## Los Angeles Basin

# Water Augmentation Study
# Phase II Final Report

**The Los Angeles and San Gabriel Rivers Watershed Council**

**Prepared with assistance from Geomatrix Consultants, Inc.**

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- US Bureau of Reclamation
- Water Replenishment District of Southern California

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# Phase II Final Report
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# EXECUTIVE SUMMARY

The *Los Angeles Basin Water Augmentation Study* is a long-term research project led by the Los Angeles & San Gabriel Rivers Watershed Council, to explore the potential for reducing surface water pollution and increasing local water supplies by increasing infiltration of urban storm water runoff. The Watershed Council has forged a unique partnership between local water supply, wastewater and public works agencies, the Los Angeles Regional Board, the California Department of Water Resources, and the US Bureau of Reclamation, which are jointly funding the study. Each partner contributes its own perspective to the shared concerns of bringing scientific evidence to bear on the feasibility of promoting infiltration without impacting groundwater quality. The study addresses a number of questions intended to better characterize the benefits of storm water capture for infiltration, including impacts on groundwater quality and assessing appropriate and most favorable geographic, geologic and hydrologic conditions for infiltration. The overall goals of the study will be to evaluate the costs and benefits of implementation, and determine the most effective strategy for developing this potentially significant source of water for southern California.

The focus of the early phases of the study was to monitor the fate and transport of runoff-borne pollutants by measuring storm water quality at the surface, as it infiltrates through the soil to groundwater. Phase I of the study focused on water quality assessment on single parcels utilizing infiltration structures, by monitoring two locations for one wet season. Phase II, just completed, expanded the monitoring in time and scope, adding new sites with different land uses and infiltration techniques, and monitoring all six sites for several years.

## Monitoring Program

Monitoring sites are located throughout the Los Angeles area and include two industrial sites, an elementary school, a commercial office building, a private residence and a public park (see Figure 2 – Monitoring Site Locations). Groundwater depths range from 20 feet to over 350 feet below ground surface. All sites were retrofit with various infiltration structures, ranging from simple landscaped swales to large-scale underground infiltration fields. Monitoring equipment was installed as part of the study, including soil water samplers (lysimeters) installed beneath the ground surface and groundwater wells.

The monitoring program consisted of taking storm water runoff samples during storm events, and taking post-storm vadose zone samples from lysimeters and groundwater samples from monitoring wells. Samples were sent to a state-certified laboratory for analysis. Constituents analyzed included general minerals, metals, oil and grease, perchlorate, some pesticides, volatile and semi-volatile organic compounds, NDMA, surfactants, and bacteria.

The four years of monitoring saw a wide range of rainfall variability, from the driest year on record (2001-2002) to the second wettest year on record (2004-2005). Rainfall varied geographically as well, with total rainfall amounts in 2005 ranging from about 22 inches at the park to over 37 inches at the Sun Valley industrial sites.

### Summary of Water Quality Results

Soil appears to be very efficient at removing bacteria from stormwater. Fecal coliform and E. coli were detected in at least one stormwater sample from each site except Hall House, and total coliforms were detected at high levels in nearly all stormwater samples at all sites. With the exception of one sample at the Broadous School, bacteria were not detected, or detected at very low concentrations, in lysimeter and groundwater samples.

Concentrations of metals tended to be higher in stormwater than in subsurface water samples. Concentrations in subsurface samples were variable and generally stable or decreasing. Exceptions are increasing trends of copper in lysimeter samples collected at the Sun Valley site that could be associated with infiltration of storm water with relatively higher concentrations of copper. Most inorganic groundwater quality constituents do not show clear trends or show decreasing concentrations over the study period. In only one instance, involving low concentrations of nitrate, did concentrations of a constituent show a statistically significant, although slight, increase. Groundwater quality data from the shallow groundwater sites show groundwater quality improvement (decreasing salt concentrations) potentially associated with dilution by infiltrating stormwater.

At the non-industrial sites the concentrations of general monitoring parameters such as TDS and chloride tended to be less than or similar to concentrations in lysimeter and groundwater samples. This suggests that the infiltration of stormwater is not likely to have a significant negative impact to groundwater from these constituents. At the Veterans Park site, concentrations of TDS, nitrate, chloride, and other salts in groundwater samples (including pre-infiltration background samples) was much higher than concentrations in stormwater samples. This result is likely due to historical application of fertilizers. Data collected to date suggest that concentrations of many of these constituents in lysimeter and groundwater samples are decreasing with time, possibly due to dilution by infiltrated stormwater.

Other than acetone, VOCs and SVOCs detected in storm water are different than VOCs detected in subsurface samples. VOCs detected in groundwater samples during the monitoring period were also detected in initial background samples. With the possible exception of occasional low level detections of acetone, VOCs in stormwater do not appear to impact groundwater at all. At the industrial sites, groundwater constituents such as MtBE and chlorinated solvents were present in some lysimeter samples at greater concentrations than present in any stormwater samples. This finding suggests the presence of subsurface contamination prior to stormwater infiltration.

The industrial sites had detections of more organic compounds and higher concentrations of metals than the non-industrial sites. The filtration system in the detention basins at Sun Valley and the Metal Recycler site was somewhat effective at reducing concentrations of certain constituents, particularly the dissolved metals. For example, at the Metal Recycler site, concentrations of dissolved arsenic, copper, chromium VI and lead were lower after filtration. The sedimentation basin at Veterans Park and the soil layers at the other sites would also be expected to reduce concentrations of metals and other solids, although effluent was not analyzed separately to verify this.

Although perchlorate was detected in some stormwater samples, there is no evidence of groundwater degradation by perchlorate from stormwater infiltration during this study. The occurrence of perchlorate in stormwater samples was unexpected, as the focus is typically on subsurface sources of perchlorate contamination. Perchlorate is a salt, which in addition to being a component of solid rocket fuel, is also an ingredient in fireworks and road flares. Other constituents of concern for groundwater (disinfection byproducts, 1,4-Dioxane, PAHs and DBCP) were not detected in stormwater.

Soil samples collected from four of the sites at the conclusion of the study indicated no significant increases in parameters monitored, and in many cases constituent concentrations were reduced.

The concentrations of many constituents vary throughout the sampling period, but there is no apparent pattern that can be tied to effects from infiltration. As stated above, VOCs detected in groundwater are routinely different than those in stormwater. VOCs detected in groundwater samples collected during the storm season were also detected in pre-season background samples, thus they do not appear to be the result of infiltration. Given the depth to groundwater at the two industrial sites and at Broadous, it seems unlikely that constituents introduced into the soil from stormwater infiltration would migrate all the way to the groundwater at a detectable concentration.

Data collected to date indicate that there is no statistically significant degradation of groundwater quality from the infiltration of stormwater-borne constituents. Groundwater quality has generally improved for most constituents at sites with shallow groundwater.

The data collected during this study show no immediate impacts, and no apparent trends to indicate that storm water infiltration will negatively impact groundwater at these sites. While variations in storm water and groundwater pollutants between types of land use were apparent, they may not be a barrier to infiltration. Filtration methods employed at the industrial sites seemed to be effective at removing certain pollutants prior to entering the infiltration system, which may make infiltration more feasible at these more polluted sites. Careful site characterization of surface and soil constituents at industrial sites should be conducted prior to implementing infiltration strategies.

While it is clear that site-specific conditions must be considered when urban runoff is being investigated for recharge as potable groundwater, it is also important to note that groundwater recharge offers a number of benefits to municipal water managers. Groundwater storage is less costly in terms of construction costs, environmental impacts, evaporation loss of water, and eutrophication as compared to surface-water reservoirs. Further, recharging groundwater puts the resource in closer proximity to the end-user than pumping water from reservoirs, an additional cost savings. With proper planning and research, the use of urban runoff for recharge of groundwater offers a viable alternative to relying solely on purchased water for such activities, water that may not be available in present quantities for purchase in the future. On average, over 500,000 acre-feet of runoff flow to the ocean from the Los Angeles County basin each year. If some portion of this water can be captured for reuse, the pressure on supplies in northern and central California may be moderated.

## Next Steps

### Long-term Monitoring Program

While the data collected during this program do provide significant information, monitoring will continue in order to better assess the cumulative effects of infiltration. A reduced program of subsurface monitoring is under currently development. This program will likely include annual or bi-annual monitoring of lysimeters and groundwater wells at four or five sites. No storm water samples will be collected, as surface runoff quality has been well-characterized at these sites. Monitoring will be scheduled after significant storm events and late in the storm season, to ensure that infiltration to the deepest lysimeters has occurred. The analytical suite will be reduced but should include metals, general parameters, some organics, and perchlorate. We expect to continue monitoring for at least two additional years, and possibly longer if funding is available.

