	Total	0.07	mg/l						
7/8/1999	Ammonia as NH3	Total	0.06	mg/l						
6/2/1999	Ammonia as NH3	Total	*Present <QL	mg/l						
5/6/1999	Ammonia as NH3	Total	*Present <QL	mg/l						
4/1/1999	Ammonia as NH3	Total	*Present <QL	mg/l						
2/11/1999	Ammonia as NH3	Total	*Present <QL	mg/l						
1/7/1999	Ammonia as NH3	Total	*Present <QL	mg/l						
12/3/1998	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$						
11/19/1998	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$						
10/8/1998	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$						
9/14/1998	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$						
8/6/1998	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$						
7/16/1998	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$						
6/10/1998	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$						
5/7/1998	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$						
4/15/1998	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$						
3/5/1998	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$						
2/24/1998	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$						
1/14/1998	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$						
12/4/1997	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$						

11/6/1997	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
10/16/1997	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							

9/2/1997	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
8/5/1997	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
7/17/1997	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
6/5/1997	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
5/1/1997	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
4/9/1997	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
3/6/1997	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
2/6/1997	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
1/2/1997	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
12/5/1996	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
10/17/1996	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
9/19/1996	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
8/15/1996	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
6/20/1996	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
5/16/1996	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
4/25/1996	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
3/21/1996	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
2/15/1996	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
1/11/1996	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
12/7/1995	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
10/12/1995	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
9/5/1995	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
8/3/1995	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
7/6/1995	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
5/11/1995	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
3/2/1995	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
2/2/1995	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
1/6/1995	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
12/2/1994	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
11/3/1994	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
10/21/1994	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
9/2/1994	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
8/11/1994	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
7/28/1994	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
6/16/1994	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
5/31/1994	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
4/1/1994	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
3/11/1994	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
2/25/1994	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
1/27/1994	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
12/9/1993	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
11/18/1993	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
10/26/1993	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
6/25/1993	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
5/13/1993	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
4/2/1993	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
2/5/1993	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
1/15/1993	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
12/4/1992	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
11/20/1992	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
10/1/1992	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
9/4/1992	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
8/28/1992	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
7/2/1992	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
6/12/1992	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
5/14/1992	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
4/30/1992	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
3/6/1992	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
2/7/1992	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
1/17/1992	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
12/13/1991	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
11/20/1991	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
10/25/1991	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
9/27/1991	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
8/8/1991	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
7/5/1991	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
6/20/1991	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
5/23/1991	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
4/12/1991	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
3/14/1991	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
2/1/1991	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
1/3/1991	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
12/6/1990	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
11/16/1990	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
10/19/1990	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
9/14/1990	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
8/10/1990	AMMONIA, UNIONIZED (CALC FR TEMP-PH-NH4) (MG/L)	B	0.0	$							
12/3/1998	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
11/19/1998	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
10/8/1998	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
9/14/1998	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
8/6/1998	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
7/16/1998	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
6/10/1998	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
5/7/1998	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
4/15/1998	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
3/5/1998	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
2/24/1998	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
1/14/1998	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
12/4/1997	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
11/6/1997	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
10/16/1997	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
9/2/1997	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
8/5/1997	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
7/17/1997	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
6/5/1997	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
5/1/1997	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
4/9/1997	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
3/6/1997	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
2/6/1997	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
1/2/1997	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
12/5/1996	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
10/17/1996	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
9/19/1996	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
8/15/1996	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
6/20/1996	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
5/16/1996	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
4/25/1996	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
3/21/1996	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
2/15/1996	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
1/11/1996	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
12/7/1995	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
10/12/1995	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
9/5/1995	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
8/3/1995	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
7/6/1995	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
5/11/1995	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
3/2/1995	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
2/2/1995	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
1/6/1995	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
12/2/1994	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
11/3/1994	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
10/21/1994	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
9/2/1994	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
8/11/1994	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
7/28/1994	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
6/16/1994	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
5/31/1994	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
4/1/1994	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
3/11/1994	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
2/25/1994	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
1/27/1994	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
12/9/1993	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
11/18/1993	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
10/26/1993	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
6/25/1993	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
5/13/1993	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
4/2/1993	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
2/5/1993	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
1/15/1993	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
12/4/1992	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
11/20/1992	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
10/1/1992	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
9/4/1992	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
8/28/1992	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
7/2/1992	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
6/12/1992	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
5/14/1992	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
4/30/1992	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
3/6/1992	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
2/7/1992	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
1/17/1992	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
12/13/1991	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
11/20/1991	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
10/25/1991	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
9/27/1991	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
8/8/1991	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
7/5/1991	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
6/20/1991	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
5/23/1991	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
4/12/1991	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
3/14/1991	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
2/1/1991	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
1/3/1991	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
12/6/1990	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
11/16/1990	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
10/19/1990	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
9/14/1990	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
8/10/1990	AMMONIA, UNIONZED (MG/L AS N)	B	0.0	$							
12/3/1998	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1								
11/19/1998	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1								
10/8/1998	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K							
9/14/1998	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K							
8/6/1998	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.4								
7/16/1998	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.5								
6/10/1998	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1								
5/7/1998	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K							
4/15/1998	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1								
3/5/1998	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K							
2/24/1998	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K							

1/14/1998	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
12/4/1997	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.2							
11/6/1997	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1							
10/16/1997	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.2							
9/2/1997	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
8/5/1997	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1							
7/17/1997	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1							
6/5/1997	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.3							
5/1/1997	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
4/9/1997	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
3/6/1997	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
2/6/1997	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
1/2/1997	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
12/5/1996	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
10/17/1996	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
9/19/1996	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
8/15/1996	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.3							
6/20/1996	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
5/16/1996	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
4/25/1996	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
3/21/1996	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
2/15/1996	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.7							
1/11/1996	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
12/7/1995	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
10/12/1995	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
9/5/1995	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
8/3/1995	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
7/6/1995	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
5/11/1995	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
4/18/1995	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
3/2/1995	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
2/2/1995	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
1/6/1995	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
12/2/1994	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
11/3/1994	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
10/21/1994	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
9/2/1994	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
8/11/1994	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
7/28/1994	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
6/16/1994	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
5/31/1994	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
4/1/1994	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
3/11/1994	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
2/25/1994	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
1/27/1994	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
12/9/1993	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
11/18/1993	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
10/26/1993	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
6/25/1993	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.2							
5/13/1993	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	1.2							
4/2/1993	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
3/11/1993	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
2/5/1993	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
1/15/1993	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
12/4/1992	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
11/20/1992	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
10/1/1992	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1							
9/4/1992	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1							
8/28/1992	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
7/2/1992	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
6/12/1992	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
5/14/1992	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
4/30/1992	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
3/6/1992	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
2/7/1992	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
1/17/1992	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1							
12/13/1991	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
11/20/1991	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
10/25/1991	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
9/27/1991	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
8/8/1991	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
7/5/1991	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
6/20/1991	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
5/23/1991	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
4/12/1991	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
3/14/1991	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.2							
2/1/1991	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
1/3/1991	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
12/6/1990	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1							
11/16/1990	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
10/19/1990	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
9/14/1990	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1	K						
8/10/1990	NITROGEN, AMMONIA, TOTAL (MG/L AS N)	B	0.1							
7/12/2007	Biochemical oxygen demand, standard conditions	Total	*Present >QL							
6/14/2007	Biochemical oxygen demand, standard conditions	Total	*Present <QL							
5/17/2007	Biochemical oxygen demand, standard conditions	Total	3.7	mg/l						
4/12/2007	Biochemical oxygen demand, standard conditions	Total	4	mg/l						
3/15/2007	Biochemical oxygen demand, standard conditions	Total	2.1	mg/l						
2/15/2007	Biochemical oxygen demand, standard conditions	Total	*Present <QL							
1/25/2007	Biochemical oxygen demand, standard conditions	Total	*Present <QL							
12/9/2002	Biochemical oxygen demand, standard conditions	Total	*Present <QL	mg/l						
11/25/2002	Biochemical oxygen demand, standard conditions	Total	*Present <QL	mg/l						
5/28/2002	Biochemical oxygen demand, standard conditions	Total	*Present <QL	mg/l						
5/28/2002	Biochemical oxygen demand, standard conditions	Total	7.1	mg/l						
4/30/2002	Biochemical oxygen demand, standard conditions	Total	3.3	mg/l						
3/26/2002	Biochemical oxygen demand, standard conditions	Total	*Present <QL	mg/l						
2/26/2002	Biochemical oxygen demand, standard conditions	Total	*Present <QL	mg/l						
12/5/2000	Biochemical oxygen demand, standard conditions	Total	*Present <QL	mg/l						
11/6/2000	Biochemical oxygen demand, standard conditions	Total	2.6	mg/l						
10/19/2000	Biochemical oxygen demand, standard conditions	Total	*Present <QL	mg/l						
9/21/2000	Biochemical oxygen demand, standard conditions	Total	2.9	mg/l						
8/3/2000	Biochemical oxygen demand, standard conditions	Total	2.4	mg/l						
7/13/2000	Biochemical oxygen demand, standard conditions	Total	3.6	mg/l						
6/7/2000	Biochemical oxygen demand, standard conditions	Total	2.7	mg/l						
5/9/2000	Biochemical oxygen demand, standard conditions	Total	1.7	mg/l						
4/12/2000	Biochemical oxygen demand, standard conditions	Total	1.4	mg/l						
3/9/2000	Biochemical oxygen demand, standard conditions	Total	0.4	mg/l						
2/3/2000	Biochemical oxygen demand, standard conditions	Total	0.3	mg/l						
1/6/2000	Biochemical oxygen demand, standard conditions	Total	0.7	mg/l						
12/28/1999	Biochemical oxygen demand, standard conditions	Total	0.5	mg/l						
11/4/1999	Biochemical oxygen demand, standard conditions	Total	3.7	mg/l						
10/21/1999	Biochemical oxygen demand, standard conditions	Total	1.6	mg/l						
8/19/1999	Biochemical oxygen demand, standard conditions	Total	1.6	mg/l						
7/8/1999	Biochemical oxygen demand, standard conditions	Total	1.3	mg/l						
6/2/1999	Biochemical oxygen demand, standard conditions	Total	0.9	mg/l						
5/6/1999	Biochemical oxygen demand, standard conditions	Total	1	mg/l						
4/1/1999	Biochemical oxygen demand, standard conditions	Total	1.6	mg/l						
2/11/1999	Biochemical oxygen demand, standard conditions	Total	1.2	mg/l						
1/7/1999	Biochemical oxygen demand, standard conditions	Total	0.5	mg/l						
12/3/1998	BOD, 5 DAY, 20 DEG C	MG/L	B	1.0						
11/19/1998	BOD, 5 DAY, 20 DEG C	MG/L	B	2.3						
10/8/1998	BOD, 5 DAY, 20 DEG C	MG/L	B	4.0						
9/14/1998	BOD, 5 DAY, 20 DEG C	MG/L	B	0.8						
8/6/1998	BOD, 5 DAY, 20 DEG C	MG/L	B	3.9						
6/10/1998	BOD, 5 DAY, 20 DEG C	MG/L	B	2.9						
5/7/1998	BOD, 5 DAY, 20 DEG C	MG/L	B	0.8						
4/15/1998	BOD, 5 DAY, 20 DEG C	MG/L	B	0.8						
2/24/1998	BOD, 5 DAY, 20 DEG C	MG/L	B	1.3						
1/14/1998	BOD, 5 DAY, 20 DEG C	MG/L	B	0.6						
12/4/1997	BOD, 5 DAY, 20 DEG C	MG/L	B	0.4						
9/2/1997	BOD, 5 DAY, 20 DEG C	MG/L	B	1.7						
8/5/1997	BOD, 5 DAY, 20 DEG C	MG/L	B	1.9						
7/17/1997	BOD, 5 DAY, 20 DEG C	MG/L	B	2.3						
6/5/1997	BOD, 5 DAY, 20 DEG C	MG/L	B	1.3						
5/1/1997	BOD, 5 DAY, 20 DEG C	MG/L	B	1.0						
4/9/1997	BOD, 5 DAY, 20 DEG C	MG/L	B	0.8						
3/6/1997	BOD, 5 DAY, 20 DEG C	MG/L	B	1.5						
2/6/1997	BOD, 5 DAY, 20 DEG C	MG/L	B	1.4						
1/2/1997	BOD, 5 DAY, 20 DEG C	MG/L	B	1.0						
12/5/1996	BOD, 5 DAY, 20 DEG C	MG/L	B	1.7						
10/17/1996	BOD, 5 DAY, 20 DEG C	MG/L	B	1.2						
9/19/1996	BOD, 5 DAY, 20 DEG C	MG/L	B	1.7						
8/15/1996	BOD, 5 DAY, 20 DEG C	MG/L	B	2.0						
6/20/1996	BOD, 5 DAY, 20 DEG C	MG/L	B	2.0						
5/16/1996	BOD, 5 DAY, 20 DEG C	MG/L	B	1.6						
4/25/1996	BOD, 5 DAY, 20 DEG C	MG/L	B	1.0						
3/21/1996	BOD, 5 DAY, 20 DEG C	MG/L	B	0.5						
2/15/1996	BOD, 5 DAY, 20 DEG C	MG/L	B	1.5						
1/11/1996	BOD, 5 DAY, 20 DEG C	MG/L	B	1.6						
12/7/1995	BOD, 5 DAY, 20 DEG C	MG/L	B	1.6						
11/2/1995	BOD, 5 DAY, 20 DEG C	MG/L	B	1.2						
10/12/1995	BOD, 5 DAY, 20 DEG C	MG/L	B	1.2						
9/5/1995	BOD, 5 DAY, 20 DEG C	MG/L	B	0.4						
8/3/1995	BOD, 5 DAY, 20 DEG C	MG/L	B	2.7						
7/6/1995	BOD, 5 DAY, 20 DEG C	MG/L	B	1.8						
6/29/1995	BOD, 5 DAY, 20 DEG C	MG/L	B	1.9						
5/11/1995	BOD, 5 DAY, 20 DEG C	MG/L	B	2.0						
4/18/1995	BOD, 5 DAY, 20 DEG C	MG/L	B	1.4						
3/2/1995	BOD, 5 DAY, 20 DEG C	MG/L	B	1.2						
2/2/1995	BOD, 5 DAY, 20 DEG C	MG/L	B	1.4						
1/6/1995	BOD, 5 DAY, 20 DEG C	MG/L	B	0.6						
12/2/1994	BOD, 5 DAY, 20 DEG C	MG/L	B	0.6						
11/3/1994	BOD, 5 DAY, 20 DEG C	MG/L	B	1.0						
10/21/1994	BOD, 5 DAY, 20 DEG C	MG/L	B	1.6						
9/2/1994	BOD, 5 DAY, 20 DEG C	MG/L	B	1.6						
8/11/1994	BOD, 5 DAY, 20 DEG C	MG/L	B	1.7						
7/28/1994	BOD, 5 DAY, 20 DEG C	MG/L	B	1.8						
6/16/1994	BOD, 5 DAY, 20 DEG C	MG/L	B	1.1						
5/31/1994	BOD, 5 DAY, 20 DEG C	MG/L	B	2.6						
4/1/1994	BOD, 5 DAY, 20 DEG C	MG/L	B	0.8						
3/11/1994	BOD, 5 DAY, 20 DEG C	MG/L	B	1.0						
2/25/1994	BOD, 5 DAY, 20 DEG C	MG/L	B	1.2						
1/27/1994	BOD, 5 DAY, 20 DEG C	MG/L	B	0.8						
12/9/1993	BOD, 5 DAY, 20 DEG C	MG/L	B	0.8						
11/18/1993	BOD, 5 DAY, 20 DEG C	MG/L	B	4.5						
10/26/1993	BOD, 5 DAY, 20 DEG C	MG/L	B	2.5						
6/25/1993	BOD, 5 DAY, 20 DEG C	MG/L	B	3.6						
5/13/1993	BOD, 5 DAY, 20 DEG C	MG/L	B	1.2						
4/2/1993	BOD, 5 DAY, 20 DEG C	MG/L	B	2.1						
3/11/1993	BOD, 5 DAY, 20 DEG C	MG/L	B	1.0						

2/5/1993	BOD, 5 DAY, 20 DEG C	MG/L	B	1.4								
1/15/1993	BOD, 5 DAY, 20 DEG C	MG/L	B	0.4								
12/4/1992	BOD, 5 DAY, 20 DEG C	MG/L	B	2.8								
11/20/1992	BOD, 5 DAY, 20 DEG C	MG/L	B	1.2								
10/1/1992	BOD, 5 DAY, 20 DEG C	MG/L	B	2.6								
9/4/1992	BOD, 5 DAY, 20 DEG C	MG/L	B	2.8								
8/28/1992	BOD, 5 DAY, 20 DEG C	MG/L	B	1.6								
7/2/1992	BOD, 5 DAY, 20 DEG C	MG/L	B	0.2								
6/12/1992	BOD, 5 DAY, 20 DEG C	MG/L	B	3.2								
5/14/1992	BOD, 5 DAY, 20 DEG C	MG/L	B	0.6								
4/30/1992	BOD, 5 DAY, 20 DEG C	MG/L	B	1.5								
3/6/1992	BOD, 5 DAY, 20 DEG C	MG/L	B	1.8								
2/7/1992	BOD, 5 DAY, 20 DEG C	MG/L	B	3.6								
1/17/1992	BOD, 5 DAY, 20 DEG C	MG/L	B	1.9								
12/13/1991	BOD, 5 DAY, 20 DEG C	MG/L	B	2.6								
11/20/1991	BOD, 5 DAY, 20 DEG C	MG/L	B	1.0								
10/25/1991	BOD, 5 DAY, 20 DEG C	MG/L	B	2.8								
9/27/1991	BOD, 5 DAY, 20 DEG C	MG/L	B	1.2								
8/8/1991	BOD, 5 DAY, 20 DEG C	MG/L	B	1.4								
7/5/1991	BOD, 5 DAY, 20 DEG C	MG/L	B	0.5								
6/20/1991	BOD, 5 DAY, 20 DEG C	MG/L	B	1.6								
5/23/1991	BOD, 5 DAY, 20 DEG C	MG/L	B	0.8								
4/12/1991	BOD, 5 DAY, 20 DEG C	MG/L	B	0.1								
3/14/1991	BOD, 5 DAY, 20 DEG C	MG/L	B	2.5								
2/1/1991	BOD, 5 DAY, 20 DEG C	MG/L	B	1.7								
1/3/1991	BOD, 5 DAY, 20 DEG C	MG/L	B	0.6								
12/6/1990	BOD, 5 DAY, 20 DEG C	MG/L	B	1.0								
11/16/1990	BOD, 5 DAY, 20 DEG C	MG/L	B	0.8								
10/19/1990	BOD, 5 DAY, 20 DEG C	MG/L	B	2.0								
9/14/1990	BOD, 5 DAY, 20 DEG C	MG/L	B	2.2								
8/10/1990	BOD, 5 DAY, 20 DEG C	MG/L	B	2.2								
5/17/2007	Cadmium		Total	*Present <QL		0.53						
2/15/2007	Cadmium		Total	*Present <QL								
11/25/2002	Cadmium		Total	*Present <QL	ug/l		0.1			5		
5/28/2002	Cadmium		Total	*Present <QL	ug/l							
2/26/2002	Cadmium		Total	*Present <QL	ug/l							
11/6/2000	Cadmium		Total	*Present <QL	ug/l							
8/3/2000	Cadmium		Total	*Present <QL	ug/l							
5/9/2000	Cadmium		Total	*Present <QL	ug/l							
2/3/2000	Cadmium		Total	*Present <QL	ug/l							
11/4/1999	Cadmium		Total	*Present <QL	ug/l							
8/19/1999	Cadmium		Total	*Present <QL	ug/l							
5/6/1999	Cadmium		Total	*Present <QL	ug/l							
2/11/1999	Cadmium		Total	*Present <QL	ug/l							
11/19/1998	CADMIUM, TOTAL (UG/L AS CD)		B	10.0	K							
8/6/1998	CADMIUM, TOTAL (UG/L AS CD)		B	10.0	K							
5/7/1998	CADMIUM, TOTAL (UG/L AS CD)		B	10.0	K							
2/24/1998	CADMIUM, TOTAL (UG/L AS CD)		B	10.0	K							
11/6/1997	CADMIUM, TOTAL (UG/L AS CD)		B	10.0	K							
8/5/1997	CADMIUM, TOTAL (UG/L AS CD)		B	10.0	K							
5/1/1997	CADMIUM, TOTAL (UG/L AS CD)		B	10.0	K							
2/6/1997	CADMIUM, TOTAL (UG/L AS CD)		B	10.0	K							
8/15/1996	CADMIUM, TOTAL (UG/L AS CD)		B	10.0	K							
5/16/1996	CADMIUM, TOTAL (UG/L AS CD)		B	10.0	K							
2/15/1996	CADMIUM, TOTAL (UG/L AS CD)		B	10.0	K							
11/2/1995	CADMIUM, TOTAL (UG/L AS CD)		B	10.0	K							
8/3/1995	CADMIUM, TOTAL (UG/L AS CD)		B	10.0	K							
5/11/1995	CADMIUM, TOTAL (UG/L AS CD)		B	10.0	K							
2/2/1995	CADMIUM, TOTAL (UG/L AS CD)		B	10.0	K							
11/3/1994	CADMIUM, TOTAL (UG/L AS CD)		B	10.0	K							
8/11/1994	CADMIUM, TOTAL (UG/L AS CD)		B	10.0	K							
5/31/1994	CADMIUM, TOTAL (UG/L AS CD)		B	10.0	K							
2/25/1994	CADMIUM, TOTAL (UG/L AS CD)		B	10.0	K							
11/18/1993	CADMIUM, TOTAL (UG/L AS CD)		B	10.0	K							
5/13/1993	CADMIUM, TOTAL (UG/L AS CD)		B	10.0	K							
2/5/1993	CADMIUM, TOTAL (UG/L AS CD)		B	10.0	K							
11/20/1992	CADMIUM, TOTAL (UG/L AS CD)		B	10.0	K							
8/28/1992	CADMIUM, TOTAL (UG/L AS CD)		B	10.0	K							
5/14/1992	CADMIUM, TOTAL (UG/L AS CD)		B	10.0	K							
2/7/1992	CADMIUM, TOTAL (UG/L AS CD)		B	10.0	K							
11/20/1991	CADMIUM, TOTAL (UG/L AS CD)		B	10.0	K							
8/8/1991	CADMIUM, TOTAL (UG/L AS CD)		B	10.0	K							
5/23/1991	CADMIUM, TOTAL (UG/L AS CD)		B	10.0	K							
2/1/1991	CADMIUM, TOTAL (UG/L AS CD)		B	10.0	K							
11/16/1990	CADMIUM, TOTAL (UG/L AS CD)		B	10.0	K							
8/10/1990	CADMIUM, TOTAL (UG/L AS CD)		B	10.0	K							
6/10/1998	CADMIUM,TOTAL IN BOTTOM DEPOSITS (MG/KG,DRY WGT		B	1.0	K							
6/5/1997	CADMIUM,TOTAL IN BOTTOM DEPOSITS (MG/KG,DRY WGT		B	1.0	K							
6/20/1996	CADMIUM,TOTAL IN BOTTOM DEPOSITS (MG/KG,DRY WGT		B	1.0	K							
6/29/1995	CADMIUM,TOTAL IN BOTTOM DEPOSITS (MG/KG,DRY WGT		B	1.0	K							
6/16/1994	CADMIUM,TOTAL IN BOTTOM DEPOSITS (MG/KG,DRY WGT		B	1.0	K							
2/5/1993	CADMIUM,TOTAL IN BOTTOM DEPOSITS (MG/KG,DRY WGT		B	1.0	K							
2/7/1992	CADMIUM,TOTAL IN BOTTOM DEPOSITS (MG/KG,DRY WGT		B	1.0	K							
11/27/1990	CADMIUM,TOTAL IN BOTTOM DEPOSITS (MG/KG,DRY WGT		B	1.0	K							
5/17/2007	Carbon, Total Organic (Toc)		Total	6.9	mg/l							
2/15/2007	Carbon, Total Organic (Toc)		Total	5.4	mg/l							
11/25/2002	Carbon, Total Organic (Toc)		Total	5.6	mg/l							
5/28/2002	Carbon, Total Organic (Toc)		Total	7.2	mg/l							
2/26/2002	Carbon, Total Organic (Toc)		Total	6.1	mg/l							
11/6/2000	Carbon, Total Organic (Toc)		Total	4.8	mg/l							
8/3/2000	Carbon, Total Organic (Toc)		Total	3.7	mg/l							
5/9/2000	Carbon, Total Organic (Toc)		Total	*Present <QL	mg/l							
2/3/2000	Carbon, Total Organic (Toc)		Total	3	mg/l							
11/4/1999	Carbon, Total Organic (Toc)		Total	7.18	mg/l							
8/19/1999	Carbon, Total Organic (Toc)		Total	3.3	mg/l							
5/6/1999	Carbon, Total Organic (Toc)		Total	*Present <QL	mg/l							
11/19/1998	CARBON, TOTAL ORGANIC (MG/L AS C)		B	6.8								
8/6/1998	CARBON, TOTAL ORGANIC (MG/L AS C)		B	7.4								
5/7/1998	CARBON, TOTAL ORGANIC (MG/L AS C)		B	3.5								
2/24/1998	CARBON, TOTAL ORGANIC (MG/L AS C)		B	3.9								
11/6/1997	CARBON, TOTAL ORGANIC (MG/L AS C)		B	5.1								
8/5/1997	CARBON, TOTAL ORGANIC (MG/L AS C)		B	4.4								
5/1/1997	CARBON, TOTAL ORGANIC (MG/L AS C)		B	3.2								
2/6/1997	CARBON, TOTAL ORGANIC (MG/L AS C)		B	3.4								
8/15/1996	CARBON, TOTAL ORGANIC (MG/L AS C)		B	7.6								
5/16/1996	CARBON, TOTAL ORGANIC (MG/L AS C)		B	4.8								
2/15/1996	CARBON, TOTAL ORGANIC (MG/L AS C)		B	4.1								
8/3/1995	CARBON, TOTAL ORGANIC (MG/L AS C)		B	8.3								
5/11/1995	CARBON, TOTAL ORGANIC (MG/L AS C)		B	7.2								
2/2/1995	CARBON, TOTAL ORGANIC (MG/L AS C)		B	3.7								
11/3/1994	CARBON, TOTAL ORGANIC (MG/L AS C)		B	3.9								
8/11/1994	CARBON, TOTAL ORGANIC (MG/L AS C)		B	6.7								
5/31/1994	CARBON, TOTAL ORGANIC (MG/L AS C)		B	5.3								
2/25/1994	CARBON, TOTAL ORGANIC (MG/L AS C)		B	5.4								
11/18/1993	CARBON, TOTAL ORGANIC (MG/L AS C)		B	8.8								
5/13/1993	CARBON, TOTAL ORGANIC (MG/L AS C)		B	5.5								
2/5/1993	CARBON, TOTAL ORGANIC (MG/L AS C)		B	2.6								
11/20/1992	CARBON, TOTAL ORGANIC (MG/L AS C)		B	5.1								
8/28/1992	CARBON, TOTAL ORGANIC (MG/L AS C)		B	10.2								
5/14/1992	CARBON, TOTAL ORGANIC (MG/L AS C)		B	3.9								
2/7/1992	CARBON, TOTAL ORGANIC (MG/L AS C)		B	3.0								
11/20/1991	CARBON, TOTAL ORGANIC (MG/L AS C)		B	4.5								
8/8/1991	CARBON, TOTAL ORGANIC (MG/L AS C)		B	6.2								
5/23/1991	CARBON, TOTAL ORGANIC (MG/L AS C)		B	3.7								
2/1/1991	CARBON, TOTAL ORGANIC (MG/L AS C)		B	4.7								
11/16/1990	CARBON, TOTAL ORGANIC (MG/L AS C)		B	3.9								
8/10/1990	CARBON, TOTAL ORGANIC (MG/L AS C)		B	8.6								
5/17/2007	Chromium		Total	*Present <QL								
2/15/2007	Chromium		Total	*Present <QL								
11/25/2002	Chromium		Total	*Present <QL	ug/l							
5/28/2002	Chromium		Total	*Present <QL	ug/l		Chromium III					
2/26/2002	Chromium		Total	*Present <QL	ug/l		580	28			100 total	
11/6/2000	Chromium		Total	*Present <QL	ug/l							
8/3/2000	Chromium		Total	*Present <QL	ug/l		Chromium VI					
5/9/2000	Chromium		Total	*Present <QL	ug/l		16	11			100 total	
2/3/2000	Chromium		Total	*Present <QL	ug/l							
11/4/1999	Chromium		Total	*Present <QL	ug/l							
8/19/1999	Chromium		Total	*Present <QL	ug/l							
5/6/1999	Chromium		Total	*Present <QL	ug/l							
2/11/1999	Chromium		Total	*Present <QL	ug/l							
11/19/1998	CHROMIUM, TOTAL (UG/L AS CR)		B	10.0	K							
8/6/1998	CHROMIUM, TOTAL (UG/L AS CR)		B	10.0	K							
5/7/1998	CHROMIUM, TOTAL (UG/L AS CR)		B	10.0	K							
2/24/1998	CHROMIUM, TOTAL (UG/L AS CR)		B	10.0	K							
11/6/1997	CHROMIUM, TOTAL (UG/L AS CR)		B	10.0	K							
8/5/1997	CHROMIUM, TOTAL (UG/L AS CR)		B	10.0	K							
5/1/1997	CHROMIUM, TOTAL (UG/L AS CR)		B	10.0	K							
2/6/1997	CHROMIUM, TOTAL (UG/L AS CR)		B	10.0	K							
8/15/1996	CHROMIUM, TOTAL (UG/L AS CR)		B	10.0	K							
5/16/1996	CHROMIUM, TOTAL (UG/L AS CR)		B	10.0	K							
2/15/1996	CHROMIUM, TOTAL (UG/L AS CR)		B	10.0	K							
11/2/1995	CHROMIUM, TOTAL (UG/L AS CR)		B	10.0	K							
8/3/1995	CHROMIUM, TOTAL (UG/L AS CR)		B	10.0	K							
5/11/1995	CHROMIUM, TOTAL (UG/L AS CR)		B	10.0	K							
2/2/1995	CHROMIUM, TOTAL (UG/L AS CR)		B	10.0	K							
11/3/1994	CHROMIUM, TOTAL (UG/L AS CR)		B	10.0	K							
8/11/1994	CHROMIUM, TOTAL (UG/L AS CR)		B	10.0	K							
5/31/1994	CHROMIUM, TOTAL (UG/L AS CR)		B	10.0	K							
2/25/1994	CHROMIUM, TOTAL (UG/L AS CR)		B	10.0	K							
11/18/1993	CHROMIUM, TOTAL (UG/L AS CR)		B	10.0	K							
5/13/1993	CHROMIUM, TOTAL (UG/L AS CR)		B	10.0	K							
2/5/1993	CHROMIUM, TOTAL (UG/L AS CR)		B	10.0								
11/20/1992	CHROMIUM, TOTAL (UG/L AS CR)		B	10.0	K							
8/28/1992	CHROMIUM, TOTAL (UG/L AS CR)		B	10.0	K							
5/14/1992	CHROMIUM, TOTAL (UG/L AS CR)		B	10.0	K							
2/7/1992	CHROMIUM, TOTAL (UG/L AS CR)		B	10.0	K							
11/20/1991	CHROMIUM, TOTAL (UG/L AS CR)		B	10.0	K							
8/8/1991	CHROMIUM, TOTAL (UG/L AS CR)		B	10.0	K							
5/23/1991	CHROMIUM, TOTAL (UG/L AS CR)		B	10.0	K							
2/1/1991	CHROMIUM, TOTAL (UG/L AS CR)		B	10.0	K							
11/16/1990	CHROMIUM, TOTAL (UG/L AS CR)		B	10.0	K							
8/10/1990	CHROMIUM, TOTAL (UG/L AS CR)		B	10.0	K							
5/17/2007	Copper		Total	*Present <QL		3.8						
2/15/2007	Copper		Total	*Present <QL								
11/25/2002	Copper		Total	*Present <QL	ug/l		2.9	1300				
5/28/2002	Copper		Total	*Present <QL	ug/l							
2/26/2002	Copper		Total	*Present <QL	ug/l							
11/6/2000	Copper		Total	*Present <QL	ug/l							
8/3/2000	Copper		Total	*Present <QL	ug/l							
5/9/2000	Copper		Total	*Present <QL	ug/l							

