



Chatfield

Watershed Authority

2008 ANNUAL REPORT



TABLE OF CONTENTS

	<u>Page</u>
EXECUTIVE SUMMARY	ES-1
1.0 INTRODUCTION.....	1-1
2.0 RESERVOIR REGULATORY FRAMEWORK.....	2-1
2.1 Compliance with the Standard	2-2
2.1.1 Total Phosphorous Loading.....	2-4
3.0 MONITORING PROGRAM	3-1
3.1 Chatfield Reservoir	3-3
3.2 South Platte River and Plum Creek.....	3-3
3.3 Other Source Areas.....	3-4
4.0 POINT SOURCE DISCHARGERS.....	4-1
4.1 Wasteload Allocation	4-1
4.1.1 Compliance with Permits	4-2
4.2 Trades	4-2
4.3 Site Location Approval and Wastewater Plan Amendments	4-3
5.0 NONPOINT LOADING AND SOURCES.....	5-1
5.1 Nonpoint Source Reductions in the Watershed.....	5-1
5.2 Stormwater Permit Requirements	5-3
5.3 Water Quality Review of Land Use Applications	5-6
6.0 RECOMMENDATIONS FOR IMPROVING WATER QUALITY	6-1
6.1 Funding Needed.....	6-1
6.2 Investigations, Models and Projects Required as Part of the TMAL Revision....	6-1
6.3 Future Issues on the Horizon	6-4
6.3.1 Collaboration in Developing Refined Model.....	6-4
6.3.2 Implementing Additional Nonpoint Source Control Strategies.....	6-4
6.3.3 Conversion of ISDS to Conventional Wastewater Collection and Treatment	6-4

List of Tables

Table 1-1	Summary of Authority and Associate Members
Table 2-1	TMAL Total Phosphorous Allocations Distributed Among Sources
Table 2-2	Total Phosphorous and Chlorophyll Compliance (Growing Season)
Table 2-3	Total Phosphorous Loading and TMAL Compliance
Table 3-1	Sampling Parameters
Table 3-2	2008 Chatfield Reservoir Inflows
Table 4-1	Summary of 2008 Phosphorous Wasteload Contribution
Table 4-2	2008 Summary of Monthly Point Source Phosphorous Loading
Table 5-1	Summary of MS4 Programs for Inspection, Enforcement Actions and Education Outreach
Table 6-1	List of Special Studies, Models and Projects to Support TMAL Development

List of Figures

Figure 1-1	Chatfield Watershed
Figure 2-1	Seasonal Total Phosphorous Compliance (Growing Season)
Figure 2-2	Seasonal Chlorophyll Compliance (Growing Season)
Figure 2-3	2008 Total Phosphorous Load to Chatfield Reservoir
Figure 3-1	Chatfield Watershed Sampling Sites
Figure 3-2	Chatfield Reservoir Inflows

List of Appendices

Appendix A	Electronic Data Sheets for Total Phosphorous and Chlorophyll and Loading Calculations from Hayman Burn Area
Appendix B	Phosphorus Loading Detail
Appendix C	Point Source Discharger Tables

EXECUTIVE SUMMARY

The Chatfield Watershed 2008 Annual Report provides the Water Quality Control Commission (Commission) an update on the status of Chatfield Reservoir water quality and watershed health as well as a review of the Chatfield Watershed Authority (Authority) progress towards achieving water quality standards in 2008.

From a water quality and regulatory standpoint, all compliance goals were achieved. The total phosphorus standard and chlorophyll goal were attained in 2008. No point source discharger exceeded their allocation. The phosphorus total maximum annual load (TMAL) was met. In addition, best management practices (BMPs) are being implemented in the basin with the intent of providing beneficial effects, reducing phosphorus loads to Chatfield Reservoir. The growing season (June through September) total phosphorus concentration of 19- $\mu\text{g}/\text{L}$ was less than the 27- $\mu\text{g}/\text{L}$ reservoir standard and chlorophyll of 4.9- $\mu\text{g}/\text{L}$ was much less than the 17- $\mu\text{g}/\text{L}$ goal to meet beneficial uses. The TMAL was met at 14,566 pounds with 117,631 acre feet (ac-ft) of flow. Each of the Publicly Owned Treatment Works (POTWs) discharged below their wasteload allocations, well below the 7,533 pound limit at 3,111 pounds.

A considerable focus of 2008 was the hearing before the Commission. The rulemaking hearing process started on November 11, 2008, and was re-opened and completed on January 9, 2009. While this report's focus is on 2008, we also recognize the newly adopted water quality standards, including a new chlorophyll standard of 10- $\mu\text{g}/\text{L}$, assessment thresholds, a reduced TMAL that is approximately 30% of the original 59,000 pounds/year, and the challenges before the Authority to meet these new requirements based on historical water quality data.

Funding support is essential for the Authority to springboard TMAL development and achieve water quality standards. As a non-profit agency, the Authority has very limited resources and will need to leverage funding from other sources through partnerships and grants. We are hopeful that the water quality priorities at Chatfield will result in funding priorities from the Colorado Department of Public Health and Environment and US EPA. Funding will support water quality improvements and TMAL development in the basin, including the following:

Water Quality Monitoring - obtaining data required to determine nutrient fate and transport, characterize water quality, determine sources, and analyze long-term trends in water quality for both the reservoir and the Chatfield Watershed.

Special Studies – investigations that support TMAL development and improve the Authority's understanding of the Chatfield Watershed and reservoir nutrient dynamics.

Models - developing reservoir and watershed models that simulate water quality conditions and provide a basis for TMAL development and decision-making.

Special Projects – implementing projects that reduce nonpoint source loads. Because so little of the loading into the reservoir is from point sources, the Authority continues to actively pursue funding to reduce nonpoint loads. Priority special projects include stream restoration along Plum Creek.

1.0 INTRODUCTION

The purpose of the 2008 Annual Report is to provide a status update on water quality in Chatfield Reservoir and its watershed, highlighting information required by Control Regulation #73, including;

- Compliance with the watershed regulatory framework,
- Results from monitoring activities,
- Point source loadings, permit compliance, trades, and wastewater treatment facilities,
- Nonpoint source control efforts, load reductions, and management strategies, and
- Recommendations for improving water quality.

The mission of the Chatfield Watershed Authority is “... to promote protection of water quality in the Chatfield Watershed for recreation, fisheries, drinking water supplies, and other beneficial uses by protecting water quality”. The Authority develops, recommends and adopts provisions for water quality management within the Chatfield Watershed consistent with the Denver Regional Council of Governments Metro Vision Plan and the Chatfield Reservoir Control Regulation (Regulation #73, 5 CCR 1002-73). The Authority activities described in this report are part of an integrated water quality management and implementation program to protect or attain established water quality standards and beneficial uses within the Chatfield Watershed. Authority members are as diverse as the over 300 square mile watershed and its varied land uses, including representatives of counties, municipalities, special districts, state and federal agencies, industrial complexes, retreats and special facilities (Table 1-1).



Table 1-1. Summary of Authority and Associate Members

Counties	Towns & Communities	Special Districts	Industry & Agencies	Non Profit & Special Interest
Jefferson	City of Littleton	Plum Creek Wastewater Authority	Lockheed Martin Space Systems Company	Ponderosa Retreat & Conference Center
Douglas	Town of Castle Rock	Castle Pines Metro District	Denver Water	Sacred Heart Retreat
	Town of Larkspur	Centennial Water & Sanitation District	U.S. Army Corps of Engineers	Coalition for the Upper South Platte
	Town of Louviers	Dominion Water & Sanitation District	Tri-County Health Department	Highlands Ranch Law Enforcement Training Facility
	Town of Sedalia	Sedalia Water & Sanitation District	Water Quality Control Division	
	City of Castle Pines North	Louviers Water and Sanitation District	Denver Regional Council of Governments	
		Roxborough Water and Sanitation District	Colorado Department of Parks and Outdoor Recreation - Chatfield State Park	
		Jackson Creek Ranch Metro District	Colorado Division of Wildlife	
		Perry Park Water & Sanitation District		
		South Santa Fe Metro District		

* List includes Authority members pursuant to the *Memorandum of Understanding for Establishing a Management Agency in the Chatfield Watershed* in addition to associate members

The Chatfield Watershed (Figure 1-1) includes Plum Creek, Deer Creek, the portion of the South Platte River from Strontia Springs Reservoir, and Chatfield Reservoir. The Chatfield Watershed includes those areas tributary to the Plum Creek drainage or directly connected to the Chatfield Reservoir, namely, all portions of Plum Creek and its tributaries (including segments 8, 9, 10a, 10b, 11a, 11b, 12 and 13) and the South Platte River downstream of Strontia Springs Reservoir outfall (including segments 6a, 6b, and 7).

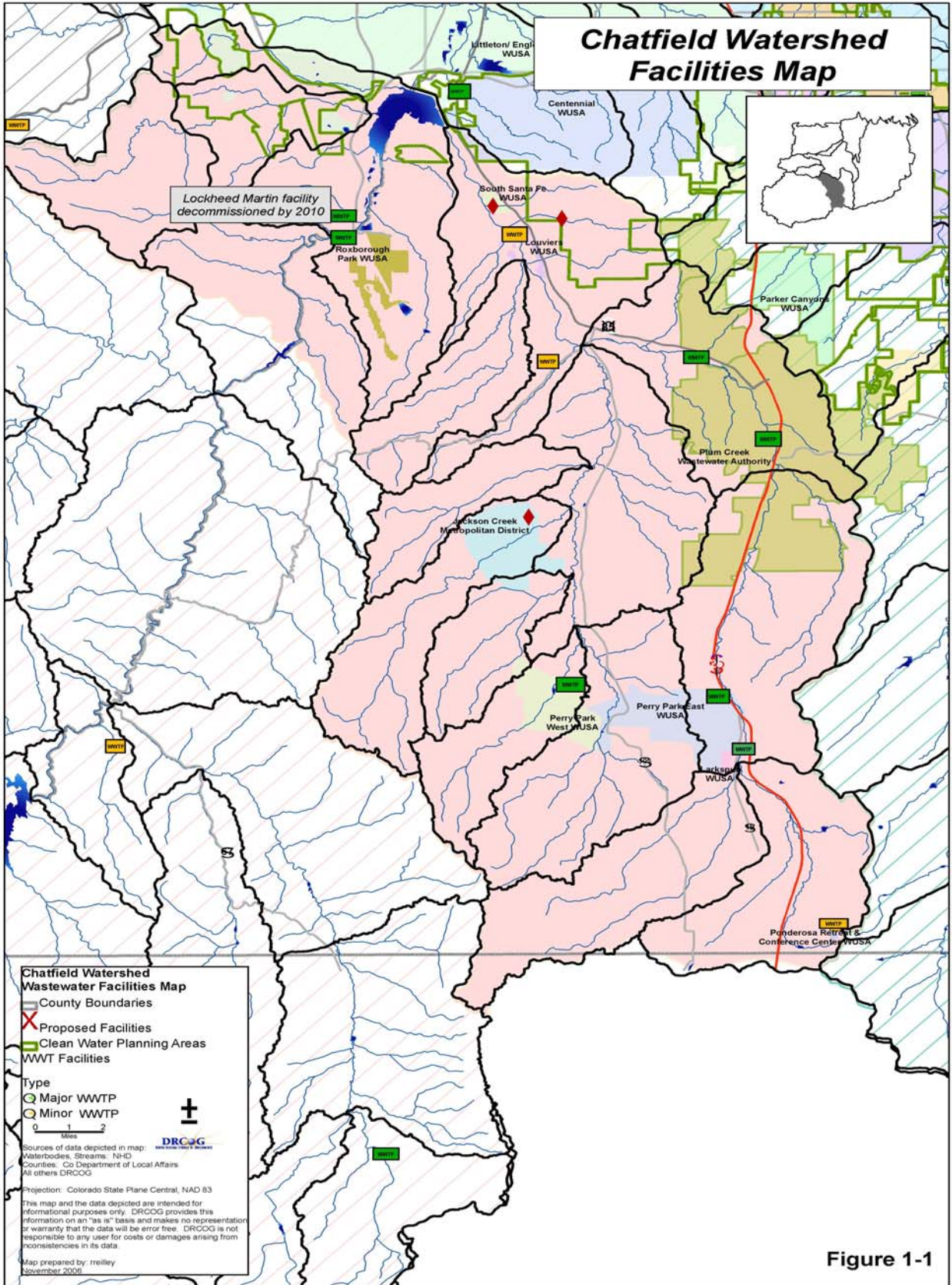


Figure 1-1

2.0 RESERVOIR REGULATORY FRAMEWORK

In 2008, the Commission held a rulemaking hearing to consider revisions to water quality standards and goals in the Chatfield Basin, specifically, Regulations #38 and #73. The hearing began on November 11, 2008 and was completed in January 2009. As part of that hearing, the Authority's expert, Dr. Bill Lewis, presented findings that phosphorus did not control the amount of chlorophyll in the reservoir; nitrogen is controlling. Dr. Lewis' evaluation of the 24-year period of record showed no direct relationship between in-lake phosphorus and chlorophyll concentrations. What the data did show was that by the end of the growing season, inorganic nitrogen was depleted, indicating that when nutrient limitation occurs, it is centered on nitrogen rather than phosphorus. Another indication of the determining role of nitrogen in chlorophyll levels was the presence of nitrogen-fixing blue-green algae near the end of the growing season. Even though the delicate balance of nitrogen and phosphorus in the reservoir has not led to undesirable blue-green algal blooms, Dr. Lewis and the Authority also recommended that phosphorus controls were important to maintain balance.

The Water Quality Control Division (Division) staff, led by Dr. Jim Saunders, began a review of the technical basis for the TMAL and original reservoir model. The Division concluded by abandoning the translator approach, because of a very weak correlation between phosphorous and chlorophyll, and replacing it with an antidegradation based approach, setting the standards for chlorophyll and phosphorous independently at the 90th percentile of historical data.

At the conclusion of the Rulemaking Hearing, in January 2009, the Commission, adopted a Total Phosphorus (TP) standard of 30-µg/L and a chlorophyll (chl) standard (changing the goal to a standard) of 10-µg/L with an exceedance frequency of 1 in 5 years. A new concept, or approach, called an "assessment threshold" was also introduced in terms of attainment criteria for the reservoir. The assessment threshold was set at 35-µg/L for TP and 11.2-µg/L for chl. The Commission also adopted a revised TMAL of 19,600 lbs/year at a median flow of 100,860 acre-feet/year. Except for the TMAL maximum at a designated flow, no allocations among sources were completed nor were details of the TMAL implementation. The Commission adopted language that existing wasteload allocations would remain unchanged, and be controlling limits for discharge permits, until there is development of the revised TMAL. Activities to support the TMAL development would be based on the availability of funds.

Until revisions to meet the new TMAL have been adopted by the Commission and Division, the existing TMAL allocations among sources, shown in Table 2-1, remain in effect.

Table 2-1. TMAL Total Phosphorus Allocations Distributed Among Sources	
Allocation Type	Total Phosphorus Pounds/Year
Chatfield Watershed	40,894
Reservoir Base-Load	13,400
Background Sources	19,961
Wasteload Allocation (Point Sources) ¹	7,533
Upper South Platte River Watershed ²	17,930
Reservoir Base-Load	6,000
Background Sources	11,842
Summit County Wasteload Allocation	88
TOTAL³	58,824

Notes:

1. Point source discharge permit holders and regulated stormwater permittees who are in compliance with their permit limits and terms for a constituent will not have those limits or terms modified prior to any future adjustment of classifications or standards by the Commission to the extent any observed water quality standards exceedances are attributable to other factors, such as wildfires that are beyond the control of the permit holders.
2. Loadings from the Upper South Platte River watershed include all point sources upstream of the Strontia Springs Reservoir outfall, including 88 pounds of phosphorus per year from wastewater originating in Summit County and discharged directly into the Roberts Tunnel, and all nonpoint sources above the Strontia Springs Reservoir outfall.
3. While the TMAL total phosphorus poundage allocation formula remains unchanged, the amount of total phosphorus assigned to the Chatfield Watershed is reduced because of approved nonpoint source to point source trades.

2.1 Compliance with the Standard

Historically, the growing season mean TP concentrations have ranged between 3-µg/L to 50-µg/L and averaged 22- µg/L during the 25 year period of record (Figure 2-1). Total phosphorus in the reservoir for the 2008 growing season average was 19-µg/L. Like last year, it was in compliance with both the new 2009 TP standard (30-µg/L) and the 2008 TP standard (27-µg/L). However, as summarized in Table 2-2, the 2008 TP standard has only been attained 68% of the time. The newly promulgated 30-µg/L TP standard, with an exceedance frequency of 1-in-5 years, has met the standard 76% of the time. A comparison of historical data and the TP attainment criteria of 35-µg/L indicates four exceedances during the 25 years of record.

While compliance with the TP standard has varied over time, the chlorophyll goal for the reservoir, which is now a water quality standard, has been met in all but three years; 1983, 1990, and 2001. The 2008 chlorophyll level of 4.9-µg/L shows decreases over the last three years when compared to information for 2001-2004 (Table 2-2; Figure 2-2). Copies of the electronic 2008 data sheets are provided in Appendix A.