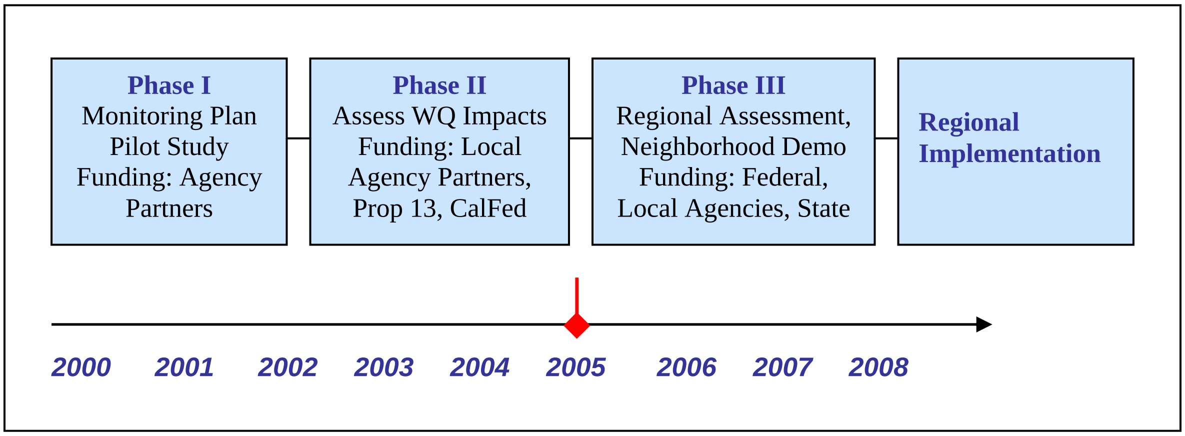
### Phase III Work Plan

The third phase of the study will incorporate demonstration projects on a neighborhood scale. We propose to retrofit one or more small neighborhoods with state of the art Best Management Practices to address storm water infiltration as well as water conservation, pollution reduction and treatment, flooding, and habitat and stream restoration. Specific techniques will depend upon the sites selected, but may include conversion to native drought-tolerant landscapes, use of irrigation controllers, facilities to capture runoff for infiltration and/or reuse, restoring buried stream channels, and adding green space and habitat areas. The demonstration projects will be monitored for water quality as well as for reduction of runoff and water use, changes in property values, and other potential benefits. These neighborhood projects will provide real-world models of addressing existing infrastructure and will serve to integrate many on-going efforts in the region to address flood management, water quality, water supply and environmental restoration. Our goal is to demonstrate how these approaches can be applied on a regional scale in Southern California as well as in other geographic regions.

In addition to the demonstration project, we are assessing the overall feasibility of utilizing infiltration techniques to capture storm water for groundwater recharge. The Bureau of Reclamation is currently developing a groundwater augmentation model to predict the amount of additional water that could be available for deep percolation if infiltration is increased. They are also developing a regional cost and benefit assessment to determine the real cost of this new water supply. Researchers at UC Riverside are assessing costs on a site-specific scale. The long-term goal of this project is a regional strategy for implementation.

The WAS is in its fifth year and is currently funded through 2006, through the second year of Phase III. The figure below illustrates each of the project phases, the goal of each, and source of funding.

**Project Timeline**



# 1. INTRODUCTION

## 1.1 Project Background

The Water Augmentation Study (WAS) is a ten year research program of the Los Angeles and San Gabriel Rivers Watershed Council (Watershed Council). The purpose of the program is to assess whether the capture and infiltration of stormwater at localized sites throughout the region is a viable means of augmenting water supply, without adversely affecting groundwater quality. The study began in 2000 in collaboration with representatives from academia and from federal, state and local public agencies. Several public agencies joined in a Memorandum of Understanding (MOU) to support the WAS, and formed a Technical Advisory Committee (TAC) to oversee the study. Each partner contributes its own perspective to the shared concerns of bringing scientific evidence to bear on the feasibility of promoting infiltration without adversely impacting groundwater quality. For Phase I, the TAC developed the monitoring program and provided oversight for the Pilot Study. For Phase II, a new MOU was signed and the TAC has continued to provide oversight and technical input on a number of program aspects. A third MOU was approved by seven of the agencies, to continue the partnership for Phase III of the study. The TAC currently consists of the Watershed Council and the following agency partners:

- City of Los Angeles Department of Water and Power
- City of Los Angeles Watershed Protection Division
- City of Santa Monica Environmental Programs Division
- Los Angeles County Department of Public Works
- Metropolitan Water District of Southern California
- United States Bureau of Reclamation
- Water Replenishment District of Southern California

## 1.2 Project Goals

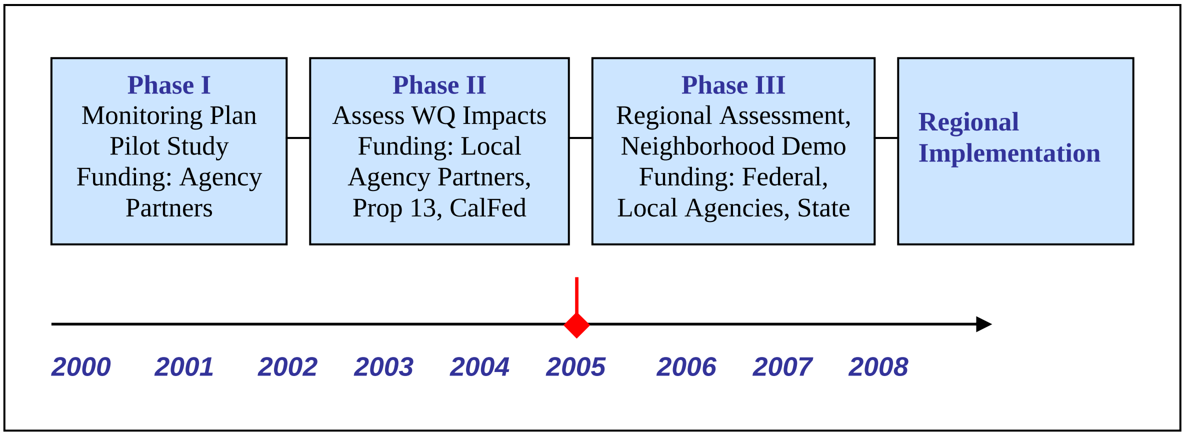
This study addresses a number of questions intended to better characterize the benefits of stormwater capture for infiltration. The most important aspects initially are evaluating the potential impact on groundwater quality, and assessing appropriate and most favorable geographic, geologic and hydrologic conditions for infiltration.

The focus of the early phases of the study was to monitor the fate and transport of runoff-borne pollutants by measuring stormwater quality at the surface, as it infiltrates through the soil and as it mixes with groundwater. Phase I of the study focused on water quality assessment on single parcels utilizing infiltration structures, by monitoring two locations for one wet season. Phase II, just completed, expanded the monitoring in time and scope, adding new sites with different land uses and infiltration techniques, and monitoring for several years. The specific goals of Phase II were to assess the cumulative impact of infiltration on soil and groundwater, and evaluate the effects of different land uses on pollutant types and concentrations.

During Phase III of our research we will assess through modeling how much additional groundwater recharge may be possible, and whether the additional recharge could provide sufficient water supply to offset the cost of implementation and extraction compared with the cost of developing new water supplies. We will implement one or more demonstration projects on a neighborhood scale, incorporating both infiltration and water conservation strategies. We will also assess other potential benefits and barriers (environmental, regulatory, social, and economic) to determine the best strategy for regional implementation.

The WAS is in its fifth year and is currently funded through early 2007, through the third year of Phase III. **Figure 1** illustrates each of the project phases, the goal of each, and source of funding for each phase.

**Figure 1**
**Project Timeline**



## 1.3 Project Activities during Phase II

### 1.3.1 Meetings

TAC meetings were held generally bi-monthly, for a total of eighteen meetings between July 2002 and April 2005. Members of the TAC include the agency funding partners, and representatives from the California Department of Water Resources, Los Angeles Regional Water Quality Control Board, Upper Los Angeles River Area Watermaster (ULARA), Main San Gabriel Basin Watermaster, West and Central Basin Municipal Water District, Santa Ana Watershed Project Authority, UC Riverside and TreePeople. Minutes were distributed to all TAC members.

Plenary meetings, open to all interested parties, were held periodically when there was a desire to communicate project progress to a larger audience. During Phase II, two plenary meetings were held: in February 2003 and November 2004. Presentations at the first meeting included an update on Phase I and II monitoring, related activities in the Santa Ana Watershed Project Authority, and a presentation/discussion of preliminary plans for Phase III of the WAS. In preparation for that meeting, a 4-page color flyer was developed describing the long-range goals and timeline for the study. The second plenary meeting addressed results to date from Phase II monitoring, development of the runoff/infiltration model to quantify potential for new water supply from infiltration, and a presentation by the Sanitation Districts of LA County on the results of their Soil Aquifer Treatment study. The latter is a long-term collaborative research study to assess the impacts on groundwater quality of infiltrating treated wastewater in recharge basins.