2/3/2000	Copper	Total	*Present <QL	ug/l						
11/4/1999	Copper	Total	*Present <QL	ug/l						
8/19/1999	Copper	Total	*Present <QL	ug/l						
5/6/1999	Copper	Total	*Present <QL	ug/l						
2/11/1999	Copper	Total	*Present <QL	ug/l						
11/19/1998	COPPER, TOTAL (UG/L AS CU)	B	10.0	K						
8/6/1998	COPPER, TOTAL (UG/L AS CU)	B	10.0	K						
5/7/1998	COPPER, TOTAL (UG/L AS CU)	B	10.0	K						
2/24/1998	COPPER, TOTAL (UG/L AS CU)	B	10.0	K						
11/6/1997	COPPER, TOTAL (UG/L AS CU)	B	10.0	K						
8/5/1997	COPPER, TOTAL (UG/L AS CU)	B	10.0	K						
5/1/1997	COPPER, TOTAL (UG/L AS CU)	B	10.0	K						
2/6/1997	COPPER, TOTAL (UG/L AS CU)	B	10.0	K						
8/15/1996	COPPER, TOTAL (UG/L AS CU)	B	10.0	K						
5/16/1996	COPPER, TOTAL (UG/L AS CU)	B	10.0	K						
2/15/1996	COPPER, TOTAL (UG/L AS CU)	B	10.0	K						
11/2/1995	COPPER, TOTAL (UG/L AS CU)	B	10.0	K						
8/3/1995	COPPER, TOTAL (UG/L AS CU)	B	10.0							
5/11/1995	COPPER, TOTAL (UG/L AS CU)	B	40.0							
2/2/1995	COPPER, TOTAL (UG/L AS CU)	B	10.0	K						
11/3/1994	COPPER, TOTAL (UG/L AS CU)	B	10.0	K						
8/11/1994	COPPER, TOTAL (UG/L AS CU)	B	30.0							
5/31/1994	COPPER, TOTAL (UG/L AS CU)	B	10.0							
2/25/1994	COPPER, TOTAL (UG/L AS CU)	B	10.0							
11/18/1993	COPPER, TOTAL (UG/L AS CU)	B	10.0	K						
5/13/1993	COPPER, TOTAL (UG/L AS CU)	B	10.0	K						
2/5/1993	COPPER, TOTAL (UG/L AS CU)	B	10.0							
11/20/1992	COPPER, TOTAL (UG/L AS CU)	B	10.0	K						
8/28/1992	COPPER, TOTAL (UG/L AS CU)	B	10.0	K						
5/14/1992	COPPER, TOTAL (UG/L AS CU)	B	10.0	K						
2/7/1992	COPPER, TOTAL (UG/L AS CU)	B	10.0	K						
11/20/1991	COPPER, TOTAL (UG/L AS CU)	B	10.0	K						
8/8/1991	COPPER, TOTAL (UG/L AS CU)	B	10.0	K						
5/23/1991	COPPER, TOTAL (UG/L AS CU)	B	10.0	K						
2/1/1991	COPPER, TOTAL (UG/L AS CU)	B	10.0	K						
11/16/1990	COPPER, TOTAL (UG/L AS CU)	B	10.0							
8/10/1990	COPPER, TOTAL (UG/L AS CU)	B	10.0	K						
5/17/2007	Depth		0.3	m						
4/12/2007	Depth		0.3	m						
3/15/2007	Depth		0.3	m						
2/15/2007	Depth		0.3	m						
1/25/2007	Depth		0.3	m						
12/9/2002	Depth		0.3	m						
11/25/2002	Depth		0.3	m						
5/28/2002	Depth		0.3	m						
5/28/2002	Depth		0.3	m						
4/30/2002	Depth		0.3	m						
3/26/2002	Depth		0.3	m						
2/26/2002	Depth		0.3	m						
12/5/2000	Depth		0.3	m						
11/6/2000	Depth		0.3	m						
10/19/2000	Depth		0.3	m						
9/21/2000	Depth		0.3	m						
8/3/2000	Depth		0.3	m						
7/13/2000	Depth		0.3	m						
6/7/2000	Depth		0.3	m						
5/9/2000	Depth		0.3	m						
4/12/2000	Depth		0.3	m						
3/9/2000	Depth		0.3	m						
2/3/2000	Depth		0.3	m						
1/6/2000	Depth		0.3	m						
12/28/1999	Depth		0.3	m						
11/4/1999	Depth		0.3	m						
10/21/1999	Depth		0.3	m						
8/19/1999	Depth		0.3	m						
7/8/1999	Depth		0.3	m						
6/2/1999	Depth		0.3	m						
5/6/1999	Depth		0.3	m						
4/1/1999	Depth		0.3	m						
3/4/1999	Depth		0.3	m						
2/11/1999	Depth		0.3	m						
1/7/1999	Depth		0.3	m						
12/3/1998	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
11/19/1998	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
10/8/1998	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
9/14/1998	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
8/6/1998	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
7/16/1998	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
6/10/1998	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
5/7/1998	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.2							
4/15/1998	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
3/5/1998	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
2/24/1998	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
1/14/1998	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
12/4/1997	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
11/6/1997	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
10/16/1997	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
9/2/1997	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
8/5/1997	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
7/17/1997	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
6/5/1997	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
5/1/1997	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
4/9/1997	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
3/6/1997	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
2/6/1997	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
1/2/1997	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
12/5/1996	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
10/17/1996	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
9/19/1996	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
8/15/1996	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
7/1/1996	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
6/20/1996	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
5/16/1996	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
4/25/1996	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
3/21/1996	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
2/15/1996	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
1/11/1996	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
12/7/1995	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
11/2/1995	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
10/12/1995	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
9/5/1995	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
8/3/1995	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
7/6/1995	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
6/29/1995	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
5/18/1995	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
3/2/1995	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
2/2/1995	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
1/6/1995	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
12/2/1994	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
11/3/1994	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
10/21/1994	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
9/2/1994	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
8/11/1994	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
7/28/1994	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
6/16/1994	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
5/31/1994	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
4/1/1994	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
3/11/1994	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
2/25/1994	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
1/27/1994	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
12/9/1993	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
11/18/1993	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
10/26/1993	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
6/25/1993	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
5/13/1993	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
4/2/1993	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
2/5/1993	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
1/15/1993	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
12/4/1992	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
11/20/1992	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
10/1/1992	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
9/4/1992	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
8/28/1992	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
7/2/1992	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
6/12/1992	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
5/14/1992	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
4/30/1992	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
3/6/1992	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
2/7/1992	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
1/17/1992	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
12/13/1991	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
11/20/1991	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
10/25/1991	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
9/27/1991	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
8/8/1991	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
7/5/1991	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
6/20/1991	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
5/23/1991	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
4/12/1991	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
3/14/1991	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
2/1/1991	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
1/3/1991	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
12/6/1990	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
11/16/1990	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
10/19/1990	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
9/14/1990	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
8/10/1990	DEPTH TO BOTTOM OF THE SAMPLING INTERVAL (METER	B	0.3							
7/12/2007	Dissolved oxygen (DO)	Dissolved	1.4	mg/l						
6/14/2007	Dissolved oxygen (DO)	Dissolved	5.91	mg/l						
5/17/2007	Dissolved oxygen (DO)	Dissolved	6.66	mg/l				TEMP AND CONDITION DEPENDENT, SEE TEXT		
4/12/2007	Dissolved oxygen (DO)	Dissolved	10.25	mg/l						
3/15/2007	Dissolved oxygen (DO)	Dissolved	10.06	mg/l						
2/15/2007	Dissolved oxygen (DO)	Dissolved	12.41	mg/l						
1/25/2007	Dissolved oxygen (DO)	Dissolved	12.17	mg/l						
12/9/2002	Dissolved oxygen (DO)	Dissolved	11.38	mg/l						
11/25/2002	Dissolved oxygen (DO)	Dissolved	11.16	mg/l						
5/28/2002	Dissolved oxygen (DO)	Dissolved	3.87	mg/l						
5/28/2002	Dissolved oxygen (DO)	Dissolved	7.01	mg/l						
4/30/2002	Dissolved oxygen (DO)	Dissolved	3.42	mg/l						
3/26/2002	Dissolved oxygen (DO)	Dissolved	6.18	mg/l						

2/26/2002	Dissolved oxygen (DO)		Dissolved	7.19	mg/l							
12/5/2000	Dissolved oxygen (DO)		Dissolved	10.9	mg/l							
11/6/2000	Dissolved oxygen (DO)		Dissolved	6.15	mg/l							
10/19/2000	Dissolved oxygen (DO)		Dissolved	5.85	mg/l							
9/21/2000	Dissolved oxygen (DO)		Dissolved	4.05	mg/l							
8/3/2000	Dissolved oxygen (DO)		Dissolved	4.85	mg/l							
7/13/2000	Dissolved oxygen (DO)		Dissolved	2.95	mg/l							
6/7/2000	Dissolved oxygen (DO)		Dissolved	4.85	mg/l							
5/9/2000	Dissolved oxygen (DO)		Dissolved	7.65	mg/l							
4/12/2000	Dissolved oxygen (DO)		Dissolved	8.95	mg/l							
3/9/2000	Dissolved oxygen (DO)		Dissolved	7.9	mg/l							
2/3/2000	Dissolved oxygen (DO)		Dissolved	11.8	mg/l							
1/6/2000	Dissolved oxygen (DO)		Dissolved	10.4	mg/l							
12/28/1999	Dissolved oxygen (DO)		Dissolved	10.45	mg/l							
11/4/1999	Dissolved oxygen (DO)		Dissolved	7.5	mg/l							
10/21/1999	Dissolved oxygen (DO)		Dissolved	7.7	mg/l							
8/19/1999	Dissolved oxygen (DO)		Dissolved	4.5	mg/l							
7/8/1999	Dissolved oxygen (DO)		Dissolved	7.9	mg/l							
6/2/1999	Dissolved oxygen (DO)		Dissolved	7.55	mg/l							
5/6/1999	Dissolved oxygen (DO)		Dissolved	9.6	mg/l							
4/1/1999	Dissolved oxygen (DO)		Dissolved	9.5	mg/l							
3/4/1999	Dissolved oxygen (DO)		Dissolved	11.2	mg/l							
2/11/1999	Dissolved oxygen (DO)		Dissolved	10.4	mg/l							
1/7/1999	Dissolved oxygen (DO)		Dissolved	12	mg/l							
12/3/1998	OXYGEN, DISSOLVED	MG/L	B	8.6								
11/19/1998	OXYGEN, DISSOLVED	MG/L	B	8.5								
10/8/1998	OXYGEN, DISSOLVED	MG/L	B	8.4								
9/14/1998	OXYGEN, DISSOLVED	MG/L	B	8.5								
8/6/1998	OXYGEN, DISSOLVED	MG/L	B	1.9								
7/16/1998	OXYGEN, DISSOLVED	MG/L	B	0.9								
6/10/1998	OXYGEN, DISSOLVED	MG/L	B	8.6								
5/7/1998	OXYGEN, DISSOLVED	MG/L	B	9.9								
4/15/1998	OXYGEN, DISSOLVED	MG/L	B	9.7								
3/5/1998	OXYGEN, DISSOLVED	MG/L	B	10.4								
2/24/1998	OXYGEN, DISSOLVED	MG/L	B	10.1								
1/14/1998	OXYGEN, DISSOLVED	MG/L	B	10.3								
12/4/1997	OXYGEN, DISSOLVED	MG/L	B	6.9								
11/6/1997	OXYGEN, DISSOLVED	MG/L	B	9.8								
10/16/1997	OXYGEN, DISSOLVED	MG/L	B	8.5								
9/2/1997	OXYGEN, DISSOLVED	MG/L	B	5.8								
8/5/1997	OXYGEN, DISSOLVED	MG/L	B	8.3								
7/17/1997	OXYGEN, DISSOLVED	MG/L	B	7.7								
6/5/1997	OXYGEN, DISSOLVED	MG/L	B	8.7								
5/1/1997	OXYGEN, DISSOLVED	MG/L	B	8.5								
4/9/1997	OXYGEN, DISSOLVED	MG/L	B	9.5								
3/6/1997	OXYGEN, DISSOLVED	MG/L	B	9.8								
2/6/1997	OXYGEN, DISSOLVED	MG/L	B	9.3								
1/2/1997	OXYGEN, DISSOLVED	MG/L	B	9.4								
12/5/1996	OXYGEN, DISSOLVED	MG/L	B	10.8								
10/17/1996	OXYGEN, DISSOLVED	MG/L	B	8.2								
9/19/1996	OXYGEN, DISSOLVED	MG/L	B	7.8								
8/15/1996	OXYGEN, DISSOLVED	MG/L	B	8.3								
7/1/1996	OXYGEN, DISSOLVED	MG/L	B	3.3								
6/20/1996	OXYGEN, DISSOLVED	MG/L	B	7.8								
5/16/1996	OXYGEN, DISSOLVED	MG/L	B	8.9								
4/25/1996	OXYGEN, DISSOLVED	MG/L	B	11.0								
3/21/1996	OXYGEN, DISSOLVED	MG/L	B	8.3								
2/15/1996	OXYGEN, DISSOLVED	MG/L	B	10.4								
1/11/1996	OXYGEN, DISSOLVED	MG/L	B	12.0								
12/7/1995	OXYGEN, DISSOLVED	MG/L	B	10.1								
11/2/1995	OXYGEN, DISSOLVED	MG/L	B	8.5								
10/12/1995	OXYGEN, DISSOLVED	MG/L	B	9.4								
9/5/1995	OXYGEN, DISSOLVED	MG/L	B	8.5								
8/3/1995	OXYGEN, DISSOLVED	MG/L	B	7.7								
7/6/1995	OXYGEN, DISSOLVED	MG/L	B	6.4								
6/29/1995	OXYGEN, DISSOLVED	MG/L	B	7.8								
5/18/1995	OXYGEN, DISSOLVED	MG/L	B	8.8								
5/11/1995	OXYGEN, DISSOLVED	MG/L	B	7.7								
3/2/1995	OXYGEN, DISSOLVED	MG/L	B	9.3								
2/2/1995	OXYGEN, DISSOLVED	MG/L	B	8.9								
1/6/1995	OXYGEN, DISSOLVED	MG/L	B	12.2								
12/2/1994	OXYGEN, DISSOLVED	MG/L	B	10.4								
11/3/1994	OXYGEN, DISSOLVED	MG/L	B	9.5								
10/21/1994	OXYGEN, DISSOLVED	MG/L	B	9.8								
9/2/1994	OXYGEN, DISSOLVED	MG/L	B	7.9								
8/11/1994	OXYGEN, DISSOLVED	MG/L	B	4.0								
7/28/1994	OXYGEN, DISSOLVED	MG/L	B	4.4								
6/16/1994	OXYGEN, DISSOLVED	MG/L	B	6.3								
5/31/1994	OXYGEN, DISSOLVED	MG/L	B	8.5								
4/1/1994	OXYGEN, DISSOLVED	MG/L	B	8.4								
3/11/1994	OXYGEN, DISSOLVED	MG/L	B	10.3								
2/25/1994	OXYGEN, DISSOLVED	MG/L	B	10.4								
1/27/1994	OXYGEN, DISSOLVED	MG/L	B	11.2								
12/9/1993	OXYGEN, DISSOLVED	MG/L	B	10.7								
11/18/1993	OXYGEN, DISSOLVED	MG/L	B	8.1								
10/26/1993	OXYGEN, DISSOLVED	MG/L	B	4.8								
6/25/1993	OXYGEN, DISSOLVED	MG/L	B	3.1								
5/13/1993	OXYGEN, DISSOLVED	MG/L	B	8.0								
4/2/1993	OXYGEN, DISSOLVED	MG/L	B	9.5								
2/5/1993	OXYGEN, DISSOLVED	MG/L	B	11.6								
1/15/1993	OXYGEN, DISSOLVED	MG/L	B	11.4								
12/4/1992	OXYGEN, DISSOLVED	MG/L	B	11.3								
11/20/1992	OXYGEN, DISSOLVED	MG/L	B	10.8								
10/1/1992	OXYGEN, DISSOLVED	MG/L	B	6.3								
9/4/1992	OXYGEN, DISSOLVED	MG/L	B	7.5								
8/28/1992	OXYGEN, DISSOLVED	MG/L	B	4.7								
7/2/1992	OXYGEN, DISSOLVED	MG/L	B	6.2								
6/12/1992	OXYGEN, DISSOLVED	MG/L	B	8.0								
5/14/1992	OXYGEN, DISSOLVED	MG/L	B	9.2								
4/30/1992	OXYGEN, DISSOLVED	MG/L	B	10.1								
3/6/1992	OXYGEN, DISSOLVED	MG/L	B	9.5								
2/7/1992	OXYGEN, DISSOLVED	MG/L	B	11.9								
1/17/1992	OXYGEN, DISSOLVED	MG/L	B	12.7								
12/13/1991	OXYGEN, DISSOLVED	MG/L	B	9.7								
11/20/1991	OXYGEN, DISSOLVED	MG/L	B	7.2								
10/25/1991	OXYGEN, DISSOLVED	MG/L	B	4.6								
9/27/1991	OXYGEN, DISSOLVED	MG/L	B	8.1								
8/8/1991	OXYGEN, DISSOLVED	MG/L	B	7.3								
7/5/1991	OXYGEN, DISSOLVED	MG/L	B	8.3								
6/20/1991	OXYGEN, DISSOLVED	MG/L	B	8.2								
5/23/1991	OXYGEN, DISSOLVED	MG/L	B	8.1								
4/12/1991	OXYGEN, DISSOLVED	MG/L	B	9.5								
3/14/1991	OXYGEN, DISSOLVED	MG/L	B	10.2								
2/1/1991	OXYGEN, DISSOLVED	MG/L	B	11.7								
1/3/1991	OXYGEN, DISSOLVED	MG/L	B	11.5								
12/6/1990	OXYGEN, DISSOLVED	MG/L	B	11.7								
11/16/1990	OXYGEN, DISSOLVED	MG/L	B	9.8								
10/19/1990	OXYGEN, DISSOLVED	MG/L	B	8.7								
9/14/1990	OXYGEN, DISSOLVED	MG/L	B	3.5								
8/10/1990	OXYGEN, DISSOLVED	MG/L	B	5.3								
7/12/2007	Enterococcus Group Bacteria		Total	*Present >QL								
6/14/2007	Enterococcus Group Bacteria		Total	156.1	#/100ml							
5/17/2007	Enterococcus Group Bacteria		Total	285.1	#/100ml							
4/12/2007	Enterococcus Group Bacteria		Total	1986.3	#/100ml							
3/15/2007	Enterococcus Group Bacteria		Total	25.3	#/100ml							
2/15/2007	Enterococcus Group Bacteria		Total	260	#/100ml							
1/25/2007	Enterococcus Group Bacteria		Total	240	#/100ml							
12/5/2000	Enterococcus Group Bacteria		Total	12	#/100ml							
11/6/2000	Enterococcus Group Bacteria		Total	17	#/100ml							
10/19/2000	Enterococcus Group Bacteria		Total	6	#/100ml							
9/21/2000	Enterococcus Group Bacteria		Total	6	#/100ml							
8/3/2000	Enterococcus Group Bacteria		Total	220	#/100ml							
7/13/2000	Enterococcus Group Bacteria		Total	*Present >QL	#/100ml							
6/7/2000	Enterococcus Group Bacteria		Total	21	#/100ml							
5/9/2000	Enterococcus Group Bacteria		Total	920	#/100ml							
4/12/2000	Enterococcus Group Bacteria		Total	75	#/100ml							
3/9/2000	Enterococcus Group Bacteria		Total	390	#/100ml							
2/3/2000	Enterococcus Group Bacteria		Total	82	#/100ml							
1/6/2000	Enterococcus Group Bacteria		Total	89	#/100ml							
12/28/1999	Enterococcus Group Bacteria		Total	62	#/100ml							
11/4/1999	Enterococcus Group Bacteria		Total	110	#/100ml							
10/21/1999	Enterococcus Group Bacteria		Total	260	#/100ml							
8/19/1999	Enterococcus Group Bacteria		Total	59	#/100ml							
7/8/1999	Enterococcus Group Bacteria		Total	440	#/100ml							
6/2/1999	Enterococcus Group Bacteria		Total	150	#/100ml							
5/6/1999	Enterococcus Group Bacteria		Total	210	#/100ml							
4/1/1999	Enterococcus Group Bacteria		Total	210	#/100ml							
2/11/1999	Enterococcus Group Bacteria		Total	28	#/100ml							
1/7/1999	Enterococcus Group Bacteria		Total	34	#/100ml							
12/3/1998	ENTEROCOCCI,ENTEROLERT,41C,24HR	#/100ML	B	79.0								
11/19/1998	ENTEROCOCCI,ENTEROLERT,41C,24HR	#/100ML	B	460.0								
10/8/1998	ENTEROCOCCI,ENTEROLERT,41C,24HR	#/100ML	B	2400.0	L							
9/14/1998	ENTEROCOCCI,ENTEROLERT,41C,24HR	#/100ML	B	390.0								
8/6/1998	ENTEROCOCCI,ENTEROLERT,41C,24HR	#/100ML	B	4.0								
7/16/1998	ENTEROCOCCI,ENTEROLERT,41C,24HR	#/100ML	B	1300.0								
6/10/1998	ENTEROCOCCI,ENTEROLERT,41C,24HR	#/100ML	B	2400.0	L							
5/7/1998	ENTEROCOCCI,ENTEROLERT,41C,24HR	#/100ML	B	230.0								
4/15/1998	ENTEROCOCCI,ENTEROLERT,41C,24HR	#/100ML	B	73.0								
3/5/1998	ENTEROCOCCI,ENTEROLERT,41C,24HR	#/100ML	B	39.0								
2/24/1998	ENTEROCOCCI,ENTEROLERT,41C,24HR	#/100ML	B	6.0								
1/14/1998	ENTEROCOCCI,ENTEROLERT,41C,24HR	#/100ML	B	84.0								
12/4/1997	ENTEROCOCCI,ENTEROLERT,41C,24HR	#/100ML	B	50.0								
11/6/1997	ENTEROCOCCI,ENTEROLERT,41C,24HR	#/100ML	B	14.0								
10/16/1997	ENTEROCOCCI,ENTEROLERT,41C,24HR	#/100ML	B	2400.0	L							
9/2/1997	ENTEROCOCCI,ENTEROLERT,41C,24HR	#/100ML	B	83.0								
8/5/1997	ENTEROCOCCI,ENTEROLERT,41C,24HR	#/100ML	B	730.0								
7/17/1997	ENTEROCOCCI,ENTEROLERT,41C,24HR	#/100ML	B	690.0								
7/12/2007	Fecal Coliform		Total	370	#/100ml							
6/14/2007	Fecal Coliform		Total	230	#/100ml							
5/17/2007	Fecal Coliform		Total	360	#/100ml							
4/12/2007	Fecal Coliform		Total	1100	#/100ml							
3/15/2007	Fecal Coliform		Total	430	#/100ml							
2/15/2007	Fecal Coliform		Total	290	#/100ml							
1/25/2007	Fecal Coliform		Total	180	#/100ml							
12/9/2002	Fecal Coliform		Total	120	#/100ml							
11/25/2002	Fecal Coliform		Total	53	#/100ml							
5/28/2002	Fecal Coliform		Total	20	#/100ml							
5/28/2002	Fecal Coliform		Total	740	#/100ml							
4/30/2002	Fecal Coliform		Total	160	#/100ml							

3/26/2002	Fecal Coliform	Total	240	#/100ml							
2/26/2002	Fecal Coliform	Total	7	#/100ml							
12/5/2000	Fecal Coliform	Total	30	#/100ml							
11/6/2000	Fecal Coliform	Total	10	#/100ml							
10/19/2000	Fecal Coliform	Total	5	#/100ml							
9/21/2000	Fecal Coliform	Total	10	#/100ml							
8/3/2000	Fecal Coliform	Total	260	#/100ml							
7/13/2000	Fecal Coliform	Total	2300	#/100ml							
6/7/2000	Fecal Coliform	Total	30	#/100ml							
5/9/2000	Fecal Coliform	Total	8900	#/100ml							
4/12/2000	Fecal Coliform	Total	170	#/100ml							
3/9/2000	Fecal Coliform	Total	500	#/100ml							
2/3/2000	Fecal Coliform	Total	900	#/100ml							
1/6/2000	Fecal Coliform	Total	150	#/100ml							
12/28/1999	Fecal Coliform	Total	110	#/100ml							
11/4/1999	Fecal Coliform	Total	120	#/100ml							
10/21/1999	Fecal Coliform	Total	460	#/100ml							
8/19/1999	Fecal Coliform	Total	10	#/100ml							
7/8/1999	Fecal Coliform	Total	140	#/100ml							
6/2/1999	Fecal Coliform	Total	100	#/100ml							
5/6/1999	Fecal Coliform	Total	120	#/100ml							
4/1/1999	Fecal Coliform	Total	470	#/100ml							
2/11/1999	Fecal Coliform	Total	240	#/100ml							
1/7/1999	Fecal Coliform	Total	580	#/100ml							
12/3/1998	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	33.0	J							
11/19/1998	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	150.0								
10/8/1998	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	5200.0	J							
9/14/1998	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	440.0								
8/6/1998	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	63.0								
7/16/1998	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	460.0								
6/10/1998	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	1300.0	J							
5/7/1998	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	210.0								
4/15/1998	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	180.0								
3/5/1998	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	150.0								
2/24/1998	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	57.0								
1/14/1998	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	150.0								
12/4/1997	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	350.0								
11/6/1997	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	40.0	J							
10/16/1997	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	2200.0	J							
9/2/1997	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	20.0	J							
8/5/1997	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	140.0								
7/17/1997	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	200.0								
6/5/1997	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	590.0								
5/1/1997	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	180.0								
4/9/1997	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	120.0								
3/6/1997	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	100.0								
2/6/1997	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	100.0								
1/2/1997	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	210.0								
12/5/1996	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	43.0	J							
10/17/1996	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	140.0								
9/19/1996	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	180.0								
8/15/1996	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	1100.0								
6/20/1996	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	270.0								
5/16/1996	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	490.0								
4/25/1996	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	410.0								
3/21/1996	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	270.0								
2/15/1996	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	130.0								
1/11/1996	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	73.0								
12/7/1995	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	200.0								
11/2/1995	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	320.0								
10/12/1995	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	260.0								
9/5/1995	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	130.0								
8/3/1995	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	460.0								
7/6/1995	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	190.0								
7/6/1995	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	240.0								
6/29/1995	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	960.0								
5/11/1995	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	450.0								
4/18/1995	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	230.0								
3/2/1995	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	100.0								
2/2/1995	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	220.0								
1/6/1995	FECAL COLIFORM,MPN,EC MED,44.5C (TUBE 31614)	B	130.0								
12/2/1994	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	19.0								
11/3/1994	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	260.0								
10/21/1994	FECAL COLIFORM,MPN,EC MED,44.5C (TUBE 31614)	B	300.0								
9/2/1994	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	400.0								
8/11/1994	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	150.0								
7/28/1994	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	2800.0								
6/16/1994	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	160.0								
5/31/1994	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	40.0	J							
4/1/1994	FECAL COLIFORM,MPN,EC MED,44.5C (TUBE 31614)	B	300.0								
3/11/1994	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	210.0								
2/25/1994	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	540.0								
1/27/1994	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	450.0								
12/9/1993	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	1100.0								
11/18/1993	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	300.0								
10/26/1993	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	46.0	J							
6/25/1993	FECAL COLIFORM,MPN,EC MED,44.5C (TUBE 31614)	B	80.0								
5/13/1993	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	210.0								
4/2/1993	FECAL COLIFORM,MPN,EC MED,44.5C (TUBE 31614)	B	230.0								
3/11/1993	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	45.0	J							
2/5/1993	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	60.0	J							
1/15/1993	FECAL COLIFORM,MPN,EC MED,44.5C (TUBE 31614)	B	130.0								
12/4/1992	FECAL COLIFORM,MPN,EC MED,44.5C (TUBE 31614)	B	20.0								
11/20/1992	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	540.0								
10/1/1992	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	230.0								
9/4/1992	FECAL COLIFORM,MPN,EC MED,44.5C (TUBE 31614)	B	3000.0								
8/28/1992	FECAL COLIFORM,MPN,EC MED,44.5C (TUBE 31614)	B	3000.0								
7/2/1992	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	1100.0								
6/12/1992	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	420.0								
5/14/1992	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	410.0								
4/30/1992	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	580.0								
3/6/1992	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	570.0								
2/7/1992	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	350.0								
1/17/1992	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	230.0								
12/13/1991	FECAL COLIFORM,MPN,EC MED,44.5C (TUBE 31614)	B	80.0								
11/20/1991	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	150.0								
10/25/1991	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	20.0	J							
9/27/1991	FECAL COLIFORM,MPN,EC MED,44.5C (TUBE 31614)	B	1100.0								
8/8/1991	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	1300.0	J							
7/5/1991	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	560.0								
6/20/1991	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	2000.0								
5/23/1991	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	340.0								
4/12/1991	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	97.0								
3/14/1991	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	110.0								
2/1/1991	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	20.0	J							
1/3/1991	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	160.0								
12/6/1990	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	190.0								
11/16/1990	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	140.0								
10/19/1990	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	10.0	J							
9/14/1990	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	220.0								
8/10/1990	FECAL COLIFORM,MEMBR FILTER,M-FC BROTH,44.5 C	B	760.0	J							
5/17/2007	Hardness, Ca + Mg	Total	21	mg/l							
2/15/2007	Hardness, Ca + Mg	Total	15	mg/l							
2/3/2000	Hardness, Ca + Mg	Total	18	mg/l							
2/11/1999	Hardness, Ca + Mg	Total	17	mg/l							
2/24/1998	HARDNESS, TOTAL (MG/L AS CACO3)	B	11.0								
2/6/1997	HARDNESS, TOTAL (MG/L AS CACO3)	B	17.0								
2/2/1995	HARDNESS, TOTAL (MG/L AS CACO3)	B	33.0								
5/31/1994	HARDNESS, TOTAL (MG/L AS CACO3)	B	19.0								
5/13/1993	HARDNESS, TOTAL (MG/L AS CACO3)	B	330.0								
2/7/1992	HARDNESS, TOTAL (MG/L AS CACO3)	B	17.0								
5/23/1991	HARDNESS, TOTAL (MG/L AS CACO3)	B	23.0								
7/12/2007	Inorganic nitrogen (nitrate and nitrite) as N	Total	*Present <QL		**SEE TEXT FOR NARRATIVE STATEMENT AND NUMERIC CRITERIA FOR TOTAL N**						
6/14/2007	Inorganic nitrogen (nitrate and nitrite) as N	Total	*Present <QL								
5/17/2007	Inorganic nitrogen (nitrate and nitrite) as N	Total	0.023	mg/l							
3/15/2007	Inorganic nitrogen (nitrate and nitrite) as N	Total	*Present <QL								
2/15/2007	Inorganic nitrogen (nitrate and nitrite) as N	Total	0.043	mg/l							
1/25/2007	Inorganic nitrogen (nitrate and nitrite) as N	Total	0.026	mg/l							
12/9/2002	Inorganic nitrogen (nitrate and nitrite) as N	Total	*Present <QL	mg/l							
11/25/2002	Inorganic nitrogen (nitrate and nitrite) as N	Total	*Present <QL	mg/l							
5/28/2002	Inorganic nitrogen (nitrate and nitrite) as N	Total	*Present <QL	mg/l							
5/28/2002	Inorganic nitrogen (nitrate and nitrite) as N	Total	0.17	mg/l							
4/30/2002	Inorganic nitrogen (nitrate and nitrite) as N	Total	*Present <QL	mg/l							
3/26/2002	Inorganic nitrogen (nitrate and nitrite) as N	Total	*Present <QL	mg/l							
2/26/2002	Inorganic nitrogen (nitrate and nitrite) as N	Total	*Present <QL	mg/l							
12/5/2000	Inorganic nitrogen (nitrate and nitrite) as N	Total	*Present <QL	mg/l							
11/6/2000	Inorganic nitrogen (nitrate and nitrite) as N	Total	*Present <QL	mg/l							
10/19/2000	Inorganic nitrogen (nitrate and nitrite) as N	Total	*Present <QL	mg/l							
9/21/2000	Inorganic nitrogen (nitrate and nitrite) as N	Total	*Present <QL	mg/l							
8/3/2000	Inorganic nitrogen (nitrate and nitrite) as N	Total	0.08	mg/l							
7/13/2000	Inorganic nitrogen (nitrate and nitrite) as N	Total	0.07	mg/l							
6/7/2000	Inorganic nitrogen (nitrate and nitrite) as N	Total	0.03	mg/l							
5/9/2000	Inorganic nitrogen (nitrate and nitrite) as N	Total	*Present <QL	mg/l							
4/12/2000	Inorganic nitrogen (nitrate and nitrite) as N	Total	*Present <QL	mg/l							
3/9/2000	Inorganic nitrogen (nitrate and nitrite) as N	Total	*Present <QL	mg/l							
2/3/2000	Inorganic nitrogen (nitrate and nitrite) as N	Total	*Present <QL	mg/l							
1/6/2000	Inorganic nitrogen (nitrate and nitrite) as N	Total	*Present <QL	mg/l							
12/28/1999	Inorganic nitrogen (nitrate and nitrite) as N	Total	*Present <QL	mg/l							
11/4/1999	Inorganic nitrogen (nitrate and nitrite) as N	Total	*Present <QL	mg/l							
10/21/1999	Inorganic nitrogen (nitrate and nitrite) as N	Total	*Present <QL	mg/l							
8/19/1999	Inorganic nitrogen (nitrate and nitrite) as N	Total	*Present <QL	mg/l							
7/8/1999	Inorganic nitrogen (nitrate and nitrite) as N	Total	*Present <QL	mg/l							
6/2/1999	Inorganic nitrogen (nitrate and nitrite) as N	Total	0.04	mg/l							
5/6/1999	Inorganic nitrogen (nitrate and nitrite) as N	Total	*Present <QL	mg/l							
4/1/1999	Inorganic nitrogen (nitrate and nitrite) as N	Total	*Present <QL	mg/l							
2/11/1999	Inorganic nitrogen (nitrate and nitrite) as N	Total	0.03	mg/l							
12/3/1998	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0	K							
11/19/1998	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0	K							
10/8/1998	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.1								
9/14/1998	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0	K							
8/6/1998	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0								
7/16/1998	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0								
6/10/1998	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.1								
5/7/1998	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0								
4/15/1998	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0	K							
3/5/1998	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0								
2/24/1998	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.1								
1/14/1998	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0								
12/4/1997	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0	K							
11/6/1997	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0	K							