Table 2-2. Total Phosphorus and Chlorophyll Compliance (Growing Season)

	Newly Promulgated Standards (2009)	Attainment Criteria (2009)	2008 Standard and Goal
Total Phosphorus Standard for Growing Season	30 µg/L	35 µg/L	27 µg/L
Chlorophyll Standard/Goal	10 µg/L	11.2 µg/L	17 µg/L
Exceedance Frequency	1 in 5 years	1 in 5 years	-
Years of Seasonal Record	1983-2008		
Percent of Seasonal Compliance for Total Phosphorus	76%	80%	68%
Percent of Seasonal Compliance for Chlorophyll	84%	100%	96%

Figure 2-1. Seasonal Total Phosphorus Compliance

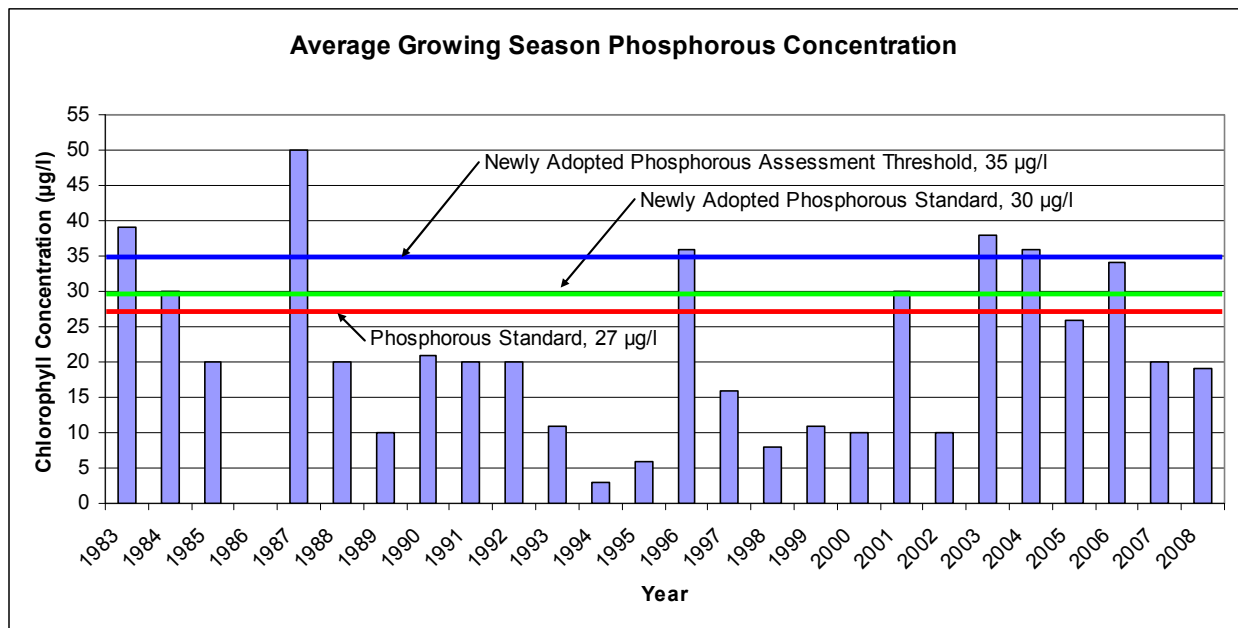
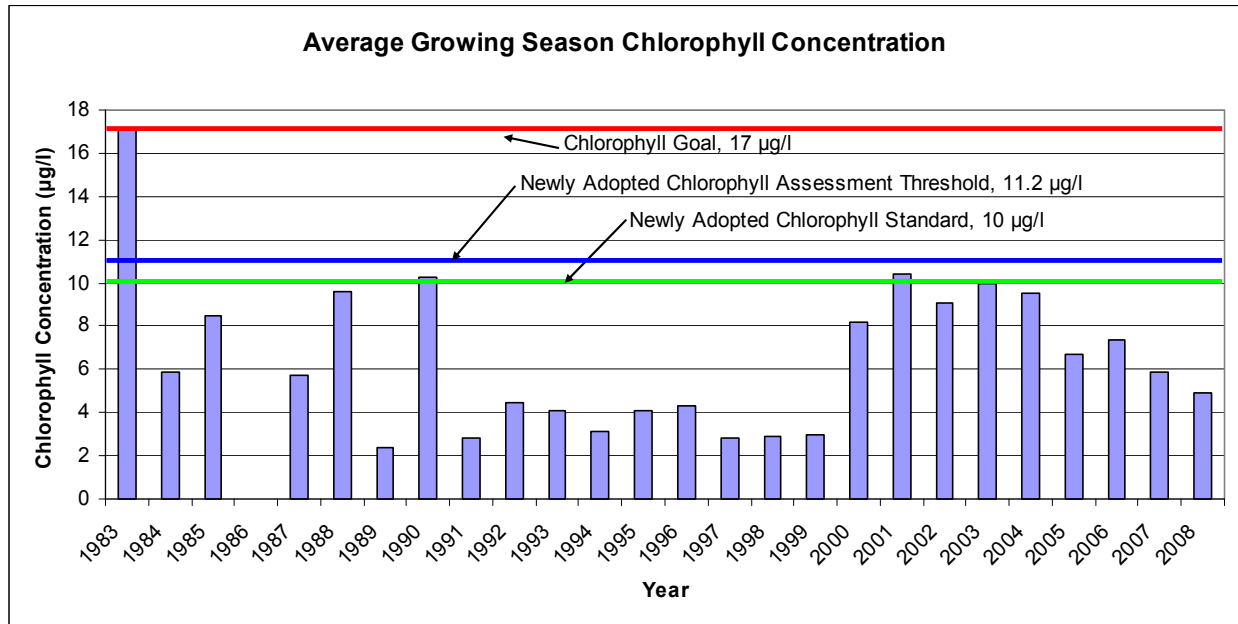


Figure 2-2. Seasonal Chlorophyll Compliance



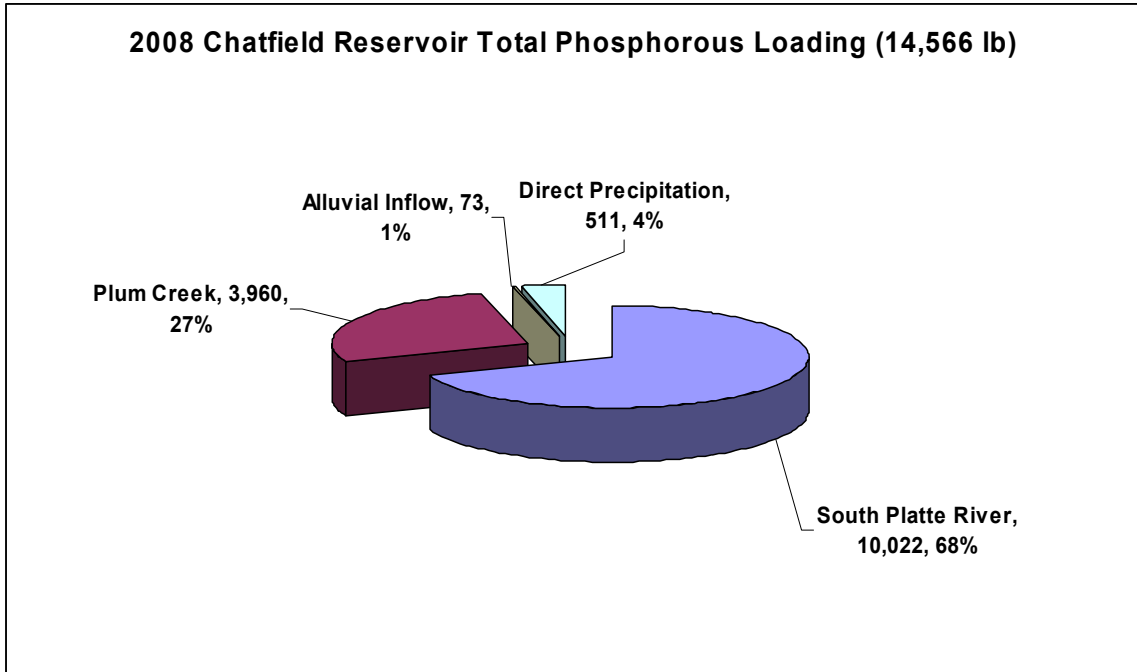
2.1.1 Total Phosphorus Loading

Annual measured flows and calculated loads are summarized in Table 2-3. In 2008, the TP load to the reservoir from inflow sources was calculated at 14,566 pounds. This is below the existing TMAL of 59,000 pounds and the newly promulgated TMAL of 19,600 pounds. The net total phosphorus load to Chatfield Reservoir was calculated at 9,015 pounds (TP load from inflow sources minus TP load from outflow). Inflows to Chatfield Reservoir were less than previous years, estimated at 117,631 acre-feet/year. While Plum Creek comprised approximately 12% of the inflow to the reservoir, it contributed an estimated 27% of the TP load to the reservoir. The South Platte River contributed 85% of the inflow and 68% of the TP load (Figure 2-3). Typically, snowmelt and stormwater runoff events, which are nonpoint source events, contribute a large portion of the total annual load. Appendix B provides the detail summary of the load calculations and data used. As described in Section 4.0, all POTWs were below their respective wasteload allocations.

Table 2-3. Total Phosphorus Loading and TMAL Compliance

Annual	Total Volume (acre-ft)	Total Phosphorus Loading			In-Lake TP Growing Season Conc. (µg/L)
		Reservoir TP Load (lbs)	South Platte TP Load (lbs)	Plum Creek TP Load (lbs)	
1983	-	-	-	-	39
1984	-	-	-	-	30
1985	-	-	-	-	20
1986	116,996	15,900	9,412	4,261	-
1987	270,468	50,201	22,664	21,366	50
1988	122,351	26,693	6,153	14,277	20
1989	100,690	12,342	8,924	1,368	10
1990	80,666	11,181	6,233	4,022	21
1991	74,113	10,848	4,949	3,906	20
1992	78,306	14,169	3,487	6,580	20
1993	70,621	9,832	4,286	2,688	11
1994	74,847	11,544	4,293	4,752	3
1995	336,345	52,471	33,201	12,226	6
1996	82,408	9,511	6,252	1,108	36
1997	120,653	16,596	10,541	4,793	16
1998	177,849	39,586	12,580	21,281	8
1999	242,221	46,691	21,685	24,155	11
2000	88,223	13,886	6,075	5,620	10
2001	67,072	10,360	3,438	4,505	30
2002	36,464	3,506	1,618	1,019	10
2003	68,742	13,778	4,596	7,695	38
2004	69,339	12,527	4,701	4,732	36
2005	107,785	25,202	8,431	16,065	26
2006	89,786	13,540	9,734	3,170	34
2007	288,680	56,077	33,822	21,515	20
2008	117,631	14,566	10,022	3,960	19
Average	125,315	21,348	10,309	8,481	22

Figure 2-3. 2008 Total Phosphorus Load to Chatfield Reservoir



3.0 MONITORING PROGRAM

In 2008, the Authority completed the annual monitoring program of the reservoir, South Platte River and Plum Creek. Figure 3-1 depicts surface water sampling sites in the Chatfield watershed.

As in prior years, the monitoring parameters for this program were selected to maximize the use of available financial resources while still meeting the objectives of the monitoring program. The water quality monitoring program samples selected constituents at inflow (South Platte River at Waterton and Plum Creek at Titan Road), outfall (South Platte River below Chatfield) stations and within Chatfield Reservoir. Other ungaged inflows to the reservoir include Deer Creek and Massey Draw, direct surface runoff, direct precipitation and alluvial inflow. Selected constituents sampled and frequencies are summarized in Table 3-1. Sampling data can be found at the Authority's website, www.chatfieldwatershedauthority.org.

Figure 3-1. Chatfield Watershed Sampling Sites

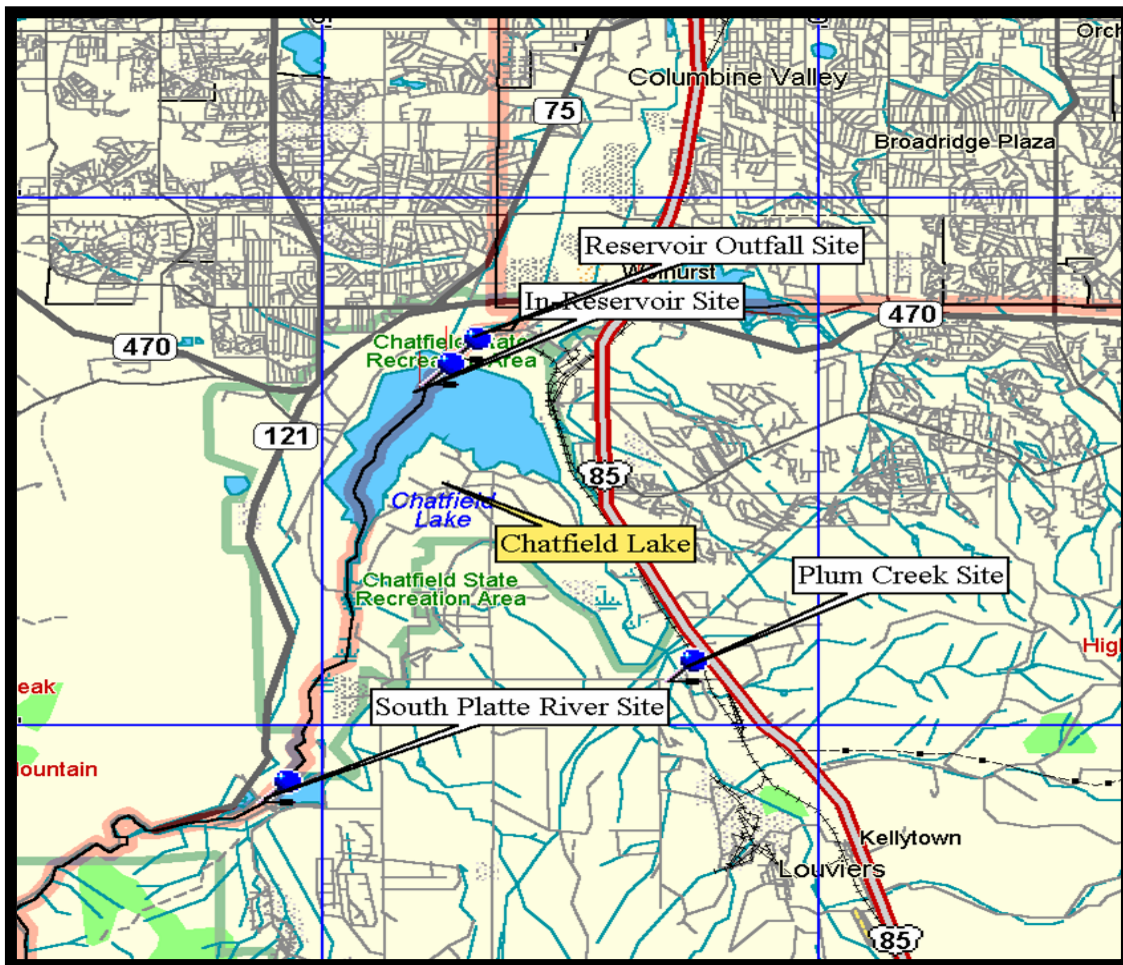


Table 3-1. Constituents Sampled and Frequency		
Constituent	Monthly Frequency	Notes
Reservoir Monitoring		
Temperature, Degrees C	X	Collected at one meter intervals through entire water column; bimonthly samples during growing season.
Field pH (s.u.)	X	Collected at one meter intervals through entire water column; bimonthly samples during growing season
Specific Conductance (uS/cm)	X	Collected at one meter intervals through entire water column; bimonthly samples during growing season.
Dissolved Oxygen, mg/L	X	Collected at one meter intervals through entire water column; bimonthly during growing season.
Phytoplankton	X	Bi-monthly during growing season
Chlorophyll a, ug/L	X	Bi-monthly during growing season
Secchi Depth, meters	X	Bi-monthly during growing season
Alkalinity, mg/L	X	Bi-monthly during growing season
Total Phosphorus, mg/L	X	Bi-monthly during growing season
Ortho Phosphorus, mg/L	X	Bi-monthly during growing season
Nitrite + Nitrate-nitrogen, mg/L	X	Bi-monthly during growing season
Ammonia Nitrogen, mg/L	X	Bi-monthly during growing season
Total Nitrogen, mg/L	X	Bi-monthly during growing season
Watershed Monitoring		
Instantaneous Flow (Rivers & Streams), cfs	X	
Temperature, Degrees C	X	
Field pH (s.u.)	X	
Specific Conductance (uS/cm)	X	
Dissolved Oxygen, mg/L	X	
Alkalinity, mg/L	X	
Total Phosphorus, mg/L	X	
Ortho Phosphorus, mg/L	X	
Nitrite + Nitrate-nitrogen, mg/L	X	
Ammonia Nitrogen, mg/L	X	
Total Nitrogen, mg/L	X	

3.1 Chatfield Reservoir

The in-reservoir monitoring characterizes Chatfield Reservoir chemical and biological quality. Reservoir monitoring is conducted at one reservoir location for both depth-specific samples and vertical profiles for the basic water quality parameters.

Vertical profile sampling is conducted to determine seasonal stratification of the reservoir. The water column samples are collected from three depths: the bottom one meter of the water column, the mid-euphotic zone (as determined from Secchi-depth readings) and the top one-meter of the water column. Chlorophyll is analyzed only from the top one-meter of the water column using an integrated sample.

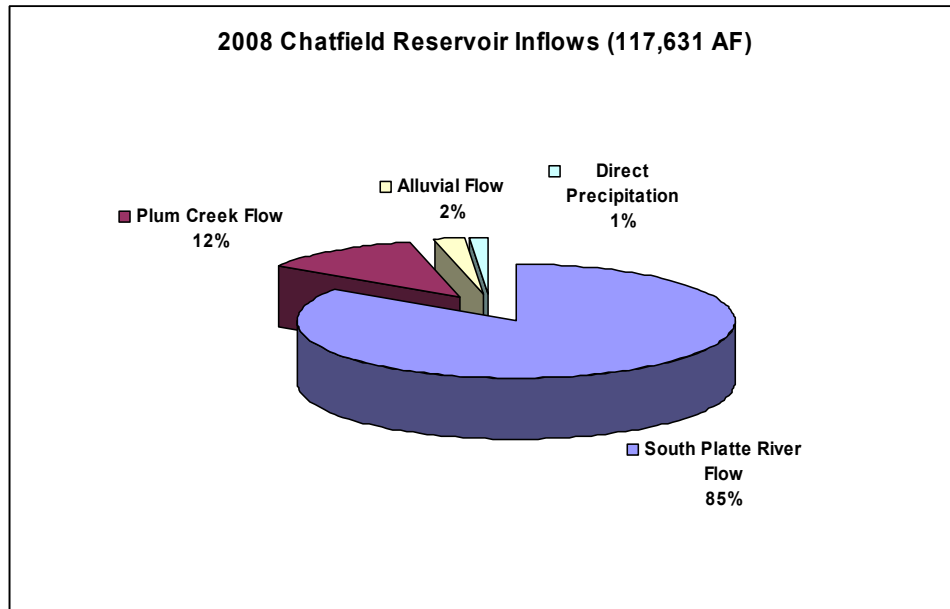
3.2 South Platte and Plum Creek

The South Platte River and Plum Creek are the two gaged surface inflows to Chatfield Reservoir and primary sources of water to the reservoir. As shown in Table 3-2, approximately 85% of the inflow to Chatfield Reservoir in 2008 is the South Platte River. Plum Creek, contributed approximately 17% of the inflow to the reservoir. The monitoring locations include the South Platte River at Waterton (Colorado Division of Water Resources, historically reported stream flows at USGS station 06708000) and Plum Creek at Titan Road near Louviers (USGS station 06709530). Other ungaged inflows to the reservoir include Deer Creek and Massey Draw, direct surface runoff, direct precipitation, and alluvial inflow.

Table 3-2. 2008 Chatfield Reservoir Inflows

Source	Flow (AF)	Percent of Total
South Platte River	99,469	85%
Plum Creek	13,858	12%
Alluvial Inflow	2,684	2%
Direct Precipitation	1,620	1%
Total	117,631	100%

Figure 3-2. Chatfield Reservoir Inflows



No direct flow measurements are made at inflow sites; rather, discharge values are obtained from the appropriate data sources (Colorado Division of Water Resources or the USGS, respectively) for the two inflow sites. Other residual inflow contributions include two small ungaged tributaries (Deer Creek and Massey Draw), direct surface runoff, direct precipitation, and alluvial inflow.

3.3 Other Source Areas

The Authority has historically administered water quality monitoring programs in other source areas in the Chatfield Watershed. However, due to reallocation of resources for the Rulemaking Hearing effort in 2008, this aspect of the program for the monitoring or characterization of water quality in other source areas was effectively eliminated. In 2008, the Authority did not receive Section 319 Grant dollars to continue monitoring activities along Massey Draw. Funding for water quality monitoring in the Hayman Burn area was also eliminated. Without such funds, 2008 monitoring data in these areas could not be obtained. However, during 2009, in-kind services donated by Authority members will re-invigorate the monitoring aspects of the Massey Draw monitoring program.

4.0 POINT SOURCE DISCHARGERS

There are seven operational wastewater treatment facilities in the Chatfield watershed, all which discharge to Plum Creek or its tributaries. The total annual wasteload for point source phosphorus (among all permitted dischargers) in the Chatfield Watershed is 7,533 lbs/year.