### 1.3.2 Sample Collection

During the first year of Phase II (2002-2003), three sites were monitored: an elementary school, a commercial office site, and a single-family residence. Samples were collected over four storm events during that winter, between November and April. The field monitoring program was conducted by CDM, under contract to the Watershed Council. Three new monitoring locations were established for the 2003-2004 season, bringing the total to six sites. The new sites were a public park in Long Beach and two industrial sites, in Los Angeles and Sun Valley. Geomatrix Consultants, Inc. (Geomatrix) of Costa Mesa was retained by the Watershed Council to establish the three new monitoring sites and conduct the field sampling program for two seasons from 2003-2005. For the new sites, they assisted with site selection and evaluation, designed and constructed infiltration BMPs, designed a monitoring program and installed monitoring equipment. For all six sites, they assisted with preparation of the Sampling Plan and Quality Assurance Project Plan. During the rainy season, they monitored weather forecasts and, in consultation with the Watershed Council, identified storms suitable for sampling and mobilized their field crews accordingly. Two to three rounds of sampling were completed for each site each season. Geomatrix was also responsible for managing and analyzing the resulting data.

### 1.3.3 Laboratory Analysis

The Watershed Council contracted with Calscience Environmental Laboratories in Garden Grove, California to perform soil and water quality testing of field samples during the course of the study. Calscience provided sample checklists, labeled sample containers and coolers for each monitoring site and event. Samples were delivered to Calscience by sampling field staff after collection. Laboratory results and quality control data were transmitted to the Watershed Council and Geomatrix electronically and via hard copy reports. These data are included in the Appendix tables for each monitoring site.

### 1.3.4 Equipment Maintenance

Each monitoring location has a variety of equipment installed for infiltration and monitoring, including detention/sedimentation vaults, soil water samplers (lysimeters), groundwater monitoring wells, and subsurface soil moisture sensors. These are described in detail in the Project Study Plan (Section 3). Maintenance activities included inspecting all facilities and equipment, testing the lysimeters, cleaning out the sedimentation vaults, collecting soil moisture data and replacing the datalogger batteries as needed.

During the course of the study, several lysimeters and well covers were damaged and replaced, and one lysimeter was relocated to provide a more representative sample from the vadose zone. We also installed a deep lysimeter (70-80 feet below ground surface) at one of our industrial sites to better characterize the pollutant removal capacity of the soil.

We also prepared Operations and Maintenance documentation for the BMPs installed at our newest sites, as they will be maintained by the property owners once this project is complete.

### 1.3.5 Presentations

Presentations on the WAS were made at a number of conferences and meetings during this phase of the project:

- Association of American Geographers 2002 Annual Meeting
- Floodplain Management Association 2004 annual conference
- Headwaters to Ocean 2003 and 2004 annual conferences in Long Beach, organized by the California Shore and Beach Preservation Association, CalCoast, the Wetlands Recovery Project and the Society of Wetlands Scientists
- Los Angeles County Department of Public Works BMP Task Force
- Main San Gabriel Basin Watermaster, Water Quality Management Committee
- Public Officials for Water and Environmental Reform 2002 annual Water Policy Conference
- State Water Resources Control Board Nonpoint Source 2003 bi-annual conference
- Southern California Water Dialogue
- Southern California Stormwater Monitoring Coalition

We also presented periodic updates on study progress at the Watershed Council’s monthly stakeholders’ meetings.

## 1.4 Purpose of this Report

This report provides information on activities undertaken during the monitoring phase of the WAS, from July 1, 2001 through April 30, 2005, and the water quality results from that monitoring. The Introduction describes the WAS background and timeframe, and highlights the project goals and accomplishments. Section 2 is a literature review of prior research that addresses runoff characteristics and infiltration studies. Section 3 describes the project activities and work plan, including the monitoring sites, the protocols for the sampling regime and monitored pollutants. Section 4 discusses the monitored events and the water quality results, and Section 5 assesses the data gathered over the past four years and summarizes the conclusions from these results. Section 6 discusses project outcomes and what steps will be undertaken during the next phase. The Appendices (on the enclosed cd) include complete water quality and soil data results, trend analysis graphs, groundwater hydrographs and other technical data.

# 2. RELATED RESEARCH

This section reviews and summarizes the literature related to research on urban stormwater infiltration, including the long-term impacts of recharge on groundwater, and appropriate conditions for stormwater recharge.

## 2.1 Characteristics of Urban Stormwater Pollutants

### 2.1.1 The Nationwide Urban Runoff Program

Urban runoff is comprised of various flow phases and includes dry-weather base flows, stormwater, combined sewer overflows and, in applicable areas, snowmelt (Pitt et. al., 1996). Perhaps the most comprehensive study of the various constituents comprising urban stormwater pollution was undertaken by the U.S. Environmental Protection Agency's (EPA) Nationwide Urban Runoff Program (NURP). This research was conducted by the Water Planning Division of the EPA and entailed collecting and analyzing water sampling data between 1978 and 1982 in order to both determine the characteristics of urban stormwater runoff and to identify potential differences among contaminant concentrations attributed to varying land uses and geographic areas. EPA listed priority pollutants studied included heavy metals, organic pollutants, coliform bacteria, nutrients, oxygen-demanding substances, and suspended solids.

The NURP study entailed collection of runoff samples from 81 sites located in 22 different cities throughout the United States, and included more than 2,300 separate storm events. Concerning general levels of priority pollutants found in urban runoff, the NURP study identified heavy metals as the most prevalent substances, all 13 of which were detected in water samples. Lead, copper, and zinc occurred at the highest frequency, present in 91% of samples taken. The EPA noted that lead concentrations violated drinking water thresholds in 73% of the samples, though this does not necessarily mean that receiving waters (i.e. groundwater aquifers) would contain the same level of lead. Organic constituents -- 63 out of a total of 106 tested -- were detected at both lower concentrations and frequencies than heavy metals, occurring in no more than 20% of stormwater samples. Of these constituents, pentachlorophenol and chlordane exceeded the EPA's freshwater *acute* threshold, while freshwater *chronic* criteria were exceeded by pentachlorophenol, bias, phthalate, gamma-BHC, chlordane, and alpha-endosulfan. Detected carcinogens included alpha-BHC, gamma-BHC, chlordane, pyrene, chrysene, and phenanthrene. Rarely occurring organic constituents were speculated to be site-specific. Coliform bacteria were present in high levels in urban runoff samples. Nutrients, while found in runoff, appeared in lower concentrations while oxygen-demanding substances were detected in samples approximating levels found in secondary treatment plants (EPA 1983).

Finally, the EPA study concluded that total suspended solids concentrations present in stormwater runoff samples were higher in mineral and human-made products but lower in organic particulates than those discharged from sewage treatment plants. Suspended solids found in runoff tended to have other types of contaminants absorbed onto them. On an annual load basis, suspended solids contained in urban runoff greatly exceed those released from secondary treatment plants. Thus, contaminated sediments, at least in some areas, are an issue requiring address, as is the need for consideration of urban runoff control where total suspended solids-related water quality problems exist (EPA 1983).

The data for ten measured contaminants were used to calculate the event mean concentration, or EMC. The EMC is defined as the total constituent mass discharge divided by the total runoff volume for each measured substance, and is based on the flow weighted average concentration of each identified priority pollutant. Results indicated that the EMCs at each test site and the median of the EMCs for all test sites were found to exhibit normal statistical distribution, and that their appeared to be no significant correlation between EMC values and runoff volumes. This finding is best explained by the high incidence of pollutant concentration variability from one rainfall event to another at most sites, effectively eclipsing site-to-site variability that could be present as well as influences owed to variations in land use, geographic location or other relative factors (slope, precipitation, urban density). Essentially, although there are differences in the concentrations of various constituents across land uses, the data do not provide a statistically significant basis for predicting differences in EMC values (EPA 1983).

### 2.1.2 Other Studies

The 1983 NURP study was a landmark research project, yielding comprehensive data sets that allowed for general characterization of the various pollutant substances found in urban runoff. Since this published report, numerous other studies have been conducted to both measure and describe these and other identified constituents in stormwater. A brief examination of more recent studies reveals that there are additional constituents that require attention. In 1994, EPA released a study addressing potential groundwater contamination from stormwater infiltration. The agency noted that volatile organic compounds, including the subset polycyclic aromatic hydrocarbons (PAHs), have been discovered in groundwater near industrial sites. Further, viruses have been detected in groundwater adjacent to stormwater recharge basins.

Viruses are a special case to contend with for a number of reasons: 1) enteric viruses are more resistant to environmental factors than are enteric bacteria, 2) viruses can survive for longer periods of time in water, 3) they can occur in both fresh and marine waters in the absence of fecal coliforms or other indicator bacteria, and 4) they are more resistant to common disinfectants than indicator bacteria (EPA 1994). Viruses are not commonly monitored in stormwater because of the cost and volume of sample needed. Available studies indicate that viruses are sometimes present in dry weather and wet weather flow. Santa Monica Bay Restoration Commission study measured enteric viruses in storm drains in concentrations from 0 to 10 infectious units per 100 liters during dry weather (SMBRP 1992). A study by Caltrans found the presence of at least one type of human virus in 12 of 97 samples taken at 20 sites in Southern California (Schroeder et al 2002). Further, this study found no correlation between the presence of human virus and standard indicator bacteria.