10/16/1997	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0	K							
9/2/1997	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0	K							
8/5/1997	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0	K							
7/17/1997	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.1								
6/5/1997	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0								
5/1/1997	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0								
4/9/1997	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0	K							
3/6/1997	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0								
2/6/1997	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0	K							
1/2/1997	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0								
12/5/1996	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0	K							
10/17/1996	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0	K							
9/19/1996	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0								
8/15/1996	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0	K							
6/20/1996	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.8								
5/16/1996	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.2								
4/25/1996	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0	K							
3/21/1996	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.5								
2/15/1996	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0								
1/11/1996	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0	K							
12/7/1995	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0								
10/12/1995	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	1.6								
9/5/1995	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.6								
8/3/1995	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.1								
7/6/1995	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	1.2								
6/29/1995	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.1								
5/11/1995	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.1								
4/18/1995	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0	K							
3/2/1995	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0								
2/2/1995	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.3								
1/6/1995	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.3								
12/2/1994	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.3								
11/3/1994	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.1								
10/21/1994	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.3								
9/2/1994	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0								
8/11/1994	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	5.9								
7/28/1994	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.1								
6/16/1994	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.1								
5/31/1994	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.1								
4/1/1994	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0	K							
3/11/1994	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0	K							
2/25/1994	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0								
1/27/1994	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0	K							
12/9/1993	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0								
11/18/1993	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0	K							
10/26/1993	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0								
6/25/1993	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0	K							
5/13/1993	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	2.5								
4/2/1993	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0								
3/11/1993	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0	K							
2/5/1993	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0	K							
1/15/1993	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0								
12/4/1992	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0	K							
11/20/1992	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0								
10/1/1992	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0								
9/4/1992	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.2								
8/28/1992	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.1								
7/2/1992	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.1								
6/12/1992	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.1								
5/14/1992	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.1								
4/30/1992	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.1								
3/6/1992	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0								
2/7/1992	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0	K							
1/17/1992	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0	K							
12/13/1991	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0	K							
11/20/1991	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0	K							
10/25/1991	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0								
9/27/1991	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0	K							
8/8/1991	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0								
7/5/1991	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0								
6/20/1991	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.1								
5/23/1991	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.1								
4/12/1991	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0	K							
3/14/1991	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0								
2/1/1991	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0								
1/3/1991	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0	K							
12/6/1990	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0	K							
11/16/1990	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0	K							
10/19/1990	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.1								
9/14/1990	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.0								
8/10/1990	NITRITE PLUS NITRATE, TOTAL 1 DET. (MG/L AS N)	B	0.3								
5/17/2007	Iron	Total	1.6	ug/l							
2/15/2007	Iron	Total	0.97	ug/l							
11/25/2002	Iron	Total	960	ug/l							
5/28/2002	Iron	Total	1600	ug/l							
2/26/2002	Iron	Total	160	ug/l							
11/6/2000	Iron	Total	3400	ug/l							
8/3/2000	Iron	Total	1700	ug/l							
5/9/2000	Iron	Total	1000	ug/l							
2/3/2000	Iron	Total	520	ug/l							
11/4/1999	Iron	Total	610	ug/l							
8/19/1999	Iron	Total	1400	ug/l							
5/6/1999	Iron	Total	920	ug/l							
2/11/1999	Iron	Total	760	ug/l							
11/19/1998	IRON, TOTAL (UG/L AS FE)	B	570.0								
8/6/1998	IRON, TOTAL (UG/L AS FE)	B	2000.0								
5/7/1998	IRON, TOTAL (UG/L AS FE)	B	700.0								
2/24/1998	IRON, TOTAL (UG/L AS FE)	B	1300.0								
11/6/1997	IRON, TOTAL (UG/L AS FE)	B	700.0								
8/5/1997	IRON, TOTAL (UG/L AS FE)	B	1000.0								
5/1/1997	IRON, TOTAL (UG/L AS FE)	B	1200.0								
2/6/1997	IRON, TOTAL (UG/L AS FE)	B	700.0								
8/15/1996	IRON, TOTAL (UG/L AS FE)	B	1600.0								
5/16/1996	IRON, TOTAL (UG/L AS FE)	B	920.0								
2/15/1996	IRON, TOTAL (UG/L AS FE)	B	530.0								
11/2/1995	IRON, TOTAL (UG/L AS FE)	B	630.0								
8/3/1995	IRON, TOTAL (UG/L AS FE)	B	2700.0								
5/11/1995	IRON, TOTAL (UG/L AS FE)	B	1800.0								
2/2/1995	IRON, TOTAL (UG/L AS FE)	B	760.0								
11/3/1994	IRON, TOTAL (UG/L AS FE)	B	980.0								
8/11/1994	IRON, TOTAL (UG/L AS FE)	B	2600.0								
5/31/1994	IRON, TOTAL (UG/L AS FE)	B	1200.0								
2/25/1994	IRON, TOTAL (UG/L AS FE)	B	1800.0								
11/18/1993	IRON, TOTAL (UG/L AS FE)	B	690.0								
5/13/1993	IRON, TOTAL (UG/L AS FE)	B	260.0								
2/5/1993	IRON, TOTAL (UG/L AS FE)	B	450.0								
11/20/1992	IRON, TOTAL (UG/L AS FE)	B	1100.0								
8/28/1992	IRON, TOTAL (UG/L AS FE)	B	2000.0								
5/14/1992	IRON, TOTAL (UG/L AS FE)	B	1400.0								
2/7/1992	IRON, TOTAL (UG/L AS FE)	B	770.0								
11/20/1991	IRON, TOTAL (UG/L AS FE)	B	1200.0								
8/8/1991	IRON, TOTAL (UG/L AS FE)	B	1500.0								
5/23/1991	IRON, TOTAL (UG/L AS FE)	B	1300.0								
2/1/1991	IRON, TOTAL (UG/L AS FE)	B	890.0								
11/16/1990	IRON, TOTAL (UG/L AS FE)	B	830.0								
8/10/1990	IRON, TOTAL (UG/L AS FE)	B	2400.0								
7/12/2007	Kjeldahl nitrogen	Total	1.4	mg/l							
6/14/2007	Kjeldahl nitrogen	Total	0.58	mg/l							
4/12/2007	Kjeldahl nitrogen	Total	0.21	mg/l							
2/15/2007	Kjeldahl nitrogen	Total	0.21	mg/l							
12/9/2002	Kjeldahl nitrogen	Total	0.22	mg/l							
4/30/2002	Kjeldahl nitrogen	Total	0.8	mg/l							
2/26/2002	Kjeldahl nitrogen	Total	0.1	mg/l							
12/5/2000	Kjeldahl nitrogen	Total	0.24	mg/l							
11/6/2000	Kjeldahl nitrogen	Total	0.55	mg/l							
10/19/2000	Kjeldahl nitrogen	Total	0.26	mg/l							
9/21/2000	Kjeldahl nitrogen	Total	0.52	mg/l							
8/3/2000	Kjeldahl nitrogen	Total	0.38	mg/l							
7/13/2000	Kjeldahl nitrogen	Total	1.05	mg/l							
6/7/2000	Kjeldahl nitrogen	Total	0.53	mg/l							
5/9/2000	Kjeldahl nitrogen	Total	0.36	mg/l							
4/12/2000	Kjeldahl nitrogen	Total	0.28	mg/l							
3/9/2000	Kjeldahl nitrogen	Total	0.32	mg/l							
2/3/2000	Kjeldahl nitrogen	Total	*Present <QL	mg/l							
1/6/2000	Kjeldahl nitrogen	Total	0.15	mg/l							
12/28/1999	Kjeldahl nitrogen	Total	*Present <QL	mg/l							
11/4/1999	Kjeldahl nitrogen	Total	0.35	mg/l							
10/21/1999	Kjeldahl nitrogen	Total	0.12	mg/l							
8/19/1999	Kjeldahl nitrogen	Total	0.21	mg/l							
7/8/1999	Kjeldahl nitrogen	Total	0.23	mg/l							
6/2/1999	Kjeldahl nitrogen	Total	0.27	mg/l							
5/6/1999	Kjeldahl nitrogen	Total	*Present <QL	mg/l							
4/1/1999	Kjeldahl nitrogen	Total	0.34	mg/l							
2/11/1999	Kjeldahl nitrogen	Total	0.63	mg/l							
1/7/1999	Kjeldahl nitrogen	Total	0.28	mg/l							
12/3/1998	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.2								
11/19/1998	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.7								
10/8/1998	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.8								
9/14/1998	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.1	K							
8/6/1998	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	1.1								
7/16/1998	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	1.7								
6/10/1998	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.5								
5/7/1998	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.1								
4/15/1998	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.2								
3/5/1998	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.1	K							
2/24/1998	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.2								
1/14/1998	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.2								
12/4/1997	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.2								
11/6/1997	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.3								
10/16/1997	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.9								
9/2/1997	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.3								
8/5/1997	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.5								
7/17/1997	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.6								
6/5/1997	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.5								
5/1/1997	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.3								
4/9/1997	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.2								
3/6/1997	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.3								
2/6/1997	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.1								
1/2/1997	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.2								
12/5/1996	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.1								

10/17/1996	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.2							
9/19/1996	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.4							
8/15/1996	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.8							
6/20/1996	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.2							
5/16/1996	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.1							
4/25/1996	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.3							
3/21/1996	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.2							
2/15/1996	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.4							
1/11/1996	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.2							
12/7/1995	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.2							
10/12/1995	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.3							
9/5/1995	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.2							
8/3/1995	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	1.0							
7/6/1995	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.3							
6/29/1995	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.5							
5/11/1995	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.5							
4/18/1995	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.2							
3/2/1995	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.3							
2/2/1995	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.3							
1/6/1995	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.5							
12/2/1994	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.2							
11/3/1994	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.3							
10/21/1994	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.3							
9/2/1994	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.3							
8/11/1994	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.5							
7/28/1994	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.7							
6/16/1994	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.3							
5/31/1994	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.6							
4/1/1994	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.1	K						
3/11/1994	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.2							
2/25/1994	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.1	K						
1/27/1994	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.1	K						
12/9/1993	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.2							
11/18/1993	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.3							
10/26/1993	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.5							
6/25/1993	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.8							
5/13/1993	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	2.4							
4/2/1993	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.2							
3/11/1993	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.3							
2/5/1993	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.1	K						
1/15/1993	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.1							
12/4/1992	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.2							
11/20/1992	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.2							
10/1/1992	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	1.4							
9/4/1992	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.6							
8/28/1992	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.4							
7/2/1992	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.4							
6/12/1992	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.5							
5/14/1992	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.7							
4/30/1992	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.1	K						
3/6/1992	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.4							
2/7/1992	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.1							
1/17/1992	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.3							
12/13/1991	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.2							
11/20/1991	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.3							
10/25/1991	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.3							
9/27/1991	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.5							
8/8/1991	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.3							
7/5/1991	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.4							
6/20/1991	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.8							
5/23/1991	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.2							
4/12/1991	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.1	K						
3/14/1991	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.4							
2/1/1991	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.4							
1/3/1991	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.3							
12/6/1990	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.2							
11/16/1990	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.3							
10/19/1990	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.3							
9/14/1990	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.6							
8/10/1990	NITROGEN, KJELDAHL, TOTAL, (MG/L AS N)	B	0.8							
5/17/2007	Lead	Total	*Present <QL		14					
2/15/2007	Lead	Total	*Present <QL							
11/25/2002	Lead	Total	*Present <QL	ug/l		0.54				
5/28/2002	Lead	Total	*Present <QL	ug/l						
2/26/2002	Lead	Total	*Present <QL	ug/l						
11/6/2000	Lead	Total	*Present <QL	ug/l						
8/3/2000	Lead	Total	*Present <QL	ug/l						
5/9/2000	Lead	Total	*Present <QL	ug/l						
2/3/2000	Lead	Total	*Present <QL	ug/l						
11/4/1999	Lead	Total	*Present <QL	ug/l						
8/19/1999	Lead	Total	*Present <QL	ug/l						
5/6/1999	Lead	Total	*Present <QL	ug/l						
2/11/1999	Lead	Total	*Present <QL	ug/l						
11/19/1998	LEAD, TOTAL (UG/L AS PB)	B	50.0	K						
8/6/1998	LEAD, TOTAL (UG/L AS PB)	B	50.0	K						
5/7/1998	LEAD, TOTAL (UG/L AS PB)	B	50.0	K						
2/24/1998	LEAD, TOTAL (UG/L AS PB)	B	50.0	K						
11/6/1997	LEAD, TOTAL (UG/L AS PB)	B	50.0	K						
8/5/1997	LEAD, TOTAL (UG/L AS PB)	B	50.0	K						
5/1/1997	LEAD, TOTAL (UG/L AS PB)	B	50.0	K						
2/6/1997	LEAD, TOTAL (UG/L AS PB)	B	50.0	K						
8/15/1996	LEAD, TOTAL (UG/L AS PB)	B	50.0	K						
5/16/1996	LEAD, TOTAL (UG/L AS PB)	B	50.0	K						
2/15/1996	LEAD, TOTAL (UG/L AS PB)	B	50.0	K						
11/2/1995	LEAD, TOTAL (UG/L AS PB)	B	50.0	K						
8/3/1995	LEAD, TOTAL (UG/L AS PB)	B	50.0	K						
5/11/1995	LEAD, TOTAL (UG/L AS PB)	B	50.0	K						
2/2/1995	LEAD, TOTAL (UG/L AS PB)	B	50.0	K						
11/3/1994	LEAD, TOTAL (UG/L AS PB)	B	50.0	K						
8/11/1994	LEAD, TOTAL (UG/L AS PB)	B	50.0	K						
5/31/1994	LEAD, TOTAL (UG/L AS PB)	B	50.0	K						
2/25/1994	LEAD, TOTAL (UG/L AS PB)	B	50.0	K						
11/18/1993	LEAD, TOTAL (UG/L AS PB)	B	50.0	K						
5/13/1993	LEAD, TOTAL (UG/L AS PB)	B	50.0	K						
2/5/1993	LEAD, TOTAL (UG/L AS PB)	B	50.0	K						
11/20/1992	LEAD, TOTAL (UG/L AS PB)	B	50.0	K						
8/28/1992	LEAD, TOTAL (UG/L AS PB)	B	50.0	K						
5/14/1992	LEAD, TOTAL (UG/L AS PB)	B	50.0	K						
2/7/1992	LEAD, TOTAL (UG/L AS PB)	B	50.0	K						
11/20/1991	LEAD, TOTAL (UG/L AS PB)	B	50.0	K						
8/8/1991	LEAD, TOTAL (UG/L AS PB)	B	50.0	K						
5/23/1991	LEAD, TOTAL (UG/L AS PB)	B	50.0	K						
2/1/1991	LEAD, TOTAL (UG/L AS PB)	B	50.0	K						
11/16/1990	LEAD, TOTAL (UG/L AS PB)	B	50.0	K						
8/10/1990	LEAD, TOTAL (UG/L AS PB)	B	50.0	K						
5/17/2007	Manganese	Total	0.16	ug/l						
2/15/2007	Manganese	Total	0.05	ug/l						
11/25/2002	Manganese	Total	31	ug/l						
5/28/2002	Manganese	Total	310	ug/l						
2/26/2002	Manganese	Total	29	ug/l						
11/6/2000	Manganese	Total	640	ug/l						
8/3/2000	Manganese	Total	190	ug/l						
5/9/2000	Manganese	Total	120	ug/l						
2/3/2000	Manganese	Total	50	ug/l						
11/4/1999	Manganese	Total	60	ug/l						
8/19/1999	Manganese	Total	310	ug/l						
5/6/1999	Manganese	Total	40	ug/l						
2/11/1999	Manganese	Total	50	ug/l						
11/19/1998	MANGANESE, TOTAL (UG/L AS MN)	B	20.0							
8/6/1998	MANGANESE, TOTAL (UG/L AS MN)	B	910.0							
5/7/1998	MANGANESE, TOTAL (UG/L AS MN)	B	30.0							
2/24/1998	MANGANESE, TOTAL (UG/L AS MN)	B	40.0							
11/6/1997	MANGANESE, TOTAL (UG/L AS MN)	B	30.0							
8/5/1997	MANGANESE, TOTAL (UG/L AS MN)	B	50.0							
5/1/1997	MANGANESE, TOTAL (UG/L AS MN)	B	60.0							
2/6/1997	MANGANESE, TOTAL (UG/L AS MN)	B	80.0							
8/15/1996	MANGANESE, TOTAL (UG/L AS MN)	B	100.0							
5/16/1996	MANGANESE, TOTAL (UG/L AS MN)	B	50.0							
2/15/1996	MANGANESE, TOTAL (UG/L AS MN)	B	100.0							
11/2/1995	MANGANESE, TOTAL (UG/L AS MN)	B	120.0							
8/3/1995	MANGANESE, TOTAL (UG/L AS MN)	B	80.0							
5/11/1995	MANGANESE, TOTAL (UG/L AS MN)	B	50.0							
2/2/1995	MANGANESE, TOTAL (UG/L AS MN)	B	90.0							
11/3/1994	MANGANESE, TOTAL (UG/L AS MN)	B	130.0							
8/11/1994	MANGANESE, TOTAL (UG/L AS MN)	B	470.0							
5/31/1994	MANGANESE, TOTAL (UG/L AS MN)	B	150.0							
2/25/1994	MANGANESE, TOTAL (UG/L AS MN)	B	50.0							
11/18/1993	MANGANESE, TOTAL (UG/L AS MN)	B	90.0							
5/13/1993	MANGANESE, TOTAL (UG/L AS MN)	B	2200.0							
2/5/1993	MANGANESE, TOTAL (UG/L AS MN)	B	70.0							
11/20/1992	MANGANESE, TOTAL (UG/L AS MN)	B	40.0							
8/28/1992	MANGANESE, TOTAL (UG/L AS MN)	B	200.0							
5/14/1992	MANGANESE, TOTAL (UG/L AS MN)	B	100.0							
2/7/1992	MANGANESE, TOTAL (UG/L AS MN)	B	90.0							
11/20/1991	MANGANESE, TOTAL (UG/L AS MN)	B	50.0							
8/8/1991	MANGANESE, TOTAL (UG/L AS MN)	B	60.0							
5/23/1991	MANGANESE, TOTAL (UG/L AS MN)	B	40.0							
2/1/1991	MANGANESE, TOTAL (UG/L AS MN)	B	100.0							
11/16/1990	MANGANESE, TOTAL (UG/L AS MN)	B	120.0							
8/10/1990	MANGANESE, TOTAL (UG/L AS MN)	B	120.0							
5/17/2007	Mercury	Total	*Present <QL		1.6					
2/15/2007	Mercury	Total	*Present <QL							
11/25/2002	Mercury	Total	*Present <QL	ug/l		0.91	0.05	0.051	2	
5/28/2002	Mercury	Total	*Present <QL	ug/l						
2/26/2002	Mercury	Total	*Present <QL	ug/l						
11/6/2000	Mercury	Total	*Present <QL	ug/l						
8/3/2000	Mercury	Total	*Present <QL	ug/l						
5/9/2000	Mercury	Total	*Present <QL	ug/l						
2/3/2000	Mercury	Total	*Present <QL	ug/l						
11/4/1999	Mercury	Total	*Present <QL	ug/l						
8/19/1999	Mercury	Total	*Present <QL	ug/l						
5/6/1999	Mercury	Total	*Present <QL	ug/l						
2/11/1999	Mercury	Total	*Present <QL	ug/l						
11/19/1998	MERCURY, TOTAL (UG/L AS HG)	B	0.2	K						
8/6/1998	MERCURY, TOTAL (UG/L AS HG)	B	0.2	K						
5/7/1998	MERCURY, TOTAL (UG/L AS HG)	B	0.2	K						
2/24/1998	MERCURY, TOTAL (UG/L AS HG)	B	0.2	K						
11/6/1997	MERCURY, TOTAL (UG/L AS HG)	B	0.2	K						
8/5/1997	MERCURY, TOTAL (UG/L AS HG)	B	0.2	K						
5/1/1997	MERCURY, TOTAL (UG/L AS HG)	B	0.2	K						

2/6/1997	MERCURY, TOTAL (UG/L AS HG)	B	0.2	K						
8/15/1996	MERCURY, TOTAL (UG/L AS HG)	B	0.2	K						
5/16/1996	MERCURY, TOTAL (UG/L AS HG)	B	0.2	K						
2/15/1996	MERCURY, TOTAL (UG/L AS HG)	B	0.2	K						
11/2/1995	MERCURY, TOTAL (UG/L AS HG)	B	0.2	K						
8/3/1995	MERCURY, TOTAL (UG/L AS HG)	B	0.2	K						
5/11/1995	MERCURY, TOTAL (UG/L AS HG)	B	0.2	K						
2/2/1995	MERCURY, TOTAL (UG/L AS HG)	B	0.2	K						
11/3/1994	MERCURY, TOTAL (UG/L AS HG)	B	0.2	K						
8/11/1994	MERCURY, TOTAL (UG/L AS HG)	B	0.2	K						
5/31/1994	MERCURY, TOTAL (UG/L AS HG)	B	0.2	K						
2/25/1994	MERCURY, TOTAL (UG/L AS HG)	B	0.2	K						
11/18/1993	MERCURY, TOTAL (UG/L AS HG)	B	0.2	K						
5/13/1993	MERCURY, TOTAL (UG/L AS HG)	B	0.2	K						
2/5/1993	MERCURY, TOTAL (UG/L AS HG)	B	0.2	K						
11/20/1992	MERCURY, TOTAL (UG/L AS HG)	B	0.2	K						
8/28/1992	MERCURY, TOTAL (UG/L AS HG)	B	0.2	K						
5/14/1992	MERCURY, TOTAL (UG/L AS HG)	B	0.2	K						
2/7/1992	MERCURY, TOTAL (UG/L AS HG)	B	0.2	K						
11/20/1991	MERCURY, TOTAL (UG/L AS HG)	B	0.2	K						
8/8/1991	MERCURY, TOTAL (UG/L AS HG)	B	0.2	K						
5/23/1991	MERCURY, TOTAL (UG/L AS HG)	B	0.2	K						
2/1/1991	MERCURY, TOTAL (UG/L AS HG)	B	0.2	K						
11/16/1990	MERCURY, TOTAL (UG/L AS HG)	B	0.2	K						
8/10/1990	MERCURY, TOTAL (UG/L AS HG)	B	0.2	K						
5/17/2007	Nickel	Total	*Present <QL		150					
2/15/2007	Nickel	Total	*Present <QL							
11/25/2002	Nickel	Total	*Present <QL	ug/l		16	610	4600		
5/28/2002	Nickel	Total	*Present <QL	ug/l						
2/26/2002	Nickel	Total	*Present <QL	ug/l						
11/6/2000	Nickel	Total	*Present <QL	ug/l						
8/3/2000	Nickel	Total	*Present <QL	ug/l						
5/9/2000	Nickel	Total	*Present <QL	ug/l						
2/3/2000	Nickel	Total	*Present <QL	ug/l						
11/4/1999	Nickel	Total	*Present <QL	ug/l						
8/19/1999	Nickel	Total	*Present <QL	ug/l						
5/6/1999	Nickel	Total	*Present <QL	ug/l						
2/11/1999	Nickel	Total	*Present <QL	ug/l						
11/19/1998	NICKEL, TOTAL (UG/L AS NI)	B	20.0	K						
8/6/1998	NICKEL, TOTAL (UG/L AS NI)	B	20.0	K						
5/7/1998	NICKEL, TOTAL (UG/L AS NI)	B	20.0	K						
2/24/1998	NICKEL, TOTAL (UG/L AS NI)	B	20.0	K						
11/6/1997	NICKEL, TOTAL (UG/L AS NI)	B	20.0	K						
8/5/1997	NICKEL, TOTAL (UG/L AS NI)	B	20.0	K						
5/1/1997	NICKEL, TOTAL (UG/L AS NI)	B	20.0	K						
2/6/1997	NICKEL, TOTAL (UG/L AS NI)	B	20.0	K						
8/15/1996	NICKEL, TOTAL (UG/L AS NI)	B	20.0	K						
5/16/1996	NICKEL, TOTAL (UG/L AS NI)	B	20.0	K						
2/15/1996	NICKEL, TOTAL (UG/L AS NI)	B	20.0	K						
11/2/1995	NICKEL, TOTAL (UG/L AS NI)	B	20.0	K						
8/3/1995	NICKEL, TOTAL (UG/L AS NI)	B	20.0	K						
5/11/1995	NICKEL, TOTAL (UG/L AS NI)	B	20.0	K						
2/2/1995	NICKEL, TOTAL (UG/L AS NI)	B	20.0	K						
11/3/1994	NICKEL, TOTAL (UG/L AS NI)	B	20.0	K						
8/11/1994	NICKEL, TOTAL (UG/L AS NI)	B	20.0	K						
5/31/1994	NICKEL, TOTAL (UG/L AS NI)	B	20.0	K						
2/25/1994	NICKEL, TOTAL (UG/L AS NI)	B	20.0	K						
11/18/1993	NICKEL, TOTAL (UG/L AS NI)	B	20.0	K						
5/13/1993	NICKEL, TOTAL (UG/L AS NI)	B	30.0							
2/5/1993	NICKEL, TOTAL (UG/L AS NI)	B	20.0	K						
11/20/1992	NICKEL, TOTAL (UG/L AS NI)	B	20.0	K						
8/28/1992	NICKEL, TOTAL (UG/L AS NI)	B	20.0	K						
5/14/1992	NICKEL, TOTAL (UG/L AS NI)	B	20.0	K						
2/7/1992	NICKEL, TOTAL (UG/L AS NI)	B	20.0	K						
11/20/1991	NICKEL, TOTAL (UG/L AS NI)	B	20.0	K						
8/8/1991	NICKEL, TOTAL (UG/L AS NI)	B	20.0	K						
5/23/1991	NICKEL, TOTAL (UG/L AS NI)	B	20.0							
2/1/1991	NICKEL, TOTAL (UG/L AS NI)	B	20.0	K						
11/16/1990	NICKEL, TOTAL (UG/L AS NI)	B	20.0	K						
8/10/1990	NICKEL, TOTAL (UG/L AS NI)	B	20.0	K						
7/12/2007	pH		6.78	None						
6/14/2007	pH		6.78	None						
5/17/2007	pH		6.91	None					**SEE TEXT**	
4/12/2007	pH		7.34	None						
3/15/2007	pH		6.82	None						
2/15/2007	pH		7.06	None						
1/25/2007	pH		7.4	None						
12/9/2002	pH		7.98	None						
11/25/2002	pH		8.34	None						
5/28/2002	pH		6.75	None						
5/28/2002	pH		6.8	None						
4/30/2002	pH		7.01	None						
3/26/2002	pH		6.45	None						
2/26/2002	pH		6.75	None						
12/5/2000	pH		6.63	None						
11/6/2000	pH		6.67	None						
10/19/2000	pH		6.89	None						
9/21/2000	pH		7.07	None						
8/3/2000	pH		7.28	None						
7/13/2000	pH		6.73	None						
6/7/2000	pH		7.28	None						
5/9/2000	pH		7.5	None						
4/12/2000	pH		7.29	None						
3/9/2000	pH		8.18	None						
2/3/2000	pH		7.47	None						
1/6/2000	pH		6.75	None						
12/28/1999	pH		7.8	None						
11/4/1999	pH		6.22	None						
10/21/1999	pH		7.52	None						
8/19/1999	pH		7.13	None						
7/8/1999	pH		8.3	None						
6/2/1999	pH		7.15	None						
5/6/1999	pH		7.76	None						
4/1/1999	pH		7.63	None						
3/4/1999	pH		6.94	None						
2/11/1999	pH		7.17	None						
1/7/1999	pH		7.87	None						
12/3/1998	PH (STANDARD UNITS)	B	6.4							
11/19/1998	PH (STANDARD UNITS)	B	6.5							
10/8/1998	PH (STANDARD UNITS)	B	7.3							
9/14/1998	PH (STANDARD UNITS)	B	7.4							
8/6/1998	PH (STANDARD UNITS)	B	6.6							
7/16/1998	PH (STANDARD UNITS)	B	6.6							
6/10/1998	PH (STANDARD UNITS)	B	6.6							
5/7/1998	PH (STANDARD UNITS)	B	7.2							
4/15/1998	PH (STANDARD UNITS)	B	7.6							
3/5/1998	PH (STANDARD UNITS)	B	7.6							
2/24/1998	PH (STANDARD UNITS)	B	6.9							
1/14/1998	PH (STANDARD UNITS)	B	6.9							
12/4/1997	PH (STANDARD UNITS)	B	8.0							
11/6/1997	PH (STANDARD UNITS)	B	7.4							
10/16/1997	PH (STANDARD UNITS)	B	6.8							
9/2/1997	PH (STANDARD UNITS)	B	7.1							
8/5/1997	PH (STANDARD UNITS)	B	7.1							
7/17/1997	PH (STANDARD UNITS)	B	7.3							
6/5/1997	PH (STANDARD UNITS)	B	7.5							
5/1/1997	PH (STANDARD UNITS)	B	6.3							
4/9/1997	PH (STANDARD UNITS)	B	6.2							
3/6/1997	PH (STANDARD UNITS)	B	6.5							
2/6/1997	PH (STANDARD UNITS)	B	6.8							
1/2/1997	PH (STANDARD UNITS)	B	7.9							
12/5/1996	PH (STANDARD UNITS)	B	8.1							
10/17/1996	PH (STANDARD UNITS)	B	6.7							
9/19/1996	PH (STANDARD UNITS)	B	8.8							
8/15/1996	PH (STANDARD UNITS)	B	6.9							
7/1/1996	PH (STANDARD UNITS)	B	6.6							
6/20/1996	PH (STANDARD UNITS)	B	6.8							
5/16/1996	PH (STANDARD UNITS)	B	6.8							
4/25/1996	PH (STANDARD UNITS)	B	7.3							
3/21/1996	PH (STANDARD UNITS)	B	8.3							
2/15/1996	PH (STANDARD UNITS)	B	6.4							
1/11/1996	PH (STANDARD UNITS)	B	8.1							
12/7/1995	PH (STANDARD UNITS)	B	7.2							
11/2/1995	PH (STANDARD UNITS)	B	7.2							
10/12/1995	PH (STANDARD UNITS)	B	6.7							
9/5/1995	PH (STANDARD UNITS)	B	7.1							
8/3/1995	PH (STANDARD UNITS)	B	6.9							
7/6/1995	PH (STANDARD UNITS)	B	6.9							
6/29/1995	PH (STANDARD UNITS)	B	7.0							
5/18/1995	PH (STANDARD UNITS)	B	7.3							
5/11/1995	PH (STANDARD UNITS)	B	6.9							
3/2/1995	PH (STANDARD UNITS)	B	6.4							
2/2/1995	PH (STANDARD UNITS)	B	6.8							
1/6/1995	PH (STANDARD UNITS)	B	7.6							
12/2/1994	PH (STANDARD UNITS)	B	7.6							
11/3/1994	PH (STANDARD UNITS)	B	6.5							
10/21/1994	PH (STANDARD UNITS)	B	7.1							
9/2/1994	PH (STANDARD UNITS)	B	6.7							
8/11/1994	PH (STANDARD UNITS)	B	6.8							
7/28/1994	PH (STANDARD UNITS)	B	7.5							
6/16/1994	PH (STANDARD UNITS)	B	6.8							
5/31/1994	PH (STANDARD UNITS)	B	6.2							
4/1/1994	PH (STANDARD UNITS)	B	6.6							
3/11/1994	PH (STANDARD UNITS)	B	7.5							
2/25/1994	PH (STANDARD UNITS)	B	6.3							
1/27/1994	PH (STANDARD UNITS)	B	6.8							
12/9/1993	PH (STANDARD UNITS)	B	6.7							
11/18/1993	PH (STANDARD UNITS)	B	7.3							
10/26/1993	PH (STANDARD UNITS)	B	6.7							
6/25/1993	PH (STANDARD UNITS)	B	6.3							
5/13/1993	PH (STANDARD UNITS)	B	6.8							
4/2/1993	PH (STANDARD UNITS)	B	7.9							
2/5/1993	PH (STANDARD UNITS)	B	8.0							
1/15/1993	PH (STANDARD UNITS)	B	7.5							
12/4/1992	PH (STANDARD UNITS)	B	6.8							
11/20/1992	PH (STANDARD UNITS)	B	7.1							
10/1/1992	PH (STANDARD UNITS)	B	6.4							
9/4/1992	PH (STANDARD UNITS)	B	6.8							
9/4/1992	PH, LAB, STANDARD UNITS SU	B	6.8							
8/28/1992	PH (STANDARD UNITS)	B	7.0							