4.1 Wasteload Allocation

In 2008, recorded TP discharges were 3,111 pounds or about 41% of the allowable total discharge poundage (Table 4-1). All actively reporting dischargers were in compliance with their established wasteload allocations. Wasteload allocations for Ponderosa Center and the Centennial Law Enforcement Training Center were received pursuant to the Authority Trading Guidelines (Guidelines) and are subject to completing trade projects and/or activities pursuant to the Guidelines. Monthly contributions of phosphorus discharged by each wastewater treatment facility are provided in Table 4-2.

Table 4-1. Summary of 2008 Phosphorus Wasteload Contribution

Allocation Sources	Wasteload Allocation (Pounds per Year)	2008 Point Source Total Pounds
Plum Creek Wastewater Authority	4,256	2,750
Perry Park Water and Sanitation District: Waucondah	365	207.98
Lockheed Martin Space Systems Company	1,005	75.4
Perry Park Water and Sanitation District: Sageport	73	61.10
Town of Larkspur	231	11.30
Sacred Heart Retreat	15 ²	0.70
Ponderosa Center	75 ³	4.10
Louviers Mutual Service Company	122	No Discharge ¹
Roxborough Park Metropolitan District	1,218	No Discharge ¹
Jackson Creek Metropolitan District	50 ⁴	No Discharge ¹
Centennial Law Enforcement Foundation	50 ⁵	No Discharge ¹
South Santa Fe Metro District	21 ⁶	No Discharge ¹
Reserve/Emergency Pool	52	Not Used
Total Phosphorus Wasteload	7,533	3,111

1. No discharge data or monitoring program not established by permit.
2. Temporary five-year phosphorous allocation of 15 pounds for inclusion in discharge permit; obtained from Roxborough Park Metropolitan District.
3. Ponderosa Center water quality credits are subject to completing a trade project pursuant to the Authority Trading Guidelines.
4. Jackson Creek Metropolitan District received point source allocations through trades pursuant to the Authority Trading Guidelines. Jackson Creek has a transfer agreement of 50 pounds with Roxborough Park Metropolitan District.
5. Centennial Law Enforcement Foundation water quality credits are subject to completing a trade pursuant to the Authority Trading Guidelines.

6. South Santa Fe Metropolitan District received a point source allocation of 21 pounds through a trade pursuant to the Authority Trading Guidelines; water quality credits are subject to completing a trade project pursuant to the Trading Guidelines.

Table 4-2. 2008 Summary of Monthly Point Source Phosphorous Loading

Month	Town of Larkspur (lbs/month)	Perry Park Water and Sanitation District: Waucondah (lbs/month)	Perry Park Water and Sanitation District: Sageport (lbs/month)	Plum Creek Wastewater Authority (lbs/month)	Louviers Mutual Service Company (lbs/month)	Roxborough Park Water and Sanitation District (lbs/month)	Lockheed Martin Space Systems Company (lbs/month)	Ponderosa Center (lbs/month)	Centennial Law Enforcement Foundation (lbs/month)	Sacred Heart Retreat (lbs/month)
January	0.75	28.91	3.47	335	0	0	28.9	0.0	0	0
February	0.61	17.23	5.44	355	0	0	11.1	0.0	0	0
March	0.55	19.64	4.10	149	0	0	1.9	0.0	0	0
April	2.04	20.24	3.53	225	0	0	6.6	0.0	0	0
May	0.64	16.17	6.41	171	0	0	6.4	0.2	0	0
June	0.60	11.18	4.01	154	0	0	1.9	0.2	0	0
July	1.42	9.53	4.24	182	0	0	1.7	0.8	0	0
August	1.05	10.35	11.75	208	0	0	5.0	0.5	0	0
September	0.75	20.66	4.61	218	0	0	3.4	1.9	0	0
October	1.33	28.35	4.02	237	0	0	4.2	0.5	0	0
November	0.81	13.71	3.60	260	0	0	2.4	0.0	0	0
December	0.72	12.00	5.93	257	0	0	1.9	0		0.7
Total Annual Phosphorus Discharge (pounds)	11.3	208	61.1	2,750	0	0	75.4	4.1	0.0	0.70

Note: Total annual phosphorous values are rounded.

4.1.1 Compliance with Permits

Point source dischargers are responsible for monitoring their effluent discharges for compliance with their individual permits and compliance with Regulation #73. Summary of actual discharge monitoring data for each permit (average monthly TP concentration, flow, and monthly wasteload) are provided in Appendix C. Permit compliance issues in 2008 included the following:

Bell Mountain Ranch Metropolitan District - Water Treatment Discharge. – Bell Mountain Ranch Metropolitan District, located south of Castle Rock, treats Denver basin aquifer groundwater from the Arapahoe formation for drinking water supply purposes. Backwash from the water treatment plant is discharged into a tributary to East Plum Creek. The discharge amount permitted is 28,000 gallons per day but there is presently no phosphorus allocation for the discharge. Historic data indicate elevated phosphorus concentrations of the discharge and Bell Mountain does not currently have a wasteload allocation or phosphorus credits. The Authority requested additional data to address the elevated phosphorus issues associated with the treatment process, including determination of a phosphorus wasteload allocation. The Authority recommended that Bell Mountain Ranch Metropolitan District secure an adequate phosphorus allocation via the Trading Guidelines.

4.2 Trades

Regulation 73 authorizes trading for point-to-point source trades and point-to-nonpoint source trades. The goal of the Trading Program is to ensure that trades involving

nonpoint sources have a net water quality benefit for the Chatfield Reservoir. All Authority approvals of trade credits and alternative arrangements are subject to review and confirmation by the Commission.

Point sources have used four mechanisms to obtain additional phosphorus wasteload allocations:

- Nonpoint source to point source trades (Jackson Creek Ranch; South Santa Fe Metropolitan District, Ponderosa Retreat Center and Law Enforcement Center).
- Point source to point source transfers (Approved transfer from Roxborough to Jackson Creek Ranch; Temporary trade from Lockheed Martin to Plum Creek Metropolitan District).
- Alternative treatment arrangements for phosphorus reductions (Application of effluent at agronomic rates – Larkspur).
- Reserve/emergency pool allocations (Ponderosa Retreat Center and Sacred Heart Retreat).

No new trading activity was submitted to the Authority for review and approval in 2008. We anticipate trading activity in 2009, addressing the phosphorus wasteload allocations for Sacred Heart, Centennial Law Enforcement Training Center, and Bell Mountain Ranch.

4.3 Site Location Approval and Wastewater Plan Amendments

As the designated water quality management agency for the Chatfield Watershed the Authority reviews applications for site approval for site location and design approval of domestic wastewater treatment works. Review of these applications focus on meeting the Chatfield Control Regulation, phosphorus wasteload allocation, water quality standards, appropriate sizing and design of proposed improvements, and protecting downstream water supplies. In 2008, the following plan amendment came before the Authority:

Plum Creek Wastewater Authority Wastewater Utility Plan and Site Approval Amendment – The Plum Creek Wastewater Authority submitted studies and documentation to the Authority, supporting re-rating the hydraulic capacity of the facility from 4.87 MGD to 6.44 MGD and organic capacity from 16,000 lb BOD/day to 19,000 lb BOD/day. The change in capacity is not expected to change the plant's effluent phosphorus concentration nor cause exceedances of its phosphorus allocation. The information was reviewed and the Authority had no objections to the increase in capacity.

5.0 NONPOINT LOADING AND SOURCES

The largest contributor of phosphorous loading to the Chatfield Reservoir is nonpoint sources. Controlling nonpoint sources is critical to preserving water quality. This section describes activities undertaken in 2008 to control nonpoint sources of phosphorus loading.

5.1 Nonpoint Source Reductions in the Watershed

- **Douglas County** – Douglas County took the lead on the West Creek Water Quality Improvements project. The goal of this Section 319 project is to develop and implement a restoration plan to reduce sedimentation, turbidity and suspended solids in the J.O Hill Reservoir which affect the drinking water quality and supply for the Town of West Creek. The restoration plan will include West Creek watershed revegetation, bank stabilization, and sediment removal. A final goal will be to quantify the effects of improvements on the water quality, resulting from both forest restoration and sediment control.

Douglas County also maintains an extensive erosion control program. The county updated their Erosion Control Manual and Drainage Criteria Manual to provide greater emphasis on water quality. While the county has not determined the TP poundage reduction from the county erosion control program, ongoing enforcement efforts ensure that BMPs are maintained. The county is involved with extensive fire recovery activities associated with the Hayman burn.

- **Jefferson County** – The Massey Draw Project, a Section 319 project sponsored by the Authority, Lockheed Martin, Jefferson County, and UDFCD, is a stream restoration project completed in 2005 which provides bank stabilization and wetlands for a lower portion of the Massey Draw in Jefferson County that experiences severe erosion with deposition of sediment reaching Chatfield Reservoir.

Jefferson County also maintains an erosion and sediment control program as part of their MS4 permit. The county maintains a small-site erosion control manual that explains the basic principles of erosion control and illustrates techniques to control sediment from small development sites.

- **Town of Castle Rock** – Castle Rock has incorporated water quality features into its stormwater improvements. Detention facilities throughout the Town reduce the amount of nonpoint source total phosphorus reaching adjacent waters. The Town has also commenced implementation of drainageway master plan improvements tributary to East Plum Creek along Seller's Gulch, a tributary to East Plum Creek. The significant improvements along Seller's Gulch provided bank restoration and habitat improvement which will result in water quality enhancement. Proposed channel and water quality improvements are also designed and shovel-ready for portions of East Plum Creek.

Castle Rock increased stormwater quality awareness in the community by holding workshops for kids covering stormwater topics and organizing activities such as the Household Chemical Roundup and the Plum Creek Clean-up.

- **City of Littleton** – The City of Littleton has implemented several nonpoint source projects in the watershed targeted to reduce total phosphorus loads by 45% to 55%. Examples of pollutant reduction facilities include several detention ponds and wetland areas at the Chatfield Green development. In addition, every fall the city recycles leaves. In the past 13 years, the city has recycled more than 9,000 cubic yards of leaves and 1,600 tires. The leaves are recycled and mixed with soil amendment products and offered to citizens or used in city gardens. The city also recycles Christmas trees each January and provides that mulch to citizens as well.

Littleton partners with the City of Englewood to host the annual Household Hazardous Waste Roundup every fall. On two Saturdays, residents of each city are allowed to drop off oil-based paint, paint thinner, herbicides, pesticides, motor oil, gasoline, antifreeze, batteries and more. A \$20 co-payment is charged just to cover the costs to safely dispose of the products. Keeping hazardous wastes from getting into waterways that drain into Chatfield Reservoir preserves the reservoir's water quality.

- **Roxborough Park Metropolitan District** – Roxborough has a runoff detention system that reduces the amount of nonpoint source total phosphorus reaching adjacent waters. In addition, Roxborough is a sponsor of the Douglas County Household Chemical Roundup Program, the results of which are discussed below.
- **Tri-County Health Department** – The Tri-County Health Department leads the Douglas County Household Chemical Roundup Program which provides residents with an opportunity to dispose of hazardous chemicals from their homes in a safe, legal, and environmentally responsible way, providing an outlet for wastes that might otherwise end up in creeks, stormwater systems, sanitary sewers and septic systems, or be disposed of illegally on others' property. Plum Creek Wastewater Authority and Centennial Water and Sanitation District participate in this program, also. Throughout the year, the program provides information to the public about ways to reduce the generation of household hazardous waste, including ways to recycle and dispose of items that should not be poured down the drain or put in the trash.

In 2008, the program operated three, one-day Household Chemical Roundup events to collect household hazardous wastes from homeowners. A total of 2,510 vehicles participated in the Roundups, collecting waste from an estimated 2,887 households. Over 155 tons of hazardous materials were collected, including 6,472 gallons of hazardous liquids (oil, antifreeze,

flammable liquids, and reactive chemicals), 13,935 pounds of pesticides, 280 pounds of mercury-containing devices and mercury-contaminated waste, and more than 115 tons of paint and paint products. In addition, 493 tires, 453 propane tanks, and 591 automotive batteries were also recycled.

- **Colorado Department of Transportation** – Since getting a Notice of Violation from the State in 2005, CDOT has been diligently implementing and maintaining BMPs for CDOT construction sites within the basin. CDOT inspects BMPs daily in active construction sites. Monthly BMP inspections are completed on all active and inactive projects and include water quality testing. CDOT BMPs include grass lined channels and channel grading (Figure 5-1), rip rap on culvert outlets, rip rap protected concrete weirs (Figure 5-2) and water quality detention ponds. CDOT calculated that its BMPs kept 24 tons of sediment out of Plum Creek and Chatfield Reservoir in 2008.



Figure 5-1 – CDOT channel grading along I-25 near Castle Rock assisted to keep approximately 24 tons of sediment out of Plum Creek

5.2 Stormwater Permit Requirements

Colorado stormwater permit program requires all governmental and private organizations to control stormwater runoff. Stormwater runoff is rainfall or snowmelt that runs over the land surface potentially carrying pollutants into streams and lakes. A major focus of the stormwater permit is erosion control to reduce sediment (and materials attached to sediment, such as phosphorus) from reaching streams and rivers. Pet waste, excess lawn fertilizer, motor oil, cigarette butts, and trash can result in polluted stormwater runoff.

The program to permit municipal stormwater discharges has been implemented in two phases, with the second phase being most applicable to the Authority.

In response to federal stormwater rules (commonly referred to as Phase I and II rules) the state has implemented a permitting program for municipal separate storm sewer systems (MS4s). Phase I and II MS4s in the Chatfield Basin Include:

- Douglas County
- Jefferson County
- Town of Castle Rock
- City of Littleton
- Castle Pines Metropolitan District



Figure 5-2 – Along US 85, concrete weirs with rip rap reinforcing eliminates hydraulic piping, undermining and erosion

Unlike wastewater treatment facilities or industrial dischargers, MS4s do not have end-of-pipe effluent limits included in their permits. Instead, MS4 permits are based on requirements to develop programs that meet six minimum control measures, and many of these programs involve the implementation of best management practices in order to reduce pollutants discharged to the maximum extent practicable. The six minimum control measures Phase II permittees are required to meet include:

1. Public education and outreach on stormwater impacts
2. Public participation and involvement
3. Detection and elimination of illicit connections and discharges
4. Construction site stormwater runoff control
5. Post-construction stormwater management in development and redevelopment
6. Pollution prevention/good housekeeping for municipal operations

Table 5-1 summarizes information about the 2008 Phase II MS4 activities in the Chatfield watershed.

Table 5-1. Summary of MS4 Programs for Inspections, Enforcement Actions and Education Outreach

Land Use Agency	Permit Inspection Actions	Permit Enforcement Actions	Education & Outreach Programs
Douglas County	Illicit discharges: 155 Inspections Construction: 1653 Inspections Post-Construction: 57 Inspections	Illicit discharges: 14 Construction: 63 Post-construction: 0	<ul style="list-style-type: none"> ▪ Monthly ad in local CCN papers circulating to 181,815 readers per month
Jefferson County	Illicit discharges: 5 Inspections Construction: 1670 Inspections Post-Construction: 37 Inspections	Illicit discharges: 4 Construction: 230 Post-construction : 0	<ul style="list-style-type: none"> ▪ Presentation of stormwater information booth at two public events to reach a diverse audience. ▪ Stormwater article in County's e-newsletter. ▪ Participated in Rooney Road Recycling Center for household chemical waste drop off.
Castle Rock	Illicit discharges: 253 outfall, 15 hotline response inspections Construction: 1273 inspections (GESC) and 1376 inspections for single-family residential (DESC) Post-construction BMPs: 38 construction, 267 O&M inspections	Illicit discharges: 14 enforcement actions Construction: 624 notices of non-compliance issued, 2 stop work orders Post-Construction: no enforcement actions	<ul style="list-style-type: none"> ▪ (12) Monthly Ads on Stormwater topics ▪ 12/3/08 workshop, Preschool classroom ▪ 4/24/08 Kids to Work Day presentation ▪ 9/20/08 Household Chemical Roundup ▪ 5/3/08 Creek Clean-up ▪ 11/15/08 Creek Clean-up
Castle Pines Metropolitan District	Illicit discharges: 0 Inspections Construction: 0 Inspections Post-Construction: 0 Inspections	Illicit discharges: 0 Construction: 0 Post-construction: 0	<ul style="list-style-type: none"> -Stormwater page on CPMD web site -Sponsorship of stormwater quality oriented ads in local newspapers -Sponsorship of web site for Douglas County Stormwater Co-op -Presentation of stormwater information booth at two public

Land Use Agency	Permit Inspection Actions	Permit Enforcement Actions	Education & Outreach Programs
			events
City of Littleton	Illicit discharges: 5 Inspections Construction: 0 Inspections Post-Construction: 3 Inspections	Illicit discharges : 0 Construction: 0 Post-construction: 0	-“Littleton Report” articles on storm water topics (2) - Western Welcome Week booth - Informational products- “dog pooper scooper” bags -World Water Monitoring Day open house -Household hazardous material roundup -Summer Cleanup program - Leaf and Christmas Tree recycling

5.3 Water Quality Review of Land Use Applications

The Authority is a referral agency in the land use application process and as such, provides review and comments on potential water quality impacts associated with land development. The Authority continues to recommend best management practices and low impact development (“LID”) practices when reviewing land use applications in Jefferson and Douglas counties. The “Referral Review Guidance” (Authority guidance, 2006 and readopted July 2007) outlines general Authority land disturbance mitigation preferences, and Authority review and comment guidance.

The permitting of new and operation of existing ISDS in the basin is of ongoing concern for the Authority and the Authority is taking an active role in supporting conversion of ISDS, particularly along the industrial and commercial US-85 corridor, to conventional wastewater collection and treatment. A policy for commercial/industrial ISDS was adopted in March of 2006 and is used as a guide for providing comments on land use referrals. “This Policy shall apply to applicants proposing an individual sewage disposal system to serve industrial or commercial development of any size, or residential development where wastewater flows will be greater than 2,000 gallons per day ... The Authority shall not approve septic systems that are within the 100-year floodplain.” The entire policy can be found on the Authority’s web page, www.chatfieldwatershedauthority.org. The Authority also has a policy for reviewing manure management and stabled or confined animal nutrient generation, adopted in April 2006, which projects phosphorus contributions from stabled animals and manure, and outlines guidance.

In 2008 the Authority reviewed several land use applications from referral agencies providing a thoughtful water quality review of applications and review comments. Included in projects for which formal comments were prepared are The Meadows Dog Park in Castle Rock and a Recreational Vehicle Storage Site Improvement Plan in Douglas County in the Kelly Town area. Additionally, the Authority provided formal comments on proposed general permits and rationale for minimal industrial discharges (MINDI permits).

6.0 RECOMMENDATIONS FOR IMPROVING WATER QUALITY

This section identifies studies, implementation projects, and funding needs to improve water quality and meet regulatory requirements. As a non-profit watershed association, the Chatfield Watershed Authority will necessarily continue to forge a balance between the extent of water quality improvements and their associated costs, which considers the cost of preserving water quality and the reasonableness of the costs to watershed residents and businesses.

6.1 Funding Needed

In 2008, the biggest obstacle preventing the Authority from implementing more projects to improve water quality continues to be funding. To overcome this obstacle, the Authority has leveraged its' greatest asset, member cooperation, to implement a number of changes that will improve water quality in the basin. Nonetheless, the Authority is at a critical financial juncture because new water quality improvements need critical funding.