Concerning other potential environmental pollutants, a group of known but yet unregulated constituents that can make their way into urban runoff include pharmaceuticals and personal care products (PPCPs). This diverse group of compounds is found in human and veterinary drugs, X-ray media, bioactive food supplements, fragrances, and sun-screen agents (Lee 2004). Lee predicts that as urban population bases expand, PPCPs will play an increased role in water quality issues, noting that chemicals in domestic water supplies are transferred to urban runoff through leaking sanitary sewers and fugitive irrigation waters. Lastly, the EPA recently identified disinfection by-product agents (DBPs) as a group of water pollutants. Various DBPs form when a chemical used for disinfecting drinking water reacts with natural organic matter or bromide/iodine in the source water. Commonly used disinfectants include chlorine, ozone, chlorine dioxide, and chloramine (Lee 2004).

Perchlorate, which has become a significant pollutant of concern in groundwater, is rarely sampled in stormwater. Perchlorate is a salt, which is used as an oxidizer to help solid rocket fuel burn, and is an ingredient in fireworks and road flares. A recent study (Tipton 2003) suggests there is the potential for perchlorate to be reduced in surface soils through natural biodegradation before it can migrate to ground water.

## 2.2 Impacts from Urban Runoff on Groundwater Quality

### 2.2.1 The NURP Study

The EPA NURP study also evaluated the effect of urban stormwater runoff on groundwater aquifers and subsurface soils at sites in Long Island, New York and Fresno, California. This evaluation was based on extensive monitoring of infiltration recharge basins ranging from recent installations to others that had been in service in excess of twenty years. The most significant of these findings are summarized below.

- Heavy metals, an appreciable number of organic priority pollutants, most pesticides, and coliform bacteria are intercepted during the process of infiltration and effectively prevented from reaching groundwater underlying recharge basins.
- Most constituents accumulate in the upper soil layers. Concentrations were found to correlate with the length of time a basin has been in service. Effective retention of applicable constituents takes place with all soil types tested, ranging from clays to sands. The depth of constituent penetration is affected by soil type and water content, depth to groundwater, slope, and various bio-chemical parameters; however, in no case did contaminant enrichment of soil exceed several meters in depth, with the highest concentrations found near the surface.
- The limit of the ability of soils to retain/absorb urban runoff constituents is unknown and additional study is warranted. A related issue is the environmentally safe disposal of sediments in detention basins.

- At both NY and CA locations, groundwater surfaces were at least 20 feet below the base of the recharge basins. NURP findings may not be applicable at locations with shallow depths to groundwater.
- No significant differences in the interception or retention of runoff constituents were apparent for basins with vegetated versus non-vegetated recharge surfaces. However, vegetation does apparently help to maintain infiltration rates normal for the soil type.
- Surface soil accumulations of priority pollutants in installations used for both recharge and recreational use requires further investigation to determine whether such a practice creates unacceptable health risks or requires appropriately designed and conducted maintenance procedures.
- Urban runoff from central business districts and industrial sites, which were not included in the NURP study, may very well contain significantly higher levels of pollutants.
- Synergistic effects among urban runoff constituents were not examined. Various environmental parameters including temperature and pH may reduce or increase toxicity levels of particular constituents. More studies in this area are needed.

### 2.2.2 Recent Studies

Research conducted since the NURP study reinforces many of the general findings listed above. Most priority pollutants carried by stormwater sorb to soils, accumulating in the upper layers. Ferguson (1998) states that “the soil is a powerful filter and dynamic ecosystem that protects streams and aquifers from urban contamination.” Metals, several pathogens, hydrocarbons, and numerous organic compounds will either: 1) sorb to soil particles, 2) volatilize at the surface, or 3) degrade by microbial processes in surface and sub-surface soil layers.

Two studies conducted in small residential communities in Wisconsin compared constituent levels in urban runoff samples with groundwater samples taken downgradient of drywells used for stormwater infiltration. Low levels of polynuclear aromatic hydrocarbons (PAHs) and volatile organic compounds (VOCs) detected in stormwater were not detected in groundwater with the exception of one well sample. However, sediment samples taken from the infiltration wells revealed that these contaminants were accumulating in the upper soil layers (Lindemann 1999, Dunning and Bannerman 1993). Similarly, studies of infiltration systems receiving highway runoff for several decades demonstrated the accumulation of heavy metals and hydrocarbons in the upper soil matrix much higher than those measured concentrations in nearby soils (Dierkes and Geiger 1999, Mikkelson et al 1997, Legret and Colandini 1999). In these studies, groundwater below infiltration systems was not impacted.

While the general consensus is that stormwater infiltration poses few significant risks to underlying aquifers, adverse impacts to groundwater from runoff infiltration can take place. Fisher et al (2003) compared ambient groundwater quality to that receiving infiltrated runoff in 16 detention basins located in southern New Jersey. The basins differed in surface area, depth, and number and size of inlets and outlets but all were located in newly developed urban areas. Analyses of water samples taken from installed wells indicated elevated levels of four pesticides in runoff, lower levels of dissolved oxygen (DO) in groundwater under infiltration basins (a probable result of increased microbial activity due to greater concentrations of organic compounds in runoff), and greater occurrence of petroleum hydrocarbons. Infiltration rates among the 16 basins varied due to accumulated sediment near inlet channels and at low points in the basins. The researchers note that because low concentrations of DO can affect both the persistence and transformation of other polluting substances, the groundwater quality beneath detention basins can be adversely impacted by the influx of large volumes of poorly oxygenated stormwater. Hence, infiltrating stormwater can, on the one hand, serve to dilute pollutants of concern but can also increase the occurrence of other substances above the amounts found in ambient groundwater.

In four other studies described here, reported results support most of the NURP findings, but each also points out select issues concerning the use of urban runoff to recharge groundwater aquifers. In a study taking place in Lyon, France, researchers took water and soil samples from an infiltration basin in operation for over 30 years, located on a university campus in an urban area. The basin has a partially clogged cobble layer contaminated by hydrocarbons and heavy metals (owed to its extended use). The groundwater table fluctuates between 2.5–3.5 meters below the surface of the infiltration bed. Results for priority pollutants concentrations in infiltration bed sediments were similar to those reflected in other studies, with reduced concentrations found at depth. However, mineralization of organic compounds originally retained in detention basin sediments acted as a source of dissolved contaminants, being attributed to elevated concentrations of phosphate and dissolved organic carbon in receiving groundwater (Datry et al 2004). The problem of reduced DO in urban runoff transferring to groundwater was reiterated in this research project. A similar study of the same basin concluded that discrepancies can occur when evaluating the contamination potential from analysis of nutrient concentrations in inflow stormwater and the environmental risk resulting from percolation of inflow water through permeable sediment (Datry et al 2003).

In another study, Barraud et al (1999) measured various urban runoff constituents in both newly built and 30 year-old detention basins in Valence, France. These basins drain runoff from heavily traveled roads and open space, and the bottoms of each are very close to the water table. Results indicated that some organic constituents were not being retained in bed sediments but rather were part of the washdown at the beginning of infiltration, due to a permanent saturated soil layer in both shallow basins. Bottom soil was contaminated by hydrocarbons but this is not surprising given the shallow depth of the basins. The authors point out that the sediment bed of the older detention basin (~30 years) was contaminated with heavy metals and mineral oils impacting at least a one meter radius of soil. In another study, also examining the spatial distribution of constituents in a 14 year-old constructed infiltration basin located in France, researchers noted that zinc, a highly mobile heavy metal, was found below 30 centimeters of top soil—the depth limit of other metals reported in other studies (Dechesne et al 2004).

In a comprehensive review of groundwater contamination literature concerning urban runoff constituents, Pitt et al (1996) reaffirmed most of the findings of studies previously discussed. Additionally, the authors state the following:

- Viruses, in low levels, may be found in stormwater and small amounts can cause health problems. Most viruses do die off or adsorb to soil, and most are removed within the first few meters. However they are so small that they could be transported through cracks or through very permeable soils to underlying groundwater. The highest probability of transferring viruses from the surface is where the aquifer is near the surface.
- Nitrogen contact with soil can lead to nitrate leaching. Nitrates are quite soluble and will stay in solution in percolating water migrating to groundwater.
- Heavy and repetitive use of mobile pesticides on irrigated or sandy soils can contaminate aquifers. Pesticides decompose at different rates on soil surfaces but can take much longer to degrade in subsurface soils due to reduced microbial activity. Pesticide leaching into the vadose zone and groundwater is a possibility.
- Sorption of organic constituents can be countered by resolubilization during wet periods. Factors affecting microbial degradation include temperature, pH, soil moisture content, ion exchange capacity of soil, and air availability.

It should be noted that Pitt's evaluation of constituent transport potential was based on the worst case scenario: sandy soils with low organic content overlying shallow water tables. Most organic compounds would be less mobile through soils having a higher proportion of clay and organic matter. Natural organic matter also impacts sorption of metals in soil. In laboratory simulations, high concentrations of organic matter, particularly humic acid, were found to react with heavy metals and increase metal attenuation in soil (Hathhorn and Yonge 1995). Essentially, extremely coarse or extremely clay-rich soils may not filter constituents as well as more medium-grained soils with organic content.