8/28/1992	PH, LAB, STANDARD UNITS	SU	B	7.0								
7/2/1992	PH (STANDARD UNITS)		B	7.1								
7/2/1992	PH, LAB, STANDARD UNITS	SU	B	7.2								
6/12/1992	PH (STANDARD UNITS)		B	6.8								
6/12/1992	PH, LAB, STANDARD UNITS	SU	B	7.2								
5/14/1992	PH (STANDARD UNITS)		B	9.4								
5/14/1992	PH, LAB, STANDARD UNITS	SU	B	7.2								
4/30/1992	PH (STANDARD UNITS)		B	7.4								
4/30/1992	PH, LAB, STANDARD UNITS	SU	B	7.4								
3/6/1992	PH (STANDARD UNITS)		B	7.2								
3/6/1992	PH, LAB, STANDARD UNITS	SU	B	7.0								
2/7/1992	PH (STANDARD UNITS)		B	7.4								
2/7/1992	PH, LAB, STANDARD UNITS	SU	B	7.1								
1/17/1992	PH (STANDARD UNITS)		B	7.2								
12/13/1991	PH (STANDARD UNITS)		B	6.9								
12/13/1991	PH, LAB, STANDARD UNITS	SU	B	6.9								
11/20/1991	PH (STANDARD UNITS)		B	6.6								
11/20/1991	PH, LAB, STANDARD UNITS	SU	B	6.9								
10/25/1991	PH (STANDARD UNITS)		B	6.6								
10/25/1991	PH, LAB, STANDARD UNITS	SU	B	6.8								
9/27/1991	PH (STANDARD UNITS)		B	6.5								
9/27/1991	PH, LAB, STANDARD UNITS	SU	B	7.0								
8/8/1991	PH (STANDARD UNITS)		B	6.8								
8/8/1991	PH, LAB, STANDARD UNITS	SU	B	7.2								
7/5/1991	PH (STANDARD UNITS)		B	7.2								
7/5/1991	PH, LAB, STANDARD UNITS	SU	B	7.1								
6/20/1991	PH (STANDARD UNITS)		B	6.6								
6/20/1991	PH, LAB, STANDARD UNITS	SU	B	6.5								
5/23/1991	PH (STANDARD UNITS)		B	6.9								
5/23/1991	PH, LAB, STANDARD UNITS	SU	B	7.3								
4/12/1991	PH (STANDARD UNITS)		B	6.7								
4/12/1991	PH, LAB, STANDARD UNITS	SU	B	6.9								
3/14/1991	PH (STANDARD UNITS)		B	6.1								
3/14/1991	PH, LAB, STANDARD UNITS	SU	B	6.5								
2/1/1991	PH (STANDARD UNITS)		B	7.5								
2/1/1991	PH, LAB, STANDARD UNITS	SU	B	6.7								
1/3/1991	PH (STANDARD UNITS)		B	7.0								
1/3/1991	PH, LAB, STANDARD UNITS	SU	B	7.0								
12/6/1990	PH (STANDARD UNITS)		B	7.4								
12/6/1990	PH, LAB, STANDARD UNITS	SU	B	6.9								
11/16/1990	PH (STANDARD UNITS)		B	7.2								
11/16/1990	PH, LAB, STANDARD UNITS	SU	B	6.6								
10/19/1990	PH (STANDARD UNITS)		B	7.5								
10/19/1990	PH, LAB, STANDARD UNITS	SU	B	6.3								
9/14/1990	PH, LAB, STANDARD UNITS	SU	B	6.7								
8/10/1990	PH (STANDARD UNITS)		B	6.5								
8/10/1990	PH, LAB, STANDARD UNITS	SU	B	6.4								
7/12/2007	Phosphate-phosphorus as P		Total	0.053	mg/l	**NARRATIVE CRITERIA**						
6/14/2007	Phosphate-phosphorus as P		Total	0.035	mg/l							
5/17/2007	Phosphate-phosphorus as P		Total	0.042	mg/l							
4/12/2007	Phosphate-phosphorus as P		Total	0.032	mg/l							
3/15/2007	Phosphate-phosphorus as P		Total	0.038	mg/l							
2/15/2007	Phosphate-phosphorus as P		Total	*Present <QL								
1/25/2007	Phosphate-phosphorus as P		Total	0.056	mg/l							
12/9/2002	Phosphate-phosphorus as P		Total	*Present <QL	mg/l							
11/25/2002	Phosphate-phosphorus as P		Total	*Present <QL	mg/l							
5/28/2002	Phosphate-phosphorus as P		Total	0.02	mg/l							
5/28/2002	Phosphate-phosphorus as P		Total	0.51	mg/l							
4/30/2002	Phosphate-phosphorus as P		Total	0.039	mg/l							
3/26/2002	Phosphate-phosphorus as P		Total	*Present <QL	mg/l							
2/26/2002	Phosphate-phosphorus as P		Total	*Present <QL	mg/l							
6/10/1998	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.2								
5/7/1998	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0								
4/15/1998	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0	K							
3/5/1998	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0	K							
2/24/1998	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0	K							
1/14/1998	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0	K							
12/4/1997	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0	K							
11/6/1997	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0								
10/16/1997	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.1								
9/2/1997	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0	K							
8/5/1997	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0								
7/17/1997	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0								
6/5/1997	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.1								
5/1/1997	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0								
4/9/1997	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0	K							
3/6/1997	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0								
2/6/1997	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0	K							
1/2/1997	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0								
12/5/1996	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0								
10/17/1996	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0								
9/19/1996	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.1								
8/15/1996	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.1								
6/20/1996	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.1								
5/16/1996	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0								
4/25/1996	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0	K							
3/21/1996	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0	K							
2/15/1996	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0	K							
1/11/1996	PHOSPHATE, TOTAL (MG/L AS PO4)		B	0.0	K							
12/7/1995	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0								
10/12/1995	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0	K							
9/5/1995	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.1								
8/3/1995	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0								
7/6/1995	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0								
6/29/1995	PHOSPHATE, TOTAL (MG/L AS PO4)		B	0.0								
5/11/1995	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.1								
4/18/1995	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.1								
3/2/1995	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.1								
2/2/1995	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0	K							
1/6/1995	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0	K							
12/2/1994	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0	K							
11/3/1994	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0								
10/21/1994	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0	K							
9/2/1994	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0	K							
8/11/1994	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.1								
7/28/1994	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0	K							
6/16/1994	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0								
5/31/1994	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0								
4/1/1994	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0								
3/11/1994	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0								
2/25/1994	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0								
1/27/1994	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0								
12/9/1993	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0								
11/18/1993	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0								
10/26/1993	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.1								
6/25/1993	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0								
5/13/1993	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0								
4/2/1993	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0	K							
3/11/1993	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0								
2/5/1993	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0	K							
1/15/1993	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0								
12/4/1992	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0								
11/20/1992	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0	K							
10/1/1992	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.1								
9/4/1992	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.1								
8/28/1992	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.1								
7/2/1992	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0								
6/12/1992	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0								
5/14/1992	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.1								
4/30/1992	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0								
3/6/1992	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0								
2/7/1992	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0								
1/17/1992	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0	K							
12/13/1991	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0	K							
11/20/1991	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0								
10/25/1991	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0								
9/27/1991	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0								
8/8/1991	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0	K							
7/5/1991	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0	K							
6/20/1991	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0								
5/23/1991	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0								
4/12/1991	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0								
3/14/1991	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.1								
2/1/1991	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0								
1/3/1991	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0								
12/6/1990	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0								
11/16/1990	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0	K							
10/19/1990	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.0	K							
9/14/1990	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.1								
8/10/1990	PHOSPHORUS, TOTAL (MG/L AS P)		B	0.2								
12/28/1999	Solids, Fixed		Suspended	*Present <QL	mg/l							
12/5/2000	Solids, Fixed		Suspended	110	mg/l							
5/9/2000	Solids, Fixed		Suspended	10	mg/l							
10/19/2000	Solids, Fixed		Suspended	3.2	mg/l							
7/12/2007	Temperature, air			24	deg C							
6/14/2007	Temperature, air			21	deg C							
5/17/2007	Temperature, air			20.5	deg C							
4/12/2007	Temperature, air			17.5	deg C							
3/15/2007	Temperature, air			19	deg C							
2/15/2007	Temperature, air			1	deg C							
1/25/2007	Temperature, air			6	deg C							
12/9/2002	Temperature, air			11	deg C							
11/25/2002	Temperature, air			20	deg C							
5/28/2002	Temperature, air			29	deg C							
5/28/2002	Temperature, air			24	deg C							
4/30/2002	Temperature, air			23	deg C							
3/26/2002	Temperature, air			19	deg C							
2/26/2002	Temperature, air			19	deg C							
12/5/2000	Temperature, air			14	deg C							
11/6/2000	Temperature, air			12.5	deg C							
10/19/2000	Temperature, air			18	deg C							
9/21/2000	Temperature, air			24.5	deg C							
8/3/2000	Temperature, air			25	deg C							
7/13/2000	Temperature, air			24.5	deg C							
6/7/2000	Temperature, air			21.5	deg C							
5/9/2000	Temperature, air			22	deg C							
4/12/2000	Temperature, air			20	deg C							
3/9/2000	Temperature, air			21.5	deg C							
2/3/2000	Temperature, air			5.5	deg C							
1/6/2000	Temperature, air			2.5	deg C							

12/28/1999	Temperature, air		4.5	deg C							
11/4/1999	Temperature, air		5	deg C							
10/21/1999	Temperature, air		13	deg C							
8/19/1999	Temperature, air		26.5	deg C							
7/8/1999	Temperature, air		33	deg C							
6/2/1999	Temperature, air		29.5	deg C							
5/6/1999	Temperature, air		24	deg C							
4/1/1999	Temperature, air		20.5	deg C							
3/4/1999	Temperature, air		6	deg C							
2/11/1999	Temperature, air		17	deg C							
1/7/1999	Temperature, air		10	deg C							
12/3/1998	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	17.5								
11/19/1998	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	16.0								
10/8/1998	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	35.0								
9/14/1998	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	24.5								
8/6/1998	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	29.0								
7/16/1998	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	31.0								
6/10/1998	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	23.0								
5/7/1998	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	23.0								
4/15/1998	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	17.0								
3/5/1998	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	13.0								
2/24/1998	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	24.0								
1/14/1998	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	8.0								
12/4/1997	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	14.0								
11/6/1997	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	14.0								
10/16/1997	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	15.0								
9/2/1997	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	27.0								
8/5/1997	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	27.0								
7/17/1997	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	27.0								
6/5/1997	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	22.0								
5/1/1997	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	21.0								
4/9/1997	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	18.0								
3/6/1997	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	18.0								
2/6/1997	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	13.0								
1/2/1997	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	17.0								
12/5/1996	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	10.0								
10/17/1996	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	18.0								
9/19/1996	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	18.0								
8/15/1996	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	24.0								
7/1/1996	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	33.0								
6/20/1996	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	28.0								
5/16/1996	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	21.0								
4/25/1996	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	17.0								
3/21/1996	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	7.0								
2/15/1996	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	16.0								
1/11/1996	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	6.0								
12/7/1995	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	10.0								
11/2/1995	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	20.0								
10/12/1995	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	21.0								
9/5/1995	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	22.0								
8/3/1995	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	29.0								
7/6/1995	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	27.0								
6/29/1995	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	29.0								
5/18/1995	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	29.0								
5/11/1995	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	29.0								
3/2/1995	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	10.0								
2/2/1995	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	15.0								
1/6/1995	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	0.0								
12/2/1994	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	1.0								
11/3/1994	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	20.0								
10/21/1994	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	11.0								
9/2/1994	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	23.0								
8/11/1994	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	24.0								
7/28/1994	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	22.0								
6/16/1994	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	29.0								
5/31/1994	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	26.0								
4/1/1994	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	11.0								
3/11/1994	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	8.0								
2/25/1994	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	15.0								
1/27/1994	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	9.0								
12/9/1993	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	9.0								
11/18/1993	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	18.0								
10/26/1993	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	18.0								
6/25/1993	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	21.0								
5/13/1993	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	22.0								
4/2/1993	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	15.0								
2/5/1993	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	7.0								
1/15/1993	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	6.0								
12/4/1992	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	7.0								
11/20/1992	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	13.0								
10/1/1992	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	15.0								
9/4/1992	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	25.0								
8/28/1992	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	23.0								
7/2/1992	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	27.0								
6/12/1992	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	20.0								
5/14/1992	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	20.0								
4/30/1992	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	15.0								
3/6/1992	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	17.0								
2/7/1992	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	6.0								
1/17/1992	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	6.0								
12/13/1991	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	15.0								
11/20/1991	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	30.0								
10/25/1991	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	17.0								
9/27/1991	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	14.0								
8/8/1991	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	25.0								
7/5/1991	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	33.0								
6/20/1991	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	26.0								
5/23/1991	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	30.0								
4/12/1991	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	27.0								
3/14/1991	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	20.0								
2/1/1991	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	9.0								
1/3/1991	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	11.0								
12/6/1990	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	9.0								
11/16/1990	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	13.0								
10/19/1990	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	22.0								
9/14/1990	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	25.0								
8/10/1990	TEMPERATURE, AIR (DEGREES CENTIGRADE)	B	30.0								
7/12/2007	Temperature, water		23.7	deg C	**SEE SECTION E-12 OF r.61-68**						
6/14/2007	Temperature, water		19.7	deg C							
5/17/2007	Temperature, water		19.4	deg C							
4/12/2007	Temperature, water		13.1	deg C							
3/15/2007	Temperature, water		14.7	deg C							
2/15/2007	Temperature, water		6	deg C							
1/25/2007	Temperature, water		7	deg C							
12/9/2002	Temperature, water		5.9	deg C							
11/25/2002	Temperature, water		11	deg C							
5/28/2002	Temperature, water		21.5	deg C							
5/28/2002	Temperature, water		16.4	deg C							
4/30/2002	Temperature, water		17.5	deg C							
3/26/2002	Temperature, water		13.5	deg C							
2/26/2002	Temperature, water		11.5	deg C							
12/5/2000	Temperature, water		7	deg C							
11/6/2000	Temperature, water		11	deg C							
10/19/2000	Temperature, water		15.6	deg C							
9/21/2000	Temperature, water		22	deg C							
8/3/2000	Temperature, water		22.5	deg C							
7/13/2000	Temperature, water		29.5	deg C							
6/7/2000	Temperature, water		18.5	deg C							
5/9/2000	Temperature, water		17.5	deg C							
4/12/2000	Temperature, water		15.5	deg C							
3/9/2000	Temperature, water		17.5	deg C							
2/3/2000	Temperature, water		3.5	deg C							
1/6/2000	Temperature, water		3.5	deg C							
12/28/1999	Temperature, water		3.5	deg C							
11/4/1999	Temperature, water		7	deg C							
10/21/1999	Temperature, water		15	deg C							
8/19/1999	Temperature, water		25	deg C							
7/8/1999	Temperature, water		26	deg C							
6/2/1999	Temperature, water		20.5	deg C							
5/6/1999	Temperature, water		16.5	deg C							
4/1/1999	Temperature, water		15.5	deg C							
3/4/1999	Temperature, water		6.5	deg C							
2/11/1999	Temperature, water		11	deg C							
1/7/1999	Temperature, water		3.5	deg C							
12/3/1998	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	10.5								
11/19/1998	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	12.0								
10/8/1998	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	21.5								
9/14/1998	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	20.0								
8/6/1998	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	23.0								
7/16/1998	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	25.5								
6/10/1998	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	20.1								
5/7/1998	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	17.5								
4/15/1998	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	14.5								
3/5/1998	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	10.0								
2/24/1998	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	12.5								
1/14/1998	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	10.5								
12/4/1997	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	14.0								
11/6/1997	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	10.5								
10/16/1997	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	15.0								
9/2/1997	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	24.0								
8/5/1997	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	22.0								
7/17/1997	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	22.0								
6/5/1997	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	16.0								
5/1/1997	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	16.0								
4/9/1997	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	13.0								
3/6/1997	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	16.0								
2/6/1997	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	8.0								
1/2/1997	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	9.5								
12/5/1996	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	6.0								
10/17/1996	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	15.0								
9/19/1996	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	17.0								
8/15/1996	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	21.0								
7/1/1996	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	25.5								
6/20/1996	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	22.0								
5/16/1996	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	15.0								
4/25/1996	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	12.5								
3/21/1996	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	5.9								
2/15/1996	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	10.0								
1/11/1996	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	4.0								
12/7/1995	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	9.0								

11/2/1995	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	16.0								
10/12/1995	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	18.5								
9/5/1995	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	18.5								
8/3/1995	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	23.0								
7/6/1995	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	23.0								
6/29/1995	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	22.0								
5/18/1995	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	18.0								
5/11/1995	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	20.5								
3/2/1995	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	10.0								
2/2/1995	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	12.0								
1/6/1995	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	3.0								
12/2/1994	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	7.0								
11/3/1994	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	14.0								
10/21/1994	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	13.5								
9/2/1994	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	21.5								
8/11/1994	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	20.0								
7/28/1994	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	22.0								
6/16/1994	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	22.0								
5/31/1994	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	21.5								
4/1/1994	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	9.0								
3/11/1994	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	8.5								
2/25/1994	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	7.5								
1/27/1994	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	8.0								
12/9/1993	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	5.5								
11/18/1993	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	14.0								
10/26/1993	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	16.0								
6/25/1993	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	22.0								
5/13/1993	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	18.5								
4/2/1993	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	13.0								
2/5/1993	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	6.0								
1/15/1993	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	7.0								
12/4/1992	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	5.5								
11/20/1992	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	10.0								
10/1/1992	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	14.0								
9/4/1992	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	21.5								
8/28/1992	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	22.0								
7/2/1992	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	22.5								
6/12/1992	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	18.5								
5/14/1992	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	15.5								
4/30/1992	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	11.0								
3/6/1992	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	12.5								
2/7/1992	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	4.0								
1/17/1992	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	0.0								
12/13/1991	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	10.0								
11/20/1991	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	15.0								
10/25/1991	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	15.5								
9/27/1991	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	15.5								
8/8/1991	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	22.0								
7/5/1991	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	20.5								
6/20/1991	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	19.0								
5/23/1991	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	20.0								
4/12/1991	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	14.0								
3/14/1991	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	12.5								
2/1/1991	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	6.0								
1/3/1991	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	7.0								
12/6/1990	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	4.5								
11/16/1990	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	8.5								
10/19/1990	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	20.0								
9/14/1990	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	23.0								
8/10/1990	TEMPERATURE, WATER (DEGREES CENTIGRADE)	B	17.5								
7/12/2007	Turbidity		57	NTU							
6/14/2007	Turbidity		26	NTU							
5/17/2007	Turbidity		10	NTU							
4/12/2007	Turbidity		18	NTU							
3/15/2007	Turbidity		7.8	NTU							
2/15/2007	Turbidity		18	NTU							
1/25/2007	Turbidity		9	NTU							
12/9/2002	Turbidity		20	NTU							
11/25/2002	Turbidity		6	NTU							
5/28/2002	Turbidity		6.6	NTU							
5/28/2002	Turbidity		420	NTU							
4/30/2002	Turbidity		5.1	NTU							
3/26/2002	Turbidity		2.4	NTU							
2/26/2002	Turbidity		3.8	NTU							
12/5/2000	Turbidity		6.1	NTU							
11/6/2000	Turbidity		8.6	NTU							
10/19/2000	Turbidity		7.8	NTU							
9/21/2000	Turbidity		14	NTU							
8/3/2000	Turbidity		21	NTU							
7/13/2000	Turbidity		22	NTU							
6/7/2000	Turbidity		9.8	NTU							
5/9/2000	Turbidity		8.7	NTU							
4/12/2000	Turbidity		6.2	NTU							
3/9/2000	Turbidity		7.9	NTU							
2/3/2000	Turbidity		9.4	NTU							
1/6/2000	Turbidity		3.9	NTU							
12/28/1999	Turbidity		2.2	NTU							
11/4/1999	Turbidity		8.5	NTU							
10/21/1999	Turbidity		4.2	NTU							
8/19/1999	Turbidity		7.9	NTU							
7/8/1999	Turbidity		6.7	NTU							
6/2/1999	Turbidity		7.1	NTU							
5/6/1999	Turbidity		8.8	NTU							
4/1/1999	Turbidity		29	NTU							
2/11/1999	Turbidity		12	NTU							
1/7/1999	Turbidity		7.8	NTU							
12/3/1998	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	4.0								
11/19/1998	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	5.4								
10/8/1998	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	320.0								
9/14/1998	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	7.0								
8/6/1998	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	11.0								
7/16/1998	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	8.3								
6/10/1998	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	45.0								
4/15/1998	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	14.0								
3/5/1998	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	11.0								
2/24/1998	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	18.0								
1/14/1998	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	9.3								
12/4/1997	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	11.0								
11/6/1997	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	6.6								
10/16/1997	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	39.0								
9/2/1997	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	3.6								
8/5/1997	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	10.0								
7/17/1997	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	18.0								
6/5/1997	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	23.0								
5/1/1997	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	13.0								
4/9/1997	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	5.3								
3/6/1997	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	50.0								
2/6/1997	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	7.7								
1/2/1997	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	5.6								
12/5/1996	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	6.2								
10/17/1996	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	9.5								
9/19/1996	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	18.0								
8/15/1996	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	20.0								
6/20/1996	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	3.8								
5/16/1996	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	6.3								
4/25/1996	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	9.8								
3/21/1996	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	10.0								
2/15/1996	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	7.8								
1/11/1996	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	6.1								
12/7/1995	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	7.9								
11/2/1995	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	7.6								
10/12/1995	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	6.1								
9/5/1995	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	9.2								
8/3/1995	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	45.0								
7/6/1995	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	6.9								
6/29/1995	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	50.0								
5/11/1995	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	20.0								
4/18/1995	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	5.1								
3/2/1995	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	39.0								
2/2/1995	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	8.4								
1/6/1995	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	4.7								
12/2/1994	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	8.3								
11/3/1994	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	9.4								
10/21/1994	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	10.0								
9/2/1994	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	6.9								
8/11/1994	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	22.0								
7/28/1994	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	15.0								
6/16/1994	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	12.0								
5/31/1994	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	6.5								
4/1/1994	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	11.0								
3/11/1994	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	22.0								
2/25/1994	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	28.0								
1/27/1994	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	10.0								
12/9/1993	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	8.7								
11/18/1993	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	4.5								
10/26/1993	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	6.6								
6/25/1993	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	11.0								
5/13/1993	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	2.4								
4/2/1993	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	10.0								
3/11/1993	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	13.0								
2/5/1993	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	9.5								
1/15/1993	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	16.0								
12/4/1992	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	9.8								
11/20/1992	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	10.0								
10/1/1992	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	14.0								
9/4/1992	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	140.0								
8/28/1992	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	12.0								
7/2/1992	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	19.0								
6/12/1992	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	25.0								
5/14/1992	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	12.0								
4/30/1992	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	9.2								
3/6/1992	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	10.0								
2/7/1992	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	10.0								
1/17/1992	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	11.0								
12/13/1991	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	5.6								
11/20/1991	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	4.7								
10/25/1991	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	6.1								
9/27/1991	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	10.0								
8/8/1991	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	22.0								
7/5/1991	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	12.2								

6/20/1991	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	40.0	L							
5/23/1991	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	10.0								
4/12/1991	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	16.0								
3/14/1991	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	40.0	L							
2/1/1991	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	25.0								
1/3/1991	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	10.0								
12/6/1990	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	12.0								
11/16/1990	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	9.4								
10/19/1990	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	4.5								
9/14/1990	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	14.0								
8/10/1990	TURBIDITY,HACH TURBIDIMETER (FORMAZIN TURB UNIT)	B	140.0								
5/17/2007	Weather condition (WMO code 4501) (choice list)		1								
4/12/2007	Weather condition (WMO code 4501) (choice list)		0								
3/15/2007	Weather condition (WMO code 4501) (choice list)		1								
1/25/2007	Weather condition (WMO code 4501) (choice list)		0								
12/9/2002	Weather condition (WMO code 4501) (choice list)		1								
11/25/2002	Weather condition (WMO code 4501) (choice list)		1								
5/28/2002	Weather condition (WMO code 4501) (choice list)		1								
5/28/2002	Weather condition (WMO code 4501) (choice list)		1								
4/30/2002	Weather condition (WMO code 4501) (choice list)		1								
3/26/2002	Weather condition (WMO code 4501) (choice list)		1								
2/26/2002	Weather condition (WMO code 4501) (choice list)		1								
12/5/2000	Weather condition (WMO code 4501) (choice list)		0								
11/6/2000	Weather condition (WMO code 4501) (choice list)		1								
10/19/2000	Weather condition (WMO code 4501) (choice list)		1								
9/21/2000	Weather condition (WMO code 4501) (choice list)		1								
8/3/2000	Weather condition (WMO code 4501) (choice list)		1								
7/13/2000	Weather condition (WMO code 4501) (choice list)		1								
6/7/2000	Weather condition (WMO code 4501) (choice list)		0								
5/9/2000	Weather condition (WMO code 4501) (choice list)		1								
4/12/2000	Weather condition (WMO code 4501) (choice list)		1								
3/9/2000	Weather condition (WMO code 4501) (choice list)		1								
2/3/2000	Weather condition (WMO code 4501) (choice list)		0								
1/6/2000	Weather condition (WMO code 4501) (choice list)		1								
12/28/1999	Weather condition (WMO code 4501) (choice list)		0								
11/4/1999	Weather condition (WMO code 4501) (choice list)		0								
10/21/1999	Weather condition (WMO code 4501) (choice list)		1								
8/19/1999	Weather condition (WMO code 4501) (choice list)		1								
7/8/1999	Weather condition (WMO code 4501) (choice list)		1								
6/2/1999	Weather condition (WMO code 4501) (choice list)		1								
5/6/1999	Weather condition (WMO code 4501) (choice list)		1								
4/1/1999	Weather condition (WMO code 4501) (choice list)		6								
3/4/1999	Weather condition (WMO code 4501) (choice list)		0								
2/11/1999	Weather condition (WMO code 4501) (choice list)		0								
1/7/1999	Weather condition (WMO code 4501) (choice list)		0								
12/3/1998	WEATHER (WMO CODE 4501)	B	1.0								
11/19/1998	WEATHER (WMO CODE 4501)	B	2.0								
10/8/1998	WEATHER (WMO CODE 4501)	B	2.0								
9/14/1998	WEATHER (WMO CODE 4501)	B	0.0								
8/6/1998	WEATHER (WMO CODE 4501)	B	1.0								
7/16/1998	WEATHER (WMO CODE 4501)	B	2.0								
6/10/1998	WEATHER (WMO CODE 4501)	B	0.0								
5/7/1998	WEATHER (WMO CODE 4501)	B	2.0								
4/15/1998	WEATHER (WMO CODE 4501)	B	2.0								
3/5/1998	WEATHER (WMO CODE 4501)	B	2.0								
2/24/1998	WEATHER (WMO CODE 4501)	B	0.0								
1/14/1998	WEATHER (WMO CODE 4501)	B	2.0								
12/4/1997	WEATHER (WMO CODE 4501)	B	2.0								
11/6/1997	WEATHER (WMO CODE 4501)	B	2.0								
10/16/1997	WEATHER (WMO CODE 4501)	B	2.0								
9/2/1997	WEATHER (WMO CODE 4501)	B	1.0								
8/5/1997	WEATHER (WMO CODE 4501)	B	1.0								
7/17/1997	WEATHER (WMO CODE 4501)	B	1.0								
6/5/1997	WEATHER (WMO CODE 4501)	B	0.0								
5/1/1997	WEATHER (WMO CODE 4501)	B	0.0								
4/9/1997	WEATHER (WMO CODE 4501)	B	0.0								
3/6/1997	WEATHER (WMO CODE 4501)	B	0.0								
2/6/1997	WEATHER (WMO CODE 4501)	B	0.0								
1/2/1997	WEATHER (WMO CODE 4501)	B	2.0								
12/5/1996	WEATHER (WMO CODE 4501)	B	2.0								
10/17/1996	WEATHER (WMO CODE 4501)	B	1.0								
9/19/1996	WEATHER (WMO CODE 4501)	B	0.0								
8/15/1996	WEATHER (WMO CODE 4501)	B	1.0								
7/1/1996	WEATHER (WMO CODE 4501)	B	1.0								
6/20/1996	WEATHER (WMO CODE 4501)	B	2.0								
5/16/1996	WEATHER (WMO CODE 4501)	B	2.0								
4/25/1996	WEATHER (WMO CODE 4501)	B	0.0								
3/21/1996	WEATHER (WMO CODE 4501)	B	0.0								
2/15/1996	WEATHER (WMO CODE 4501)	B	2.0								
1/11/1996	WEATHER (WMO CODE 4501)	B	0.0								
12/7/1995	WEATHER (WMO CODE 4501)	B	2.0								
11/2/1995	WEATHER (WMO CODE 4501)	B	2.0								
10/12/1995	WEATHER (WMO CODE 4501)	B	2.0								
9/5/1995	WEATHER (WMO CODE 4501)	B	1.0								
8/3/1995	WEATHER (WMO CODE 4501)	B	2.0								
7/6/1995	WEATHER (WMO CODE 4501)	B	1.0								
6/29/1995	WEATHER (WMO CODE 4501)	B	1.0								
5/18/1995	WEATHER (WMO CODE 4501)	B	1.0								
5/11/1995	WEATHER (WMO CODE 4501)	B	1.0								
3/2/1995	WEATHER (WMO CODE 4501)	B	1.0								
2/2/1995	WEATHER (WMO CODE 4501)	B	2.0								
1/6/1995	WEATHER (WMO CODE 4501)	B	2.0								
12/2/1994	WEATHER (WMO CODE 4501)	B	1.0								
11/3/1994	WEATHER (WMO CODE 4501)	B	0.0								
10/21/1994	WEATHER (WMO CODE 4501)	B	1.0								
9/2/1994	WEATHER (WMO CODE 4501)	B	2.0								
8/11/1994	WEATHER (WMO CODE 4501)	B	22.0								
7/28/1994	WEATHER (WMO CODE 4501)	B	2.0								
6/16/1994	WEATHER (WMO CODE 4501)	B	1.0								
5/31/1994	WEATHER (WMO CODE 4501)	B	2.0								
4/1/1994	WEATHER (WMO CODE 4501)	B	1.0								
3/11/1994	WEATHER (WMO CODE 4501)	B	1.0								
2/25/1994	WEATHER (WMO CODE 4501)	B	1.0								
1/27/1994	WEATHER (WMO CODE 4501)	B	2.0								
12/9/1993	WEATHER (WMO CODE 4501)	B	1.0								
11/18/1993	WEATHER (WMO CODE 4501)	B	1.0								
10/26/1993	WEATHER (WMO CODE 4501)	B	2.0								
6/25/1993	WEATHER (WMO CODE 4501)	B	2.0								
5/13/1993	WEATHER (WMO CODE 4501)	B	2.0								
4/2/1993	WEATHER (WMO CODE 4501)	B	1.0								
2/5/1993	WEATHER (WMO CODE 4501)	B	2.0								
1/15/1993	WEATHER (WMO CODE 4501)	B	1.0								
12/4/1992	WEATHER (WMO CODE 4501)	B	2.0								
11/20/1992	WEATHER (WMO CODE 4501)	B	2.0								
10/1/1992	WEATHER (WMO CODE 4501)	B	0.0								
9/4/1992	WEATHER (WMO CODE 4501)	B	1.0								
8/28/1992	WEATHER (WMO CODE 4501)	B	22.0								
7/2/1992	WEATHER (WMO CODE 4501)	B	2.0								
6/12/1992	WEATHER (WMO CODE 4501)	B	22.0								
5/14/1992	WEATHER (WMO CODE 4501)	B	1.0								
4/30/1992	WEATHER (WMO CODE 4501)	B	2.0								
3/6/1992	WEATHER (WMO CODE 4501)	B	22.0								
2/7/1992	WEATHER (WMO CODE 4501)	B	1.0								
1/17/1992	WEATHER (WMO CODE 4501)	B	0.0								
12/13/1991	WEATHER (WMO CODE 4501)	B	2.0								
11/20/1991	WEATHER (WMO CODE 4501)	B	1.0								
10/25/1991	WEATHER (WMO CODE 4501)	B	1.0								
9/27/1991	WEATHER (WMO CODE 4501)	B	0.0								
8/8/1991	WEATHER (WMO CODE 4501)	B	2.0								
7/5/1991	WEATHER (WMO CODE 4501)	B	1.0								
6/20/1991	WEATHER (WMO CODE 4501)	B	2.0								
5/23/1991	WEATHER (WMO CODE 4501)	B	1.0								
4/12/1991	WEATHER (WMO CODE 4501)	B	2.0								
3/14/1991	WEATHER (WMO CODE 4501)	B	1.0								
2/1/1991	WEATHER (WMO CODE 4501)	B	0.0								
1/3/1991	WEATHER (WMO CODE 4501)	B	2.0								
12/6/1990	WEATHER (WMO CODE 4501)	B	1.0								
11/16/1990	WEATHER (WMO CODE 4501)	B	0.0								
10/19/1990	WEATHER (WMO CODE 4501)	B	0.0								
9/14/1990	WEATHER (WMO CODE 4501)	B	2.0								
8/10/1990	WEATHER (WMO CODE 4501)	B	1.0								
5/17/2007	Zinc	Total	0.024	ug/l	37						
2/15/2007	Zinc	Total	0.022	ug/l							
11/25/2002	Zinc	Total	13	ug/l		37	7400	26000			
5/28/2002	Zinc	Total	*Present <QL	ug/l							
2/26/2002	Zinc	Total	*Present <QL	ug/l							
11/6/2000	Zinc	Total	*Present <QL	ug/l							
8/3/2000	Zinc	Total	30	ug/l							
5/9/2000	Zinc	Total	30	ug/l							
2/3/2000	Zinc	Total	*Present <QL	ug/l							
11/4/1999	Zinc	Total	40	ug/l							
8/19/1999	Zinc	Total	10	ug/l							
5/6/1999	Zinc	Total	10	ug/l							
2/11/1999	Zinc	Total	10	ug/l							
11/19/1998	ZINC, TOTAL (UG/L AS ZN)	B	20.0								
8/6/1998	ZINC, TOTAL (UG/L AS ZN)	B	10.0								
5/7/1998	ZINC, TOTAL (UG/L AS ZN)	B	20.0								
2/24/1998	ZINC, TOTAL (UG/L AS ZN)	B	40.0								
11/6/1997	ZINC, TOTAL (UG/L AS ZN)	B	10.0								
8/5/1997	ZINC, TOTAL (UG/L AS ZN)	B	30.0								
5/1/1997	ZINC, TOTAL (UG/L AS ZN)	B	10.0								
2/6/1997	ZINC, TOTAL (UG/L AS ZN)	B	10.0								
8/15/1996	ZINC, TOTAL (UG/L AS ZN)	B	60.0								
5/16/1996	ZINC, TOTAL (UG/L AS ZN)	B	30.0								
2/15/1996	ZINC, TOTAL (UG/L AS ZN)	B	20.0								
11/2/1995	ZINC, TOTAL (UG/L AS ZN)	B	10.0	K							
8/3/1995	ZINC, TOTAL (UG/L AS ZN)	B	110.0								
5/11/1995	ZINC, TOTAL (UG/L AS ZN)	B	50.0								
2/2/1995	ZINC, TOTAL (UG/L AS ZN)	B	10.0				0.146341463				
11/3/1994	ZINC, TOTAL (UG/L AS ZN)	B	30.0				41				
8/11/1994	ZINC, TOTAL (UG/L AS ZN)	B	20.0								
5/31/1994	ZINC, TOTAL (UG/L AS ZN)	B	30.0								
2/25/1994	ZINC, TOTAL (UG/L AS ZN)	B	10.0	K							
11/18/1993	ZINC, TOTAL (UG/L AS ZN)	B	10.0								
5/13/1993	ZINC, TOTAL (UG/L AS ZN)	B	20.0								
2/5/1993	ZINC, TOTAL (UG/L AS ZN)	B	20.0								
11/20/1992	ZINC, TOTAL (UG/L AS ZN)	B	10.0	K							
8/28/1992	ZINC, TOTAL (UG/L AS ZN)	B	10.0								
5/14/1992	ZINC, TOTAL (UG/L AS ZN)	B	10.0	K							
2/7/1992	ZINC, TOTAL (UG/L AS ZN)	B	20.0								

11/20/1991	ZINC, TOTAL (UG/L AS ZN)	B	10.0	K							
8/8/1991	ZINC, TOTAL (UG/L AS ZN)	B	10.0	K							
5/23/1991	ZINC, TOTAL (UG/L AS ZN)	B	10.0								
2/1/1991	ZINC, TOTAL (UG/L AS ZN)	B	510.0								
11/16/1990	ZINC, TOTAL (UG/L AS ZN)	B	20.0								
8/10/1990	ZINC, TOTAL (UG/L AS ZN)	B	10.0	K							

Appendix E

KERSHAW COUNTY SWMP
TECHNICAL MEMORANDUM 10-3
STRATTON HALL STREAM STABILIZATION
LUGOFF, SC

An unnamed tributary to Twenty-five Mile Creek in the Stratton Hall neighborhood of Lugoff, SC is actively degrading between Wellington Drive and Cambridge Lane. If left alone, it will likely continue to degrade. Possible consequences include bank failure that could undermine power poles and fences, expose portions of a sanitary sewer line, cause loss of property, and degrade aquatic ecology. The following is a summary of observations made during a site visit and recommendations to improve stream stability.