The Authority applied for, but was unable to accept, a \$15,000 Section 319 grant from the US EPA administered by the Division for continued monitoring of the Massey Draw BMP Effectiveness Project. Requirements for the Authority to purchase a \$1 million insurance policy to indemnify the State of Colorado were too onerous for the Authority's limited budget. Even offers from members to indemnify the state under their insurance policies were not adequate. These insurance requirements may preclude many watershed associations from using government funds for the purpose they were intended. We have been assured from the Division that coordination with State contracting and procurement staff will help alleviate this issue for future grant opportunities. Fortunately, the Massey Draw BMP Effectiveness program was recently re-invigorated by Authority members, who have donated personnel and analytical services to ensure that the monitoring will continue.

Another illustration of the Authority leveraging work with limited financial resources is through its monitoring program. Beginning in 2009, Denver Water will be primarily responsible for the water quality monitoring effort in the reservoir and watershed, to measure constituents for compliance with Regulations #38 and #73. This monitoring and data analysis is being provided by Denver Water as an in-kind donation in lieu of member dues. The expertise that Denver Water brings to the monitoring effort ensures that data collection will continue uninterrupted, and with high quality services.

6.2 Investigations, Models and Projects Required as Part of the TMAL Revision

Following the January 2009 rulemaking hearing, the Authority identified the studies, evaluations, and special projects necessary for source assessments, allocations and implementation under the new TMAL for phosphorus of 19,600 lbs/year under a median inflow of 100,860 acre-feet/year. A number of activities and studies are needed, as funding will allow, in order to determine allocations and complete revisions to the TMAL. The Authority has developed a summary of special studies, modeling tools and

implementation projects needed in order to improve an understanding of the Chatfield watershed and reservoir nutrient dynamics and support TMAL development and implementation. Table 6-1 provides more detail on the suggested studies and project needs.

Table 6-1. List of Special Studies, Models and Projects to Support TMAL Development and Implementation

Special Studies		Process
1	Conduct water quality monitoring and data collection to quantify phosphorus removal effectiveness of nonpoint source structures	Implement water quality monitoring network for nonpoint source [stormwater] improvements, upstream and downstream of improvements.
2	Install shallow groundwater monitoring wells; conduct groundwater sampling program to characterize flow and quality (profiling nutrient content) at specific locations in watershed	A monitoring well network, installed along Plum Creek and the South Platte River, will determine groundwater flows and nutrient transport associated with that alluvial groundwater column.
3	Quantify ISDS impact on water quality and nutrient loading; As part of this study, the attenuation of wastewater flows from ISDS in the sensitive areas of the basin would be identified.	Groundwater and surface water sampling will take place at locations upstream and downstream of concentrated ISDS locations to determine ISDS impact to water quality throughout the watershed. This study could be in conjunction with Special Study #2 above.
4	Evaluate in-lake treatment options for Chatfield Reservoir	An evaluation of in-lake treatment technologies and costs will be conducted to support attainment of the water quality standards and uses.
5	Characterize watershed and pollutant sources.	A thorough watershed characterization will be conducted along with identification of pollutant sources. Watershed hydrology data (flow, precipitation, temperature, solar radiation) shall be summarized to support watershed model efforts. A GIS tool will be developed that will provide a basis for future watershed modeling tools.
6	Conduct a feasibility study of nutrient removal from point sources.	A study shall be conducted to determine the cost and water quality benefits of removing a pound of phosphorous for each entity having a wasteload allocation in the watershed.
7	Characterize watershed hydrology	Watershed hydrology data is presently obtained from the US Army Corps of Engineers (flow, precipitation, temperature, solar radiation). As part of this study, additional watershed hydrology data from the watershed shall be summarized to support watershed model efforts.
8	Additional water quality monitoring is needed to better understand fate and transport issues. Routine water quality monitoring is insufficient. Currently only one location is monitored in each of the two sub-watershed locations at Plum Creek upstream of the Reservoir and South Platte River upstream of the Reservoir. Additional data collection from the upper reaches of the sub-watersheds is needed to understand the fate and transport of nutrients.	Additional water quality sampling and analyses shall be conducted to determine nutrient fate and transport ratios and calibrate watershed water quality models that need to be developed for use in TMAL development and implementation (see description of watershed and reservoir models needed under "Models and Predictive Tools # 1, below)

Models and Predictive Tools		Process
1	Develop a watershed loading model for simulating pollutant loading to the reservoir. As part of this modeling effort the fate and transport of both nutrients and sediment in the watershed will be incorporated. The watershed model will feed data into the hydrodynamic reservoir model which has already been developed as part of the Chatfield Re-allocation Study.	A through watershed model shall be developed to pin point locations with heavy runoff events that exhibit a higher potential for soil erosion and nutrient transport. This model will assist in the determination of location for nonpoint source projects in the watershed. The selected watershed loading model should strive to predict nitrogen, phosphorus and suspended solids loading on a seasonal basis. The selected model should also be constructed so that multiple calibration locations can be simultaneously considered.
Implementation of Special Projects		Process
1	Construct nonpoint source projects in the Plum Creek and South Platte River watershed in conjunction with wetlands enhancement and trail corridor.	In coordination with Chatfield stakeholders like the Chatfield Conservation Network, design and implement projects along the Plum Creek riparian corridor that restore the stream, wetlands habitat, and aquatic habitat while improving water quality. These projects are contemplated along priority corridor lands in coordination with the Chatfield Conservation Network.
2	Sediment control and streambank stabilization along East Plum Creek.	In coordination with municipal jurisdictions, identify stormwater improvements along reaches of Plum Creek that are highly erosive and require streambank stabilization. Existing streambank stabilization projects in Castle Rock have already been identified within the watershed. Engineering design techniques and green approaches can be utilized to strengthen streambanks while providing water quality enhancement.
3	Enhance wetlands habitat and trail corridor along Plum Creek	In coordination with the Chatfield Conservation Network, Chatfield Reallocation/Water Users, CWCB, and U.S. Army Corps of Engineers, identify key reaches of Plum Creek slated for conservation and wetlands enhancement.
4	Implement livestock and stable management projects to control livestock wastes from entering waterbody	Implementation of pilot projects with agricultural users in the study area. Manure management is a key component of the project.
5	Implement West Plum Creek ecosystem improvements	Install drop structures, stabilize stream reaches and create pools that promote fisheries habitat and reduce sediment and nutrient load.
6	Pine beetle management; Implementation of watershed management strategies to stabilize disturbed areas.	Stabilize disturbed areas with vegetation. Consider use of check dams in tributaries along South Platte River in conjunction with re-vegetation where sediment control may be particularly significant.
7	Convert ISDS to conventional sewer along the US 85 corridor. The US 85 corridor has a proliferation of ISDS, many located within the riparian zone so conversion of ISDS to conventional sewer would reduce NPS loads from ISDS, many which were constructed in the 1900's and are located in the Plum Creek alluvium. Douglas County is spearheading a wastewater study that is evaluating options to improve water quality through the elimination of ISDS in the study area.	In coordination with Douglas County, this process would include funding for final design of the preferred options; funding for installation of a collection system in the Town of Sedalia, South Santa Fe Commerce Center, Law Enforcement Training Center, and Titan Road Industrial Park. Funding would also be needed to construct the 14-mile interceptor sewer along the US 85 corridor and treatment facilities.

6.3 Future Issues on the Horizon

The overarching challenge for the Authority into the future will be to manage the impacts from land use changes on water quality. In a sense, the mission of the Authority is to implement a sustainability plan for an entire watershed as measured through water quality. The Authority is committed to being a proactive partner and implementing improvements in the basin targeted towards phosphorus reduction and watershed health.

6.3.1 Collaboration in Developing Reservoir and Watershed Models

We envision continued collaborative opportunity with the CWCB, Corps and Division that entails further refinement of the reservoir model, with additional funding and in-kind support to facilitate model development for the watershed. As the Authority operates on an annual budget of approximately \$150,000, the Authority needs supplemental funding to address the regulatory and water quality requirements. If this funding is not allocated, no refinement of the new TMAL or revision to wasteload allocations will be possible.

6.3.2 Implementing Additional Nonpoint Source Control Strategies

We foresee water quality improvements being realized in conjunction with MS4 permittees and new sustainable development, to enhance stormwater controls and to promote additional reduction of phosphorus loading to Chatfield Reservoir. With additional funding, or commitment on grant requests, the Authority can make great strides in targeting the most effective controls to reduce phosphorus. Projects like those summarized in Table 6-1 will go a long way to improve water quality, reduce sediment and phosphorus loading in the watershed and reservoir while providing a riparian habitat amenity.

6.3.3 Conversion of ISDS to Conventional Wastewater Collection and Treatment

A long-standing water quality priority of the Authority has been the need to convert ISDS in proximity to key tributaries, streams and rivers to conventional wastewater treatment wherever feasible and environmentally prudent. In 2008, Douglas County conducted a study to address wastewater solutions along the US 85 Corridor located in the Chatfield Watershed. Recognizing the importance of water resources in the Chatfield Watershed and the reliance on surface water and alluvial groundwater, this study's goal is to improve water quality along the Corridor through the elimination of ISDS with consideration of centralized wastewater collection and treatment solutions to enhance water quality and promote reuse.

The Study's Technical Committee included many of the members of the Authority and the Authority has carefully monitored the study results. Looking to potential future conditions along the Plum Creek corridor, an estimated 3 MGD of wastewater could be generated from the study area. Three alternatives were considered as preferred

options to collect and treat wastewater from areas like Sedalia, Louviers, South Santa Fe Metropolitan District, Titan Road Industrial Park and other future growth areas. The preferred alternatives promote regional wastewater treatment, reuse, and the establishment of a wastewater authority. Financing considerations were evaluated for design and construction of the 14-miles of wastewater collection infrastructure, estimated at \$15 million.

The Authority will continue coordinating with Douglas County in an effort to improve water quality in the Plum Creek basin and promote the conversion of ISDS in and along the US 85 Corridor to make regional wastewater treatment and reuse in this growing area of the watershed a reality.

APPENDIX A
ELECTRONIC LABORATORY DATA SHEETS

LABID	CLIENTID	COLLECTDATE	RECEIVEDATE	ANALYTE	MATRIX	METHOD	RESULT	TEXTRESUL1	QUAL	UNITS	MDL	PQL	ANALYZEDATE
C108-1	RM-1	1/31/08	1/31/08	Chlorophyll a	SW	10200 H (modified)	7.2	7.2		mg/m3	0.1		2/19/08
C108-1	RM-1	1/31/08	1/31/08	Hardness as CaCO3	SW	2340 C (modified)	124	124		mg/L	1		1/31/08
C108-1	RM-1	1/31/08	1/31/08	Nitrogen, total	SW	4500-N B (modified)	0.556	0.556		mg/L	0.002		2/5/08
C108-1	RM-1	1/31/08	1/31/08	Phosphorus, ortho total	SW	4500-P G	0.009	0.009		mg/L	0.002		2/1/08
C108-1	RM-1	1/31/08	1/31/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.013	0.013		mg/L	0.002		2/4/08
C108-1	RM-1	1/31/08	1/31/08	Residue, Non-Filterable (TSS)	SW	2540 D			U	mg/L	4		2/5/08
C108-2	RM-2	1/31/08	1/31/08	Hardness as CaCO3	SW	2340 C (modified)	134	134		mg/L	1		1/31/08
C108-2	RM-2	1/31/08	1/31/08	Nitrogen, total	SW	4500-N B (modified)	0.835	0.835		mg/L	0.002		2/5/08
C108-2	RM-2	1/31/08	1/31/08	Phosphorus, ortho total	SW	4500-P G	0.009	0.009		mg/L	0.002		2/1/08
C108-2	RM-2	1/31/08	1/31/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.016	0.016		mg/L	0.002		2/4/08
C108-2	RM-2	1/31/08	1/31/08	Residue, Non-Filterable (TSS)	SW	2540 D	5.1	5.1		mg/L	4		2/5/08
C108-3	RM-3	1/31/08	1/31/08	Hardness as CaCO3	SW	2340 C (modified)	156	156		mg/L	1		1/31/08
C108-3	RM-3	1/31/08	1/31/08	Nitrogen, total	SW	4500-N B (modified)	0.860	0.860		mg/L	0.002		2/5/08
C108-3	RM-3	1/31/08	1/31/08	Phosphorus, ortho total	SW	4500-P G	0.007	0.007		mg/L	0.002		2/1/08
C108-3	RM-3	1/31/08	1/31/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.015	0.015		mg/L	0.002		2/4/08
C108-3	RM-3	1/31/08	1/31/08	Residue, Non-Filterable (TSS)	SW	2540 D	5.9	5.9		mg/L	4		2/5/08
C108-4	SP	1/31/08	1/31/08	Hardness as CaCO3	SW	2340 C (modified)	104	104		mg/L	1		1/31/08
C108-4	SP	1/31/08	1/31/08	Nitrate/Nitrite as N, dissolve	SW	4500-NO3 I	0.309	0.309		mg/L	0.002		2/1/08
C108-4	SP	1/31/08	1/31/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.040	0.040		mg/L	0.003		1/31/08
C108-4	SP	1/31/08	1/31/08	Phosphorus, ortho total	SW	4500-P G	0.004	0.004		mg/L	0.002		2/1/08
C108-4	SP	1/31/08	1/31/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.006	0.006		mg/L	0.002		2/4/08
C108-4	SP	1/31/08	1/31/08	Residue, Non-Filterable (TSS)	SW	2540 D			U	mg/L	4		2/5/08
C108-5	SO	1/31/08	1/31/08	Hardness as CaCO3	SW	2340 C (modified)	154	154		mg/L	1		1/31/08
C108-5	SO	1/31/08	1/31/08	Nitrate/Nitrite as N, dissolve	SW	4500-NO3 I	0.270	0.270		mg/L	0.002		2/1/08
C108-5	SO	1/31/08	1/31/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.055	0.055		mg/L	0.003		1/31/08
C108-5	SO	1/31/08	1/31/08	Phosphorus, ortho total	SW	4500-P G			U	mg/L	0.002		2/1/08
C108-5	SO	1/31/08	1/31/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.015	0.015		mg/L	0.002		2/4/08
C108-5	SO	1/31/08	1/31/08	Residue, Non-Filterable (TSS)	SW	2540 D			U	mg/L	4		2/5/08
C108-6	PC	1/31/08	1/31/08	Hardness as CaCO3	SW	2340 C (modified)	180	180		mg/L	1		1/31/08
C108-6	PC	1/31/08	1/31/08	Nitrate/Nitrite as N, dissolve	SW	4500-NO3 I	0.947	0.947		mg/L	0.002		2/1/08
C108-6	PC	1/31/08	1/31/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.046	0.046		mg/L	0.003		1/31/08
C108-6	PC	1/31/08	1/31/08	Phosphorus, ortho total	SW	4500-P G	0.018	0.018		mg/L	0.002		2/1/08
C108-6	PC	1/31/08	1/31/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.037	0.037		mg/L	0.002		2/4/08
C108-6	PC	1/31/08	1/31/08	Residue, Non-Filterable (TSS)	SW	2540 D	15.6	15.6		mg/L	4		2/21/08

LABID	CLIENTID	COLLECTDATE	RECEIVEDATE	ANALYTE	MATRIX	METHOD	RESULT	TEXTRESUL	QUAL	UNITS	MDL	PQL	ANALYZEDATE
C208-1	RM-1	2/20/08	2/20/08	Alkalinity as CaCO3	SW	2320 B	88	88		mg/L		1	2/20/08
C208-1	RM-1	2/20/08	2/20/08	Chlorophyll a	SW	10200 H (modified)	0.7	0.7		mg/m3		0.1	3/5/08
C208-1	RM-1	2/20/08	2/20/08	Hardness as CaCO3	SW	2340 C (modified)	136	136		mg/L		1	2/20/08
C208-1	RM-1	2/20/08	2/20/08	Nitrogen, total	SW	4500-N B (modified)	0.451	0.451		mg/L		0.002	2/28/08
C208-1	RM-1	2/20/08	2/20/08	Phosphorus, ortho total	SW	4500-P G			U	mg/L		0.002	2/21/08
C208-1	RM-1	2/20/08	2/20/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.016	0.016		mg/L		0.002	2/25/08
C208-1	RM-1	2/20/08	2/20/08	Residue, Non-Filterable (TSS)	SW	2540 D			U	mg/L		4	2/26/08
C208-2	RM-2	2/20/08	2/20/08	Alkalinity as CaCO3	SW	2320 B	90	90		mg/L		1	2/20/08
C208-2	RM-2	2/20/08	2/20/08	Hardness as CaCO3	SW	2340 C (modified)	136	136		mg/L		1	2/20/08
C208-2	RM-2	2/20/08	2/20/08	Nitrogen, total	SW	4500-N B (modified)	0.409	0.409		mg/L		0.002	2/28/08
C208-2	RM-2	2/20/08	2/20/08	Phosphorus, ortho total	SW	4500-P G			U	mg/L		0.002	2/21/08
C208-2	RM-2	2/20/08	2/20/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.007	0.007		mg/L		0.002	2/25/08
C208-2	RM-2	2/20/08	2/20/08	Residue, Non-Filterable (TSS)	SW	2540 D	4.2	4.2		mg/L		4	2/26/08
C208-3	RM-3	2/20/08	2/20/08	Alkalinity as CaCO3	SW	2320 B	90	90		mg/L		1	2/20/08
C208-3	RM-3	2/20/08	2/20/08	Hardness as CaCO3	SW	2340 C (modified)	142	142		mg/L		1	2/20/08
C208-3	RM-3	2/20/08	2/20/08	Nitrogen, total	SW	4500-N B (modified)	0.631	0.631		mg/L		0.002	2/28/08
C208-3	RM-3	2/20/08	2/20/08	Phosphorus, ortho total	SW	4500-P G			U	mg/L		0.002	2/21/08
C208-3	RM-3	2/20/08	2/20/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.014	0.014		mg/L		0.002	2/25/08
C208-3	RM-3	2/20/08	2/20/08	Residue, Non-Filterable (TSS)	SW	2540 D	10.0	10		mg/L		4	2/26/08
C208-4	SP	2/20/08	2/20/08	Alkalinity as CaCO3	SW	2320 B	60	60		mg/L		1	2/20/08
C208-4	SP	2/20/08	2/20/08	Hardness as CaCO3	SW	2340 C (modified)	102	102		mg/L		1	2/20/08
C208-4	SP	2/20/08	2/20/08	Nitrate/Nitrite as N, dissolve	SW	4500-NO3 I	0.302	0.302		mg/L		0.002	2/22/08
C208-4	SP	2/20/08	2/20/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.030	0.030		mg/L		0.003	2/21/08
C208-4	SP	2/20/08	2/20/08	Nitrogen, total	SW	4500-N B (modified)	0.412	0.412		mg/L		0.002	2/28/08
C208-4	SP	2/20/08	2/20/08	Phosphorus, ortho total	SW	4500-P G			U	mg/L		0.002	2/21/08
C208-4	SP	2/20/08	2/20/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.010	0.010		mg/L		0.002	2/25/08
C208-4	SP	2/20/08	2/20/08	Residue, Non-Filterable (TSS)	SW	2540 D			U	mg/L		4	2/26/08
C208-5	SO	2/20/08	2/20/08	Alkalinity as CaCO3	SW	2320 B	100	100		mg/L		1	2/20/08
C208-5	SO	2/20/08	2/20/08	Hardness as CaCO3	SW	2340 C (modified)	144	144		mg/L		1	2/20/08
C208-5	SO	2/20/08	2/20/08	Nitrate/Nitrite as N, dissolve	SW	4500-NO3 I	0.374	0.374		mg/L		0.002	2/22/08
C208-5	SO	2/20/08	2/20/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.080	0.080		mg/L		0.003	2/21/08
C208-5	SO	2/20/08	2/20/08	Nitrogen, total	SW	4500-N B (modified)	0.666	0.666		mg/L		0.002	2/28/08
C208-5	SO	2/20/08	2/20/08	Phosphorus, ortho total	SW	4500-P G			U	mg/L		0.002	2/21/08
C208-5	SO	2/20/08	2/20/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.015	0.015		mg/L		0.002	2/25/08
C208-5	SO	2/20/08	2/20/08	Residue, Non-Filterable (TSS)	SW	2540 D			U	mg/L		4	2/26/08
C208-6	PC	2/20/08	2/20/08	Alkalinity as CaCO3	SW	2320 B	104	104		mg/L		1	2/20/08
C208-6	PC	2/20/08	2/20/08	Hardness as CaCO3	SW	2340 C (modified)	154	154		mg/L		1	2/20/08
C208-6	PC	2/20/08	2/20/08	Nitrate/Nitrite as N, dissolve	SW	4500-NO3 I	0.728	0.728		mg/L		0.002	2/22/08
C208-6	PC	2/20/08	2/20/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.048	0.048		mg/L		0.003	2/21/08
C208-6	PC	2/20/08	2/20/08	Nitrogen, total	SW	4500-N B (modified)	0.968	0.968		mg/L		0.002	2/28/08
C208-6	PC	2/20/08	2/20/08	Phosphorus, ortho total	SW	4500-P G	0.032	0.032		mg/L		0.002	2/21/08
C208-6	PC	2/20/08	2/20/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.056	0.056		mg/L		0.002	2/25/08
C208-6	PC	2/20/08	2/20/08	Residue, Non-Filterable (TSS)	SW	2540 D	53.8	53.8		mg/L		4	2/26/08