### 2.2.3 Federal Agency Studies of Groundwater Recharge in California

The United States Geological Survey (USGS) has been involved in artificial recharge of aquifers in the state of California since the 1960s, when the California Water Plan was approved to import water from the northern part of the state and deliver it to the southern area for subsurface storage via recharge. Prior to USGS involvement, the state had been engaged in utilizing stormwater for recharge of groundwater through the use of spreading basins since the early 1900s (USGS 2001). Currently, the central and west coast groundwater basins in Los Angeles County are artificially recharged using three sources of water: 1) purchased water originating from northern California and the Colorado River, 2) treated recycled water purchased from the Los Angeles County Sanitation District, and 3) diverted stormwater runoff. The urban runoff that is used is directed to holding ponds located at the Rio Hondo and the San Gabriel River Spreading Grounds, in Montebello and Pico Rivera. The Water Replenishment District (WRD) of Southern California reports that average annual use of potable water in the area is 250,000 acre-feet, while average annual recycled and stormwater use are 50,000 and 40,000 acre-feet, respectively (WRD Fact Sheet). The USGS has conducted a multitude of studies to further the understanding of the processes involved in recharge, the most relative of which are summarized below.

Concerning the fate and transport of pathogens in recharge projects, Metge (2002) notes that temperature, salinity, DO, pH, microbial size, nutrient availability, and microbial growth are factors that influence the survival of most pathogens in groundwater matrices. Many viruses become inactivated at temperatures above 200ºC but can survive below 100ºC. A USGS-developed model indicated that the degree of aquifer heterogeneity assisted in determining the degree of viral transport within the soil matrix. In another USGS study examining the same issues at a research site in Montebello, researchers found that coliform bacteria increased rapidly and immediately after recharge using treated wastewater, noting that bacteria can move quickly through underlying soil, within a matter of days. Further, using a proxy medium (in replacement of a live virus) and bromide as a tracer for assessing the subsurface transport of the virus in three separate periods of time Anders et al (2003) found that adsorption was the predominant removal mechanism during recharge processes. Here, higher temperatures and changes in entrapped air, sealing of the soil surface, and the effect of biofilms sealing soil matrix pore space were the determining factors. In one other study, USGS researchers determined that untreated groundwater located in Los Angeles area basins containing low-levels of volatile organic compounds (VOCs) was most likely contaminated by industrial wastewater that was recharged into forebay areas. Most of the wells with high concentrations of multiple VOCs were located in close proximity to recharge facilities, with VOC concentrations dropping off beyond 10-15 kilometers in distance. Hydrology and the acceleration of groundwater flow produced by recharge actions in conjunction with pumping are likely factors in controlling the distribution of VOCs (Shelton et al 2001).

Finally, in what might be considered the most comprehensive assessment of artificial recharge using tertiary-treated wastewater, a 10-year study was recently completed by USGS, Los Angeles County Sanitation Districts and others to assess water quality at recharge facilities in Montebello Forebay. A research basin was constructed adjacent to spreading grounds in Pico Rivera for a limited number of tests and analyses of samples taken at deep-seated monitoring wells located up to ten miles from the basins was also carried out. Results of this study are summarized below:

- At the research basin, DOC and dissolved nitrogen in percolating water significantly decreased. The decrease in DOC was independent of operating conditions. Reduced nitrogen in subsurface recycled water was attributed to the oxidation of nitrogen to nitrate, with denitrification taking place as the environment becomes more reducing.
- Experiments using tracers and employing extrapolation from results indicate that viruses die off or become inactive over a distance of about 100 feet from Montebello Forebay, meeting current DOHS requirements. No infective viruses were detected in groundwater samples.
- Removal of organics occurs mostly within the top 10 feet of soil.

It should be noted that recharge has also been implemented in the central portion of California since 1956, when the Fresno Metropolitan Flood Control District constructed a multi-use flood control system comprised of 143 stormwater ponding basins and five large flood-control dams and reservoirs. Each watershed located in the Fresno-Clovis metro area is approximately one square mile in area and is served by a basin ranging in size from 10 to 40 acres, with a holding capacity of between 100 and 600 acre-feet of water. Studies conducted by the District indicate that ponding basins remove between 50% - 83% of commonly occurring runoff constituents. On an annual basis, about 17,000 acre-feet of stormwater are recharged back into local aquifers providing potable water. Thirty basins serve community recreational activities (sport fields, dog runs, open space). According to Mr. Daniel Rourke of the Fresno Flood Control District, most basins are cleaned every 4-5 years, with some being cleaned at a higher frequency due to lower infiltration rates (pers. comm. 2004). In addition to the studies conducted of these basins under NURP, another USGS study of an industrial catchment in Fresno found that contaminants do not reach groundwater but tend to accumulate in the surface sediments (upper 1.5 inches). Concentrations of stormwater constituents in soil decreased with depth and reached background concentrations at depths of only 6.3 inches (Schroeder 1995).

## 2.3 Constituent Concentrations and “First Flush”

The “first flush” effect describes an initial storm event whereby build-up of constituents during dry periods are flushed from urban surface areas by runoff. During these first flush periods, very large quantities of constituents are discharged into receiving waters, or alternatively, into retention basins. Within a given storm event, there may also be a “first flush” effect as constituents are initially washed off. Urbonas and Stahre (1993) note that as rainfall continues, surface constituent build-up is depleted and concentrations are diluted by larger flow volumes. The amount of surface constituents washed off also depends on the intensity and the duration of the storm event, the size of the watershed area being drained, the amount of impervious area, and the frequency of dry weather periods. Ferguson (1994) found that with storms of long duration, initial runoff had higher concentrations of constituents than runoff generated later in the storm. In a study conducted by the Southern California Coastal Water Research Project (SCCWRP), the effect of rainfall intensity and duration on contaminant concentrations in runoff was assessed by sampling simulated events of varying rainfall intensities. Within a given storm, concentrations of suspended solids, total and dissolved metals and polycyclic aromatic hydrocarbons (PAHs) in runoff were consistently greater at the beginning of the storm events (<10 minutes) than later in the event (10-40 minutes). Variability between storms indicated that constituent concentrations were inversely correlated with rainfall duration or intensities: shorter rainfall durations or lower rainfall intensities produced greater runoff concentrations (Tiefenthaler and Schiff 2002).

The variation in constituent concentration within a storm has implications for treatment and monitoring. If the beginning of the storm contains the highest concentration of constituents, the total volume requiring pretreatment may be considerably less than the total storm runoff. For monitoring purposes, composite samples with results reported as

EMCs become a more consistent measure than single grab samples taken at a random point during the storm event (Strecker 1994).

In addition to constituent concentrations during a storm event, Urbonas and Stahre (1993) discuss whether early season storms constitute the only "first flush", containing higher concentrations of constituents than later storm events. In arid regions, such as southern California, there may be several dry weeks between storm events. These dry periods allow constituents to accumulate repeatedly, impacting constituent concentrations in subsequent storms. Thus, there may be multiple "first flush" events throughout the season. In a study conducted by SCCWRP to assess the relationship between antecedent rainfall and pollutant build-up, researchers found that virtually all of the accumulation occurred within one month after wet weather for total suspended solids, total trace metals, and dissolved trace metals (Tiefenthaler et al 2002).

## 2.4 Constituent Removal Effectiveness of BMPs

The utilization of urban runoff for artificial recharge of groundwater may necessitate pre-treatment to maximize the removal of as many constituents as possible prior to release for infiltration. Structural best management practices or BMPs can be very effective at removing constituents from stormwater runoff prior to infiltration. Pre-treatment associated with many types of BMPs can significantly reduce the potential for adverse groundwater impacts (Schueler 1987). Some of the more common BMPs employed include the following:

- Sedimentation or settling of suspended solids, which removes particulates and sorbed constituents such as metals, hydrocarbons and nutrients
- Filtration to remove particulates and associated constituents. Organic filtration media can also remove soluble nutrients
- Biological uptake or degradation by plants and microorganisms is effective for removing nutrients and toxic organic compounds. Sedimentation basins, ponds, and wetlands promote degradation and/or volatilization of certain organic compounds (EPA 1999).

Most often, simple filtration through soil is the BMP most often used to naturally treat urban runoff for recharge. As previously discussed, infiltration is appropriate for areas that have relatively permeable soils. However, Lee (2000) cautions that the very soils that are conducive to filtration of heavy metals, hydrocarbons and most bacterial pathogens perform poorly in filtering and adsorbing contaminates that might otherwise enter an aquifer. Additionally, clogging of infiltration beds restricts maximum performance. Lee reports that current guidelines for effective infiltration call for minimum soil permeability rates of about .52 inches/hour. For this and other stated reasons, a groundwater monitoring element is suggested to ensure that water quality is not impaired in receiving groundwater.