Observations made during a site visit of the stream corridor on May 26, 2010 indicate that immediately downstream of Wellington Drive road crossing, the channel is deeply incised. There is evidence of past channel dredging along the back of the lots on Hampton Court. Excavated material appears to be deposited on top of the right bank (looking downstream). A sanitary sewer easement runs parallel to the stream on the right bank and power poles are located on the left bank through this upstream (US) reach. Riparian vegetation is primarily herbaceous as a result of utility easements being sprayed or mowed to keep them clear for maintenance crews. Aerial sewer laterals cross the creek to the main sewer line on the right side of the channel, which cause constrictions on the channel. Some yards adjacent to the stream have fences on top of the left bank.

The bed is primarily made up of clay, and some river gravel and cobble has fallen in from the banks to create some bed features. Bank material is primarily made up of three individual layers. The uppermost layer is comprised of organic coated sands. These overlay rounded river rock deposits, which overlay a clay layer. Fresh water seeps flow out of the clay near the boundary with the river rock. The channel bed is made up of clay and it is limiting or slowing the vertical degradation of the stream. Typical views of the upstream segment of this stream reach are highlighted in the following two photographs. Photo 1 illustrates the clay bed. Photo 2 illustrates the unstable vertical banks and layered bank materials. The river rock that falls in from these banks is transported downstream and is being distributed into new bed features.

Photo 1

Photo 2

In the middle segment of this stream reach, the channel starts to widen and bank heights start dropping. No more dredge material is evident on the top of the right bank. The left bank (looking downstream) opens up and has developed a more stable angle of repose. Riparian vegetation is still mostly herbaceous. Power poles shift from the left bank to the right bank in this section of stream. A typical view is shown in Photo 3. Note that the right bank is actively eroding and river rock covers the bed. Moving further downstream, the channel is starting to develop a gentle meander pattern in the low flow channel as evidenced in Photo 4. It is actively eroding portions of the right bank eating into yards and exposing power poles, as shown in Photo 5. Bank heights continue to drop in the downstream direction.

Photo 3

Photo 4

Photo 5

In the most downstream segment of this channel, the bank heights have dropped significantly, a new floodplain is forming within the widened channel and flows have slowed down where the slope has flattened out. Fine particles are accumulating in these areas. Power poles are on the right side of the steam channel. The sanitary sewer still runs along the right side of the stream channel, however, there is no easement over it in this segment and homeowners have placed utility buildings over the sanitary sewer line. Similar to upstream segments, several lots have fences at the top of bank along the back of their property. Riparian

vegetation is still primarily herbaceous. Typical photos of this segment are shown below. Photo 6 shows sheds over the sanitary sewer on the right side of the stream. Photo 7 shows the accumulation of fines in slack water areas. Vegetation is encroaching in the stream bed due to very low flow velocities and the presence of fine bed materials.

Photo 6

Photo 7

In summary, bank heights and channel slope are much steeper in the upstream segments of this reach and tend to drop or get flatter in the downstream direction. Channel width also increases in the downstream direction. Riparian vegetation is largely herbaceous due to mowing in the sanitary sewer easements, spraying under the power lines, and lawn from yards extending to the top of bank. Aerial sewer lines cause flow constrictions and in some cases debris jams. Some bank failures are noted, particularly in the upper and middle stream segments. These failures are due to either geotechnical instability of vertical banks or lateral migration of the stream channel as it dissipates energy and creates a new floodplain. Bed material changes over the length of this stream reach. It is dominantly clay in the upstream reaches. They clay is limiting the rate of vertical degradation of the stream bed. Sand, gravel and cobble that enters the upper reach is generally transported to the middle and lower stream reaches. The middle reach has more gravel and cobble deposits as the stream has less energy to transport these particle sizes due to decreasing slope. At the downstream limit of this stream reach, bed material is sandy with some gravel and organic matter. Because there are three distinct stages of channel evolution present in this study reach, the solutions applied to stabilize this stream reach must be tailored to address the unique causes and effects acting on these segments.

Potential solutions to address bank instability issues and protect property and utilities are as follows:

1. Create stable channel geometry suitable for each segment of stream within the reach from Wellington Drive to Cambridge Lane.

    a. In the upper stream reach where space is limited, structures (such as a crib wall or rock structure) or bioengineering (soil wrapping and planting) may be required to stabilize banks.

    b. Where there is room, lay back the banks to a stable angle, create a floodplain, and vegetate using woody, native vegetation to the maximum extent practicable.

c. Install some grade control structures, such as log or rock vanes with energy dissipaters, to prevent further vertical degradation of the stream bed.

d. Create stable planform geometry for a meandering low flow channel in low slope areas.

2. Move power lines exposed or threatened by channel erosion. It may also help to move power poles in order to install bank protection or lay back banks to a stable angle.

3. Educate stakeholders using this corridor about the role of riparian vegetation, the importance of not dumping yard waste or slash into the stream channel, and channel processes that could affect their property or the utilities within this corridor. This includes residents, the power company, and the sanitary sewer maintenance crew.

4. Where there is landowner cooperation, move some fences to create space for stream stabilization activities.

5. Control stormwater runoff from the contributing watershed by incorporating stormwater best management practices (BMPs) in new development and retrofit BMPs in existing developments when opportunities arise.

Appendix F

How to reference this document:

South Carolina Department of Health and Environmental Control. 2012. Standard Operating and Quality Control Procedures for Macroinvertebrate Sampling. Technical Report No. xxx-12. Bureau of Water. Columbia, South Carolina.

samples is a disciplined procedure designed to ensure that all the habitats present at a site are thoroughly sampled, irrespective of what type of habitat is available or where the sample is collected. Rivers and streams from the mountains to the coastal plain of South Carolina vary in habitat type and amount available for colonization by macroinvertebrates. For example, mountain sites are often dominated by rock/gravel riffle stream substrate, woody debris, and root wads, while coastal sites are dominated by aquatic vegetation, root wads, woody debris, and sandy to muddy stream substrate. Between the mountains and coastal plain lies the piedmont, which has a combination of some or all of the above habitats. Regardless of what region or what kind of habitat is being sampled, the MHSP insures that an adequet representation of the macroinvertebrate community is obtained. The following is a discussion of the MHSP with detailed steps on how to properly collect macroinvertebrate samples from the variety of stream habitats.

A. Chironomidae and Small Macroinvertebrate Collection Procedure

A very important component of the macroinvertebrate community is the midge family Chironomidae. Midges generally account for at least 50% of the total species diversity in most systems (Merritt and Cummins, 1996). Since midges are relatively small, they are collected with fine mesh samplers. The fine mesh samplers are made with Nytex (micro-screen cloth material) that has a mesh size of 300 μm. One sampler is a mesh bag, 0.5 m by 1.0 m, made from a folded sheet of Nytex sewn together on two sides. This bag is used to collect midges from the sand. The other sampler is a 13.0 cm long by 10.0 cm diameter piece of PVC pipe with a Nytex covering on one end. This is used to strain water from the bucket in which midges are washed from the habitats. Although the objective of the fine mesh net is to collect midges, it can also collect other small macroinvertebrates.

Collection Steps:

1. Fill a 19.0 liter bucket approximate one half full with water.

2. Collect two or three samples of all the habitat types present at a stream site by hand (rocks, sticks, leaf packs, root wads, etc.) and rinse in the bucket to remove midges and other macroinvertebrates. Attached root wads and vegetation may be rinsed directly in the bucket without detachment.

3. Since some midge taxa are sand dwellers, select a sandy bottom site in the stream and collect midges by placing the small mesh bag on the bottom with the open end facing upstream. Disturb approximately a 1.0 m^2 area of the sand upstream of the bag and let the sand and midges drift into the bag. Collect three sand samples from three different areas of the stream. The bag is only used when there are sandy bottom areas available.

4. Empty the contents of the bag into the same bucket of water that contains the other habitat washes and rinse the bag up and down in the bucket to remove the attached midges.

C. Kick Net Collection Procedure

The kick net is a 1.0 m^2 sheet of Nytex (500 μm mesh size) attached on two sides to 1.5 m long poles. The kick net is used to sample rock/gravel riffles and snags/leaf packs.

Collection Steps:

1. Place the kick net slightly downstream of the area to be sampled (snags/leaf packs and/or rock/gravel riffle). Disturb about 1.0 m^2 of the habitat and catch the debris and macroinvertebrates that drift into the net.

2. Spread the kick net out on a sand bar or a flat area on the bank and collect macroinvertebrates from the net with forceps and preserve them in a jar of 85% EtOH.

If the habitat is mostly snags/leaf packs, a minimum of two kick net samples should be taken. If the habitat is a mix of both rock/gravel riffle and snags/leaf packs, a minimum of one kick net sample should be taken from each habitat. In streams that are mostly rock/gravel riffle, a minimum of two kick net samples should be taken in the riffle areas. One kick net sample should be taken from a high velocity riffle area and the other from a low velocity riffle area.

D. Sieve Collection Procedure

Sieves are used to sample all habitat types and are also used during visual collections. Sieve sizes used are the U.S. #30 (0.6 mm openings) and the U.S. #10 (2.0 mm openings). The #10 sieve is used primarily in the sand while the #30 is used on all habitat types. The sieve enables the biologist to sample large amounts of habitat quickly and is invaluable for collecting sediment-dwelling taxa such as: Odonata (dragonflies), Gastropoda (snails), Pelecypoda (clams, mussels), Polycentropodidae (burrowing caddisflies), sand case building and burrowing caddisflies (Molannidae, Sericostomadidae, Dipseudopsidae, Odontoceridae), and Ephemeridae (burrowing mayflies). The sieve can be used effectively in the same habitat types that are sampled with the dip net and kick net.

Collection Steps:

1. Visually inspect the sand and mud for signs of macroinvertebrate activity. For example, the movement of burrowing odonates and mussels leaves trails in the sand. Small holes can be seen in the mud, clay, or sand in areas where burrowing mayflies are found. The tubes of *Phylocentropus* sp. larvae, when present, can be seen extending above the substrate.

2. With either the #10 or #30 sieve, sample the mud or sand where there are signs of macroinvertebrate activity (use #10 sieve primarily for sand substrates). Sift the excess sand, mud, silt, and detritus in the stream to trap macroinvertebrates in the sieve.

three sampling devices (dip net, kick net, fine mesh nets) to sample the appropriate habitat. Upon completion, visual collections are begun and the sieve is used extensively. It is helpful for the sampling team to discuss the kinds and numbers of taxa present and absent at a site. This results in more efficient sampling. It is important that the field staff be trained and experienced macroinvertebrate taxonomist to use the MHSP effectively.

The sampling methodology described above requires that freshwater streams and rivers be wadeable for efficient sample collection. High water conditions can impair sampling efficiency by making some critical habitats inaccessible due to water depth and clarity. An underestimate of taxa richness may lead to spurious results. If high water levels and turbid conditions make sampling difficult, it is better to return to the site under more amenable sampling conditions.

Generally, nonwadeable rivers are not sampled for macroinvertebrates. However, when necessary, a boat is used to access the natural habitats for sampling. The sampling methodology remains the same but the duration may be increased to insure that all natural habitats have been adequately sampled. In low water areas, the river is sampled as a wadeable stream. Otherwise, the available natural habitat is sampled from the boat with dip nets and sieves and/or by dragging logs, sticks, root wads, etc., into the boat.

1.1.3 Equipment

1. D-frame dip net
2. Kick net
3. Sieves (U.S. number 10 and 30)
4. 13.0 cm (length) by 10.0 cm (dia) PVC fine mesh sampler
5. Fine mesh bag
6. 19.0 liter bucket
7. White pan
8. Forceps
9. Collection vials and jars filled with 85% EtOH
10. Collection labels and EtOH-proof pen or pencil
11. Physicochemical parameter equipment (pH meter, dissolved oxygen/temperature meter, conductivity meter, and stick thermometer)

1.2 Habitat Assessment

Habitat assessment is an important step towards understanding the effects of pollution on macroinvertebrate communities. The ABS conducts two kinds of habitat assessments at each sampling site. The first is a comprehensive assessment adopted from the Environmental Protection Agency's (EPA) □*Revisions to Rapid Bioassessment Protocols for Use in Streams and Rivers* (Appendix 1), and the second is a simplified form developed to meet specific needs of the ABS (Appendix 2). Instructions are included on the forms explaining how to evaluate each of the habitat metrics. Habitat metrics are independently evaluated by each biologist and

slides with CMC-10 mounting media and identified with a compound microscope capable of 1000x magnification. Identifications are made to the lowest practical taxonomic level using the appropriate taxonomic references.

Midges are transferred to water and allowed to settle before mounting. A drop of CMC-10 mounting media is placed on a labeled slide, and the specimen(s) is oriented in the media so that the ventral side of the head capsule is up. To get the head arranged properly, it may be necessary to separate it from the body. A cover slip is placed over the specimen and gentle pressure is applied to spread the mouthparts. Several midges may be mounted on one slide. Slides are allowed to dry at least two days before identification.

Baetidae and certain other taxa that require slide mounting are set aside in a petri dish and the entire body or body parts are mounted, as necessary, for identification. A drop of CMC 10 mounting media is placed on a labeled slide. The whole specimen or parts such as the head or legs are placed in the drop of CMC 10 and, with forceps, a cover slip is placed over the specimen. Gentle pressure is applied to the cover slip to reveal the structures necessary for identification. Several specimens may be mounted on one slide. Slides are sometimes placed on a drying rack for two days before identification, although some taxa can be identified immediately.

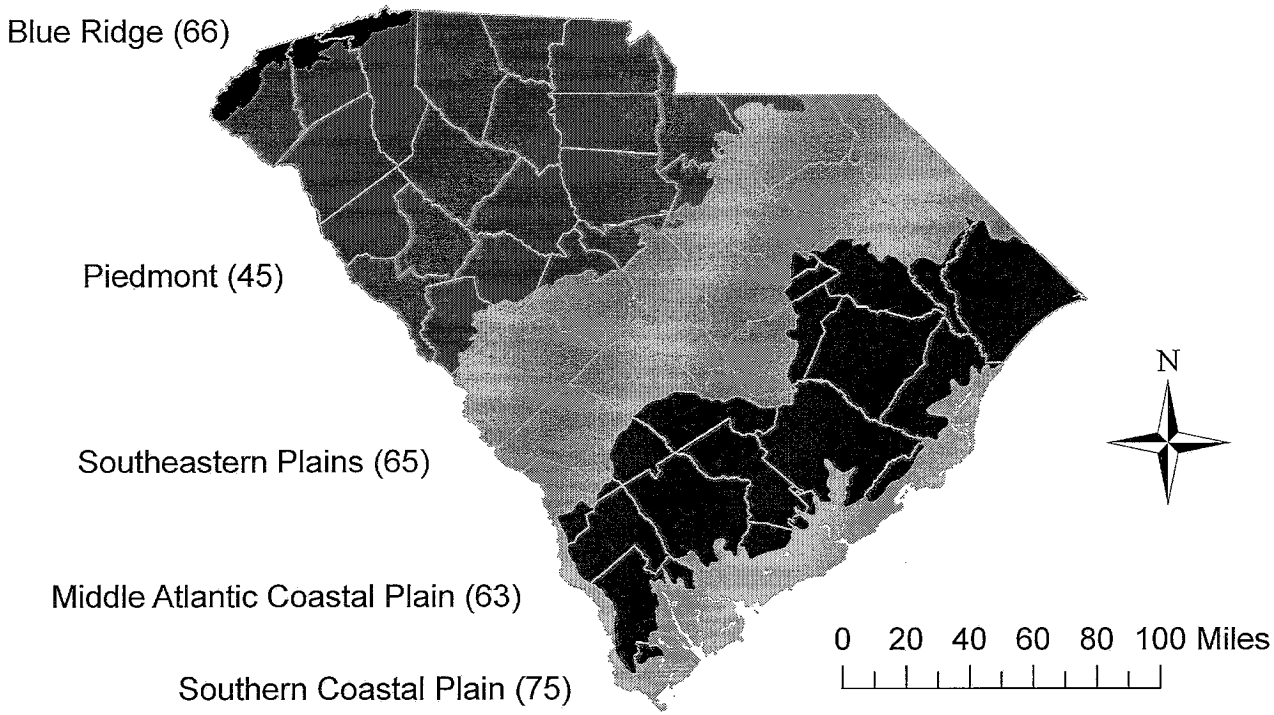
After the sorted macroinvertebrates (except Chironomidae and some Baetidae) from a station have been identified and these data recorded on bench sheets, they are placed together in a single jar of 85% EtOH. This jar is labeled with station, date collected, and person who identified the sample, and is stored at least five years in the ABS voucher collection. If a new taxa record (i.e. one not previously collected from South Carolina) is identified from a site, it is removed from the voucher collection and stored separately in the ABS reference collection. A note is made on a bench sheet (a form used to record the number of taxa and specimens identified) when a specimen is relocated to the reference collection. Slide mounted specimens are stored separately in cabinets according to sample date and station. If mounted Chironomidae or other taxa are transferred to the reference collection, this is noted on the bench sheet.

1.4.2 Data Analysis

The taxa list, physicochemical data, and habitat information are entered into computer data base. This program is used for data management and reporting purposes.

Because the MHSP is a timed-qualitative method, metrics that require quantitative collection methods are not used. Two metrics that have proven to be very effective in evaluating macroinvertebrate data collected by qualitative methods are the EPT and biotic indices (Lenat, 1993; Wallace, 1996; Barbour, 1997). The EPT index is the total number of Ephemeroptera (mayflies), Plecoptera (stoneflies), and Trichoptera (caddisflies) taxa collected at a site. Most EPT taxa are very intolerant of pollution and, in general, a high EPT count indicates excellent water quality.

Figure 1. Level 3 Ecoregions of South Carolina
(after Omernik, 1987)



Bioclassification of streams is important because it helps resource manager's prioritize cleanup and protection efforts. This information is reported in the 305b report to the United States Environmental Protection Agency. The Clean Water Act (Section 305b) requires that States report the conditions of their waters to congress. In the 305b report, macroinvertebrates are used to make a determination on a stream's aquatic life use support (ALUS). The criteria used to measure ALUS are summarized in three categories: Fully Supporting, Partially Supporting and Not Supporting.

Fully Supporting: Reliable data indicate functioning, sustainable biological assemblages (e.g. fish, macroinvertebrates, or algae) none of which has been modified significantly beyond the natural range of the reference condition.

Partially Supporting: At least one assemblage indicates moderate modification of the biological community as compared to the reference condition.

Not Supporting: At least one assemblage indicates a severely impacted macroinvertebrate community. Data clearly indicate severe modification of the biological community compared to the reference condition.

The Aquatic Biology Section determines the ALUS based on the bioclassification of the stream:

Bioclassification	ALUS
Excellent and Good	Fully Supporting
Good-Fair and Fair	Partially Supporting
Poor	Not Supporting

This method is also used to make stream impairment judgments for South Carolina's Watershed Water Quality Management Strategy and for point/nonpoint source impact assessments.

1.4.3 Data Analysis for Special Studies

Special studies often involve using sites upstream from a point source discharge or a non-point source area as a control. The site downstream from the potential impact can then be compared with this upstream reference station for assessment purposes. By comparing final bioclassification scores an assessment can be made. The following represents the levels of impairment and their associated change in bioclassification scores.

Level of Impairment	Decrease in Bioclassification Score
Unimpaired	<0.4
Slightly Impaired	0.6-1.4

QA/QC after 10 samples have been identified. Each set of 10 completed samples is numbered. A single sample is randomly chosen by picking a coin from a jar of coins numbered one through ten. Each taxonomist is assigned a number and is chosen to perform QA/QC by random picking from numbered coins. The taxonomist that conducted the initial identifications is not eligible to conduct QA/QC on that sample. Disagreements are resolved between the QA/QC taxonomist and the original taxonomist, and the results are recorded in the QA/QC logbook.

To evaluate the precision of the field techniques 10% of the stations are sampled twice. This involves the selection of two adjacent stream reaches on the same stream. Each reach should be similar to each other with respect to habitat and hydrology. Each reach is sampled using the timed MHSP described above preferably on the same day. Each reach is treated as a separate station with a final bioclassification score calculated for each segment. Precision is determined by comparing the two bioclassification scores, which ideally should be the same.

Taxonomists use current, accepted taxonomic references in making identifications as well as in interpreting the results (see References). In addition, primary literature is kept on file and used when the above keys are not appropriate. Taxonomists also attend workshops and in-service training sessions to expand their knowledge and competence.

1.6 Index Period

For ambient monitoring SCDHEC's index period is 15 June to 15 September for the Blueridge, Piedmont, and Southeastern Plains ecoregions while it is 15 January to 15 March in the Middle Atlantic Coastal Plain Ecoregion. Attempts are mode to stay away from the margins of these date brackets if time permits. Special studies in which an upstream control site can be used theoretically can be conducted at any time of the year. A summer sample is often used but recent findings demonstrate that a winter sample may be more valuable, particularly in small watersheds. This is because the upstream control often has a better macroinvertebrate community when water levels are higher and more stable, making any potential change more noticeable.

1.7 References

Barbour, M. T., J. Gerritsen, B. D. Snyder, J. B. Stribling. 1997. Revision to rapid bioassessment protocols for use in streams and rivers: Periphyton, benthic macroinvertebrates and fish. EPA 841-D-97-002, Washington, D.C.

Bode, R. W. 1983. Larvae of North American *Eukiefferiella* and *Tvetenia* (Diptera: Chironomidae). New York State Museum Bulletin No. 452. The New York State Education Dept., Albany, NY. 40 pp.

Brigham, A. R., W. U. Brigham, and A. Gnilka. 1982. Aquatic insects and Oligochaeta of North and South Carolina. Midwest Aquatic Enterprises, Mahomet, IL. 800 pp.

Brinkhurst, R. O. 1986. Guide to the freshwater aquatic microdrile oligochaetes of North

North Carolina Department of Environment, Health and Natural Resources (NCDEHNR). 1997. Standard operating procedures: Biological monitoring. Division of Environmental Management, Water Quality Section, Raleigh, NC.

Omernik, J.M. 1987. Ecoregions of the conterminous United States (map supplement). Annals of the Association of American Geographers. 77(1): 118-125.

Pennak, R. W. 1989. Freshwater invertebrates of the United States. 3rd Ed. John Wiley and Sons, NY. 628 pp.

Ross, H. H. 1944. The caddisflies or Trichoptera of Illinois. Entomol. Reprint Specialists, Los Angeles. CA. 326 pp.

South Carolina Department of Health and Environmental Control. 1997. Environmental Investigations Standard Operating Procedures and Quality Assurance Manual. Environmental Quality Control. Columbia, S.C.

Stewart, K. W. and B. P. Stark. 1988. Nymphs of North American stonefly genera (Plecoptera). The Thomas Say Foundation., Vol. 12. 460 pp.

United States Environmental Protection Agency. 1997. Field and laboratory methods for macroinvertebrate and habitat assessment of low gradient nontidal streams. Mid-Atlantic Coastal Streams Workgroup, Environmental Services Division, Region 3, Wheeling, WV. 23 pp.

Usinger, R. L. 1971. Aquatic insects of California. Univ. Calif. Press, Berkeley, CA. 608 pp.

Wallace, J. B., J. W. Grubaugh and M.R. Whiles. 1996. Biotic indices and stream ecosystem processes: Results from an experimental study. In: Ecological Applications, 6(1), 1996, pp. 140-151. by the Ecological Society of America.

Wiederholm, T. (ed.). 1983. Chironomidae of the Holartic Region. Keys and Diagnoses. Part 1. Larvae. Entomologica Scandinavica. Supplement No. 19. 457 pp.

Wiggins, G. B. 1996. Larvae of the North American caddisfly genera (Trichoptera). 2nd Ed. Univ. Toronto Press, Toronto, Canada. 457 pp.

Williams, W. D. 1972. Freshwater isopods (Asellidae) of North America. EPA Project No. 18050. U.S. Govt. Print. Off., Washington, D. C. 45 pp.

Macroinvertebrate Habitat Assessment - Short Form

Station _____ Date _____ Time _____ #Jars _____ #Vials _____

Stream Name _____ Location _____ County _____

Collectors Names _____ Field QC Logbook _____Page# _____

Air Temp (C) _____ pH (SU)_____ DO (mg/l)_____ H_2O Temp (C)_____ Cond (umhos/cm)_____

Aquatic Habitat Score: Excellent = 5 Good = 4 Good - Fair = 3 Fair = 2 Poor = 1 Nonexistent = 0

*Habitat	Score						Comments
Root Banks	5	4	3	2	1	0	
Logs, Sticks, Snags	5	4	3	2	1	0	
Rock/Gravel Riffle	5	4	3	2	1	0	
Mature Leaf Pack	5	4	3	2	1	0	
Aquatic Vegetation	5	4	3	2	1	0	
Total							

*If aufwuchs and/or sediment on the habitats appear to adversely affect colonization by macroinvertebrates, this impact is noted in the comments section; however, the habitat score does not change.

**Velocity/Flow: Fully Supporting Partially Supporting Not Supporting

Sedimentation: Little or no Moderate Severe

**The degree to which there is diversity of flow supportive of macroinvertebrate colonization of the variety of habitats.

Appendix G

SECTION 7
WASTEWATER FACILITY AND AMBIENT MONITORING

SECTION OBJECTIVES:

- To provide guidance for the proper collection of wastewater facility and ambient monitoring samples.
- To provide guidance for ensuring that the sample collected is representative of the material or medium being sampled;
- To provide guidance for sample handling and preservation techniques;
- To provide guidance for properly identifying the collected samples and documenting their collection in permanent field records;

7.1 Introduction

This guidance is for *routine* sampling of wastewater treatment facilities and ambient monitoring. Special studies require an approved study plan. The wide variety of conditions existing at different wastewater treatment facilities always requires that some judgment be made regarding the methodology and procedure for collection of representative samples of the wastewater. There are, however, basic rules and precautions generally applicable to all wastewater sample collection.

7.2 Preparation and General Considerations

Proper planning for sampling of a treatment facility is essential to ensure that the facility is sampled correctly. Some important considerations are as follows:

- Selection of the facility to be sampled. (Consult monitoring schedule and/or regional office water pollution manager).
- Coordination with laboratory supervisor and facility evaluator. Sampling staff work schedules may have to be adjusted to insure samples are received by the Lab within the allowable holding times and other lab procedures.
- Review of all existing data from the National Pollutant Discharge Elimination System (NPDES) permit or other permit, facility evaluations, enforcement orders, etc. including Water Pollution Control (WPC) views, Environmental Facility Information System (EFIS), maps of sampling locations, etc.
- Performance of field reconnaissance, if needed, or consultation with personnel having knowledge of the facility that is scheduled.

- Preparation of a work schedule as to what equipment is needed and what parameters will be sampled (NPDES or other permit should always be available in the field).

- The necessary equipment should be inspected for cleanliness and made sure that the said equipment is in proper working order before leaving the Region office.

- Consider weather forecast and possible affects on sampling (ask operators about flow increases due to inflow and infiltration).

- Before installation of sampling equipment, the owner/ operator should be notified. Split sampling should be encouraged with the owner/operator except in the cases of unannounced inspections.

- Each parameter to be sampled, as described in the NPDES or other permit, should be appropriately collected in the proper container, properly preserved, and the sample chain-of-custody maintained.

- When collecting samples or installing sampling equipment, field investigators always wear a new pair of the appropriate protective gloves (disposable latex gloves, rubber gloves, etc.) to prevent contamination of the sample and reduce exposure.

- At no time shall sampling equipment other than DHEC's be used for sample collection to determine permit compliance.

The above mentioned considerations are applicable to all facility sampling. It should be standard practice before entering into a facility sampling activity that all personnel involved have reviewed the above points.

7.3 Site Selection

Routine wastewater facility samples should be collected at the location(s) specified in the NPDES permit. Documentation, such as a map indicating the approved sampling locations, should be retained to insure samples are collected at proper locations. Some considerations for obtaining a representative wastewater sample include the collection of the sample where the wastewater is well-mixed, the collection of the sample at or near the center of the flow channel , and the collection of the sample at approximately 40 to 60 percent of the water depth where turbulence is at a maximum and the possibility of solids settling is minimized. Skimming of the water surface or dragging the channel bottom with the sampling probe should be avoided. However, allowances should be made for fluctuations in water depth due to flow variations. In some instances, the sampling location specified in the permit, or the location chosen by the permittee, may not be adequate for the collection of a representative wastewater sample. In such cases, the field investigator should collect a representative sample at the point that the investigator feels is best in addition to the location specified in the permit. Record any deviations in the field log book. When chlorination is used for disinfection, TRC samples must be taken at the end of the disinfection process, prior to dechlorination (as well as specified by the permit). If flow is split **between** two or more chlorine contact chambers before chlorine is added, then TRC residual should be checked in each contact chambers (not just after the flow recombines). **This should be done each time that a fecal coliform sample is taken.** Samples for **Toxicity** testing should be taken at or as close to the discharge point as possible, and may include effluent from multiple outfalls if 2 or more outfalls mix before being discharged. Documentation should be entered in the field logbook. If no site is specified in the permit, samples should be collected at the last accessible

representative site following the final treatment process and prior to discharge to the receiving stream. At certain facilities, additional measures may have to be employed to obtain samples in areas of limited access. Recommendations for any changes in sampling location should be given to the appropriate permitting division in the Central Office.