LABID	CLIENTID	COLLECTDATE	RECEIVEDATE	ANALYTE	MATRIX	METHOD	RESULT	RESULT	QUAL	UNITS	MDL	PQL	ANALYZEDATE
C308-1	SP	3/18/08	3/18/08	Hardness as CaCO3	SW	2340 C (modified)	100	100		mg/L		1	3/18/08
C308-1	SP	3/18/08	3/18/08	Nitrate/Nitrite as N, dissolve	SW	4500-NO3 I	0.258	0.258		mg/L	0.002		3/21/08
C308-1	SP	3/18/08	3/18/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.005	0.005		mg/L	0.003		3/19/08
C308-1	SP	3/18/08	3/18/08	Phosphorus, ortho total	SW	4500-P G	0.004	0.004		mg/L	0.002		3/20/08
C308-1	SP	3/18/08	3/18/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.007	0.007		mg/L	0.002		3/25/08
C308-1	SP	3/18/08	3/18/08	Residue, Non-Filterable (TSS)	SW	2540 D	4.7	4.7		mg/L		4	3/26/08
C308-2	SO	3/18/08	3/18/08	Hardness as CaCO3	SW	2340 C (modified)	128	128		mg/L		1	3/18/08
C308-2	SO	3/18/08	3/18/08	Nitrate/Nitrite as N, dissolve	SW	4500-NO3 I	0.181	0.181		mg/L	0.002		3/21/08
C308-2	SO	3/18/08	3/18/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.011	0.011		mg/L	0.003		3/19/08
C308-2	SO	3/18/08	3/18/08	Phosphorus, ortho total	SW	4500-P G	0.004	0.004		mg/L	0.002		3/20/08
C308-2	SO	3/18/08	3/18/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.009	0.009		mg/L	0.002		3/25/08
C308-2	SO	3/18/08	3/18/08	Residue, Non-Filterable (TSS)	SW	2540 D	4.6	4.6		mg/L		4	3/26/08
C308-3	PC	3/18/08	3/18/08	Hardness as CaCO3	SW	2340 C (modified)	160	160		mg/L		1	3/18/08
C308-3	PC	3/18/08	3/18/08	Nitrate/Nitrite as N, dissolve	SW	4500-NO3 I	0.305	0.305		mg/L	0.002		3/21/08
C308-3	PC	3/18/08	3/18/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.013	0.013		mg/L	0.003		3/19/08
C308-3	PC	3/18/08	3/18/08	Phosphorus, ortho total	SW	4500-P G	0.009	0.009		mg/L	0.002		3/20/08
C308-3	PC	3/18/08	3/18/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.041	0.041		mg/L	0.002		3/25/08
C308-3	PC	3/18/08	3/18/08	Residue, Non-Filterable (TSS)	SW	2540 D	21.4	21.4		mg/L		4	3/26/08

LABID	CLIENTID	COLLECTDATE	RECEIVEDATE	ANALYTE	MATRIX	METHOD	RESULT	RESULT	QUAL	UNITS	MDL	PQL	ANALYZEDATE
C408-1	RM-1	4/24/08	4/24/08	Chlorophyll a	SW	10200 H (modified)	13.9	13.9		mg/m3	0.1		6/18/07
C408-1	RM-1	4/24/08	4/24/08	Chlorophyll a	SW	10200 H (modified)	15.9	15.9		mg/m3	0.1		6/18/07
C408-1	RM-1	4/24/08	4/24/08	Nitrate/Nitrite as N, dissolve	SW	4500-NO3 I	0.058	0.058		mg/L	0.002		5/14/08
C408-1	RM-1	4/24/08	4/24/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.035	0.035		mg/L	0.003		5/7/08
C408-1	RM-1	4/24/08	4/24/08	Phosphorus, ortho total	SW	4500-P G	0.005	0.005		mg/L	0.002		5/7/08
C408-1	RM-1	4/24/08	4/24/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.018	0.018		mg/L	0.002		5/9/08
C408-1	RM-1	4/24/08	4/24/08	Residue, Non-Filterable (TSS)	SW	2540 D	8.2	8.2		mg/L	4		5/12/08
C408-1	RM-1	4/24/08	4/24/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.517	0.517		mg/L	0.002		5/12/08
C408-2	RM-2	4/24/08	4/24/08	Nitrate/Nitrite as N, dissolve	SW	4500-NO3 I	0.080	0.080		mg/L	0.002		5/14/08
C408-2	RM-2	4/24/08	4/24/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.038	0.038		mg/L	0.003		5/7/08
C408-2	RM-2	4/24/08	4/24/08	Phosphorus, ortho total	SW	4500-P G	0.005	0.005		mg/L	0.002		5/7/08
C408-2	RM-2	4/24/08	4/24/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.019	0.019		mg/L	0.002		5/9/08
C408-2	RM-2	4/24/08	4/24/08	Residue, Non-Filterable (TSS)	SW	2540 D	10.6	10.6		mg/L	4		5/12/08
C408-2	RM-2	4/24/08	4/24/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.524	0.524		mg/L	0.002		5/12/08
C408-3	RM-3	4/24/08	4/24/08	Nitrate/Nitrite as N, dissolve	SW	4500-NO3 I	0.055	0.055		mg/L	0.002		5/14/08
C408-3	RM-3	4/24/08	4/24/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.049	0.049		mg/L	0.003		5/7/08
C408-3	RM-3	4/24/08	4/24/08	Phosphorus, ortho total	SW	4500-P G	0.004	0.004		mg/L	0.002		5/7/08
C408-3	RM-3	4/24/08	4/24/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.015	0.015		mg/L	0.002		5/9/08
C408-3	RM-3	4/24/08	4/24/08	Residue, Non-Filterable (TSS)	SW	2540 D	8.2	8.2		mg/L	4		5/12/08
C408-3	RM-3	4/24/08	4/24/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.443	0.443		mg/L	0.002		5/12/08
C408-4	SP	4/24/08	4/24/08	Nitrate/Nitrite as N, dissolve	SW	4500-NO3 I	0.095	0.095		mg/L	0.002		5/14/08
C408-4	SP	4/24/08	4/24/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.023	0.023		mg/L	0.003		5/7/08
C408-4	SP	4/24/08	4/24/08	Phosphorus, ortho total	SW	4500-P G	0.005	0.005		mg/L	0.002		5/7/08
C408-4	SP	4/24/08	4/24/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.012	0.012		mg/L	0.002		5/9/08
C408-4	SP	4/24/08	4/24/08	Residue, Non-Filterable (TSS)	SW	2540 D	9.0	9		mg/L	4		5/12/08
C408-4	SP	4/24/08	4/24/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.362	0.362		mg/L	0.002		5/12/08
C408-5	SO	4/24/08	4/24/08	Nitrate/Nitrite as N, dissolve	SW	4500-NO3 I	0.061	0.061		mg/L	0.002		5/14/08
C408-5	SO	4/24/08	4/24/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.035	0.035		mg/L	0.003		5/7/08
C408-5	SO	4/24/08	4/24/08	Phosphorus, ortho total	SW	4500-P G	0.005	0.005		mg/L	0.002		5/7/08
C408-5	SO	4/24/08	4/24/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.014	0.014		mg/L	0.002		5/9/08
C408-5	SO	4/24/08	4/24/08	Residue, Non-Filterable (TSS)	SW	2540 D	5.2	5.2		mg/L	4		5/12/08
C408-5	SO	4/24/08	4/24/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.428	0.428		mg/L	0.002		5/12/08

CLIENTID	COLLECTDATE	ANALYTE	RESULT	TEXTRESULT
RM-1	5/21/08	Alkalinity as CaCO3	80	80
RM-1	5/21/08	Chlorophyll a	4.2	4.2
RM-1	5/21/08	Nitrate/Nitrite as N, dissolve	0.004	0.004
RM-1	5/21/08	Nitrogen, ammonia	0.013	0.013
RM-1	5/21/08	Phosphorus, ortho total	0.002	0.002
RM-1	5/21/08	Phosphorus, total	0.012	0.012
RM-1	5/21/08	Residue, Non-Filterable (TSS)	4.8	4.8
RM-1	5/21/08	Total Nitrogen	0.314	0.314
RM-2	5/21/08	Alkalinity as CaCO3	82	82
RM-2	5/21/08	Nitrate/Nitrite as N, dissolve	0.004	0.004
RM-2	5/21/08	Nitrogen, ammonia	0.013	0.013
RM-2	5/21/08	Phosphorus, ortho total	0.003	0.003
RM-2	5/21/08	Phosphorus, total	0.008	0.008
RM-2	5/21/08	Residue, Non-Filterable (TSS)	0.0	0
RM-2	5/21/08	Total Nitrogen	0.215	0.215
RM-3	5/21/08	Alkalinity as CaCO3	84	84
RM-3	5/21/08	Nitrate/Nitrite as N, dissolve	0.024	0.024
RM-3	5/21/08	Nitrogen, ammonia	0.069	0.069
RM-3	5/21/08	Phosphorus, ortho total	0.000	0.000
RM-3	5/21/08	Phosphorus, total	0.032	0.032
RM-3	5/21/08	Residue, Non-Filterable (TSS)	5.8	5.8
RM-3	5/21/08	Total Nitrogen	0.331	0.331
SP	5/21/08	Alkalinity as CaCO3	64	64
SP	5/21/08	Nitrate/Nitrite as N, dissolve	0.135	0.135
SP	5/21/08	Nitrogen, ammonia	0.009	0.009
SP	5/21/08	Phosphorus, ortho total	0.011	0.011
SP	5/21/08	Phosphorus, total	0.004	0.004
SP	5/21/08	Residue, Non-Filterable (TSS)	5.2	5.2
SP	5/21/08	Total Nitrogen	0.214	0.214
SO	5/21/08	Alkalinity as CaCO3	84	84
SO	5/21/08	Nitrate/Nitrite as N, dissolve	0.012	0.012
SO	5/21/08	Nitrogen, ammonia	0.020	0.020
SO	5/21/08	Phosphorus, ortho total	0.002	0.002
SO	5/21/08	Phosphorus, total	0.017	0.017
SO	5/21/08	Residue, Non-Filterable (TSS)	8.4	8.4
SO	5/21/08	Total Nitrogen	0.240	0.240
PC	5/21/08	Alkalinity as CaCO3	102	102
PC	5/21/08	Nitrate/Nitrite as N, dissolve	0.160	0.160
PC	5/21/08	Nitrogen, ammonia	0.004	0.004
PC	5/21/08	Phosphorus, ortho total	0.002	0.002
PC	5/21/08	Phosphorus, total	0.146	0.146
PC	5/21/08	Residue, Non-Filterable (TSS)	98.0	98
PC	5/21/08	Total Nitrogen	0.426	0.426

LABID	CLIENTID	COLLECTDATE	RECEIVEDATE	ANALYTE	MATRIX	METHOD	RESULT	TEXTRESULT	QUAL	UNITS	MDL	PQL	ANALYZEDATE
C608-1	RM-1	6/27/08	6/27/08	Alkalinity as CaCO3	SW	2320 B	68	68		mg/L		1	6/28/08
C608-1	RM-1	6/27/08	6/27/08	Chlorophyll a	SW	10200 H (modified)	5.5	5.5		mg/m3		0.1	7/23/08
C608-1	RM-1	6/27/08	6/27/08	Nitrate/Nitrite as N, dissolve	SW	4500-NO3 I	0.009	0.009		mg/L	0.002		7/10/08
C608-1	RM-1	6/27/08	6/27/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.019	0.019		mg/L	0.003		6/28/08
C608-1	RM-1	6/27/08	6/27/08	Phosphorus, ortho total	SW	4500-P G	0.002	0.002		mg/L	0.002		7/1/08
C608-1	RM-1	6/27/08	6/27/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.012	0.012		mg/L	0.002		7/14/08
C608-1	RM-1	6/27/08	6/27/08	Residue, Non-Filterable (TSS)	SW	2540 D	7.2	7.2		mg/L		4	7/3/08
C608-1	RM-1	6/27/08	6/27/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.448	0.448		mg/L	0.002		7/16/08
C608-2	RM-2	6/27/08	6/27/08	Alkalinity as CaCO3	SW	2320 B	64	64		mg/L		1	6/28/08
C608-2	RM-2	6/27/08	6/27/08	Nitrate/Nitrite as N, dissolve	SW	4500-NO3 I	0.039	0.039		mg/L	0.002		7/10/08
C608-2	RM-2	6/27/08	6/27/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.030	0.030		mg/L	0.003		6/28/08
C608-2	RM-2	6/27/08	6/27/08	Phosphorus, ortho total	SW	4500-P G	0.007	0.007		mg/L	0.002		7/1/08
C608-2	RM-2	6/27/08	6/27/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.023	0.023		mg/L	0.002		7/14/08
C608-2	RM-2	6/27/08	6/27/08	Residue, Non-Filterable (TSS)	SW	2540 D	7.2	7.2		mg/L		4	7/3/08
C608-2	RM-2	6/27/08	6/27/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.476	0.476		mg/L	0.002		7/16/08
C608-3	RM-3	6/27/08	6/27/08	Alkalinity as CaCO3	SW	2320 B	68	68		mg/L		1	6/28/08
C608-3	RM-3	6/27/08	6/27/08	Nitrate/Nitrite as N, dissolve	SW	4500-NO3 I	0.088	0.088		mg/L	0.002		7/10/08
C608-3	RM-3	6/27/08	6/27/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.085	0.085		mg/L	0.003		6/28/08
C608-3	RM-3	6/27/08	6/27/08	Phosphorus, ortho total	SW	4500-P G	0.005	0.005		mg/L	0.002		7/1/08
C608-3	RM-3	6/27/08	6/27/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.019	0.019		mg/L	0.002		7/14/08
C608-3	RM-3	6/27/08	6/27/08	Residue, Non-Filterable (TSS)	SW	2540 D	7.2	7.2		mg/L		4	7/3/08
C608-3	RM-3	6/27/08	6/27/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.543	0.543		mg/L	0.002		7/16/08
C608-4	SP	6/27/08	6/27/08	Alkalinity as CaCO3	SW	2320 B	46	46		mg/L		1	6/28/08
C608-4	SP	6/27/08	6/27/08	Nitrate/Nitrite as N, dissolve	SW	4500-NO3 I	0.166	0.166		mg/L	0.002		7/10/08
C608-4	SP	6/27/08	6/27/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.006	0.006		mg/L	0.003		6/28/08
C608-4	SP	6/27/08	6/27/08	Phosphorus, ortho total	SW	4500-P G	0.005	0.005		mg/L	0.002		7/1/08
C608-4	SP	6/27/08	6/27/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.016	0.016		mg/L	0.002		7/14/08
C608-4	SP	6/27/08	6/27/08	Residue, Non-Filterable (TSS)	SW	2540 D	4.8	4.8		mg/L		4	7/3/08
C608-4	SP	6/27/08	6/27/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.315	0.315		mg/L	0.002		7/16/08
C608-5	SO	6/27/08	6/27/08	Alkalinity as CaCO3	SW	2320 B	60	60		mg/L		1	6/28/08
C608-5	SO	6/27/08	6/27/08	Nitrate/Nitrite as N, dissolve	SW	4500-NO3 I	0.069	0.069		mg/L	0.002		7/10/08
C608-5	SO	6/27/08	6/27/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.045	0.045		mg/L	0.003		6/28/08
C608-5	SO	6/27/08	6/27/08	Phosphorus, ortho total	SW	4500-P G	0.007	0.007		mg/L	0.002		7/1/08
C608-5	SO	6/27/08	6/27/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.027	0.027		mg/L	0.002		7/14/08
C608-5	SO	6/27/08	6/27/08	Residue, Non-Filterable (TSS)	SW	2540 D	6.4	6.4		mg/L		4	7/3/08
C608-5	SO	6/27/08	6/27/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.340	0.340		mg/L	0.002		7/16/08
C608-6	PC	6/27/08	6/27/08	Alkalinity as CaCO3	SW	2320 B	118	118		mg/L		1	6/28/08
C608-6	PC	6/27/08	6/27/08	Nitrate/Nitrite as N, dissolve	SW	4500-NO3 I	0.106	0.106		mg/L	0.002		7/10/08
C608-6	PC	6/27/08	6/27/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.005	0.005		mg/L	0.003		6/28/08
C608-6	PC	6/27/08	6/27/08	Phosphorus, ortho total	SW	4500-P G	0.034	0.034		mg/L	0.002		7/1/08
C608-6	PC	6/27/08	6/27/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.061	0.061		mg/L	0.002		7/14/08
C608-6	PC	6/27/08	6/27/08	Residue, Non-Filterable (TSS)	SW	2540 D	7.8	7.8		mg/L		4	7/3/08
C608-6	PC	6/27/08	6/27/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.342	0.342		mg/L	0.002		7/16/08