On a local level, the County of Orange, California, commissioned a study to determine the most appropriate BMPs to comply with federal regulations included in the County's stormwater permit. Based on runoff pollutant reduction rates and maintenance requirements, infiltration basins and trenches were among seven BMPs deemed feasible for implementation (RBF 2003). In another study, researchers examined the long-term effectiveness of four types of permeable pavement systems comprised of a matrix of concrete or plastic structures with spaces filled with sand, gravel, or soil constructed within a parking lot in Renton, Washington. Results demonstrated that stormwater effectively infiltrates through the voids into underlying soil in the four permeable pavement systems used, and that all showed only minor signs of wear and tear after six years of use (Brattebo and Booth 2003). A study conducted in Mexico found that untreated wastewater used for irrigation did not significantly impact groundwater, with the exception of nitrates (Downs et al 2000). The reservoir and canal system served as vehicles for volatilization, degradation, and filtration of dozens of measured contaminants including metals, semi-volatile organics and pesticides.

The effectiveness of BMPs varies with local weather conditions, the nature and concentration of targeted constituents, and geologic parameters of the individual site. Local, physical conditions that can make stormwater infiltration inappropriate include steep slopes, slow percolating soils, shallow water tables, and nearby groundwater use. In addition, it should be noted that assessing the effectiveness of BMPs at removing constituent concentrations is itself subject to uncertainties because of inconsistencies in study methods (such as sample collection and constituent analysis) and reporting protocols (Strecker et al 2001). **Table 3** summarizes the comparative removal effectiveness of various BMPs.

## 2.5 Conditions for Groundwater Recharge

Groundwater originates, in part, from the infiltration and percolation of surface water through the soil matrix. There are a number of variables that determine whether conditions are suitable for groundwater recharge using urban runoff in a given location. First, the ability of surface water to reach groundwater depends on a number of factors, including: 1) permeability of surface soil and the subsurface soil matrix, 2) antecedent soil moisture, 3) soil properties such as texture, organic content, porosity and hydraulic conductivity (which in turn determine rates of infiltration and percolation), 4) depth to groundwater, and 5) the volume of water available for infiltrating to an aquifer (Dunne and Leopold 1979, Novotny and Olem 1994, Urbonas and Stahre 1993). Secondly, water moves through the soil under gravitational forces, displacing water stored previously until it eventually reaches the saturated zone. Successive storms that keep this soil layer moist provide a greater opportunity for this stored water to reach groundwater. If, however, the soil layer is dry, percolation rates will decrease because the capillary forces holding water in the soil are stronger than the gravitational forces that tend to drive moisture further down (Dunne and Leopold 1979). Small storms may not produce a sufficient volume of runoff to infiltrate beyond the root zone before the soil begins to dry out again. Finely textured soils, such as clays (which have expanding properties when exposed to water), have lower infiltration rates and may require less intense but longer duration storms to achieve sufficiently deep percolation to reach groundwater. The various factors that affect infiltration make it difficult to calculate whether runoff from a given storm event will actually reach groundwater sources. Under some circumstances, it may be that only the infrequent, large storm events will generate sufficient volumes of surface water to reach groundwater, and only with sufficient antecedent moisture.

## Table 1
## Removal Efficiency of Stormwater BMPs

| BMP Types | Suspended Sediment | Phosphorous | Nitrogen | Oxygen Demand | Metals | Bacteria |
|---|---|---|---|---|---|---|
| Bio-retention | High | Moderate | Moderate | Mod Low | Moderate to Mod High | Mod Low |
| Catch basin inserts | Mod High | Low | Low | Low | Mod High (those designed for metals) | Low |
| Extended detention basin | High | Moderate | Mod Low | Moderate | Mod High | Low |
| Grass swale | Moderate to Mod High | Mod Low | Mod Low | Mod Low | Mod Low | Unknown |
| Infiltration basin | High | Moderate | Moderate | Mod High | High | Mod High |
| Media filtration | Mod High to High | Mod Low[1] | Mod Low[1] | Unknown | Mod High | Low |
| Porous pavement | High | Moderate | Mod High | Mod High | High | High |
| Retention basin | Mod High | Moderate | Moderate | Unknown | Mod High | Moderate |
| Wetland or wet pond | High | Mod High | Moderate | Mod Low | Mod High | Mod High |

**KEY:**
High 80-100% Removal
Mod High 60-80% Removal
Moderate 40-60% Removal
Mod Low 20-40% Removal
Low 0-20% Removal

Source: Glick, 1998, Schueler, 1987, USEPA, 1999
[1] Removal efficiency is high if organic media used

While infiltration can be an important component of stormwater management, there are a number of caveats that must be factored in when planning a recharge facility. According to the USGS, ideal conditions for groundwater recharge are rare, thus a well developed set of guidelines offers the best strategy for determining the suitability of a recharge operation. Pretreatment of stormwater to remove suspended solids significantly reduces clogging of the surface soil, and periodic cleaning is required to maintain infiltration rates. The presence of faults or folds and clay lenses below the surface can inhibit recharge by directing infiltrating water away from the targeted area (USGS 2004).

Sites where the groundwater table is less than ten feet below the infiltration bed or where very sandy soils and low organic content exist are least suitable for groundwater recharge unless runoff is first treated to remove pollutants (Urbonas and Stahre 1993). Too much infiltration in areas of shallow groundwater could also create conditions for liquefaction. Liquefaction is caused by creating a shallow water table in poorly consolidated geologic materials, which can results in unstable soils particularly when shaken by an earthquake (USGS 2004). As previously discussed, some constituents are more mobile under certain conditions. Pitt et al (1996) recommend that in the following cases runoff should be diverted or treated:

- Dry-weather storm drainage effluent should be diverted or pretreated due to potentially high concentrations of pathogens, soluble heavy metals and pesticides;
- Combined sewage overflows should be diverted because of poor water quality;
- Runoff from manufacturing industrial areas should be diverted or pretreated because of potentially high concentrations of soluble toxicants;
- Construction site runoff should either be diverted or treated prior to release for infiltration due to high concentrations of suspended solids which can quickly clog infiltration beds; and
- Runoff from vehicle service stations and other critical source areas should be pretreated to minimize or eliminate groundwater contamination from petroleum hydrocarbons.

## 2.6 Summary

The most significant impacts on groundwater quality in urban environments come from leaking or leaching of contaminants from underground storage tanks, septic systems, landfills, or previously contaminated soil in industrial areas (WEF 1998). In general, concentrations of constituents in urban runoff are many orders of magnitude more dilute than pure product or other historical pollution sources (WEF 1998). This review indicates that infiltration of stormwater has not been found to pose considerable risk to groundwater contamination, given appropriate soil characteristics, depth to aquifers, pretreatment of problematic substances, diversion of runoff from select sources, knowledge of geological formations that may inhibit effective infiltration, and proper design and maintenance of infiltration facilities. Some urban runoff pollutants, such as nitrates and viruses, may have the potential to reach groundwater under certain conditions. The use of BMPs for pretreatment of stormwater greatly reduces the potential risk of groundwater contamination.

There is also the potential to increase soil contamination as a result of pollutant accumulation in the top layers of soil, which may present long-term disposal planning issues in some situations. Individual site conditions should be assessed to determine this. While the ability of soils to continue to filter and adsorb constituents is not precisely known, some researchers estimate that it could take upwards of 200 years to exhaust soil capacity in particular locations (Cox and Livingston 1997, Mikkelson et al 1996, Pitt et al 1996, WEF 1998).

While it is clear that numerous caveats must be considered when urban runoff is being investigated for recharge of potable groundwater, it is also important to note that groundwater recharge offers a number of benefits to municipal water managers. Groundwater storage is less costly in terms of construction costs, environmental impacts, evaporation loss of water, and eutrophication as compared to surface-water reservoirs (USGS 2004). Further, recharging groundwater puts the resource in closer proximity to the end-user than pumping water from reservoirs, an additional cost savings. With proper planning and research, the use of urban runoff for recharge of groundwater offers a viable alternative to relying solely on purchased water for such activities, water that may not be available in present quantities for purchase in the future.

## 3. PROJECT STUDY PLAN

The objective of the monitoring program was to evaluate the potential effects of infiltrating urban stormwater runoff on groundwater quality, via engineered infiltration systems referred to as Best Management Practices (BMPs). During the Phase I Pilot Study, two sites were monitored in the Los Angeles area. The monitoring plan included installation of monitoring wells and lysimeters, baseline soil and groundwater sampling, and subsequent monitoring of stormwater runoff and infiltration associated with storm events during the 2001-2002 season. Because the winter season was dry, most of the data collected was baseline groundwater data; only one storm event was sampled.

The Phase II work plan called for adding at least three new monitoring locations – residential, commercial and industrial – and retrofitting the properties with infiltration BMPs and subsurface monitoring equipment. Soil samples were collected during installation of the monitoring equipment, to characterize constituent concentrations prior to infiltration. For each winter between 2002 and 2005, several storm events were monitored, including the first storm of each season. Subsurface monitoring followed each sampled storm event.