7.3.1 Influent:

Preferably, influent wastewaters are sampled at points of highly turbulent flow in order to insure proper mixing. However, in many cases the most desirable location is not accessible. In all cases, samples should be collected upstream from any recirculated plant supernatant and sludges and the sample collected should be completely untreated.

7.3.2 Effluent:

Effluent samples should be collected at the site specified in the permit, or if no site is specified in the permit, at the most representative site downstream from all entering wastewater streams prior to discharge into the receiving waters. If a conflict exists between the permittee and inspector regarding the source being sampled or the location of the most representative site, follow the procedures previously described under "Site Selection".

7.3.3 Ambient Monitoring (Surface Water) Sampling Site Selection:

Streams and lakes are monitored routinely at specified locations. Care must be taken to locate the exact location using landmarks such as marker buoys or bridge mid-points. In streams, the samples must be taken from an area that is well mixed and where the stream is deep enough to submerge sampling equipment. Unless predetermined stations have been established then the location is to be recorded as percent from right bank.

The following factors should be considered in the selection of surface water sampling locations:

- Study objectives;
- Water use;
- Point source discharges;
- Nonpoint source discharges;
- Tributary locations;
- Changes in stream characteristics;
- Type of stream bed;
- Depth of stream;
- Turbulence;
- Presence of structures (weirs, dams, etc.);
- Accessibility; and
- Tidal effect (estuarine).

Before any sampling is conducted, an initial reconnaissance should be made to locate suitable sampling locations. Bridges and piers are normally good choices as sites since they provide ready access and permit water sampling at any point across the width of the water body. However, these structures may alter the nature of water flow and thus influence sediment deposition or scouring. Additionally, bridges and piers are not always located in desirable locations with reference to waste sources, tributaries, etc. Wading for water samples in lakes, ponds, and slow-moving rivers and streams must be done with caution since bottom deposits are easily disturbed, thereby resulting in increased sediments in the overlying water column. On the

other hand, wadeable areas may be best for sediment sampling. In slow-moving or deep water, a boat is usually required for sampling. Sampling station locations can be chosen without regard to other means of access if the stream is navigable by boat, especially in estuarine systems where boats frequently provide the only access to critical sampling locations.

Water environments are commonly separated into two types:

- Flowing water, including estuarine environments, rivers, creeks, and small to intermittent streams; and

- Water that is contained, with restricted flow including lakes, ponds, and manmade impoundments.

7.3.4 Ambient Water Quality Monitoring Locations:

A network of ambient monitoring stations has been established throughout South Carolina to assess water quality trends across the State. Specific sampling stations, their locations, and parametric coverage at those stations are presented annually in the State of South Carolina Monitoring Strategy (12).

In addition to ambient water quality monitoring, the guidelines and methodologies presented in this manual are followed for intensive water quality surveys, lake studies, and any other special water quality studies conducted by DHEC.

In order for the ambient stations to be monitored effectively, proper planning and organization is necessary throughout the sampling program. Guidelines presented here will not only assist monitoring personnel in meeting their responsibilities but also will provide consistency in sampling procedures throughout the State.

7.4 Sample Types

Sample types include split, duplicate, blank, grab, and composite. For NPDES sampling, two types of sampling techniques are used: grab and composite. For these procedures, the NPDES permit specifies the appropriate sample type. The NPDES permit should be carefully reviewed for the proper sampling type, location and time period specified before setting up the sampler. A complete description of all NPDES sampling procedures and techniques is presented in the NPDES Compliance Inspection Manual (1).

7.4.1 Split Sample

A split sample is any effluent, stream, sediment, or other media sample that is divided with a facility owner, facility operator, other regulatory agency personnel, or any other person that is not associated with DHEC. Split samples should always be offered to the responsible party's representative when present. In order to protect the integrity of the split sample, the following procedure must be followed:

There must be an adequate volume of sample before a split can be made. It may be necessary for the other party to request a split in advance of the sampler set-up in order to insure this. No additional sample can be added to a composite once the sampling cycle has been initiated and/or completed. A signature of acceptance must be obtained from the party receiving the sample before the split sample is released. If the party or representative that is requesting the split sample is not present to receive the sample and provide the necessary signature, then no samples will be split. The signature of the party must be placed in the Comments Section of the Field Quality Control Logbook, along with the date, time, type of sample that is split, and

identification of the party's association with the split sample (e.g., agency name, facility name, consulting firm). If split samples are analyzed on-site for insitu parameters such as pH and residual chlorine, the other party should be observed whenever possible to insure proper analytical procedures are being performed. The results by both parties should be recorded in the field logbook. **Only DHEC results should be recorded on the inspection chain of custody form.** All samples can be split except for those parameters noted in the following section.

7.4.2 Split Samples for Bacteria

Typically split samples for bacteria are not provided, but a duplicate sample may be offered. If the permittee or other party insists on splitting a bacteria sample, the following procedure may be used with proper advance arrangements:

Split samples for fecal coliform bacteriological testing must be taken from a sterilized DHEC sample container only. Proper procedures are:

1. Collect the routine fecal coliform sample using a sterile 250ml bottle containing declorinating agent.
2. Shake the sample thoroughly by inverting back and forth at least 25 times to insure complete mixing of the contents.
3. Transfer sample into two (2) 125 ml disposable sterilized containers containing declorinating agent.
4. One bottle may be given to the facility representative requesting the split sample. The facility representative must sign in the field logbook before receiving the split sample from the DHEC inspector.
5. Follow routine procedures for preserving and transporting sample back to the lab.

7.4.3 Duplicate Samples

A duplicate sample is two or more samples collected from the same source at the same time. The following is a list of parameters that, if requested as a split sample, must be collected as a grab sample and described in the Field Quality Control Logbook as a duplicate sample:

Sulfide
Oil and Grease
Organic Halides
Purgeable Organics (Volatile Organics)
Bacteria (see 7.4.2 for special split samples)

7.4.4 Field Blank Samples

DHEC uses two types of field blank samples. The first type, which is for ambient sampling for volatile organics, is a blank sample that is collected from the laboratory deionized water system carried into the field as a sample and returned to the Laboratory for analyses. The second type of field blank sample consists of deionized water that is taken into the field in a properly cleaned glass container. This type of blank is for organic sampling at treatment facilities. From this deionized water, a portion is pumped through the wastewater sampler and discarded. The remaining portion of deionized water is then pumped through the sampler and collected into the particular organic sample container specific to the analyses to be conducted.

7.4.5 Grab Samples

A grab sample is a discrete sample collected at a specific point and at a particular instance in time.

Grab samples are:

- used to characterize the medium or material at a particular instant in time; and,
- always associated with instantaneous wastewater flow data.

Grab sampling is conducted when:

- specified by the NPDES permit
- the water or wastewater stream is not continuous (e.g., batch discharges or intermittent flow);
- the characteristics of the water or waste stream are known to be constant or nearly so;
- the sample is to be analyzed for parameters whose characteristics are likely to change significantly with time, i.e., dissolved gases, bacteria, etc.;
- the sample is to be collected for analysis of a parameter such as oil and grease where the compositing process could significantly affect the observed concentration relative to the true concentration; and,
- data on maximum/minimum concentrations are desired for a continuous wastewater stream.

Samples that will always be collected as a grab type and parameters that will always be analyzed from such include:

pH
Temperature
Dissolved Oxygen
Sulfide
Cyanide
Total Phenol
Volatile Organics
Organic Halides
Ortho Phosphorus
Hexavalent Chromium
Phenol
Oil and Grease
Bacteria
Chlorine Residual
Salinity
Specific Conductance
Total Dissolved Phosphorus
Dissolved Metals

Except where otherwise specified in Section 7.7(Special Sample Collection Procedures), grab samples may be collected by submersing the sample container in the waste stream, catching effluent as it flows over a weir, using a composite sampler set for continuous flow. When possible, the sample should be collected directly into the appropriate sample container. The container should not be overfilled if preservatives are present in the container. If the material to be sampled cannot be physically reached, an intermediate collection device may be used. When the sample container must be lowered into the waste stream, either because of safety or impracticality (manhole, slippery effluent area, etc.), care must be taken to avoid contamination. The most desirable sampling location is the area of greatest mixing. Quiescent areas should be avoided. The sample container should be plunged into the wastewater using a swooping motion with the mouth facing upstream

When analyzing grab samples in the field, holding times, usually fifteen (15) minutes, must be adhered to. The time the sample is collected and the time the sample is actually analyzed must be noted in the logbook and field lab form. Although one sample maybe collected for use in several analyses, if all tests cannot be completed within the holding time allowed, then another sample must be collected and times documented separately.

7.5 Manual Stream Sampling

Manual sampling is normally used for collecting grab stream samples and/or for immediate in-situ field analyses. The best method to manually collect a sample is to use the actual sample container which will be used to transport the sample to the laboratory; this eliminates the possibility of contaminating the sample with an intermediate collection container. In general, samples are manually collected by first selecting a location in the stream that is well mixed and then dipping the container in the water so the mouth of the container faces upstream. The container should not be overfilled if preservatives are present in the container.

If the stream cannot be physically reached by the sampling personnel, an intermediate collection container can be used. The sample is then collected by lowering a properly cleaned plastic, glass, or stainless steel container (type of container used depends on the parameter being sampled) into the water to be sampled. If this is done, however, the container used to collect the sample must be properly cleaned (Appendix B.2.2) and must be made of a material that meets the requirements of the parameter(s) being investigated. The container may be attached to a pole, chain, rope, or string and then lowered into the stream. Samples are collected manually by tipping the collection container in the stream to a depth of 0.3 meters. Samples for oil and grease, bacteria, phenols, volatile organic compounds, and sulfides analyses must always be collected directly into the sample container.

The most widely used piece of equipment used for collecting grab samples is a dissolved oxygen (D.O.) dunker. A D.O. dunker consists of a stainless steel bucket with a removable top that has at least one, generally two, filler holes with rubber tubing that should extend to the bottom of the dunker.

During sample collection, the collection container should be allowed to submerge to approximately 0.3 meters below the water surface until it fills completely. Care should be taken not to allow the collection container to disturb the sediment in shallow streams to preclude introduction of solids into the sample. The collection container should be rinsed thoroughly with deionized water after each sample is collected to avoid transferring pollutants from one sample to another sample.

7.5.1 Preparation and Sample Collection:

When preparing for stream or lake monitoring sample collection, the collector should organize a list of those stations to be sampled and the parameters required for each station. All necessary sample containers should be obtained with care taken to select the proper containers for the parameters required. If pre-labeled, the containers can be segregated, by station, and placed in the sampling vehicle so they will be convenient to the collector during the sample collection. Sample containers as well as sampling equipment should be

secured and controlled access maintained to prevent contamination or tampering. It is recommended that extra containers be kept in the vehicle in case of accidental loss or breakage of the prepared containers. A quantity of ice sufficient to keep the samples at or below the required 6°C should be in each cooler used to transport the samples back to the laboratory. Bacteria samples should be preserved in a separate cooler (i.e., Little Oscar or other small cooler) to prevent contact and/or contamination through submergence of the sample bottle in water. All nutrients, metals, mercury, chlorides, and bacteria sample bottles will be placed in Whirl-Pak bags or zip lock plastic bags at the time of collection. The bags should be securely sealed, and the sample will then be preserved in ice at 6°C. Bags will be reused and discarded only when they can no longer be securely sealed or become punctured. No sample bottle should ever be allowed to become submerged in water within a cooler. Dirty coolers should be cleaned following procedures in Appendix C.5.9.

When sampling any stream station, the sample should be collected from an area in the stream that is well mixed and where the stream is deep enough to submerge sampling equipment. Unless predetermined stations have been established then the location is to be recorded as percent from right bank. For sampling purposes, the right bank is observed when facing upstream at the sampling site.

Bacteriological, organic, and oil and grease samples must be collected from the stream directly into their respective containers. These containers are specially prepared and the investigator must be careful not to contaminate the sample bottle by touching the inside of the container or the inside of the lid of the container. If the stream cannot be physically reached by the sampling personnel, the container may be attached to a pole, chain, rope, or string and then lowered into the stream.

Once the samples have been collected, those requiring laboratory analyses should be mixed thoroughly and poured into the proper bottles and preservatives added as required. Proper preservation for samples is discussed in **Appendix A**.

7.5.2 Profile Sampling:

The procedure outlined here will provide acceptable techniques and consistency for profiling water quality parameters. Profile sampling is conducted by DHEC on selected lakes, reservoirs and marine stations and some large river locations throughout the State. The purpose of profile sampling is to evaluate the quality of the water column being sampled.

Profile readings for field parameters should start at the top (0.3 meters) of the water column and descend at one meter intervals from the surface to the bottom. The bottom depth should be recorded to the nearest half-meter, i.e., 3.5 meters. At each measurement (each meter) at least one minute is required for the meter probes to equilibrate. The sampling times that are recorded for profile sampling must be in ascending order, i.e., 10:00, 10:01, 10:02 (see Section 19.4.6 for example of profile sheet). At selected secondary stream stations and during selected special studies, profile data are required at the top, middle and bottom of the water column. In these cases it is necessary to determine the bottom depth before profile measurements can begin at the top of the water column. The middle depth should be recorded to the nearest half-meter.

If it is necessary to add additional weight for the probes to overcome water currents, an independent suspension cable must be used. When additional weights are used while profiling for conductivity/salinity, care must be taken to keep the weights at least 6 inches away from the probe.

7.6 Composite Samples

A **composite sample** is usually associated with wastewater treatment facility sampling. The following guidance is given for the use of composite samples:

1. Composite samples are used when:

- required by the NPDES permit
- average constituent or waste concentrations are of interest; and,
- always associated with continuous flow data.
- the wastewater stream is continuous;
- it is necessary to calculate mass per unit time loadings;
- analytical capabilities are limited.

There are two types of composite samples: those composited by time and those composited by flow. DHEC uses three major compositing procedures at wastewater treatment facilities. These three procedures are automatic flow proportional, time composite, and manual flow proportional.

7.6.1 Flow Proportional Composite Sampling:

For DHEC purposes a **flow proportional composite** sample is usually collected over a 24-hour period and contains a number of discrete samples with constant volumes collected at a frequency proportional to the flow rate during the compositing time. Routine facility composite sampling is commonly flow proportional.

1. A flow proportional composite sample is used when:

- Required by the permit
- wastewater flow is highly variable (greater than +/-15 percent of the average daily flow).

2. A flow proportional composite sample will be collected as follows:

- continuously and proportional to the waste stream flow;
- with constant sample volume and the time between samples proportional to waste stream flow; or,
- with a constant time interval between samples and a sample volume proportional to flow at the time of sampling.
- A flow meter is used in conjunction with the automatic sampler to initiate the sample collection at a frequency proportional to the flow rate. The flow meter and sampler program times are synchronized to start at the same time. Start times can be programmed into the sampler to achieve this. The internal clocks for both devices should match.

7.6.2 Use of Automatic Samplers:

Automatic samplers may be used to collect composite or grab samples when several aliquots are to be collected at frequent intervals or when a continuous sample is required. For composite sampling applications, the automatic samplers may be used to collect time composite or flow proportional samples. In the flow proportional mode, the samplers are activated by a compatible flow meter. Flow proportional samples can also be collected using an automatic sampler equipped with multiple containers and manually compositing the individual sample portions proportional to the flow (1) (see Section 7.6.7). However, in most cases this method is no longer used as “Discrete” automatic samplers have been replaced with “Composite” samplers that are programmed in conjunction with a flow meter to properly flow-proportion the collection in the field.

Prior to leaving the region office it is important to check the automatic sampler and related appurtenances for proper operation and complete components. Batteries, if needed, should be fully charged. Locks, cables, security tape, etc. should be available.

Maintenance

The fuse for the ISCO sampler should be checked before and after each sampling. Also, a desiccant is located on the side or top of the instrument panel. This desiccant is originally blue and should be checked each time the sampler is used. If the desiccant should turn pinkish in color, replace with fresh desiccant. Desiccant can be renewed by drying in a drying oven at 103°C to 105°C overnight. The desiccant should be allowed to cool in an airtight container before use. The 12-volt batteries to be used with the sampler; should be checked prior to leaving the office. If facility power is to be used, every effort should be made to guard against accidental or intentional power disruption.

After each sampling activity the ISCO automatic sampler should be thoroughly cleaned and the operation checked (forward, reverse, auto, etc.) the same day that it is returned to the laboratory. When the sampler is not in use it should be stored in an environmentally-controlled atmosphere.

During each field trip, prior to initiating the automatic sampler, the rinse and purge-pump-purge cycle shall be checked at least once. The pumping volume should be checked at least once using a graduated cylinder or other calibrated container prior to initiating the sampler. For flow proportional sampling, the flow pacer that activates the sampler should be checked to insure that it operates properly.

Upon return from a field trip, the structural integrity of the sampler should be examined and repaired, if necessary. The desiccant will be checked and replaced, if needed. The operation (forward, reverse, automatic, etc.) will be checked and any required repairs will be made and documented.

Specific operating instructions, capabilities, capacities, and other pertinent information for automatic samplers are included in the Programming Guides for ISCO Flow Meters and Samplers (2) available in each regional office, or the respective operating manuals. These manuals should be kept for reference (3). Manuals may also be obtained from the ISCO website: http://www.isco.com/products

Due to the heavy workload of wastewater monitoring and the adaptability of automatic samplers to many sampling requirements, these automatic samplers are used extensively. Automatic samplers presently being used by DHEC include ISCO model 2710 and 3710 samplers, but older models may still be available as back-up units.

Volume calibrations must be performed during the initial setup at each facility to ensure that at least 100 ml's of sample is collected per sample, that bottles will not overflow, that sufficient sample is available for manual flow proportioned composites, and that aliquot volumes are known to determine total volume and frequency of sample collections from ISCO 1870, 2870 and 3230 flow meters. Graduated cylinders should be used to perform volume calibrations. **Calibrations must be entered in the Field Quality Control Logbook** (see Section 8.15.7). Once the composite sample has been collected at wastewater facilities, the temperature must be read in the field and recorded in the appropriate space provided in the field logbook.

Automatic flow proportional composite sampling is currently being accomplished by use of the ISCO flow meters in conjunction with ISCO automatic samplers. The Stevens flow recorder is no longer used. When using the Model 2870, 3230 or 4230 flow meter, the ISCO sampler is triggered through an electronic pulse to collect a pre-determined volume of sample after a variable time for which a certain flow has passed a reference point. Samples are to be collected over the entire period indicated by the NPDES permit. Standard procedure is to collect at least 100 ml's of sample per aliquot. For compliance purposes, a guideline of collecting approximately 50 sample aliquots with a volume of between 100ml and 150 ml per aliquot would provide sufficient volume and representativeness of sample (provides approximately two

gallons of sample). **The sample period must match the required period specified in the permit (e.g. 24 hours).** However, for guidance, if it can be determined that the sampler will not collect another sample before the full 24-hour period is reached, the sampler can be robbed early. Otherwise, the full 24-hour period (or as specified by the permit) for sample collection should be observed.

In order to prevent the automatic sampler from continuing to run after the 24-hours or other desired time, an alternate shut-off procedure has been developed. This will allow for the complete sampling period to be completed in accordance with the permit, and allow some extra time for personnel to get to the site to retrieve the samples. This guidance document should be available in each regional office.

Once programmed and the sampler started, it should run on its own, automatically collecting flow-proportioned samples. It is not necessary to collect an initial manual sample at the beginning of the cycle.

The actual number of individual samples or aliquots retrieved over the specified collection time must be recorded in the Field Quality Control Logbook (see Section 19.4.6). Likewise, the volume of the individual samples must be obtained and recorded in the field logbook. The compositing frequency in gallons must be obtained by dividing the average daily flow (based on flow records, operator input, weather forecasts) by the number of individual samples or aliquots desired (in our case, approximately 50). The compositing frequency must be entered in the field logbook. The nominal volume of the collection container and its material must be noted (e.g. glass or plastic and its size). The sampler identification or SCDHEC Asset Number is to be included in the logbook.

For additional information on automatic compositing procedures, refer to the various ISCO instruction manuals (5,6,7) or at their website: http://www.isco.com/products. Instructions for use of flow meters associated with composite sampling are in Section 16.

The automatic sampler should be checked against the manufacturer's specifications and documented whenever one or more of the sampler functions appears to be operating improperly.

Automatic samplers must meet the following requirements:

- Sampling equipment must be properly cleaned to avoid cross-contamination which could result from prior use (see Section Appendix C for cleaning procedures).
- No plastic or metal parts of the sampler shall come in contact with the water or wastewater stream when parameters to be analyzed could be impacted by these materials.
- The automatic sampler must be capable of providing adequate refrigeration during the sampling period. This can be accomplished in the field by using ice and shade covers when necessary.
- The automatic sampler must be able to collect a large enough sample for all parameter analyses.
- The individual sample aliquot must be at least 100 milliliters. (Reference 12)
- The automatic sampler should be capable of providing a lift of at least 20 feet and the sampler should be adjustable since the volume is a function of the pumping head.
- The pumping velocity must be at least 2 ft/sec to transport solids and not allow solids to settle.

- The intake line leading to the pump must be purged before each sample is collected and sloped away from the sampler to minimize any sagging in the line that would prevent proper draining. The tubing should be appropriately secured to railing, etc. where necessary.

- The minimum inside diameter of the intake line should be 1/4 inch.

- An adequate power source should be available to operate the sampler for the time required to complete the project. Facility electrical outlets may be used if available.

7.6.3 Conventional Sampling (Inorganic Parameters):

Conventional sampling includes all inorganic parameters (e.g., BOD_5, TSS, COD, nutrients, and metals) that can be collected using an automatic sampler.

New tubing (Silastic, or equal, in the pump and either Teflon or Tygon, or equal, in the sample train) -must be used for any municipal or industrial compliance sampling inspection.

Installation procedures include cutting the proper length of tubing, positioning it in the wastewater stream, and sampler programming. Protective gloves should be worn to reduce exposure and to maintain the integrity of the sample.

For a flow proportional sample, the sampler should be programmed to collect a minimum of 100 milliliters for each sample aliquot with the interval predetermined based on the flow of the monitored wastewater stream.

At the end of the compositing period, the sample collected should be properly mixed and transferred into the respective containers, followed by immediate preservation, if required. For routine inspections, the permittee should be offered a split sample.

7.6.4 Low Level Metals:

When an automatic sampler is used for collecting samples for low level metals analyses in addition to extractable organics, the entire sampler collection system should be rinsed with organic/analyte-free water, and an equipment blank should be collected for metals and organics. Approximately one gallon of rinse water should be pumped through the sample tubing into the composite container and discarded. Nitric acid must be added to the metals blank container for proper preservation. The sampler may then be positioned in the appropriate location and the sampler program initiated.

If the sampler tubing is attached to a metal conduit pipe, the sampler intake tubing should be carefully installed upstream and away from the conduit to prevent metals contamination. This can be accomplished by clamping the tubing upstream of the conduit using laboratory clamps and wrapping the submerged portion of conduit pipe with a protective barrier (e.g., duct tape). **Currently, SCDHEC does not have the capability to collect and analyze samples for low level metals.**

7.6.5 Extractable Organic Compounds, Pesticides, and PCBs:

When an automatic sampler is used for collecting samples for the analyses of extractable organic compounds, pesticides, and/or PCBs, the installation procedures include cutting the proper length of new Teflon7 tubing, rinsing of the entire sampler collection system with organic/analyte free water, and collection of appropriate blanks for organic compounds analysis. For quality control of composite samples that are to be

collected for organic analyses, a blank must be collected prior to beginning sampling. The following procedure is to be used when collecting the blank sample:

1. Approximately two and one-half gallons of deionized water must be taken into the field in a properly cleaned container (see Appendix C for cleaning procedures for organic sample containers) capped with aluminum foil.

2. Once the sampler has been set up at the sampling site, pump approximately two gallons of deionized water through the sampler and discard.

3. The remainder of deionized water (approximately one-half gallon) should then be pumped into the sampling container that is being used during the sampling inspection. This deionized water will be used for the blank samples. If sequential bottles are used, it will be assumed that all bottles are clean and only enough bottles needed to collect the necessary blank samples should be used.

4. The deionized water should then be decanted into the particular organic sample containers specific to the analyses to be conducted.

5. The blank sample should be iced immediately and returned to the laboratory for analyses of the organic parameters on the NPDES or other discharge permit.

7.6.6 Time Composite Sampling:

A time composite sample is one containing a number of equal-volume discrete samples taken at equal time intervals over the compositing period as specified by the NPDES permit. The time composite definition is sometimes used where water or wastewater flows do not vary more than $\pm$15 percent of the average daily flow rate.

1. Time composite samples will be used where wastewater flows are constant or are considered for all practical purposes to be constant. (within $\pm$ 15% of average daily flow)

2 A time composite sample will be collected as follows:

- continuously; or,
- with constant sample volume and a constant time interval between samples.

The time composite procedure is conducted using various model ISCO samplers with constant sample volume and a constant time interval between samples, usually one sample per hour over the time period specified in the permit. For time composite sample, the sampler should be programmed to collect at least 100-milliliter aliquots at a frequency that provides a representative sample and enough sample volume to conduct all required analyses. The compositing frequency in minutes must be recorded in the Field Quality Control Logbook (see Section 19.4.6).

7.6.7 Manual Flow Proportional Sampling:

For special studies, process control evaluations, criminal investigations or identification of possible unpermitted activities, etc., manual flow proportional samples using a “discrete or sequential” sampler may be collected. The automatic sampler is fitted with 24 individual bottles that allow observation of individual aliquots throughout the sampling period. The following is a step-by-step procedure for manual flow proportional sampling using a recording flow meter and an ISCO automatic sampler with sequential bottles:

First Day Procedures

1. Automatic sampler and flow recorder should be installed at the proper sampling location. Calibrate the sample volume to ensure adequate sample for compositing.

2. The sampling sequence and flow recorder should start at the same time. This is very important, as each sample volume is based on the flow at the time it was collected.

3. Initiate sample No. 1 at the time the sampler is installed. You will need to return after 23 hours to service the sampler and composite the samples. At that time there should be a total of 24 samples.

Second and Third Day Procedures

1. Switch the automatic sampler to the OFF position.

2. Remove the flow chart from the recorder. Determine each hourly head/flow reading that corresponds with each sample. Find the instantaneous flow for each hourly sample. Sum these instantaneous flow volumes to obtain the total daily flow.

3. Using the instantaneous hourly flow in million gallons per day (mgd), divide by the total daily flow in mgd. Once this fraction has been determined for all twenty-four hourly flows then multiply by the total volume that is desired. This multiplication must be performed for each hourly instantaneous flow to produce the volume of sample for that sample aliquot.

4. Each of the determined volumes of the collected samples are combined to produce the manual flow proportioned composite sample. The individual samples must be thoroughly mixed before pouring the aliquots into the composite container.

5. Discard any excess sample, rinse sample collection bottles if needed and return to the automatic sampler. Repeat sampling procedure on the third day making certain to start sampler and flow recorder at the same time.

7.6.8 Automatic Sampler Security:

Field investigators should take whatever steps are necessary to prevent tampering with DHEC equipment. A lock or custody seal must be placed on the sampler to prevent tampering. However, this does not prevent tampering with the sample collection tubing. If required, seals may be placed on the sampling pole and tubing line to further reduce tampering possibilities.

7.7 Special Sample Collection Procedures

7.7.1 Organic Compounds and Metals:

Trace organic compounds and metals detection limits are usually in the parts per billion or parts per trillion range, so extreme care must be exercised to insure sample integrity.

All containers, composite bottles, tubing, etc., used for sample collection for trace organic compounds and metals analyses should be prepared as described in Appendix C.

When possible, the sample should be collected directly into the appropriate sample container. If the material to be sampled cannot be physically reached, an intermediate collection device may be used. This should be a Teflon, glass, or stainless steel vessel on a pole or rope or Teflon tubing via a peristaltic type pump and a Teflon vacuum container attachment which converts a sample container into a vacuum container. The device which is used should be cleaned as described in Appendix C.

For quality control of composite samples that are to be collected for organic analyses, a blank must be collected prior to beginning sampling (as described in Section 7.6.5).

When the sample container must be lowered into the waste stream, either because of safety or impracticality (manhole, slippery effluent area, etc.), care must be taken to avoid contamination.

7.7.2 Bacteriological:

Samples for bacteriological analyses must always be collected directly into the prepared glass or plastic sample container. The sample container should be kept unopened until it is to be filled. When the cap is removed, care should be taken not to contaminate the cap or the inside of the bottle. The mouth should be directed against the current. See Section 7.4.2 for special procedures for splitting bacteria samples. See **Appendix A** for preservation procedures and holding times. Staff collecting shellfish waters, recreational waters, and ocean waters should also reference **Section 8**.

7.7.3 Immiscible Liquids/Oil and Grease:

Oil and grease may be present in wastewater as a surface film, an emulsion, a solution, or as a combination of these forms. Since it is very difficult to collect a representative sample for oil and grease analysis, the inspector must carefully evaluate the location of the sampling location. The most desirable sampling location is the area of greatest mixing. Quiescent areas should be avoided. The sample container should be plunged into the wastewater using a swooping motion with the mouth facing upstream. Care should be taken to insure that the bottle does not over fill during sample collection.

Because losses of oil and grease will occur on sampling equipment, an automatic sampler should not be used to collect samples for oil and grease analysis. Individual portions collected at prescribed time intervals must be analyzed separately to obtain the average concentrations over an extended period.

7.7.4 Volatile Organic Compounds:

Samples to be analyzed for volatile organic compounds (VOCs) are collected in 60 ml. amber glass vials with screw caps with a Teflon7 lined silicone disk in the cap to prevent contamination of the sample by the cap. The disks should be placed in the caps (Teflon7 side to be in contact with the sample) in the laboratory prior to the beginning of the sampling program.

When sampling for VOCs, triplicate vials should always be collected from each location. Two field blanks are also required per cooler per sampling day. Sodium thiosulfate for chlorine removal is added to the VOC vials prior to shipment from the Central Laboratory. Vials should be filled to the threads with sample. Add three drops of 1:1 HCL from the dispenser provided. Fill the vial completely with sample without overflowing to ensure no headspace or air bubbles remain. The cap is then applied and some overflow is lost, but air space in the bottle is eliminated. After capping, turn the bottle over and tap it to check for bubbles; if any are present, repeat the procedure using a new bottle. Place sample on ice or refrigerate at 4º C from time of collection. Insert special procedures for heavy flow conditions or access difficulties utilizing a 250 VOC bottle as an intermediate collection device for VOC samples at WWTPs.

Sampling containers with preservatives should be prelabeled prior to any field activities. This will reduce the chances of confusion during sampling activities by the investigation team. Sample preservation, containers, holding times, and sample volumes are listed in **Appendix A**.

7.7.5 Toxicity:

Effluent sampling for the purpose of aquatic toxicity testing should always be conducted as specified by the toxicity limitations in Part III of the current NPDES permit. The type of sample required by the permit is determined by the type of test to be conducted. An acute test will require a grab sample and a chronic test will require 24-hour composite samples.

New polyethylene Cubitainers→ (brown, collapsible containers), new milk jugs, and properly cleaned glass jars may be used to contain toxicity samples. Grab samples may be collected by submersing the sample container in the waste stream or catching effluent as it flows over a weir. If this is not practical, grab samples may be collected using a clean glass jar which has been rinsed with 20% nitric or hydrochloric acid, then rinsed with acetone, or using a composite sampler set for continuous flow. If there is no other option, the sample may be collected with a dunker. If possible, use the dunker to hold a glass jar as a sampler container. If the dunker is used as the sampler container, it must be noted on the Field Parameter sheet (DHEC 2186).

When taking grab or composite samples, the composite sampler may be fitted with Nalgene→ or Tygon→ suction line tubing, but the pump tubing must be medical grade silastic or equivalent silicone tubing. The collection jar in the sampler must be a properly cleaned glass jar. **TOXICITY SAMPLES MUST NEVER CONTACT LATEX RUBBER TUBING, SINCE IT LEACHES ZINC, WHICH IS HIGHLY TOXIC TO THE TEST ORGANISMS.**

Toxicity samples should be taken at the discharge point or as close to it as possible, and may include effluent from multiple outfalls if two or more outfalls mix before being discharged.

1. Acute tests require a single two liter sample. Ship acute samples in either a new milk jug, Cubitainer→ or clean glass jar. Fill the container completely.

   Chronic tests require three separate two liter samples, which are taken Monday, Wednesday and Friday. Collect chronic samples in either a new milk jug, Cubitainer→, or clean glass jar. Fill the container completely.

2. No preservative is added to the sample.

3. Pack the sample in ice. Do not use cooling packs. The sample must be transported to the laboratory in an ice chest containing enough ice to cool it to and maintain a 6°C temperature.