LABID	CLIENTID	COLLECTDATE	RECEIVEDATE	ANALYTE	MATRIX	METHOD	RESULT	TEXTRESUL	QUAL	UNITS	MDL	PQL	ANALYZEDATE
C708-1	RM-1	7/10/08	7/10/08	Alkalinity as CaCO3	SW	2320 B	62 62			mg/L		1	7/10/08
C708-1	RM-1	7/10/08	7/10/08	Chlorophyll a	SW	10200 H (modified)	4.6 4.6			mg/m3		0.1	8/6/08
C708-1	RM-1	7/10/08	7/10/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.005 0.005			mg/L		0.002	7/25/08
C708-1	RM-1	7/10/08	7/10/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.007 0.007			mg/L		0.003	7/11/08
C708-1	RM-1	7/10/08	7/10/08	Phosphorus, ortho total	SW	4500-P G	0.000 0.000		U	mg/L		0.002	7/23/08
C708-1	RM-1	7/10/08	7/10/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.016 0.016			mg/L		0.002	7/28/08
C708-1	RM-1	7/10/08	7/10/08	Residue, Non-Filterable (TSS)	SW	2540 D	16.0 16			mg/L		4	7/16/08
C708-1	RM-1	7/10/08	7/10/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.339 0.339			mg/L		0.002	7/29/08
C708-2	RM-2	7/10/08	7/10/08	Alkalinity as CaCO3	SW	2320 B	62 62			mg/L		1	7/10/08
C708-2	RM-2	7/10/08	7/10/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.025 0.025			mg/L		0.002	7/25/08
C708-2	RM-2	7/10/08	7/10/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.028 0.028			mg/L		0.003	7/11/08
C708-2	RM-2	7/10/08	7/10/08	Phosphorus, ortho total	SW	4500-P G	0.003 0.003			mg/L		0.002	7/23/08
C708-2	RM-2	7/10/08	7/10/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.020 0.020			mg/L		0.002	7/28/08
C708-2	RM-2	7/10/08	7/10/08	Residue, Non-Filterable (TSS)	SW	2540 D	11.6 11.6			mg/L		4	7/16/08
C708-2	RM-2	7/10/08	7/10/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.475 0.475			mg/L		0.002	7/29/08
C708-3	RM-3	7/10/08	7/10/08	Alkalinity as CaCO3	SW	2320 B	60 60			mg/L		1	7/10/08
C708-3	RM-3	7/10/08	7/10/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.081 0.081			mg/L		0.002	7/25/08
C708-3	RM-3	7/10/08	7/10/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.102 0.102			mg/L		0.003	7/11/08
C708-3	RM-3	7/10/08	7/10/08	Phosphorus, ortho total	SW	4500-P G	0.003 0.003			mg/L		0.002	7/23/08
C708-3	RM-3	7/10/08	7/10/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.020 0.020			mg/L		0.002	7/28/08
C708-3	RM-3	7/10/08	7/10/08	Residue, Non-Filterable (TSS)	SW	2540 D	11.6 11.6			mg/L		4	7/16/08
C708-3	RM-3	7/10/08	7/10/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.483 0.483			mg/L		0.002	7/29/08
C708-4	SP	7/10/08	7/10/08	Alkalinity as CaCO3	SW	2320 B	58 58			mg/L		1	7/10/08
C708-4	SP	7/10/08	7/10/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.118 0.118			mg/L		0.002	7/25/08
C708-4	SP	7/10/08	7/10/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.011 0.011			mg/L		0.003	7/11/08
C708-4	SP	7/10/08	7/10/08	Phosphorus, ortho total	SW	4500-P G	0.002 0.002			mg/L		0.002	7/23/08
C708-4	SP	7/10/08	7/10/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.017 0.017			mg/L		0.002	7/28/08
C708-4	SP	7/10/08	7/10/08	Residue, Non-Filterable (TSS)	SW	2540 D	10.2 10.2			mg/L		4	7/16/08
C708-4	SP	7/10/08	7/10/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.332 0.332			mg/L		0.002	7/29/08
C708-5	SO	7/10/08	7/10/08	Alkalinity as CaCO3	SW	2320 B	58 58			mg/L		1	7/10/08
C708-5	SO	7/10/08	7/10/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.045 0.045			mg/L		0.002	7/25/08
C708-5	SO	7/10/08	7/10/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.042 0.042			mg/L		0.003	7/11/08
C708-5	SO	7/10/08	7/10/08	Phosphorus, ortho total	SW	4500-P G	0.002 0.002			mg/L		0.002	7/23/08
C708-5	SO	7/10/08	7/10/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.020 0.020			mg/L		0.002	7/28/08
C708-5	SO	7/10/08	7/10/08	Residue, Non-Filterable (TSS)	SW	2540 D	12.4 12.4			mg/L		4	7/16/08
C708-5	SO	7/10/08	7/10/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.307 0.307			mg/L		0.002	7/29/08
C708-6	PC	7/10/08	7/10/08	Alkalinity as CaCO3	SW	2320 B	126 126			mg/L		1	7/10/08
C708-6	PC	7/10/08	7/10/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.111 0.111			mg/L		0.002	7/25/08
C708-6	PC	7/10/08	7/10/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.018 0.018			mg/L		0.003	7/11/08
C708-6	PC	7/10/08	7/10/08	Phosphorus, ortho total	SW	4500-P G	0.023 0.023			mg/L		0.002	7/23/08
C708-6	PC	7/10/08	7/10/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.059 0.059			mg/L		0.002	7/28/08
C708-6	PC	7/10/08	7/10/08	Residue, Non-Filterable (TSS)	SW	2540 D	15.6 15.6			mg/L		4	7/16/08
C708-6	PC	7/10/08	7/10/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.367 0.367			mg/L		0.002	7/29/08

LABID	CLIENTID	COLLECTDATE	RECEIVEDATE	ANALYTE	MATRIX	METHOD	RESULT	TEXTRESULT	QUAL	UNITS	MDL	PQL	ANALYZEDATE
C708B-1	RM-1	7/24/08	7/24/08	Alkalinity as CaCO3	SW	2320 B	64		64	mg/L		1	7/24/08
C708B-1	RM-1	7/24/08	7/24/08	Chlorophyll a	SW	10200 H (modified)	1.5		1.5	mg/m3		0.1	7/30/08
C708B-1	RM-1	7/24/08	7/24/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.003		0.003	mg/L		0.002	7/25/08
C708B-1	RM-1	7/24/08	7/24/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.009		0.009	mg/L		0.003	7/24/08
C708B-1	RM-1	7/24/08	7/24/08	Phosphorus, ortho total	SW	4500-P G	0.000		0.000 U	mg/L		0.002	7/24/08
C708B-1	RM-1	7/24/08	7/24/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.010		0.010	mg/L		0.002	7/29/08
C708B-1	RM-1	7/24/08	7/24/08	Residue, Non-Filterable (TSS)	SW	2540 D	8.2		8.2	mg/L		4	7/30/08
C708B-1	RM-1	7/24/08	7/24/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.328		0.328	mg/L		0.002	7/29/08
C708B-2	RM-2	7/24/08	7/24/08	Alkalinity as CaCO3	SW	2320 B	66		66	mg/L		1	7/24/08
C708B-2	RM-2	7/24/08	7/24/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.008		0.008	mg/L		0.002	7/25/08
C708B-2	RM-2	7/24/08	7/24/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.012		0.012	mg/L		0.003	7/24/08
C708B-2	RM-2	7/24/08	7/24/08	Phosphorus, ortho total	SW	4500-P G	0.000		0.000 U	mg/L		0.002	7/24/08
C708B-2	RM-2	7/24/08	7/24/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.009		0.009	mg/L		0.002	7/29/08
C708B-2	RM-2	7/24/08	7/24/08	Residue, Non-Filterable (TSS)	SW	2540 D	6.4		6.4	mg/L		4	7/30/08
C708B-2	RM-2	7/24/08	7/24/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.299		0.299	mg/L		0.002	7/29/08
C708B-3	RM-3	7/24/08	7/24/08	Alkalinity as CaCO3	SW	2320 B	62		62	mg/L		1	7/24/08
C708B-3	RM-3	7/24/08	7/24/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.129		0.129	mg/L		0.002	7/25/08
C708B-3	RM-3	7/24/08	7/24/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.093		0.093	mg/L		0.003	7/24/08
C708B-3	RM-3	7/24/08	7/24/08	Phosphorus, ortho total	SW	4500-P G	0.005		0.005	mg/L		0.002	7/24/08
C708B-3	RM-3	7/24/08	7/24/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.022		0.022	mg/L		0.002	7/29/08
C708B-3	RM-3	7/24/08	7/24/08	Residue, Non-Filterable (TSS)	SW	2540 D	13.0		13.0	mg/L		4	7/30/08
C708B-3	RM-3	7/24/08	7/24/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.701		0.701	mg/L		0.002	7/29/08
C708B-4	SP	7/24/08	7/24/08	Alkalinity as CaCO3	SW	2320 B	58		58	mg/L		1	7/24/08
C708B-4	SP	7/24/08	7/24/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.147		0.147	mg/L		0.002	7/25/08
C708B-4	SP	7/24/08	7/24/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.022		0.022	mg/L		0.003	7/24/08
C708B-4	SP	7/24/08	7/24/08	Phosphorus, ortho total	SW	4500-P G	0.003		0.003	mg/L		0.002	7/24/08
C708B-4	SP	7/24/08	7/24/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.006		0.006	mg/L		0.002	7/29/08
C708B-4	SP	7/24/08	7/24/08	Residue, Non-Filterable (TSS)	SW	2540 D	11.4		11.4	mg/L		4	7/30/08
C708B-4	SP	7/24/08	7/24/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.331		0.331	mg/L		0.002	7/29/08
C708B-5	SO	7/24/08	7/24/08	Alkalinity as CaCO3	SW	2320 B	60		60	mg/L		1	7/24/08
C708B-5	SO	7/24/08	7/24/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.080		0.080	mg/L		0.002	7/25/08
C708B-5	SO	7/24/08	7/24/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.051		0.051	mg/L		0.003	7/24/08
C708B-5	SO	7/24/08	7/24/08	Phosphorus, ortho total	SW	4500-P G	0.003		0.003	mg/L		0.002	7/24/08
C708B-5	SO	7/24/08	7/24/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.019		0.019	mg/L		0.002	7/29/08
C708B-5	SO	7/24/08	7/24/08	Residue, Non-Filterable (TSS)	SW	2540 D	16.2		16.2	mg/L		4	7/30/08
C708B-5	SO	7/24/08	7/24/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.370		0.370	mg/L		0.002	7/29/08

LABID	CLIENTID	COLLECTDATE	RECEIVEDATE	ANALYTE	MATRIX	METHOD	RESULT	TEXTRESULT	QUAL	UNITS	MDL	PQL	ANALYZEDATE
C808-1	RM-1	8/7/08	8/7/08	Alkalinity as CaCO3	SW	2320 B	64	64		mg/L		1	8/7/08
C808-1	RM-1	8/7/08	8/7/08	Chlorophyll a	SW	10200 H (modified)	6.2	6.2		mg/m3		0.1	8/20/08
C808-1	RM-1	8/7/08	8/7/08	Chlorophyll a	SW	10200 H (modified)	6.9	6.9		mg/m3		0.1	8/20/08
C808-1	RM-1	8/7/08	8/7/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I			U	mg/L		0.002	8/7/08
C808-1	RM-1	8/7/08	8/7/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.012	0.012		mg/L		0.003	8/7/08
C808-1	RM-1	8/7/08	8/7/08	Phosphorus, ortho total	SW	4500-P G	0.002	0.002		mg/L		0.002	8/13/08
C808-1	RM-1	8/7/08	8/7/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.017	0.017		mg/L		0.002	8/12/08
C808-1	RM-1	8/7/08	8/7/08	Residue, Non-Filterable (TSS)	SW	2540 D			U	mg/L		4	8/15/08
C808-1	RM-1	8/7/08	8/7/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.355	0.355		mg/L		0.002	8/15/08
C808-2	RM-2	8/7/08	8/7/08	Alkalinity as CaCO3	SW	2320 B	64	64		mg/L		1	8/7/08
C808-2	RM-2	8/7/08	8/7/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.004	0.004		mg/L		0.002	8/7/08
C808-2	RM-2	8/7/08	8/7/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.019	0.019		mg/L		0.003	8/7/08
C808-2	RM-2	8/7/08	8/7/08	Phosphorus, ortho total	SW	4500-P G	0.003	0.003		mg/L		0.002	8/13/08
C808-2	RM-2	8/7/08	8/7/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.017	0.017		mg/L		0.002	8/12/08
C808-2	RM-2	8/7/08	8/7/08	Residue, Non-Filterable (TSS)	SW	2540 D	4.2	4.2		mg/L		4	8/15/08
C808-2	RM-2	8/7/08	8/7/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.404	0.404		mg/L		0.002	8/15/08
C808-3	RM-3	8/7/08	8/7/08	Alkalinity as CaCO3	SW	2320 B	64	64		mg/L		1	8/7/08
C808-3	RM-3	8/7/08	8/7/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.028	0.028		mg/L		0.002	8/7/08
C808-3	RM-3	8/7/08	8/7/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.015	0.015		mg/L		0.003	8/7/08
C808-3	RM-3	8/7/08	8/7/08	Phosphorus, ortho total	SW	4500-P G	0.002	0.002		mg/L		0.002	8/13/08
C808-3	RM-3	8/7/08	8/7/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.024	0.024		mg/L		0.002	8/12/08
C808-3	RM-3	8/7/08	8/7/08	Residue, Non-Filterable (TSS)	SW	2540 D	11.9	11.9		mg/L		4	8/15/08
C808-3	RM-3	8/7/08	8/7/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.407	0.407		mg/L		0.002	8/15/08
C808-4	SP	8/7/08	8/7/08	Alkalinity as CaCO3	SW	2320 B	60	60		mg/L		1	8/7/08
C808-4	SP	8/7/08	8/7/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.160	0.160		mg/L		0.002	8/7/08
C808-4	SP	8/7/08	8/7/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.011	0.011		mg/L		0.003	8/7/08
C808-4	SP	8/7/08	8/7/08	Phosphorus, ortho total	SW	4500-P G	0.003	0.003		mg/L		0.002	8/13/08
C808-4	SP	8/7/08	8/7/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.008	0.008		mg/L		0.002	8/12/08
C808-4	SP	8/7/08	8/7/08	Residue, Non-Filterable (TSS)	SW	2540 D			U	mg/L		4	8/15/08
C808-4	SP	8/7/08	8/7/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.372	0.372		mg/L		0.002	8/15/08
C808-5	SO	8/7/08	8/7/08	Alkalinity as CaCO3	SW	2320 B	64	64		mg/L		1	8/7/08
C808-5	SO	8/7/08	8/7/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.013	0.013		mg/L		0.002	8/7/08
C808-5	SO	8/7/08	8/7/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.010	0.010		mg/L		0.003	8/7/08
C808-5	SO	8/7/08	8/7/08	Phosphorus, ortho total	SW	4500-P G			U	mg/L		0.002	8/13/08
C808-5	SO	8/7/08	8/7/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.022	0.022		mg/L		0.002	8/12/08
C808-5	SO	8/7/08	8/7/08	Residue, Non-Filterable (TSS)	SW	2540 D	10.7	10.7		mg/L		4	8/15/08
C808-5	SO	8/7/08	8/7/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.294	0.294		mg/L		0.002	8/15/08
C808-6	PC	8/7/08	8/7/08	Alkalinity as CaCO3	SW	2320 B	124	124		mg/L		1	8/7/08
C808-6	PC	8/7/08	8/7/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.180	0.180		mg/L		0.002	8/7/08
C808-6	PC	8/7/08	8/7/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.030	0.030		mg/L		0.003	8/7/08
C808-6	PC	8/7/08	8/7/08	Phosphorus, ortho total	SW	4500-P G	0.027	0.027		mg/L		0.002	8/13/08
C808-6	PC	8/7/08	8/7/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.082	0.082		mg/L		0.002	8/12/08
C808-6	PC	8/7/08	8/7/08	Residue, Non-Filterable (TSS)	SW	2540 D	13.9	13.9		mg/L		4	8/15/08
C808-6	PC	8/7/08	8/7/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.701	0.701		mg/L		0.002	8/15/08

LABID	CLIENTID	COLLECTDATE	RECEIVEDATE	ANALYTE	MATRIX	METHOD	RESULT	TEXTRESULT	QUAL	UNITS	MDL	PQL	ANALYZEDATE
C808B-1	RM-1	8/26/08	8/26/08	Alkalinity as CaCO3	SW	2320 B	64	64		mg/L	1		8/26/08
C808B-1	RM-1	8/26/08	8/26/08	Chlorophyll a	SW	10200 H (modified)	7.0	7.0		mg/m3	0.1		9/9/08
C808B-1	RM-1	8/26/08	8/26/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I			U	mg/L	0.002		8/27/08
C808B-1	RM-1	8/26/08	8/26/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.007	0.007		mg/L	0.003		8/27/08
C808B-1	RM-1	8/26/08	8/26/08	Phosphorus, ortho total	SW	4500-P G	0.003	0.003		mg/L	0.002		8/27/08
C808B-1	RM-1	8/26/08	8/26/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.016	0.016		mg/L	0.002		9/2/08
C808B-1	RM-1	8/26/08	8/26/08	Residue, Non-Filterable (TSS)	SW	2540 D	11.8	11.8		mg/L	4		8/29/08
C808B-1	RM-1	8/26/08	8/26/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.330	0.330		mg/L	0.002		9/3/08
C808B-2	RM-2	8/26/08	8/26/08	Alkalinity as CaCO3	SW	2320 B	66	66		mg/L	1		8/26/08
C808B-2	RM-2	8/26/08	8/26/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.003	0.003		mg/L	0.002		8/27/08
C808B-2	RM-2	8/26/08	8/26/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.009	0.009		mg/L	0.003		8/27/08
C808B-2	RM-2	8/26/08	8/26/08	Phosphorus, ortho total	SW	4500-P G	0.003	0.003		mg/L	0.002		8/27/08
C808B-2	RM-2	8/26/08	8/26/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.017	0.017		mg/L	0.002		9/2/08
C808B-2	RM-2	8/26/08	8/26/08	Residue, Non-Filterable (TSS)	SW	2540 D	9.8	9.8		mg/L	4		8/29/08
C808B-2	RM-2	8/26/08	8/26/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.380	0.380		mg/L	0.002		9/3/08
C808B-3	RM-3	8/26/08	8/26/08	Alkalinity as CaCO3	SW	2320 B	68	68		mg/L	1		8/26/08
C808B-3	RM-3	8/26/08	8/26/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.007	0.007		mg/L	0.002		8/27/08
C808B-3	RM-3	8/26/08	8/26/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.020	0.020		mg/L	0.003		8/27/08
C808B-3	RM-3	8/26/08	8/26/08	Phosphorus, ortho total	SW	4500-P G	0.005	0.005		mg/L	0.002		8/27/08
C808B-3	RM-3	8/26/08	8/26/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.025	0.025		mg/L	0.002		9/2/08
C808B-3	RM-3	8/26/08	8/26/08	Residue, Non-Filterable (TSS)	SW	2540 D	14.0	14.0		mg/L	4		8/29/08
C808B-3	RM-3	8/26/08	8/26/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.515	0.515		mg/L	0.002		9/3/08
C808B-4	SP	8/26/08	8/26/08	Alkalinity as CaCO3	SW	2320 B	70	70		mg/L	1		8/26/08
C808B-4	SP	8/26/08	8/26/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.161	0.161		mg/L	0.002		8/27/08
C808B-4	SP	8/26/08	8/26/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.024	0.024		mg/L	0.003		8/27/08
C808B-4	SP	8/26/08	8/26/08	Phosphorus, ortho total	SW	4500-P G	0.007	0.007		mg/L	0.002		8/27/08
C808B-4	SP	8/26/08	8/26/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.187	0.187		mg/L	0.002		9/2/08
C808B-4	SP	8/26/08	8/26/08	Residue, Non-Filterable (TSS)	SW	2540 D	109.0	109.0		mg/L	4		8/29/08
C808B-4	SP	8/26/08	8/26/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.605	0.605		mg/L	0.002		9/3/08
C808B-5	SO	8/26/08	8/26/08	Alkalinity as CaCO3	SW	2320 B	66	66		mg/L	1		8/26/08
C808B-5	SO	8/26/08	8/26/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.003	0.003		mg/L	0.002		8/27/08
C808B-5	SO	8/26/08	8/26/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.012	0.012		mg/L	0.003		8/27/08
C808B-5	SO	8/26/08	8/26/08	Phosphorus, ortho total	SW	4500-P G	0.003	0.003		mg/L	0.002		8/27/08
C808B-5	SO	8/26/08	8/26/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.022	0.022		mg/L	0.002		9/2/08
C808B-5	SO	8/26/08	8/26/08	Residue, Non-Filterable (TSS)	SW	2540 D	14.3	14.3		mg/L	4		8/29/08
C808B-5	SO	8/26/08	8/26/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.295	0.295		mg/L	0.002		9/3/08
C808B-6	PC	8/26/08	8/26/08	Alkalinity as CaCO3	SW	2320 B	118	118		mg/L	1		8/26/08
C808B-6	PC	8/26/08	8/26/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.580	0.580		mg/L	0.002		8/27/08
C808B-6	PC	8/26/08	8/26/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.013	0.013		mg/L	0.003		8/27/08
C808B-6	PC	8/26/08	8/26/08	Phosphorus, ortho total	SW	4500-P G	0.041	0.041		mg/L	0.002		8/27/08
C808B-6	PC	8/26/08	8/26/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.088	0.088		mg/L	0.002		9/2/08
C808B-6	PC	8/26/08	8/26/08	Residue, Non-Filterable (TSS)	SW	2540 D	35.5	35.5		mg/L	4		8/29/08
C808B-6	PC	8/26/08	8/26/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.875	0.875		mg/L	0.002		9/3/08