### 3.1 Monitoring Sites

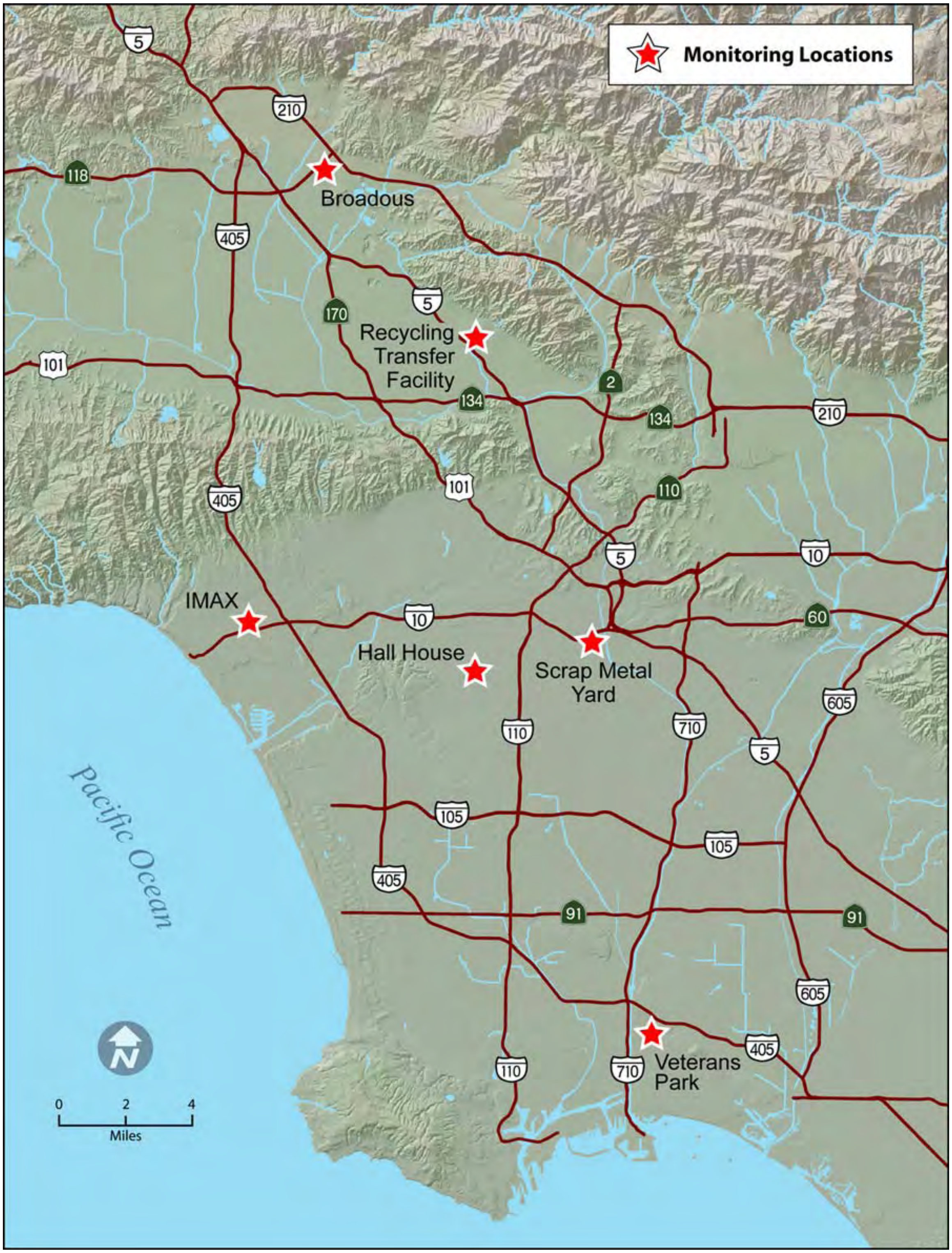
Three locations were monitored during 2002-2003 winter. Six locations were monitored during the 2003-2004 and 2004-2005 seasons (**Figure 2)**. Two of these sites, the Broadous Elementary School and IMAX Corporation, were established during the Phase I Pilot Study. A residential location was added to the program in 2002. Three additional monitoring locations were added prior to the 2003-2004 rainy season: two industrial and one commercial/recreational site. Geomatrix Consultants designed and constructed BMPs and installed monitoring equipment at the three new sites. Each of the monitoring sites is described briefly in the following sections. For the industrial sites, which are privately owned, only a generic name and location are provided.

#### 3.1.1 Broadous Elementary School

The Broadous Elementary School (Broadous) is located in Pacoima, a neighborhood within the city of Los Angeles. The BMP for the seven acre site consists of a runoff collection system, sedimentation tank, and subsurface infiltration system installed in 2001 in the playground area of the school (Figure 3)

Runoff samples are collected from one sample point in the playground area near the inlet to the BMP. The original lysimeter was installed adjacent to the infiltration BMP, 25 feet downgradient and at a depth of 60 feet. Prior to the 2003-2004 rainy season, a new lysimeter was installed at the edge of the infiltration system, at a depth of 24 feet, to better characterize water quality exiting the BMP.

## Figure 2
## Monitoring Site Locations



There are also two groundwater monitoring wells at the site, one upgradient and one downgradient of the infiltration BMP. In January of 2003, soil moisture sensors were installed downgradient of the infiltration system, at depths of 25, 35, 45 and 55 feet below the ground surface. These sensors track infiltration rates in the vadose zone throughout the year and were used to estimate timing of subsurface sampling.

**Figure 3**
**Broadous School Monitoring Site**

### 3.1.2 IMAX Corporation

The IMAX office building is a commercial office facility located in Santa Monica. The 3.5 acre site is equipped with two types of BMPs that are monitored: a drywell receiving roof runoff and a landscaped area that receives parking lot runoff (**Figure 4**). Runoff samples were collected from the front parking lot as it drains into the landscaping, and from the roof downspout at the rear of the building. There are lysimeters adjacent to each of the BMPs, and upgradient and downgradient groundwater wells at the site. There are also four soil moisture sensors in the landscaped area, at depths of 2, 5, 10 and 20 feet below the surface, which track infiltration rates after storm events and throughout the year.

Figure 4
IMAX Monitoring Site

### 3.1.3 Residential Monitoring Site

The Hall residence (Hall House) is located in south Los Angeles. The Hall House is an ongoing demonstration project of TreePeople, and was retrofitted seven years ago with a number of BMPs to contain runoff on site. The front lawn of the Hall House serves as a swale to collect runoff from the roof (**Figure 5**) and also has a drywell that collects runoff conveyed from a trench drain in the driveway. A lysimeter is installed at the edge of the lawn nearest the roof drain. Runoff samples are collected from the roof drain and the driveway. Local groundwater is at a depth of approximately 200 feet below the ground surface. Because of the site configuration in relation to the direction of groundwater flow, there is no groundwater monitoring well installed at this site.

Figure 5
Hall House Front Lawn

### 3.1.4 Metal Recycler

The Metal Recycler is an industrial site located at the southern edge of downtown Los Angeles (**Figure 6**). Facility operations include recycling of bulk ferrous and non-ferrous metals and appliances. The infiltration BMP at this site was designed to intercept runoff from a 0.85 acre portion of the site, pretreat the collected stormwater to reduce the concentrations of sediment, oil and grease, and infiltrate the treated stormwater. The stormwater treatment system consists of a concrete detention/sedimentation basin that receives site runoff and discharges into a subsurface infiltration gallery through a modified standpipe designed to perform limited runoff pretreatment.

Stormwater samples were collected from two locations at this site, representing influent to and effluent from the stormwater treatment device. The four lysimeters are installed adjacent to the infiltration gallery, at depths ranging from 20 to 52 feet. The monitoring well is downgradient of the infiltration gallery. This well was also used for geophysical logging to collect conductivity data that may indicate the path of the wetting front after a storm.

**Figure 6**
**Metal Recycler Detention Basin**

### 3.1.5 Recycling Facility

The recycling facility is an industrial facility located in Sun Valley, a neighborhood of the city of Los Angeles (**Figure 7**). Operations at the site consist of receiving and sorting materials for recycling: paper, glass, plastics and metal containers. The infiltration BMP at the Sun Valley site was designed to intercept runoff from a 2.3 acre portion of the paved yard. The stormwater treatment system is similar to that at the Metal Recycler, consisting of a concrete detention/settling basin which discharges into a subsurface infiltration gallery through a modified standpipe designed to perform some pretreatment. Runoff from a portion of the roof is directed to the same underground infiltration gallery via separate buried piping, however it does not undergo pretreatment.

Sample collection points at the site consist of three stormwater sample collection locations, five vadose zone lysimeters and one monitoring well installed in the vadose zone for geophysical logging. No groundwater monitoring wells have been installed at this site however there is an existing downgradient well off-site that was sampled periodically. Stormwater samples were collected from roof runoff, from the yard area entering the sedimentation basin prior to treatment, and from the pipe that directs stormwater from the basin to the infiltration trench. The lysimeters are installed in pairs near the infiltration area at depths ranging from 22 to 71 feet. The monitoring well is competed to a depth of approximately 143 feet. Groundwater is estimated to occur at about 350 feet below the surface.