7.8 Sample Preservation - See Appendix A

7.9 Sample Identification, Control, and Documentation

The success of any environmental monitoring program depends to a great degree on the capability to provide valid data and to be able to systematically demonstrate the validity of the data. It is essential that laboratories involved in the collection of primary evidence provide written procedures to be followed whenever evidence samples are collected, transferred, stored, analyzed, or destroyed. These procedures must provide for an accurate written record which systematically traces the possession of the sample within the laboratory organization from receipt of the sample to release of the data. The Chain of Custody procedures

that will be discussed must be fully employed to fulfill the legal requirements of the South Carolina Department of Health and Environmental Control.

All sample identification, chain-of-custody records, receipt for sample forms, calibration records, analytical records, and field records should be recorded with waterproof, non-erasable ink. If errors are made in any of these documents, corrections should be made by crossing a single line through the error and entering the correct information. Correction fluid must not be used. All corrections should be initialed and dated. If possible, all corrections should be made by the individual making the error.

If information is entered onto logbooks and sample tags or sample containers using stick-on labels, the labels should not be capable of being removed without leaving obvious indications of the attempt. Labels should never be placed over previously recorded information. Corrections to information recorded on stick-on labels should be made as stated above.

7.9.1 Sample and Evidence Identification:

The method of sample identification used depends on the type of sample collected. Samples collected for specific field analyses or measurement data are recorded directly in bound field logbooks or recorded directly on the Chain-of-Custody Record, with identifying information, while in the custody of the samplers. Examples include pH, temperature, conductivity, dissolved oxygen, and residual chlorine. Samples collected for laboratory analyses are identified by using standard sample labels which are attached to the sample containers. In some cases, particularly with biological samples, the sample labels may have to be included with or wrapped around the samples. The following information shall be included on the sample label using waterproof, non-erasable ink:

- field identification or sample station number;
- sample identification number;
- preservatives used; and
- the general types of analyses to be performed (tape on some containers).

Additional information about the sample should be recorded in a bound field logbook. The following information shall be included in the bound field logbook using waterproof, non-erasable ink:

- sample identification number;
- date and time of sample collection (compositing period if sample is a composite);
- designation of the sample as a grab or composite;
- type of sample (drinking water, wastewater, soil, etc.) or program area when applicable;
- brief description of sampling location, if pertinent;
- signature of the sample collector;
- field parameter (pH, dissolved oxygen, residual chlorine, temperature, conductivity, turbidity) analytical results; and

- relevant comments (e.g. readily detectable or identifiable odor, color, toxic properties, sheen, etc).

The field logbook may also include field instrument calibration information. If so, the information recorded should allow a person reviewing the records to recount the calibration events. Refer to **Section 14** for proper calibration and field parameter analysis procedures.

If a sample is split with a facility or other party representative, the recipient should be provided (if enough sample is available) with an equal weight or volume of sample. The split sample should be clearly marked or identified with a stick-on label, and a comment should be made in the field logbook.

Labels for blank or duplicate samples will be marked **"Blank"** or **"Duplicate"** respectively. This identifying information shall also be recorded in the bound field logbooks and on the Chain-Of-Custody Record.

7.9.2 Chain-of-Custody and Documentation - see Section 19

7.10 Cleaning and Maintenance

To remove contaminants from sampling and other field equipment to levels that do not impact monitoring objectives, standard cleaning procedures are used. Generally cleaning is done in the lab. However, some field cleaning procedures are also used. Refer to Appendices B and C for cleaning procedures.

7.11 Initial Processing of Returned Equipment

Field or sampling equipment that needs to be repaired will be identified with a "repair" tag. Any problems encountered with the equipment and specific required repairs shall be noted on this tag, as well as the date and the initials of the investigator. Field equipment or reusable sample containers needing cleaning or repairs will not be stored with clean equipment, sample tubing, or sample containers.

All aluminum foil wrapped equipment, containers, and tubing not used in the field may be placed back into stock after the following precautions are taken:

- Soap and hot water rinse plastic containers. Allow to air dry.
- If plastic wrapping leaks after soap/water rinse, remove the equipment and place it into the standard cleaning process.

7.12 References

1. U.S. Environmental Protection Agency, Office of Environmental and Compliance Assurance, NPDES Compliance Inspection Manual, September 1994.

2. South Carolina Department of Health and Environmental Control, Programming Guides for the ISCO Flow Meters and Samplers

3. ISCO, Inc., Instruction Manual for Model 2710, and 3710 Wastewater Samplers, Lincoln, Nebraska. Website: http://www.isco.com/products

4. U. S. Environmental Protection Agency, Center for Environmental Research Information, Retrofitting POTWs, EPA 625/6-89/020, Cincinnati, Ohio, 1989.

5. Water Pollution Control Federation, Operation Of Municipal Wastewater Treatment Plants, WEF Manual Of Practice No.11, Alexandria, Virginia, 1990.

6. Water Pollution Control Federation, Design Of Municipal Wastewater Treatment Plants, WEF Manual Of Practice No. 8, Book Press, Inc., Brattleboro, Vermont, 1991.

7. U.S. Environmental Protection Agency, Environmental Services Division, Water Compliance Unit, Activated Sludge Process Control Testing, Athens, GA, 1990.

8. U.S. Environmental Protection Agency, Office of Water, Process Control Manual: Aerobic Biological Treatment Facilities MD-14, EPA 430/09-77-006, Washington, D.C., 1977.

9. Metcalf and Eddy, Inc., Wastewater Engineering: Treatment, Disposal, Reuse, McGraw-Hill Book Co., New York, NY, 1991.

10. California State University - Sacramento, Operation of Wastewater Treatment Plants - Volume I, II, III, Sacramento, California.

11. South Carolina Department of Health and Environmental Control, Bureau of Water, State of South Carolina Monitoring Strategy, FYU2001.

12. U.S. Environmental Protection Agency, Handbook for the Sampling and Sample Preparation of Water and Wastewater, 600/4-82-029, September 1982.

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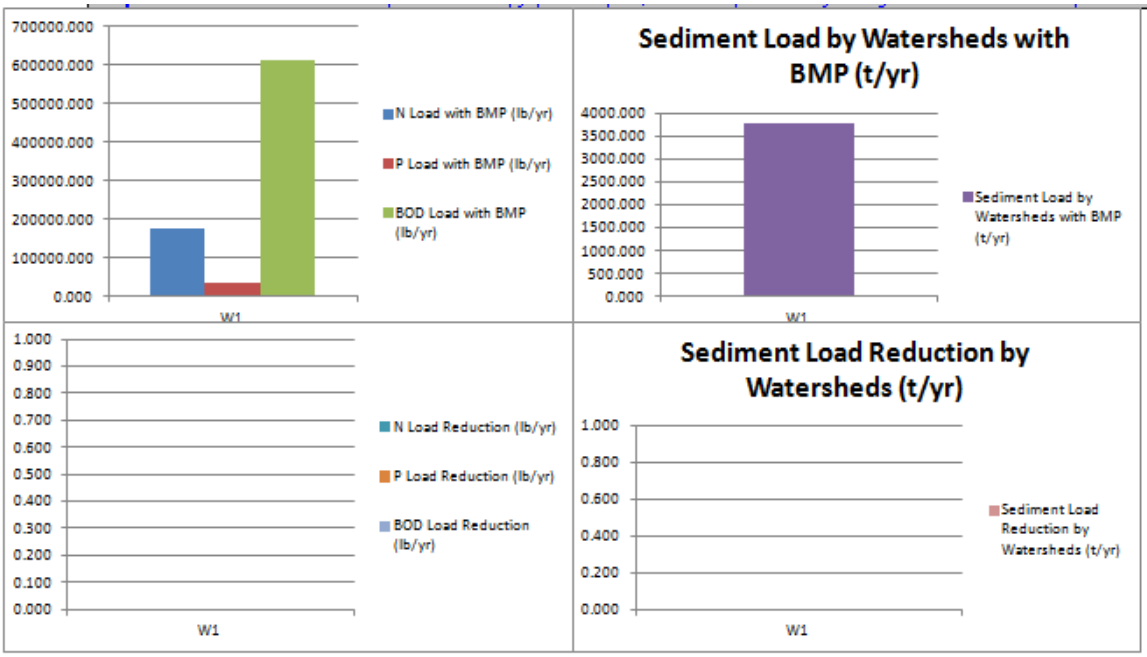
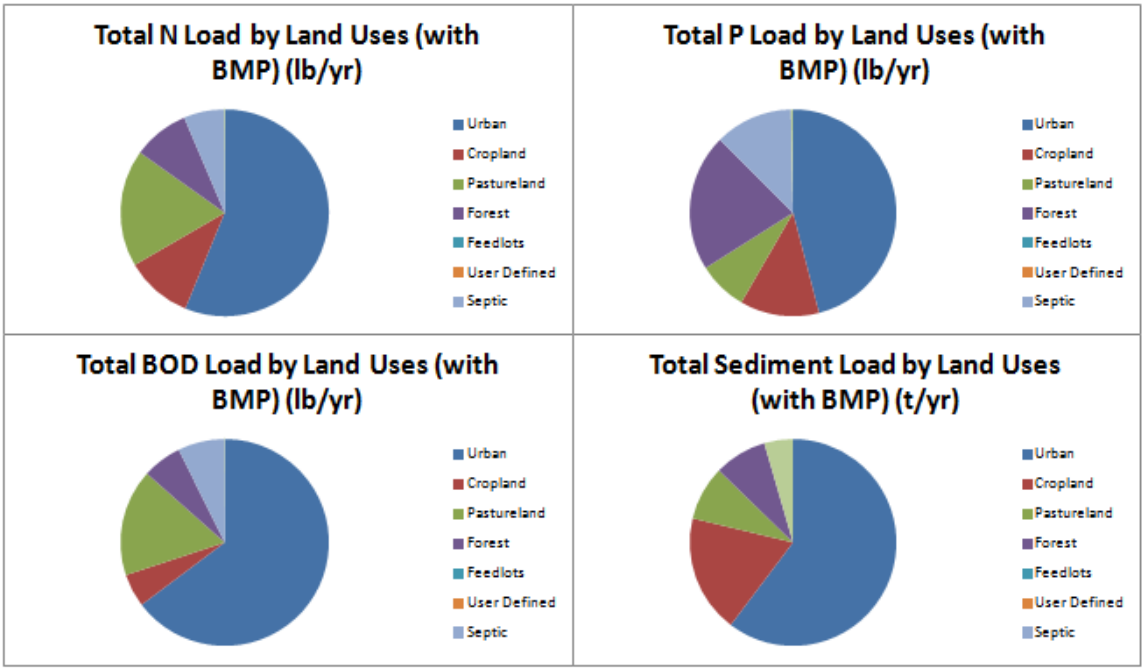
Appendix H

No BMPs





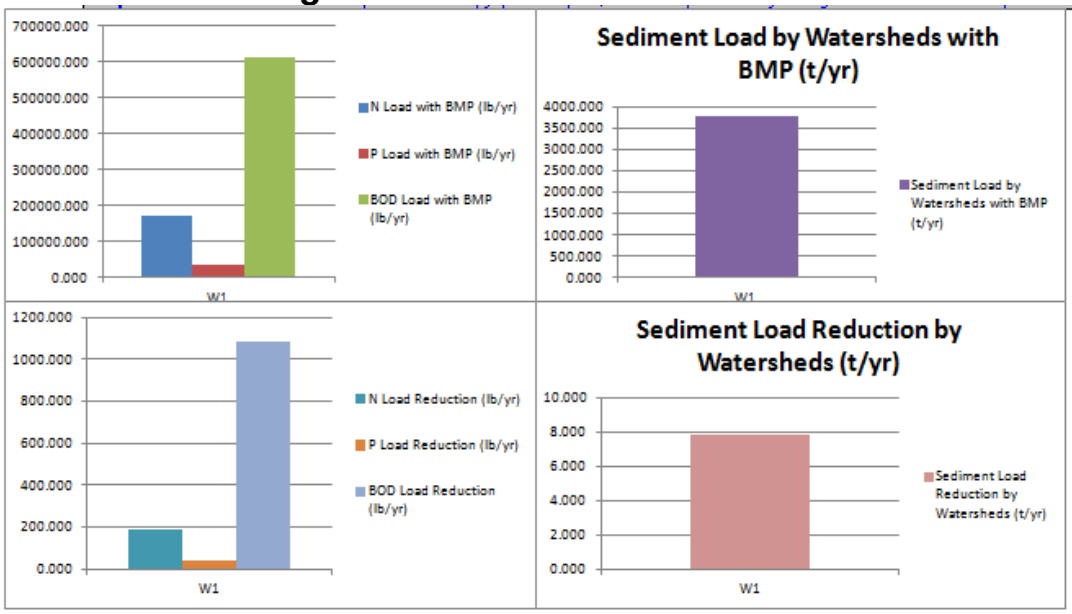
1. Total load by subwatershed(s)

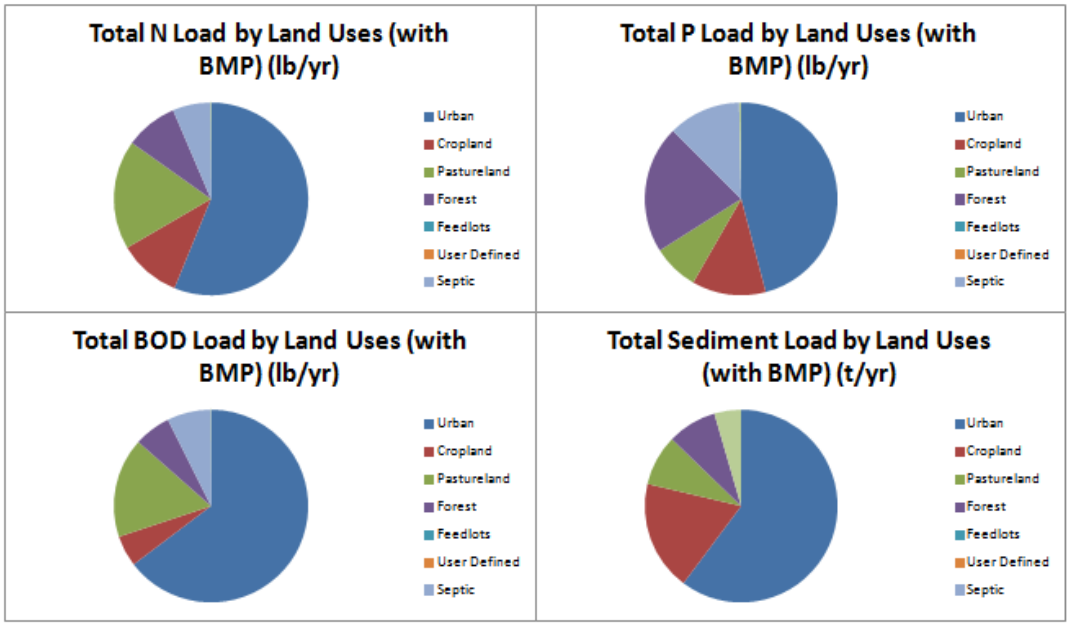
Watershed	N Load (no BMP)	P Load (no BMP)	BOD Load (no BMP)	Sediment Load (no BMP)	N Reduction	P Reduction	BOD Reduction	Sediment Reduction	N Load (with BMP)	P Load (with BMP)	BOD (with BMP)	Sediment Load (with	%N Reduction	%P Reduction	%BOD Reduction	%Sed Reduction
	lb/year	lb/year	lb/year	t/year	lb/year	lb/year	lb/year	t/year	lb/year	lb/year	lb/year	t/year	%	%	%	%
W1	174411.2	35024.1	613432.9	3783.2	0.0	0.0	0.0	0.0	174411.2	35024.1	613432.9	3783.2	0.0	0.0	0.0	0.0
Total	174411.2	35024.1	613432.9	3783.2	0.0	0.0	0.0	0.0	174411.2	35024.1	613432.9	3783.2	0.0	0.0	0.0	0.0

2. Total load by land uses (with BMP)

Sources	N Load (lb/yr)	P Load (lb/yr)	BOD Load (lb/yr)	Sediment Load (t/yr)
Urban	98078.15	16094.87	397306.30	2281.63
Cropland	18172.51	4342.14	31656.67	697.54
Pastureland	31725.71	2698.58	10182.69	321.72
Forest	15247.91	7509.08	37620.32	312.16
Feedlots	0.00	0.00	0.00	0.00
User Defined	0.00	0.00	0.00	0.00
Septic	10873.96	4258.97	44401.99	0.00
Gully	0.00	0.00	0.00	0.00
Streambank	312.98	120.50	625.97	170.10
Groundwater	0.00	0.00	0.00	0.00
Total	174411.22	35024.13	613432.94	3783.15

Stabilization along Dirt Roads and RR





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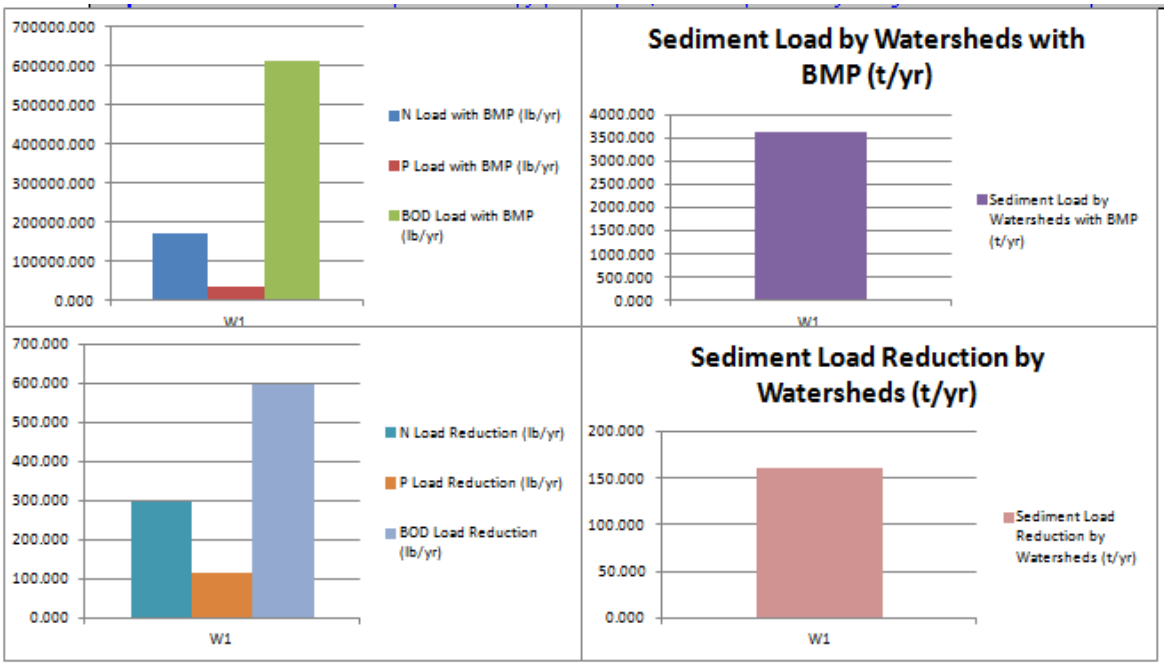
1. Total load by subwatershed(s)

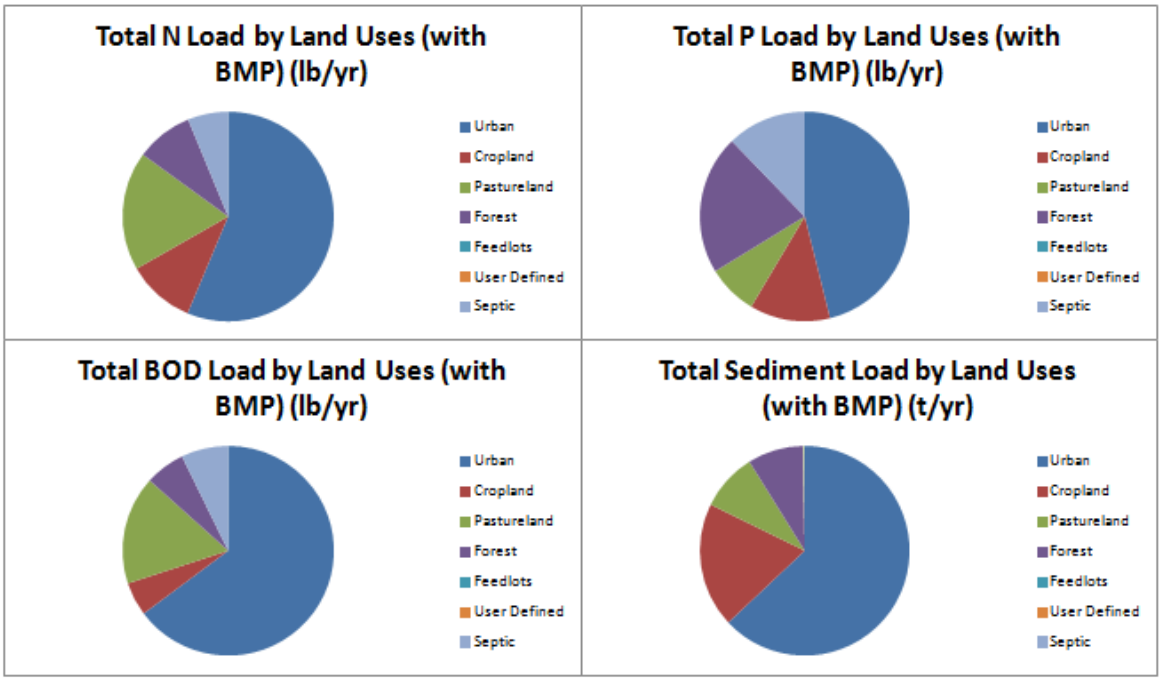
Watershed	N Load (no BMP)	P Load (no BMP)	BOD Load (no BMP)	Sediment Load (no BMP)	N Reduction	P Reduction	BOD Reduction	Sediment Reduction	N Load (with BMP)	P Load (with BMP)	BOD (with BMP)	Sediment Load (with	%N Reduction	%P Reduction	%BOD Reduction	%Sed Reduction
	lb/year	lb/year	lb/year	t/year	lb/year	lb/year	lb/year	t/year	lb/year	lb/year	lb/year	t/year	%	%	%	%
W1	174411.2	35024.1	613432.9	3783.2	188.5	38.8	1081.8	7.8	174222.7	34985.4	612351.1	3775.3	0.1	0.1	0.2	0.2
Total	174411.2	35024.1	613432.9	3783.2	188.5	38.8	1081.8	7.8	174222.7	34985.4	612351.1	3775.3	0.1	0.1	0.2	0.2

2. Total load by land uses (with BMP)

Sources	N Load (lb/yr)	P Load (lb/yr)	BOD Load (lb/yr)	Sediment Load (t/yr)
Urban	97889.63	16056.09	396224.47	2273.81
Cropland	18172.51	4342.14	31656.67	697.54
Pastureland	31725.71	2698.58	101821.69	321.72
Forest	15247.91	7509.08	37620.32	312.16
Feedlots	0.00	0.00	0.00	0.00
User Defined	0.00	0.00	0.00	0.00
Septic	10873.96	4258.97	44401.99	0.00
Gully	0.00	0.00	0.00	0.00
Streambank	312.98	120.50	625.97	170.10
Groundwater	0.00	0.00	0.00	0.00
Total	174222.71	34985.35	612351.11	3775.33

Stratton Hall Stream Restoration





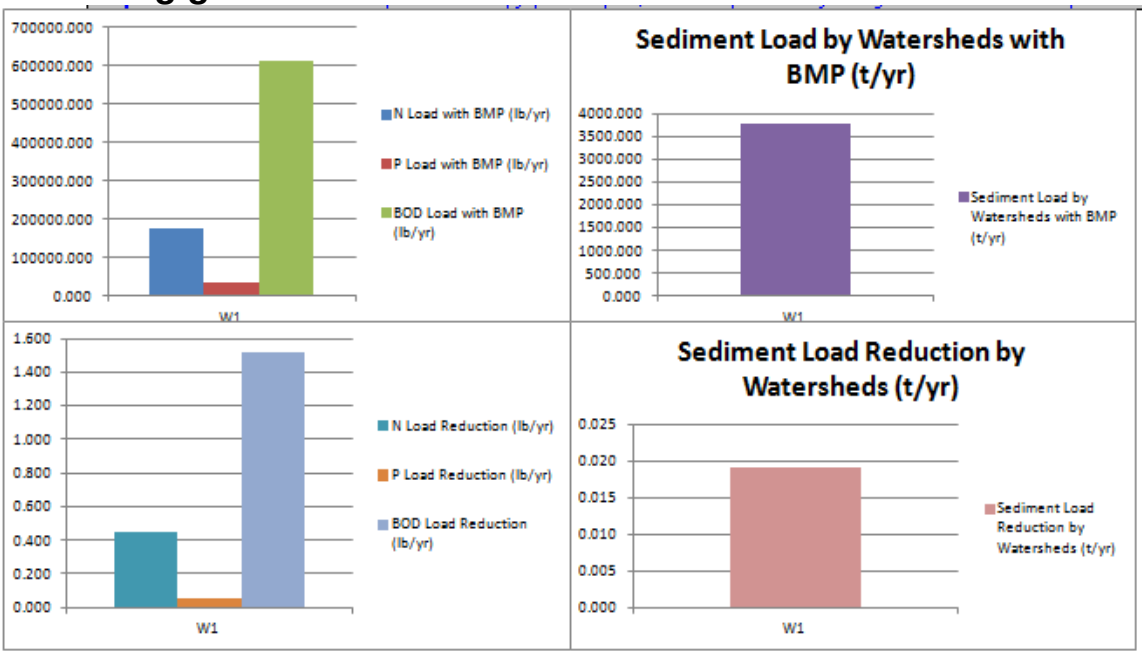
1. Total load by subwatershed(s)

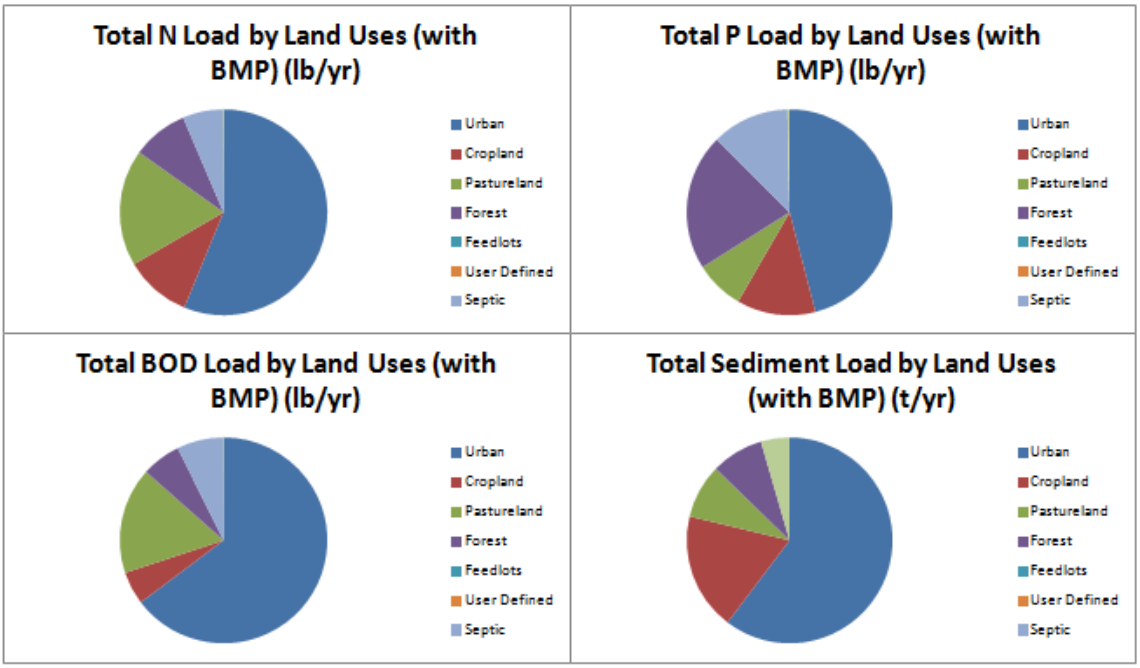
Watershed	N Load (no BMP)	P Load (no BMP)	BOD Load (no BMP)	Sediment Load (no BMP)	N Reduction	P Reduction	BOD Reduction	Sediment Reduction	N Load (with BMP)	P Load (with BMP)	BOD (with BMP)	Sediment Load (with	%N Reduction	%P Reduction	%BOD Reduction	%Sed Reduction
	lb/year	lb/year	lb/year	t/year	lb/year	lb/year	lb/year	t/year	lb/year	lb/year	lb/year	t/year	%	%	%	%
W1	174411.2	35024.1	613432.9	3783.2	297.3	114.5	594.7	161.6	174113.9	34909.7	612838.3	3621.6	0.2	0.3	0.1	4.3
Total	174411.2	35024.1	613432.9	3783.2	297.3	114.5	594.7	161.6	174113.9	34909.7	612838.3	3621.6	0.2	0.3	0.1	4.3

2. Total load by land uses (with BMP)

Sources	N Load (lb/yr)	P Load (lb/yr)	BOD Load (lb/yr)	Sediment Load (t/yr)
Urban	98078.15	16094.87	397306.30	2281.63
Cropland	18172.51	4342.14	31656.67	697.54
Pastureland	31725.71	2698.58	101821.69	321.72
Forest	15247.91	7509.08	37620.32	312.16
Feedlots	0.00	0.00	0.00	0.00
User Defined	0.00	0.00	0.00	0.00
Septic	10873.96	4258.97	44401.99	0.00
Gully	0.00	0.00	0.00	0.00
Streambank	15.65	6.02	31.30	8.51
Groundwate	0.00	0.00	0.00	0.00
Total	174113.89	34909.65	612838.27	3621.56

Stabilizing gravel road in Clemson Extension





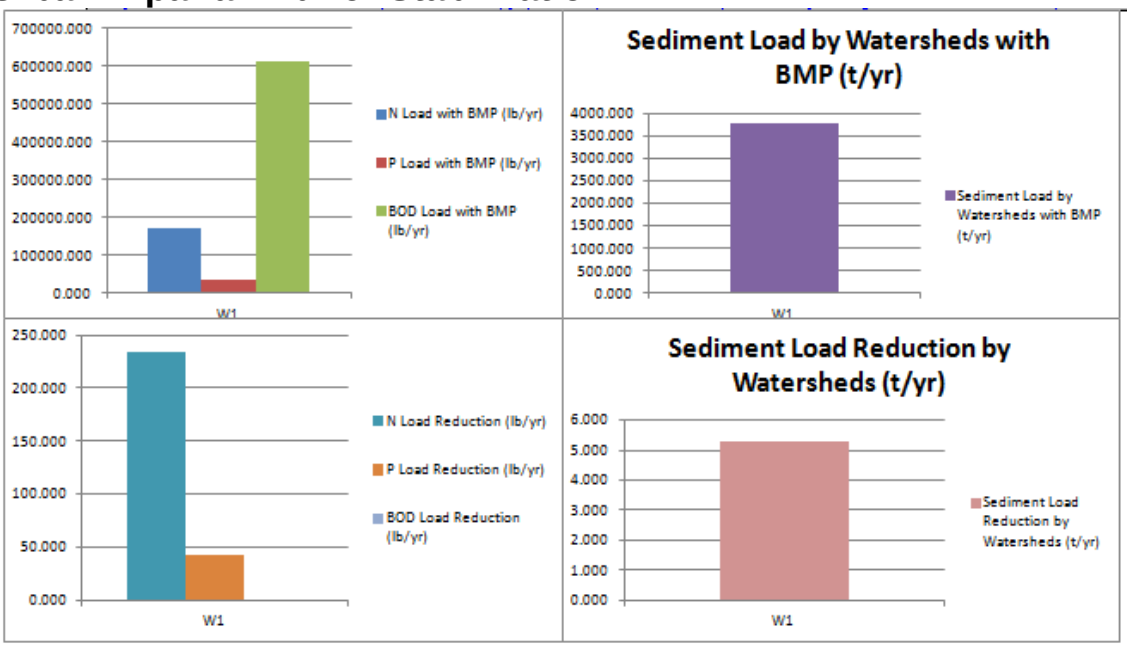
1. Total load by subwatershed(s)