LABID	CLIENTID	COLLECTDATE	RECEIVEDATE	ANALYTE	MATRIX	METHOD	RESULT	TEXTRESULT	QUAL	UNITS	MDL	PQL	ANALYZEDATE
C908-1	RM-1	9/17/08	9/17/08	Alkalinity as CaCO3	SW	2320 B	72	72		mg/L		1	9/18/08
C908-1	RM-1	9/17/08	9/17/08	Chlorophyll a	SW	10200 H (modified)	8.1	8.1		mg/m3		0.1	10/2/08
C908-1	RM-1	9/17/08	9/17/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I			U	mg/L		0.002	9/22/08
C908-1	RM-1	9/17/08	9/17/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.021	0.021		mg/L		0.003	9/25/08
C908-1	RM-1	9/17/08	9/17/08	Phosphorus, ortho total	SW	4500-P G			U	mg/L		0.002	9/22/08
C908-1	RM-1	9/17/08	9/17/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.023	0.023		mg/L		0.002	9/30/08
C908-1	RM-1	9/17/08	9/17/08	Residue, Non-Filterable (TSS)	SW	2540 D	7.2	7.2		mg/L		4	9/24/08
C908-1	RM-1	9/17/08	9/17/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.334	0.334		mg/L		0.002	9/24/08
C908-2	RM-2	9/17/08	9/17/08	Alkalinity as CaCO3	SW	2320 B	70	70		mg/L		1	9/18/08
C908-2	RM-2	9/17/08	9/17/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I			U	mg/L		0.002	9/22/08
C908-2	RM-2	9/17/08	9/17/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.022	0.022		mg/L		0.003	9/25/08
C908-2	RM-2	9/17/08	9/17/08	Phosphorus, ortho total	SW	4500-P G			U	mg/L		0.002	9/22/08
C908-2	RM-2	9/17/08	9/17/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.026	0.026		mg/L		0.002	9/30/08
C908-2	RM-2	9/17/08	9/17/08	Residue, Non-Filterable (TSS)	SW	2540 D	9.2	9.2		mg/L		4	9/24/08
C908-2	RM-2	9/17/08	9/17/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.311	0.311		mg/L		0.002	9/24/08
C908-3	RM-3	9/17/08	9/17/08	Alkalinity as CaCO3	SW	2320 B	70	70		mg/L		1	9/18/08
C908-3	RM-3	9/17/08	9/17/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.003	0.003		mg/L		0.002	9/22/08
C908-3	RM-3	9/17/08	9/17/08	Phosphorus, ortho total	SW	4500-P G			U	mg/L		0.002	9/22/08
C908-3	RM-3	9/17/08	9/17/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.030	0.030		mg/L		0.002	9/30/08
C908-3	RM-3	9/17/08	9/17/08	Residue, Non-Filterable (TSS)	SW	2540 D	13.6	13.6		mg/L		4	9/24/08
C908-3	RM-3	9/17/08	9/17/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.597	0.597		mg/L		0.002	9/24/08
C908-4	SP	9/17/08	9/17/08	Alkalinity as CaCO3	SW	2320 B	76	76		mg/L		1	9/18/08
C908-4	SP	9/17/08	9/17/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.007	0.007		mg/L		0.002	9/22/08
C908-4	SP	9/17/08	9/17/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.023	0.023		mg/L		0.003	9/25/08
C908-4	SP	9/17/08	9/17/08	Phosphorus, ortho total	SW	4500-P G			U	mg/L		0.002	9/22/08
C908-4	SP	9/17/08	9/17/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.024	0.024		mg/L		0.002	9/30/08
C908-4	SP	9/17/08	9/17/08	Residue, Non-Filterable (TSS)	SW	2540 D	4.4	4.4		mg/L		4	9/24/08
C908-4	SP	9/17/08	9/17/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.222	0.222		mg/L		0.002	9/24/08
C908-5	SO	9/17/08	9/17/08	Alkalinity as CaCO3	SW	2320 B	70	70		mg/L		1	9/18/08
C908-5	SO	9/17/08	9/17/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.008	0.008		mg/L		0.002	9/22/08
C908-5	SO	9/17/08	9/17/08	Phosphorus, ortho total	SW	4500-P G			U	mg/L		0.002	9/22/08
C908-5	SO	9/17/08	9/17/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.026	0.026		mg/L		0.002	9/30/08
C908-5	SO	9/17/08	9/17/08	Residue, Non-Filterable (TSS)	SW	2540 D	10.0	10.0		mg/L		4	9/24/08
C908-5	SO	9/17/08	9/17/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.414	0.414		mg/L		0.002	9/24/08
C908-6	PC	9/17/08	9/17/08	Alkalinity as CaCO3	SW	2320 B	132	132		mg/L		1	9/18/08
C908-6	PC	9/17/08	9/17/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.342	0.342		mg/L		0.002	9/22/08
C908-6	PC	9/17/08	9/17/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.022	0.022		mg/L		0.003	9/25/08
C908-6	PC	9/17/08	9/17/08	Phosphorus, ortho total	SW	4500-P G	0.041	0.041		mg/L		0.002	9/22/08
C908-6	PC	9/17/08	9/17/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.064	0.064		mg/L		0.002	9/30/08
C908-6	PC	9/17/08	9/17/08	Residue, Non-Filterable (TSS)	SW	2540 D	11.4	11.4		mg/L		4	9/24/08
C908-6	PC	9/17/08	9/17/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.584	0.584		mg/L		0.002	9/24/08

LABID	CLIENTID	COLLECTDATE	RECEIVEDATE	ANALYTE	MATRI	METHOD	RESULT	RESULT	QUAL	UNITS	MDL	PQL	ANALYZEDATE
C908B-1	RM-1	9/25/08	9/25/08	Alkalinity as CaCO3	SW	2320 B	72	72		mg/L		1	9/25/08
C908B-1	RM-1	9/25/08	9/25/08	Chlorophyll a	SW	10200 H (modified)	1.8	1.8		mg/m3		0.1	10/7/08
C908B-1	RM-1	9/25/08	9/25/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I			U	mg/L		0.002	9/26/08
C908B-1	RM-1	9/25/08	9/25/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.013	0.013		mg/L		0.003	9/25/08
C908B-1	RM-1	9/25/08	9/25/08	Phosphorus, ortho total	SW	4500-P G	0.006	0.006		mg/L		0.002	9/26/08
C908B-1	RM-1	9/25/08	9/25/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.016	0.016		mg/L		0.002	9/30/08
C908B-1	RM-1	9/25/08	9/25/08	Residue, Non-Filterable (TSS)	SW	2540 D	9.0	9		mg/L		4	10/2/08
C908B-1	RM-1	9/25/08	9/25/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.391	0.391		mg/L		0.002	10/29/08
C908B-2	RM-2	9/25/08	9/25/08	Alkalinity as CaCO3	SW	2320 B	72	72		mg/L		1	9/25/08
C908B-2	RM-2	9/25/08	9/25/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I			U	mg/L		0.002	9/26/08
C908B-2	RM-2	9/25/08	9/25/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.008	0.008		mg/L		0.003	9/25/08
C908B-2	RM-2	9/25/08	9/25/08	Phosphorus, ortho total	SW	4500-P G	0.004	0.004		mg/L		0.002	9/26/08
C908B-2	RM-2	9/25/08	9/25/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.012	0.012		mg/L		0.002	9/30/08
C908B-2	RM-2	9/25/08	9/25/08	Residue, Non-Filterable (TSS)	SW	2540 D	11.2	11.2		mg/L		4	10/2/08
C908B-2	RM-2	9/25/08	9/25/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.286	0.286		mg/L		0.002	10/29/08
C908B-3	RM-3	9/25/08	9/25/08	Alkalinity as CaCO3	SW	2320 B	72	72		mg/L		1	9/25/08
C908B-3	RM-3	9/25/08	9/25/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.004	0.004		mg/L		0.002	9/26/08
C908B-3	RM-3	9/25/08	9/25/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.018	0.018		mg/L		0.003	9/25/08
C908B-3	RM-3	9/25/08	9/25/08	Phosphorus, ortho total	SW	4500-P G	0.006	0.006		mg/L		0.002	9/26/08
C908B-3	RM-3	9/25/08	9/25/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.022	0.022		mg/L		0.002	9/30/08
C908B-3	RM-3	9/25/08	9/25/08	Residue, Non-Filterable (TSS)	SW	2540 D	18.6	18.6		mg/L		4	10/2/08
C908B-3	RM-3	9/25/08	9/25/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.343	0.343		mg/L		0.002	10/29/08
C908B-4	SP	9/25/08	9/25/08	Alkalinity as CaCO3	SW	2320 B	78	78		mg/L		1	9/25/08
C908B-4	SP	9/25/08	9/25/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.030	0.030		mg/L		0.002	9/26/08
C908B-4	SP	9/25/08	9/25/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.011	0.011		mg/L		0.003	9/25/08
C908B-4	SP	9/25/08	9/25/08	Phosphorus, ortho total	SW	4500-P G	0.005	0.005		mg/L		0.002	9/26/08
C908B-4	SP	9/25/08	9/25/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.010	0.010		mg/L		0.002	9/30/08
C908B-4	SP	9/25/08	9/25/08	Residue, Non-Filterable (TSS)	SW	2540 D	11.0	11.0		mg/L		4	10/2/08
C908B-4	SP	9/25/08	9/25/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.238	0.238		mg/L		0.002	10/29/08
C908B-5	SO	9/25/08	9/25/08	Alkalinity as CaCO3	SW	2320 B	72	72		mg/L		1	9/25/08
C908B-5	SO	9/25/08	9/25/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I			U	mg/L		0.002	9/26/08
C908B-5	SO	9/25/08	9/25/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.011	0.011		mg/L		0.003	9/25/08
C908B-5	SO	9/25/08	9/25/08	Phosphorus, ortho total	SW	4500-P G	0.005	0.005		mg/L		0.002	9/26/08
C908B-5	SO	9/25/08	9/25/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.021	0.021		mg/L		0.002	9/30/08
C908B-5	SO	9/25/08	9/25/08	Residue, Non-Filterable (TSS)	SW	2540 D	18.4	18.4		mg/L		4	10/2/08
C908B-5	SO	9/25/08	9/25/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.220	0.220		mg/L		0.002	10/29/08
C908B-6	PC	9/25/08	9/25/08	Alkalinity as CaCO3	SW	2320 B	132	132		mg/L		1	9/25/08
C908B-6	PC	9/25/08	9/25/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.344	0.344		mg/L		0.002	9/26/08
C908B-6	PC	9/25/08	9/25/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.017	0.017		mg/L		0.003	9/25/08
C908B-6	PC	9/25/08	9/25/08	Phosphorus, ortho total	SW	4500-P G	0.036	0.036		mg/L		0.002	9/26/08
C908B-6	PC	9/25/08	9/25/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.048	0.048		mg/L		0.002	9/30/08
C908B-6	PC	9/25/08	9/25/08	Residue, Non-Filterable (TSS)	SW	2540 D	16.6	16.6		mg/L		4	10/2/08
C908B-6	PC	9/25/08	9/25/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.529	0.529		mg/L		0.002	10/29/08

LABID	CLIENTID	COLLECTDATE	RECEIVEDATE	ANALYTE	MATRI	METHOD	RESULT	TEXTRESULT	QUAL	UNITS	MDL	PQL	ANALYZEDATE
C1008-1	RM-1	10/29/08	10/29/08	Alkalinity as CaCO3	SW	2320 B	74	74		mg/L	1		10/29/08
C1008-1	RM-1	10/29/08	10/29/08	Chlorophyll a	SW	10200 H (modified)	3.4	3.4		mg/m3	0.1		11/12/08
C1008-1	RM-1	10/29/08	10/29/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.008	0.008		mg/L	0.002		10/30/08
C1008-1	RM-1	10/29/08	10/29/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.029	0.029		mg/L	0.003		10/30/08
C1008-1	RM-1	10/29/08	10/29/08	Phosphorus, ortho total	SW	4500-P G	0.009	0.009		mg/L	0.002		10/30/08
C1008-1	RM-1	10/29/08	10/29/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.036	0.036		mg/L	0.002		11/3/08
C1008-1	RM-1	10/29/08	10/29/08	Residue, Non-Filterable (TSS)	SW	2540 D	13.1	13.1		mg/L	4		10/31/08
C1008-2	RM-2	10/29/08	10/29/08	Alkalinity as CaCO3	SW	2320 B	80	80		mg/L	1		10/29/08
C1008-2	RM-2	10/29/08	10/29/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.009	0.009		mg/L	0.002		10/30/08
C1008-2	RM-2	10/29/08	10/29/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.025	0.025		mg/L	0.003		10/30/08
C1008-2	RM-2	10/29/08	10/29/08	Phosphorus, ortho total	SW	4500-P G	0.009	0.009		mg/L	0.002		10/30/08
C1008-2	RM-2	10/29/08	10/29/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.024	0.024		mg/L	0.002		11/3/08
C1008-2	RM-2	10/29/08	10/29/08	Residue, Non-Filterable (TSS)	SW	2540 D	15.0	15.0		mg/L	4		10/31/08
C1008-3	RM-3	10/29/08	10/29/08	Alkalinity as CaCO3	SW	2320 B	76	76		mg/L	1		10/29/08
C1008-3	RM-3	10/29/08	10/29/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.013	0.013		mg/L	0.002		10/30/08
C1008-3	RM-3	10/29/08	10/29/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.032	0.032		mg/L	0.003		10/30/08
C1008-3	RM-3	10/29/08	10/29/08	Phosphorus, ortho total	SW	4500-P G	0.009	0.009		mg/L	0.002		10/30/08
C1008-3	RM-3	10/29/08	10/29/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.024	0.024		mg/L	0.002		11/3/08
C1008-3	RM-3	10/29/08	10/29/08	Residue, Non-Filterable (TSS)	SW	2540 D	12.6	12.6		mg/L	4		10/31/08
C1008-4	SP	10/29/08	10/29/08	Alkalinity as CaCO3	SW	2320 B	60	60		mg/L	1		10/29/08
C1008-4	SP	10/29/08	10/29/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.110	0.110		mg/L	0.002		10/30/08
C1008-4	SP	10/29/08	10/29/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.011	0.011		mg/L	0.003		10/30/08
C1008-4	SP	10/29/08	10/29/08	Phosphorus, ortho total	SW	4500-P G	0.011	0.011		mg/L	0.002		10/30/08
C1008-4	SP	10/29/08	10/29/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.005	0.005		mg/L	0.002		11/3/08
C1008-4	SP	10/29/08	10/29/08	Residue, Non-Filterable (TSS)	SW	2540 D	6.5	6.5		mg/L	4		10/31/08
C1008-5	SO	10/29/08	10/29/08	Alkalinity as CaCO3	SW	2320 B	80	80		mg/L	1		10/29/08
C1008-5	SO	10/29/08	10/29/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.013	0.013		mg/L	0.002		10/30/08
C1008-5	SO	10/29/08	10/29/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.027	0.027		mg/L	0.003		10/30/08
C1008-5	SO	10/29/08	10/29/08	Phosphorus, ortho total	SW	4500-P G	0.009	0.009		mg/L	0.002		10/30/08
C1008-5	SO	10/29/08	10/29/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.019	0.019		mg/L	0.002		11/3/08
C1008-5	SO	10/29/08	10/29/08	Residue, Non-Filterable (TSS)	SW	2540 D	10.0	10.0		mg/L	4		10/31/08
C1008-6	PC	10/29/08	10/29/08	Alkalinity as CaCO3	SW	2320 B	134	134		mg/L	1		10/29/08
C1008-6	PC	10/29/08	10/29/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.328	0.328		mg/L	0.002		10/30/08
C1008-6	PC	10/29/08	10/29/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.014	0.014		mg/L	0.003		10/30/08
C1008-6	PC	10/29/08	10/29/08	Phosphorus, ortho total	SW	4500-P G	0.061	0.061		mg/L	0.002		10/30/08
C1008-6	PC	10/29/08	10/29/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.080	0.080		mg/L	0.002		11/3/08
C1008-6	PC	10/29/08	10/29/08	Residue, Non-Filterable (TSS)	SW	2540 D	43.6	43.6		mg/L	4		10/31/08