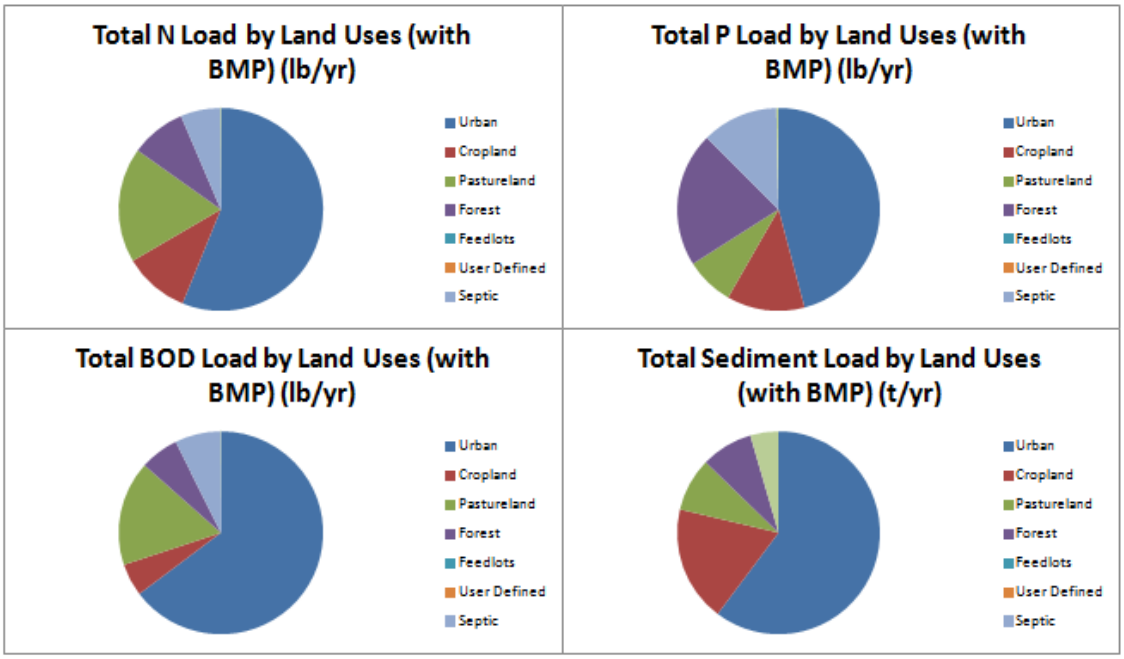
Watershed	N Load (no BMP)	P Load (no BMP)	BOD Load (no BMP)	Sediment Load (no BMP)	N Reduction	P Reduction	BOD Reduction	Sediment Reduction	N Load (with BMP)	P Load (with BMP)	BOD (with BMP)	Sediment Load (with	%N Reduction	%P Reduction	%BOD Reduction	%Sed Reduction
	lb/year	lb/year	lb/year	t/year	lb/year	lb/year	lb/year	t/year	lb/year	lb/year	lb/year	t/year	%	%	%	%
W1	174411.2	35024.1	613432.9	3783.2	0.5	0.1	1.5	0.0	174410.8	35024.1	613431.4	3783.1	0.0	0.0	0.0	0.0
Total	174411.2	35024.1	613432.9	3783.2	0.5	0.1	1.5	0.0	174410.8	35024.1	613431.4	3783.1	0.0	0.0	0.0	0.0

2. Total load by land uses (with BMP)

Sources	N Load (lb/yr)	P Load (lb/yr)	BOD Load (lb/yr)	Sediment Load (t/yr)
Urban	98077.69	16094.81	397304.78	2281.61
Cropland	18172.51	4342.14	31656.67	697.54
Pastureland	31725.71	2698.58	101821.69	321.72
Forest	15247.91	7509.08	37620.32	312.16
Feedlots	0.00	0.00	0.00	0.00
User Defined	0.00	0.00	0.00	0.00
Septic	10873.96	4258.97	44401.99	0.00
Gully	0.00	0.00	0.00	0.00
Streambank	312.98	120.50	625.97	170.10
Groundwater	0.00	0.00	0.00	0.00
Total	174410.77	35024.08	613431.42	3783.13

Urban Riparian Buffer Stabilization





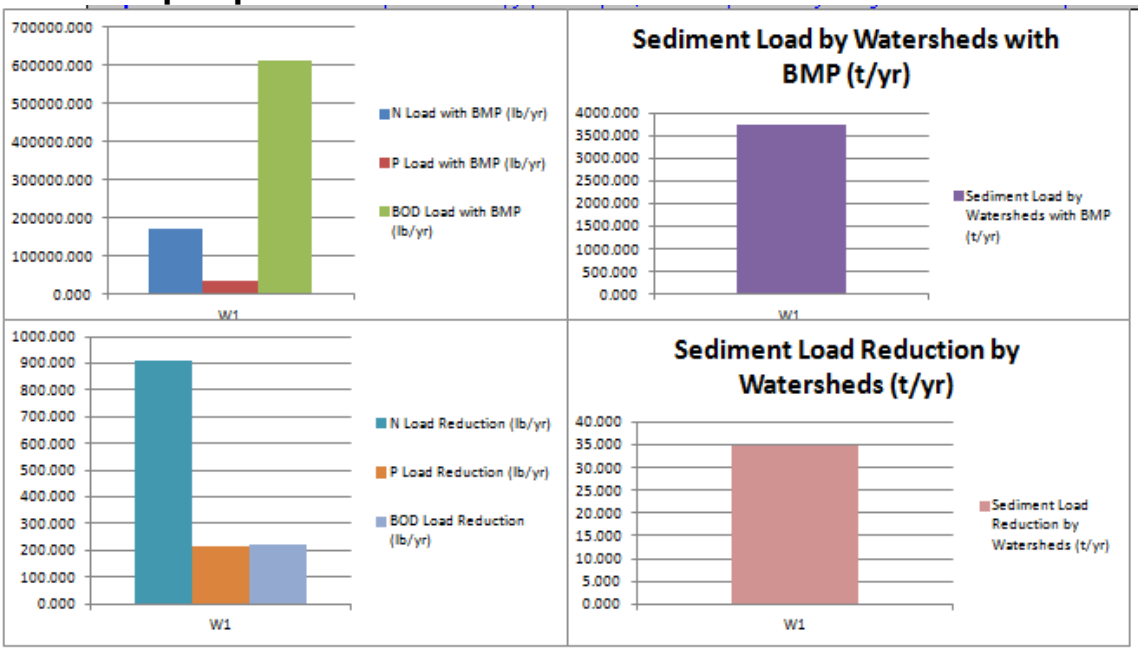
1. Total load by subwatershed(s)

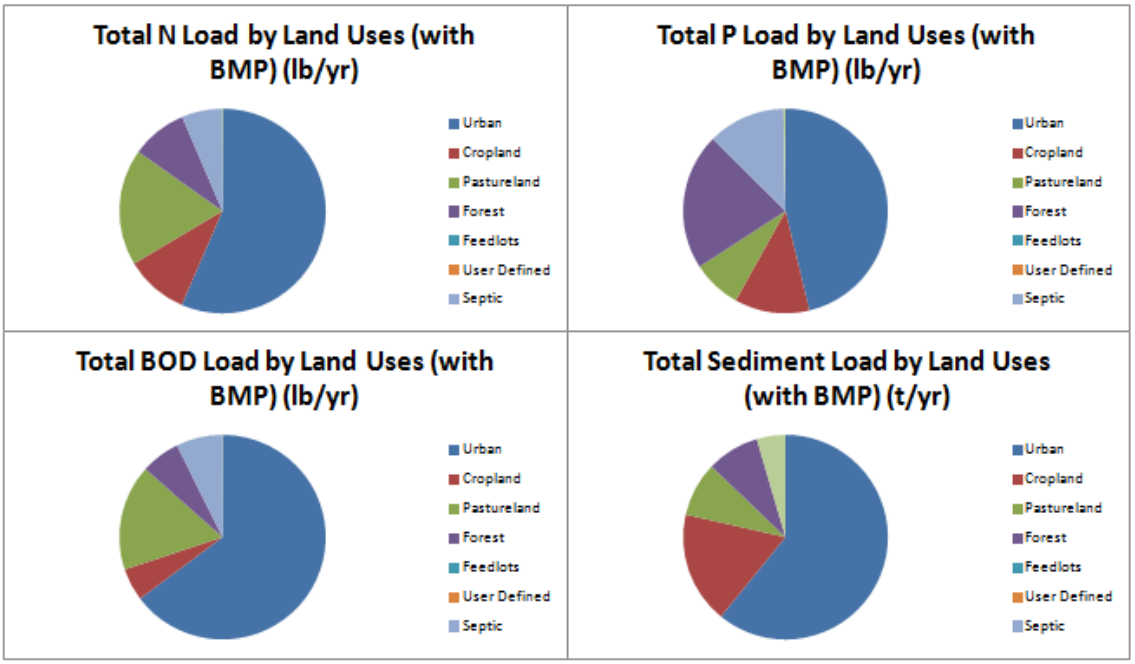
Watershed	N Load (no BMP)	P Load (no BMP)	BOD Load (no BMP)	Sediment Load (no BMP)	N Reduction	P Reduction	BOD Reduction	Sediment Reduction	N Load (with BMP)	P Load (with BMP)	BOD (with BMP)	Sediment Load (with	%N Reduction	%P Reduction	%BOD Reduction	%Sed Reduction
	lb/year	lb/year	lb/year	t/year	lb/year	lb/year	lb/year	t/year	lb/year	lb/year	lb/year	t/year	%	%	%	%
W1	174411.2	35024.1	613432.9	3783.2	233.5	42.5	0.0	5.3	174177.7	34981.7	613432.9	3777.8	0.1	0.1	0.0	0.1
Total	174411.2	35024.1	613432.9	3783.2	233.5	42.5	0.0	5.3	174177.7	34981.7	613432.9	3777.8	0.1	0.1	0.0	0.1

2. Total load by land uses (with BMP)

Sources	N Load (lb/yr)	P Load (lb/yr)	BOD Load (lb/yr)	Sediment Load (t/yr)
Urban	97844.66	16052.41	397306.30	2276.32
Cropland	18172.51	4342.14	31656.67	697.54
Pastureland	31725.71	2698.58	101821.69	321.72
Forest	15247.91	7509.08	37620.32	312.16
Feedlots	0.00	0.00	0.00	0.00
User Defined	0.00	0.00	0.00	0.00
Septic	10873.96	4258.97	44401.99	0.00
Gully	0.00	0.00	0.00	0.00
Streambank	312.98	120.50	625.97	170.10
Groundwater	0.00	0.00	0.00	0.00
Total	174177.74	34981.68	613432.94	3777.85

Rural/Crop Riparian Buffer Stabilization





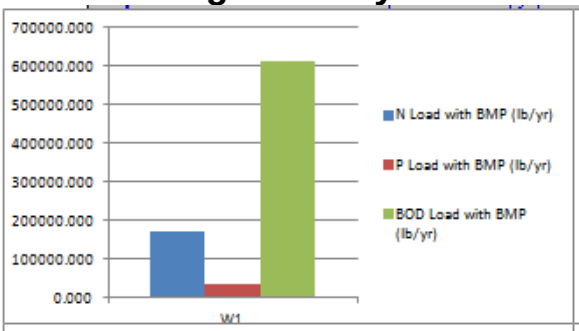
1. Total load by subwatershed(s)

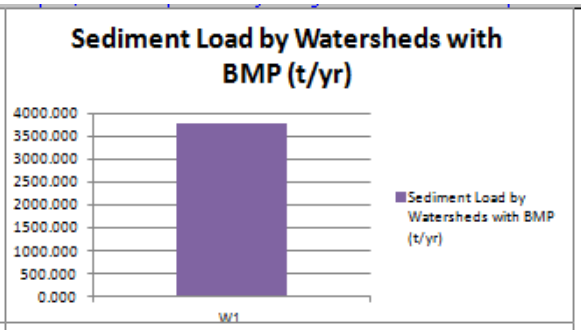
Watershed	N Load (no BMP)	P Load (no BMP)	BOD Load (no BMP)	Sediment Load (no BMP)	N Reduction	P Reduction	BOD Reduction	Sediment Reduction	N Load (with BMP)	P Load (with BMP)	BOD (with BMP)	Sediment Load (with	%N Reduction	%P Reduction	%BOD Reduction	%Sed Reduction
	lb/year	lb/year	lb/year	t/year	lb/year	lb/year	lb/year	t/year	lb/year	lb/year	lb/year	t/year	%	%	%	%
W1	174411.2	35024.1	613432.9	3783.2	913.2	218.2	224.3	35.1	173498.1	34805.9	613208.6	3748.1	0.5	0.6	0.0	0.9
Total	174411.2	35024.1	613432.9	3783.2	913.2	218.2	224.3	35.1	173498.1	34805.9	613208.6	3748.1	0.5	0.6	0.0	0.9

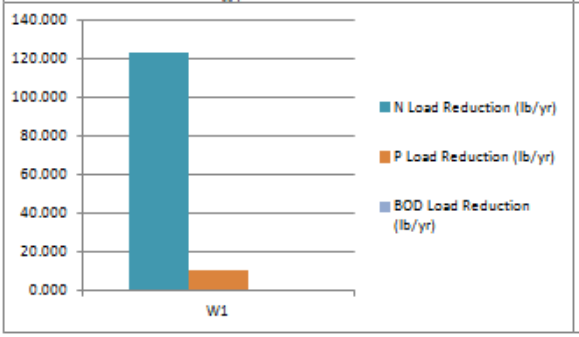
2. Total load by land uses (with BMP)

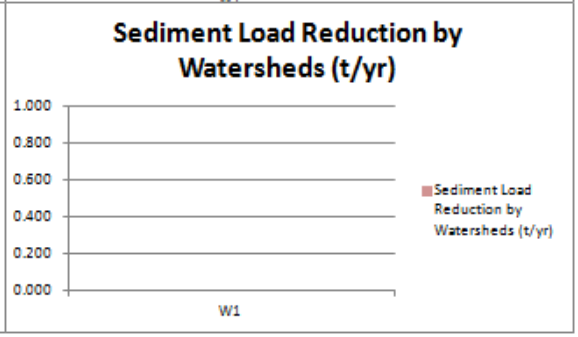
Sources	N Load (lb/yr)	P Load (lb/yr)	BOD Load (lb/yr)	Sediment Load (t/yr)
Urban	98078.15	16094.87	397306.30	2281.63
Cropland	17259.34	4123.95	31432.34	662.49
Pastureland	31725.71	2698.58	101821.69	321.72
Forest	15247.91	7509.08	37620.32	312.16
Feedlots	0.00	0.00	0.00	0.00
User Defined	0.00	0.00	0.00	0.00
Septic	10873.96	4258.97	44401.99	0.00
Gully	0.00	0.00	0.00	0.00
Streambank	312.98	120.50	625.97	170.10
Groundwater	0.00	0.00	0.00	0.00
Total	173498.06	34805.93	613208.61	3748.10

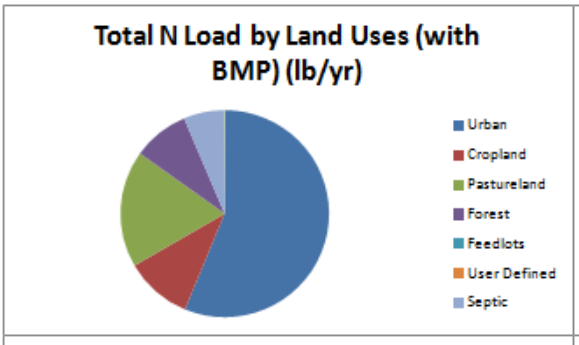
Waste Management System

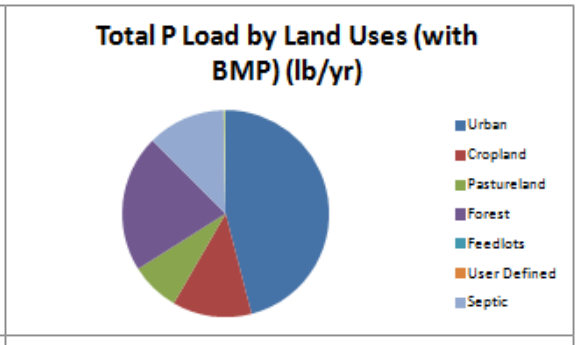


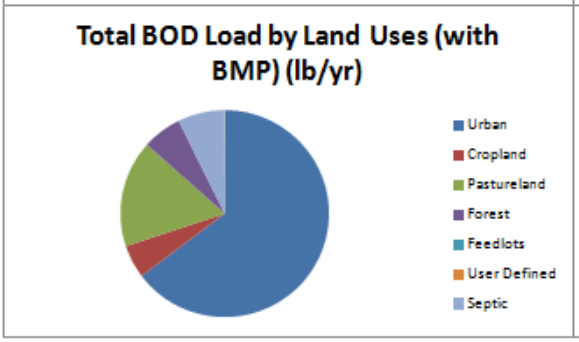


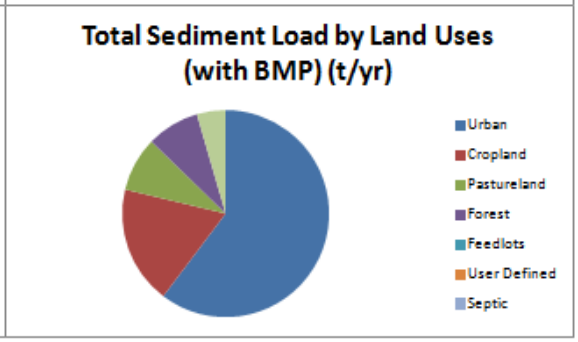












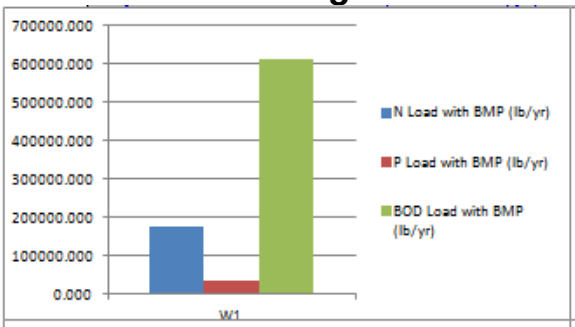
1. Total load by subwatershed(s)

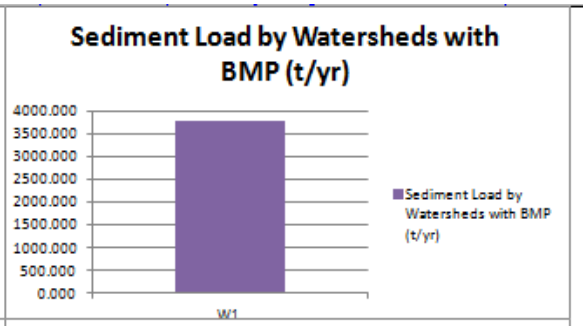
Watershed	N Load (no BMP)	P Load (no BMP)	BOD Load (no BMP)	Sediment Load (no BMP)	N Reduction	P Reduction	BOD Reduction	Sediment Reduction	N Load (with BMP)	P Load (with BMP)	BOD (with BMP)	Sediment Load (with	%N Reduction	%P Reduction	%BOD Reduction	%Sed Reduction
	lb/year	lb/year	lb/year	t/year	lb/year	lb/year	lb/year	t/year	lb/year	lb/year	lb/year	t/year	%	%	%	%
W1	174411.2	35024.1	613432.9	3783.2	122.8	10.4	0.0	0.0	174288.4	35013.8	613432.9	3783.2	0.1	0.0	0.0	0.0
Total	174411.2	35024.1	613432.9	3783.2	122.8	10.4	0.0	0.0	174288.4	35013.8	613432.9	3783.2	0.1	0.0	0.0	0.0

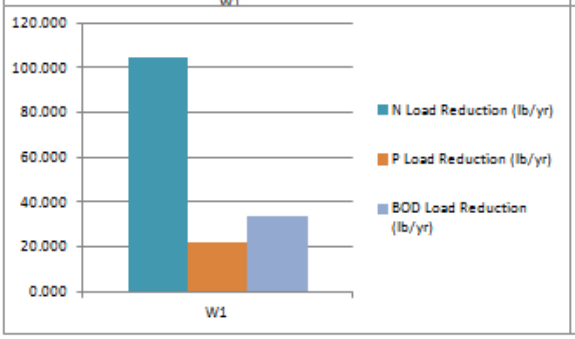
2. Total load by land uses (with BMP)

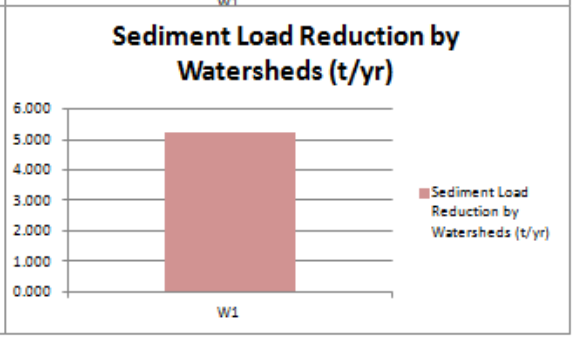
Sources	N Load (lb/yr)	P Load (lb/yr)	BOD Load (lb/yr)	Sediment Load (t/yr)
Urban	98078.15	16094.87	397306.30	2281.63
Cropland	18172.51	4342.14	31656.67	697.54
Pastureland	31602.93	2688.22	101821.69	321.72
Forest	15247.91	7503.08	37620.32	312.16
Feedlots	0.00	0.00	0.00	0.00
User Defined	0.00	0.00	0.00	0.00
Septic	10873.96	4258.97	44401.99	0.00
Gully	0.00	0.00	0.00	0.00
Streambank	312.98	120.50	625.97	170.10
Groundwater	0.00	0.00	0.00	0.00
Total	174288.44	35013.77	613432.94	3783.15

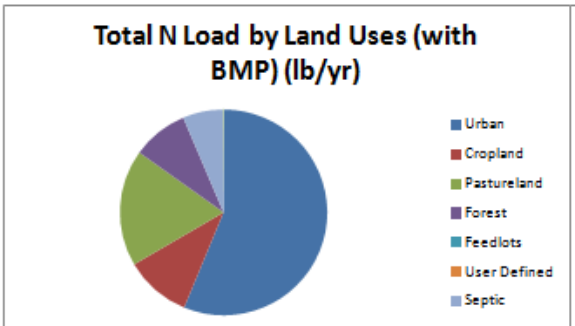
Conservation Tilling

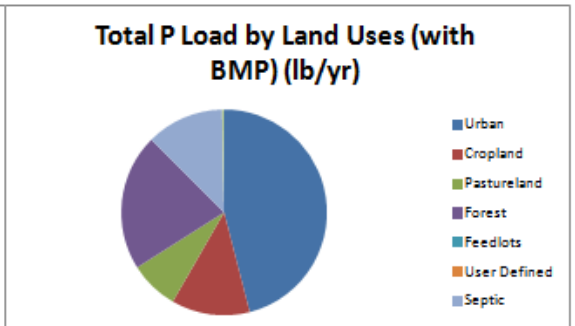


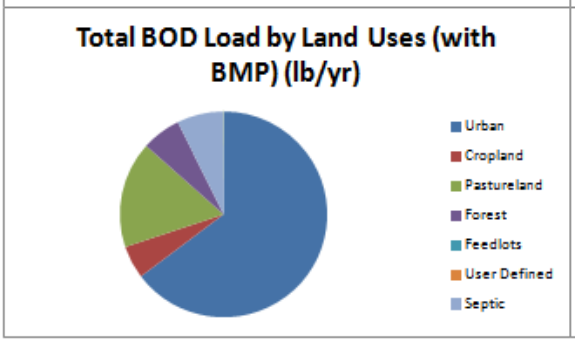


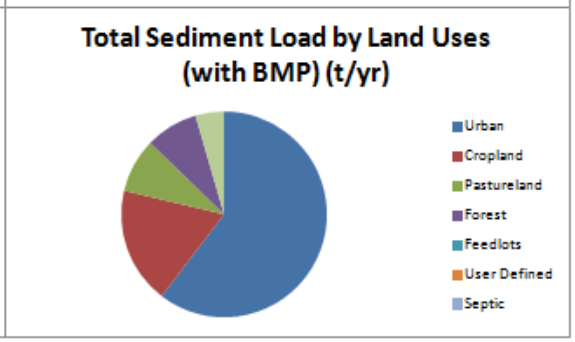












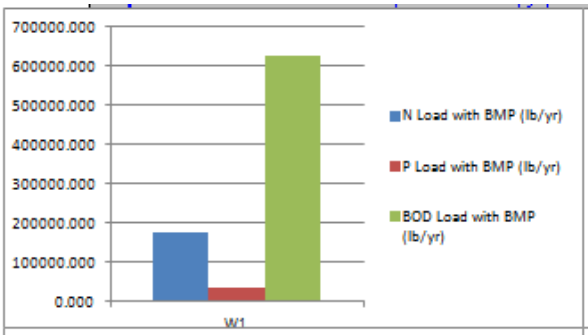
1. Total load by subwatershed(s)

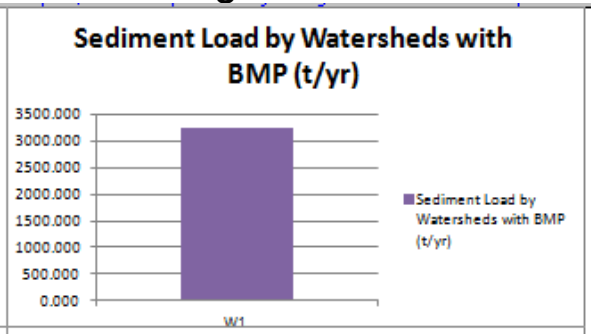
Watershed	N Load (no BMP)	P Load (no BMP)	BOD Load (no BMP)	Sediment Load (no BMP)	N Reduction	P Reduction	BOD Reduction	Sediment Reduction	N Load (with BMP)	P Load (with BMP)	BOD (with BMP)	Sediment Load (with	%N Reduction	%P Reduction	%BOD Reduction	%Sed Reduction
	lb/year	lb/year	lb/year	t/year	lb/year	lb/year	lb/year	t/year	lb/year	lb/year	lb/year	t/year	%	%	%	%
W1	174411.2	35024.1	613432.9	3783.2	104.4	22.1	33.5	5.2	174306.8	35002.0	613399.5	3777.9	0.1	0.1	0.0	0.1
Total	174411.2	35024.1	613432.9	3783.2	104.4	22.1	33.5	5.2	174306.8	35002.0	613399.5	3777.9	0.1	0.1	0.0	0.1

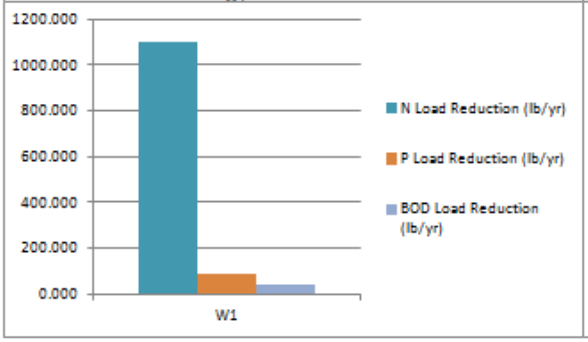
2. Total load by land uses (with BMP)

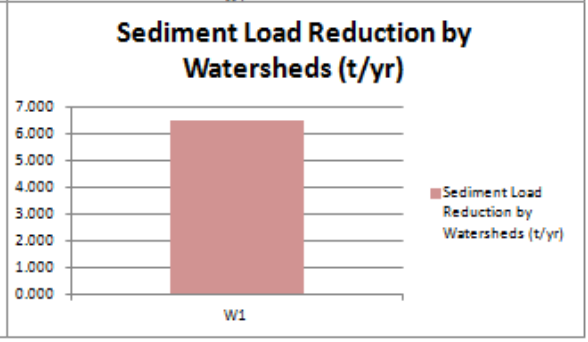
Sources	N Load (lb/yr)	P Load (lb/yr)	BOD Load (lb/yr)	Sediment Load (t/yr)
Urban	98078.15	16094.87	397306.30	2281.63
Cropland	18068.10	4320.02	31623.19	692.31
Pastureland	31725.71	2698.58	101821.69	321.72
Forest	15247.91	7509.08	37620.32	312.16
Feedlots	0.00	0.00	0.00	0.00
User Defined	0.00	0.00	0.00	0.00
Septic	10873.96	4258.97	44401.99	0.00
Gully	0.00	0.00	0.00	0.00
Streambank	312.98	120.50	625.97	170.10
Groundwater	0.00	0.00	0.00	0.00
Total	174306.81	35002.01	613399.45	3777.92

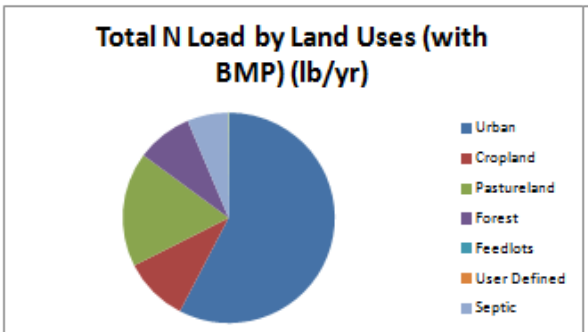
Pasture Streambank Stabilization and Fencing

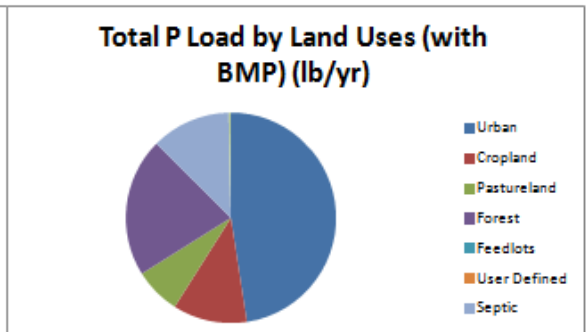


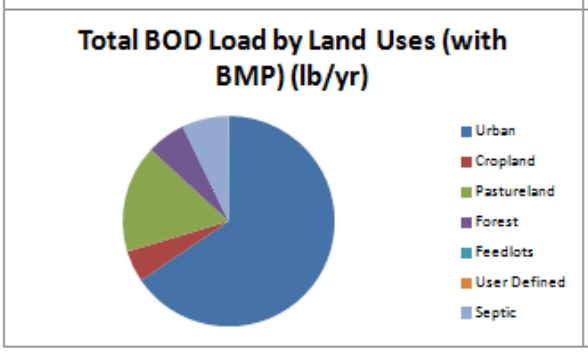


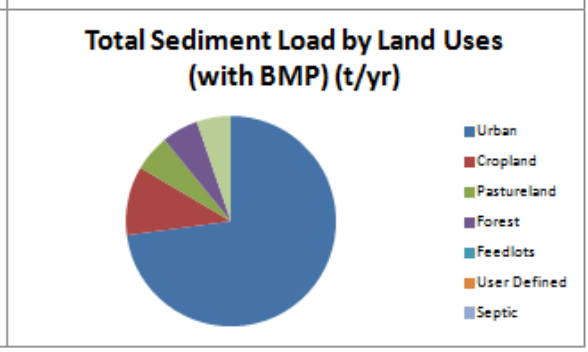












1. Total load by subwatershed(s)

Watershed	N Load (no BMP)	P Load (no BMP)	BOD Load (no BMP)	Sediment Load (no BMP)	N Reduction	P Reduction	BOD Reduction	Sediment Reduction	N Load (with BMP)	P Load (with BMP)	BOD (with BMP)	Sediment Load (with	%N Reduction	%P Reduction	%BOD Reduction	%Sed Reduction
	lb/year	lb/year	lb/year	t/year	lb/year	lb/year	lb/year	t/year	lb/year	lb/year	lb/year	t/year	%	%	%	%
W1	176718.8	34989.1	624434.6	3240.5	1098.0	88.8	41.5	6.5	175620.9	34900.4	624393.1	3234.0	0.6	0.3	0.0	0.2
Total	176718.8	34989.1	624434.6	3240.5	1098.0	88.8	41.5	6.5	175620.9	34900.4	624393.1	3234.0	0.6	0.3	0.0	0.2

2. Total load by land uses (with BMP)

Sources	N Load (lb/yr)	P Load (lb/yr)	BOD Load (lb/yr)	Sediment Load (t/yr)
Urban	101280.49	16605.23	409446.15	2356.83
Cropland	17398.13	3984.14	30002.16	343.20
Pastureland	30727.19	2484.58	102638.34	181.49
Forest	15028.12	7446.94	37278.46	182.40
Feedlots	0.00	0.00	0.00	0.00
User Defined	0.00	0.00	0.00	0.00
Septic	10873.96	4258.97	44401.99	0.00
Gully	0.00	0.00	0.00	0.00
Streambank	312.98	120.50	625.97	170.10
Groundwater	0.00	0.00	0.00	0.00
Total	175620.86	34900.35	624393.07	3234.02

Septic

1. Nutrient load from septic systems

Watershed	No. of Septic Systems	Population per Septic System	Septic Failure Rate, %	Failing Septic Systems	Population on Failing Septic	Direct Discharge Population	Failing Septic Flow, gal/day	Direct Wastewater Flow	Failing Septic Flow, l/hr	Direct Wastewater Flow, l/hr,	N Load, lb/hr	P Load, lb/hr	BOD, lb/hr	Reduction: Direct Wastewater Flow, l/hr	Reduction: N Load, lb/hr	Reduction: P Load, lb/hr	Reduction: BOD Load, lb/hr
W1	6062	2.43	5.77	349.7774	849.959082	0	59497.136	0.000	9384.215	0.000	1.241	0.486	5.069	0.000	0.000	0.000	0.000

2. Septic nutrient load in lb/yr

				Wastewater Reduction			Load after Reduction		
Watershed	N Load, lb/yr	P Load, lb/yr	BOD, lb/yr	N Load, lb/yr	P Load, lb/yr	BOD, lb/yr	N Load, lb/yr	P Load, lb/yr	BOD, lb/yr
W1	10873.96	4258.97	44401.99	0.00	0.00	0.00	10873.96	4258.97	44401.99