LABID	CLIENTID	COLLECTDATE	RECEIVEDATE	ANALYTE	MATRIX	METHOD	RESULT	TEXTRESULT	QUAL	UNITS	MDL	PQL	ANALYZEDATE
C1108-1	RM-1	11/21/08	11/21/08	Alkalinity as CaCO3	SW	2320 B	80 80			mg/L		1	11/21/08
C1108-1	RM-1	11/21/08	11/21/08	Chlorophyll a	SW	10200 H (modified)	4.9 4.9			mg/m3		0.1	12/3/08
C1108-1	RM-1	11/21/08	11/21/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.029 0.029			mg/L		0.002	12/4/08
C1108-1	RM-1	11/21/08	11/21/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.030 0.030			mg/L		0.003	12/3/08
C1108-1	RM-1	11/21/08	11/21/08	Phosphorus, ortho total	SW	4500-P G			U	mg/L		0.002	12/3/08
C1108-1	RM-1	11/21/08	11/21/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.011 0.011			mg/L		0.002	12/5/08
C1108-1	RM-1	11/21/08	11/21/08	Residue, Non-Filterable (TSS)	SW	2540 D	5.6 5.6			mg/L		4	11/26/08
C1108-1	RM-1	11/21/08	11/21/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.367 0.367			mg/L		0.002	12/5/08
C1108-2	RM-2	11/21/08	11/21/08	Alkalinity as CaCO3	SW	2320 B	80 80			mg/L		1	11/21/08
C1108-2	RM-2	11/21/08	11/21/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.030 0.030			mg/L		0.002	12/4/08
C1108-2	RM-2	11/21/08	11/21/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.031 0.031			mg/L		0.003	12/3/08
C1108-2	RM-2	11/21/08	11/21/08	Phosphorus, ortho total	SW	4500-P G	0.004 0.004			mg/L		0.002	12/3/08
C1108-2	RM-2	11/21/08	11/21/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.010 0.010			mg/L		0.002	12/5/08
C1108-2	RM-2	11/21/08	11/21/08	Residue, Non-Filterable (TSS)	SW	2540 D	6.0 6.0			mg/L		4	11/26/08
C1108-2	RM-2	11/21/08	11/21/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.299 0.299			mg/L		0.002	12/5/08
C1108-3	RM-3	11/21/08	11/21/08	Alkalinity as CaCO3	SW	2320 B	80 80			mg/L		1	11/21/08
C1108-3	RM-3	11/21/08	11/21/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.031 0.031			mg/L		0.002	12/4/08
C1108-3	RM-3	11/21/08	11/21/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.047 0.047			mg/L		0.003	12/3/08
C1108-3	RM-3	11/21/08	11/21/08	Phosphorus, ortho total	SW	4500-P G	0.004 0.004			mg/L		0.002	12/3/08
C1108-3	RM-3	11/21/08	11/21/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.018 0.018			mg/L		0.002	12/5/08
C1108-3	RM-3	11/21/08	11/21/08	Residue, Non-Filterable (TSS)	SW	2540 D	8.4 8.4			mg/L		4	11/26/08
C1108-3	RM-3	11/21/08	11/21/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.403 0.403			mg/L		0.002	12/5/08
C1108-4	SP	11/21/08	11/21/08	Alkalinity as CaCO3	SW	2320 B	60 60			mg/L		1	11/21/08
C1108-4	SP	11/21/08	11/21/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.096 0.096			mg/L		0.002	12/4/08
C1108-4	SP	11/21/08	11/21/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.011 0.011			mg/L		0.003	12/3/08
C1108-4	SP	11/21/08	11/21/08	Phosphorus, ortho total	SW	4500-P G			U	mg/L		0.002	12/3/08
C1108-4	SP	11/21/08	11/21/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.004 0.004			mg/L		0.002	12/5/08
C1108-4	SP	11/21/08	11/21/08	Residue, Non-Filterable (TSS)	SW	2540 D			U	mg/L		4	11/26/08
C1108-4	SP	11/21/08	11/21/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.247 0.247			mg/L		0.002	12/5/08
C1108-5	SO	11/21/08	11/21/08	Alkalinity as CaCO3	SW	2320 B	80 80			mg/L		1	11/21/08
C1108-5	SO	11/21/08	11/21/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.032 0.032			mg/L		0.002	12/4/08
C1108-5	SO	11/21/08	11/21/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.024 0.024			mg/L		0.003	12/3/08
C1108-5	SO	11/21/08	11/21/08	Phosphorus, ortho total	SW	4500-P G			U	mg/L		0.002	12/3/08
C1108-5	SO	11/21/08	11/21/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.016 0.016			mg/L		0.002	12/5/08
C1108-5	SO	11/21/08	11/21/08	Residue, Non-Filterable (TSS)	SW	2540 D	4.9 4.9			mg/L		4	11/26/08
C1108-5	SO	11/21/08	11/21/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.303 0.303			mg/L		0.002	12/5/08
C1108-6	PC	11/21/08	11/21/08	Alkalinity as CaCO3	SW	2320 B	128 128			mg/L		1	11/21/08
C1108-6	PC	11/21/08	11/21/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.585 0.585			mg/L		0.002	12/4/08
C1108-6	PC	11/21/08	11/21/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.020 0.020			mg/L		0.003	12/3/08
C1108-6	PC	11/21/08	11/21/08	Phosphorus, ortho total	SW	4500-P G	0.032 0.032			mg/L		0.002	12/3/08
C1108-6	PC	11/21/08	11/21/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.055 0.055			mg/L		0.002	12/5/08
C1108-6	PC	11/21/08	11/21/08	Residue, Non-Filterable (TSS)	SW	2540 D	25.0 25.0			mg/L		4	11/26/08
C1108-6	PC	11/21/08	11/21/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.733 0.733			mg/L		0.002	12/5/08

LABID	CLIENTID	COLLECTDATE	RECEIVEDATE	ANALYTE	MATRIX	METHOD	RESULT	TEXTRESULT	QUAL	UNITS	MDL	PQL	ANALYZEDATE
C1208-1	SP	12/23/08	12/23/08	Alkalinity as CaCO3	SW	2320 B	64	64		mg/L		1	12/23/08
C1208-1	SP	12/23/08	12/23/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.122	0.122		mg/L	0.002		1/14/09
C1208-1	SP	12/23/08	12/23/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.024	0.024		mg/L	0.003		1/14/09
C1208-1	SP	12/23/08	12/23/08	Phosphorus, ortho total	SW	4500-P G	0.002	0.002		mg/L	0.002		1/8/09
C1208-1	SP	12/23/08	12/23/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.004	0.004		mg/L	0.002		1/8/09
C1208-1	SP	12/23/08	12/23/08	Residue, Non-Filterable (TSS)	SW	2540 D			U	mg/L		4	12/29/08
C1208-1	SP	12/23/08	12/23/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.253	0.253		mg/L	0.002		1/15/09
C1208-2	SO	12/23/08	12/23/08	Alkalinity as CaCO3	SW	2320 B	114	114		mg/L		1	12/23/08
C1208-2	SO	12/23/08	12/23/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.095	0.095		mg/L	0.002		1/14/09
C1208-2	SO	12/23/08	12/23/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.015	0.015		mg/L	0.003		1/14/09
C1208-2	SO	12/23/08	12/23/08	Phosphorus, ortho total	SW	4500-P G	0.002	0.002		mg/L	0.002		1/8/09
C1208-2	SO	12/23/08	12/23/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.009	0.009		mg/L	0.002		1/8/09
C1208-2	SO	12/23/08	12/23/08	Residue, Non-Filterable (TSS)	SW	2540 D			U	mg/L		4	12/29/08
C1208-2	SO	12/23/08	12/23/08	Total Nitrogen	SW	SM 4500-N B (mod)	0.280	0.280		mg/L	0.002		1/15/09
C1208-3	PC	12/23/08	12/23/08	Alkalinity as CaCO3	SW	2320 B	128	128		mg/L		1	12/23/08
C1208-3	PC	12/23/08	12/23/08	Nitrate/Nitrite as N, dissolved	SW	4500-NO3 I	0.714	0.714		mg/L	0.002		1/14/09
C1208-3	PC	12/23/08	12/23/08	Nitrogen, ammonia	SW	QuickChem 10-107-06-3-D	0.094	0.094		mg/L	0.003		1/14/09
C1208-3	PC	12/23/08	12/23/08	Phosphorus, ortho total	SW	4500-P G	0.026	0.026		mg/L	0.002		1/8/09
C1208-3	PC	12/23/08	12/23/08	Phosphorus, total	SW	4500-P G, with manual digestion	0.072	0.072		mg/L	0.002		1/8/09
C1208-3	PC	12/23/08	12/23/08	Residue, Non-Filterable (TSS)	SW	2540 D	25.0	25.0		mg/L		4	12/29/08
C1208-3	PC	12/23/08	12/23/08	Total Nitrogen	SW	SM 4500-N B (mod)	1.048	1.048		mg/L	0.002		1/15/09

APPENDIX B
PHOSPHOROUS LOADING DETAIL

Appendix B. Chatfield Reservoir Phosphorous Loading Detail

Year	Final Flow							Final TP Load						Total Flow, Load, and Conc			
	USACE Chatfield Inflow (af/y)	Site 0 USACE Chatfield Outflow (af/y)	Site 1 South Platte Normalized Flow (af/y)	Site 2 Plum Creek Normalized Flow (af/y)	Alluvial Flow (af/y)	Precip Flow (af/y)	Ungaged Flow (af/y)	Site 0 Chatfield TP Export (lbs/y)	Site 1 South Platte TP Load (lbs/y)	Site 2 Plum Creek TP Load (lbs/y)	Alluvial TP Load (lbs/y)	Precip TP Load (lbs/y)	Ungaged TP Load (lbs/y)	Total Inflow (af/y)	External TP Load (lbs/y)	Net TP Load, Ext minus Export (lbs/y)	Flow-weighted TP (mg/L)
1986	116,996	117,791	92,776	14,382	2,684	1,790	5,365	--	9,412	4,261	73	565	1,589	116,996	15,900	--	0.050
1987	270,468	264,525	202,419	50,338	2,684	2,581	12,446	--	22,664	21,366	73	814	5,283	270,468	50,201	--	0.068
1988	122,351	119,445	73,369	31,949	2,684	1,690	12,659	10,386	6,153	14,277	73	533	5,657	122,351	26,693	16,307	0.080
1989	100,690	99,077	84,153	5,928	2,684	1,750	6,174	5,517	8,924	1,368	73	552	1,425	100,690	12,342	6,826	0.045
1990	80,666	75,775	64,535	10,892	2,684	1,699	857	3,129	6,233	4,022	73	536	316	80,666	11,181	8,051	0.051
1991	74,113	62,555	53,284	12,138	2,684	2,081	3,926	5,678	4,949	3,906	73	656	1,264	74,113	10,848	5,170	0.054
1992	78,306	74,129	234,858	18,268	2,684	1,728	9,673	5,980	3,487	6,580	73	545	3,484	78,306	14,169	8,189	0.067
1993	70,621	69,750	234,858	9,401	2,684	1,916	7,624	2,323	4,286	2,688	73	604	2,180	70,621	9,832	7,509	0.051
1994	74,847	68,869	234,858	12,526	2,684	1,693	4,985	2,100	4,293	4,752	73	534	1,891	74,847	11,544	9,444	0.057
1995	336,345	338,103	234,858	27,547	2,684	2,666	13,811	13,577	33,201	12,226	73	841	6,130	336,345	52,471	38,894	0.057
1996	82,408	71,878	234,858	4,752	2,684	1,742	6,553	8,367	6,252	1,108	73	549	1,529	82,408	9,511	1,145	0.042
1997	120,653	113,069	234,858	15,657	2,684	2,765	1,036	6,220	10,541	4,793	73	872	317	120,653	16,596	10,376	0.051
1998	177,849	178,363	234,858	48,648	2,684	1,890	11,558	17,087	12,580	21,281	73	596	5,056	177,849	39,586	22,499	0.082
1999	242,221	233,073	234,858	54,144	2,684	2,467	--	23,461	21,685	24,155	73	778	--	242,221	46,691	23,229	0.071
2000	88,223	83,880	234,858	16,133	2,684	1,994	4,275	3,175	6,075	5,620	73	629	1,489	88,223	13,886	10,711	0.058
2001	67,072	66,385	234,858	12,627	2,684	1,677	5,090	2,530	3,438	4,505	73	529	1,816	67,072	10,360	7,830	0.057
2002	36,464	28,761	234,858	4,273	2,684	1,358	1,543	1,124	1,618	1,019	73	428	368	36,464	3,506	2,381	0.035
2003	68,742	71,167	234,858	17,924	2,684	1,950	1,860	7,056	4,596	7,695	73	615	799	68,742	13,778	6,722	0.074
2004	69,339	68,335	234,858	14,487	2,684	2,229	7,097	5,058	4,701	4,732	73	703	2,318	69,339	12,527	7,469	0.066
2005	107,785	99,878	234,858	36,674	2,684	2,007	--	8,796	8,431	16,065	73	633	--	107,785	25,202	16,406	0.086
2006	89,786	85,619	234,858	11,433	2,684	1,783	--	7,221	9,734	3,170	73	563	--	89,786	13,540	6,318	0.055
2007	288,680	288,133	234,858	49,022	2,684	2,116	--	22,705	33,822	21,515	73	668	--	288,680	56,077	33,372	0.071
2008	117,631	105,793	99,469	13,858	2,684	1,620	--	5,551	10,022	3,960	73	511	--	117,631	14,566	9,015	0.046

APPENDIX C
POINT SOURCE DISCHARGER TABLES

Appendix C
2008 Monthly Flow, Phosphorus Concentration, and Loading from Select
Wastewater Treatment Plants in the Chatfield Watershed

Town of Larkspur

<i>Month</i>	<i>Total Montly Flow (million gallons)</i>	<i>Average Monthly Total Phosphorus Concentration (mg/L)</i>	<i>Total Phosphorus Discharge (pounds)</i>
January	0.56	0.16	0.74
February	0.53	0.14	0.61
March	0.54	0.12	0.54
April	0.49	0.50	2.04
May	0.55	0.14	0.65
June	0.59	0.12	0.59
July	0.79	0.22	1.44
August	0.72	0.18	1.08
September	0.47	0.19	0.75
October	0.58	0.27	1.31
November	0.55	0.18	0.83
December	0.61	0.14	0.71
	Total Discharge (million gallons/year)	Annual Average (mg/L)	Total Discharge (pounds/year)
	7.0	0.20	11.31

Note:
 Statistics are rounded.

Perry Park Water and Sanitation District: Waucondah

<i>Month</i>	<i>Total Montly Flow (million gallons)</i>	<i>Average Monthly Total Phosphorus Concentration (mg/L)</i>	<i>Total Phosphorus Discharge (pounds)</i>
January	4.685	0.74	28.91
February	4.396	0.47	17.23
March	4.710	0.5	19.64
April	4.580	0.53	20.24
May	4.970	0.39	16.17
June	4.623	0.29	11.18
July	4.573	0.25	9.53
August	4.774	0.26	10.35
September	4.503	0.55	20.66
October	5.312	0.64	28.35
November	4.834	0.34	13.71
December	4.960	0.29	12.00
	Total Discharge (million gallons/year)	Annual Average (mg/L)	Total Discharge (pounds/year)
	56.9	0.44	207.98

Note:
 Statistics are rounded.

Perry Park Water and Sanitation District: Sageport

<i>Month</i>	<i>Total Montly Flow (million gallons)</i>	<i>Average Monthly Total Phosphorus Concentration (mg/L)</i>	<i>Total Phosphorus Discharge (pounds)</i>
January	1.434	0.29	3.47
February	1.359	0.48	5.44
March	1.535	0.32	4.10
April	1.511	0.28	3.53
May	1.569	0.49	6.41
June	1.502	0.32	4.01
July	1.540	0.33	4.24
August	1.583	0.89	11.75
September	1.580	0.35	4.61
October	1.661	0.29	4.02
November	1.599	0.27	3.60
December	1.581	0.45	5.93
	Total Discharge (million gallons/year)	Annual Average (mg/L)	Total Discharge (pounds/year)
	18.5	0.40	61.1

Note:
Statistics are rounded.

Louviere Mutual Service Company

<i>Month</i>	<i>Total Montly Flow (million gallons)</i>	<i>Average Monthly Total Phosphorus Concentration (mg/L)</i>	<i>Total Phosphorus Discharge (pounds)</i>
January	0	0	0
February	0	0	0
March	0	0	0
April	0	0	0
May	0	0	0
June	0	0	0
July	0	0	0
August	0	0	0
September	0	0	0
October	0	0	0
November	0	0	0
December	0	0	0
	Total Discharge (million gallons/year)	Annual Average (mg/L)*	Total Discharge (pounds/year)
	0.00000	0.00	0.00

Note:
* = Zeros are not included in annual average concentration calculation.
Statistics are rounded.

Roxborough Park Water and Sanitation District

<i>Month</i>	<i>Total Montly Flow (million gallons)</i>	<i>Average Monthly Total Phosphorus Concentration</i>	<i>Total Phosphorus Discharge (pounds)</i>
January	0	0	0
February	0	0	0
March	0	0	0
April	0	0	0
May	0	0	0
June	0	0	0
July	0	0	0
August	0	0	0
September	0	0	0
October	0	0	0
November	0	0	0
December	0	0	0
	Total Discharge (million gallons/year)	Annual Average (mg/L)	Total Discharge (pounds/year)
	0	0.00	0.00

Note:

* = Zeros are not included in annual average concentration calculation.

Statistics are rounded.

Ponderosa Center

<i>Month</i>	<i>Total Montly Flow (million gallons)</i>	<i>Average Monthly Total Phosphorus Concentration (mg/L)</i>	<i>Total Phosphorus Discharge (pounds)</i>
January	0.0000	0.00	0.0
February	0.0000	0.00	0.0
March	0.0000	0.00	0.0
April	0.0000	0.00	0.0
May	0.1023	0.24	0.2
June	0.1710	0.14	0.2
July	0.2170	0.46	0.8
August	0.0699	0.81	0.5
September	0.0710	3.25	1.9
October	0.0720	0.75	0.5
November	0.0000	0.00	0.0
December	0.0000	0.00	0.0
	Total Discharge (million gallons/year)	Annual Average (mg/L)	Total Discharge (pounds/year)
	0.7	0.47	4.1

Note:

Statistics are rounded.

Lockheed Martin Space Systems Company

<i>Month</i>	<i>Total Montly Flow (million gallons)</i>	<i>Average Monthly Total Phosphorus Concentration (mg/L)</i>	<i>Total Phosphorus Discharge (pounds)</i>
January	5.7769	0.60	28.9
February	4.1564	0.32	11.1
March	2.6025	0.08	1.9
April	3.4468	0.23	6.6
May	4.0519	0.19	6.4
June	2.5100	0.09	1.9
July	2.2095	0.09	1.7
August	2.4802	0.24	5.0
September	2.2661	0.18	3.4
October	2.2956	0.22	4.2
November	2.1787	0.13	2.4
December	2.4894	0.09	1.9
	Total Discharge (million gallons/year)	Annual Average (mg/L)	Total Discharge (pounds/year)
	36.5	0.21	75.4

Note:
Statistics are rounded.

Plum Creek Wastewater Authority

<i>Month</i>	<i>Total Montly Flow (million gallons)</i>	<i>Average Monthly Total Phosphorus Concentration (mg/L)</i>	<i>Total Monthly Reuse Flow (million gallons)</i>	<i>Reuse Average Monthly Total Phosphorus Concentration (mg/L)</i>
January	127.669	0.31	0.736	0.38
February	118.714	0.36	1.485	0.43
March	112.149	0.16	6.840	0.20
April	96.063	0.27	20.966	0.27
May	97.413	0.20	22.545	0.20
June	67.205	0.25	44.307	0.32
July	64.227	0.31	45.648	0.27
August	101.446	0.24	30.628	0.25
September	91.193	0.28	26.578	0.30
October	109.800	0.25	18.240	0.25
November	96.437	0.32	10.610	0.23
December	128.005	0.24	1.132	0.29
	Total Discharge (million gallons/year)	Annual Average (mg/L)	Total Discharge (million gallons/year)	Annual Average (mg/L)
	1,210	0.27	230	0.28

Note:
Statistics are rounded.