**Figure 7**
**Sun Valley Recycling Facility Detention Basin**

### 3.1.6 Veterans Park

Veterans Park is located in west Long Beach. The site is a public park operated by the City of Long Beach (**Figure 8)**. The infiltration BMP at Veterans Park was designed to intercept runoff from a 0.5 acre portion of the site (a parking lot and adjoining sidewalks), treat the collected stormwater to reduce the concentrations of sediment and oil and grease, and infiltrate the treated stormwater. Stormwater collection for the BMP system consists of catch basins positioned to intercept surface flow along existing flow lines at the eastern and western edges of the parking lot. The discharge pipelines from the catch basins direct stormwater to a buried, concrete sand/oil interceptor, then to an underground infiltration gallery.

Stormwater samples are collected from surface flow entering the two catch basins located in the parking lot. The two lysimeters are located adjacent to the infiltration area. Four groundwater monitoring wells are located both upgradient and downgradient of the infiltration gallery.

Details for the infiltration BMPs and monitoring points at each location are provided in **Table 2** and **Table 3**.

## Figure 8
## Veterans Park Parking Lot

## Table 2
## Monitoring Sites BMP Hydrology

| Parameter | Units | Broadous | IMAX | Hall House | Metal Recycler | Veterans Park | Sun Valley |
|---|---|---|---|---|---|---|---|
| Sample Point | | Paved school yard | 1) Roof<br>2) Parking lot | 1) Roof<br>2) Driveway | Paved Yard | Parking lot | 1) Roof<br>2) Paved Yard |
| Design Rainfall | inches | 0.75 | 0.75 | 10 | 0.75 | 0.75 | 0.75 |
| Design Storm Intensity (max) | in/hr | 0.75 | 0.75 | 100-year event | 0.75 | 0.75 | 0.75 |
| Catchment Area (est) | sq. ft. | 305,000 | 1) 47,916<br>2) 68,390 | 3,000 | 37,200 | 21,200 | 1) 51,000<br>2) 75,000 |
| Runoff Volume | gallons | 95,200 | N/A | N/A | 17,400 | 9,900 | 1) 23,850<br>2) 35,065 |
| Design Runoff Rate | gal/min | N/A | N/A | N/A | 286 | 165 | 1) 394<br>2) 580 |
| BMP Inlet | | Sheet flow direct to pretreatment separator | 1) roof drain to dry well<br>2) Sheet flow into landscape strip | 1) Roof drain to landscaping<br>2) Sheet flow to driveway drain | Sheet flow direct to sedimentation basin | Sheet flow to catch basin; pipes to buried sedimentation vault | 1) Roof drain direct to buried perforated pipes<br>2) Sheet flow direct to sedimentation basin |

| Parameter | Units | Broadous | IMAX | Hall House | Metal Recycler | Veterans Park | Sun Valley |
|---|---|---|---|---|---|---|---|
| Sediment Removal | | Yes | No | Yes | Yes | Yes | 1) No<br>2) Yes |
| Oil/Grease Removal | | Yes | No | Yes | Yes | No | 1) No<br>2) Yes |
| Recharge Method | | Buried infiltration units in gravel bed | Direct through soil | Buried dry well | Buried perforated pipeline in gravel bed | Buried perforated pipeline in gravel bed | Buried perforated pipeline in gravel bed |

N/A: data not available

## Table 3
## Monitoring Points

| Site Date Completed | Surface Water Monitoring Point ID | Collection Point | Lysimeter ID | Installed Depth (ft) | Monitoring Well ID | Initial Groundwater Depth |
|---|---|---|---|---|---|---|
| Broadous | B-SW-01 | School Yard | B-LS-02 | 24 | B-MW-01 | 155 feet |
| | | | | | B-MW-02 | 139 feet |
| IMAX | I-SW-01 | Roof Drain | I-LS-01 | 8 | I-MW-01 | 32 feet |
| | I-SW-02 | Parking Lot | I-LS-03 | 10 | I-MW-02 | 31 feet |
| Hall House | H-SW-01 | Roof Drain | H-LS-01 | 8 | none | |
| | H-SW-02 | Driveway | | | | |
| Veterans Park | V-SW-01 | Parking Lot | V-LS-01 | 15 | V-MW-01 | 23 feet |
| | V-SW-02 | Roof Drain | V-LS-02 | 15 | V-MW-02 | 23 feet |
| | | | | | V-WM-03 | 23 feet |
| | | | | | V-MW-04 | 22 feet |
| Metal Recycler | M-SW-01 | Detention Basin Inlet | M-LS-01 | 37 | M-MW-01 | 225 feet |
| | M-SW-02 | Detention Basin Outlet | M-LS-02 | 51 | | |
| | | | M-LS-03 | 37 | | |
| | | | M-LS-04 | 51 | | |
| | | | | | | |
| Sun Valley | S-SW-01 | Roof Drain | S-LS-01 | 25 | S-MW-01 | 143 feet<br>Installed casing to run geophysical logs. (groundwater depth is ~350 feet below surface) |
| | S-SW-02 | Detention Basin Inlet | S-LS-02 | 47 | | |
| | S-SW-03 | Detention Basin Outlet | S-LS-03 | 25 | | |
| | | | S-LS-04 | 47 | | |
| | | | S-LS-05 | 71 | | |

## 3.2 Sampling Program Scope

Surface water sampling occurred during rain events, with subsurface sampling following. The goal was to sample at least two storm events at each monitoring site each year.

### 3.2.1 Mobilization Criteria

Sampling crews were mobilized only if a predicted storm was likely to produce sufficient runoff for sample collection and no significant rainfall occurred within 48 hours prior. To assess the mobilization criteria professional weather consultants, Weather Watch in San Diego and Meteorological Solutions (through Los Angeles County Pubic Works), were consulted to provide more comprehensive weather data than is commonly available through the Internet. Services included long- and short-range forecasts via their websites, email updates, and telephone consultation available near the onset of a storm. For pending storm events, estimates of total rainfall and probability of predicted rainfall were provided in 3-hour increments.

### 3.2.2 Subsurface Sampling Schedule

After each storm, lysimeter samples were collected from all sites. The volume of each lysimeter is typically less than required for the full suite of analytes, therefore when necessary sampling was conducted over a two or three day period. All sites except Hall House and Sun Valley have on-site monitoring wells. Wells at sites with relatively shallow groundwater were sampled in response to monitored storms (just after the collection of lysimeter samples), and wells at sites with relatively deep groundwater were sampled periodically throughout the storm season.

Induction logs are collected at the two sites with the deepest underlying groundwater, the Metal Recycler and Sun Valley. The intent was that these logs would distinguish zones of percolating stormwater (high conductivity wet soil) from other regions of the subsurface (low conductivity dry soil). Soil moisture data is also continuously recorded from sensors installed in 2003 at IMAX and Broadous. These data are periodically downloaded from the dataloggers at each site.

### 3.2.3 Sampling Procedures

During the 2001-2002 and 2002-2003 monitoring seasons, runoff samples were discrete grab samples collected during the early portion of the runoff event. During the 2003-2004 and 2004-2005 monitoring seasons, runoff samples were collected manually as time-weighted composite samples at twenty minute increments, with volatile organics and bacteria collected as grab samples. At the Metal Recycler and Sun Valley sites, automated samplers were used during the 2003-2004 season to collect whole storm flow-weighted composite samples, but due to equipment difficulties these were not reinstalled the next season. The flow-weighted composite samples are useful for estimating EMCs. The grab samples and two-hour time-weighted composites are likely more representative of the "first flush" concentration which may be higher than EMC for many constituents. All water samples were submitted for analysis to Calscience Environmental Laboratories, Inc. in Garden Grove, California, within a few hours of collection.

### 3.2.4 Analytical Suite

The analytical suite is presented in **Table 4.** Additionally, temperature, pH and conductivity were measured in the field. Not all constituents were analyzed from lysimeter samples, for several reasons. Sampling from the lysimeters is restricted by the amount of water that can be evacuated from a lysimeter, which varies according to soil moisture conditions. Additionally, some analytes, such as total suspended solids and turbidity, are not measurable in a lysimeter, as they would be filtered by the lysimeter itself. Therefore, the sampling suite for lysimeters was reduced to selected priority analytes. A detailed list of constituents, including detection limits and laboratory methods, is provided in **Appendix B**.

Some constituents have consistently resulted in non-detects at all sample points. Bacteriological constituents (total coliforms, E. coli, and fecal coliforms) occur in stormwater, sometimes in very high concentrations, but detections in the lysimeter and groundwater samples have been extremely low or not detected at all. At the end of each season, the TAC revisited the constituent list to eliminate some of these constituents for the next season. For example, NDMA, pesticides, 1,4-Dioxane and bacteriological constituents were dropped from the list for the oldest sites after two years, and for the newest sites after one round of samples. Fuel oxygenates, in addition to MtBE, were added to the organics analysis (DIPE, ETBE, TAME, TBA and ethanol). The detection limit for 1,2,3-trichloropropane, an emerging contaminant in groundwater, was reduced to 0.005 µg/L for one round of samples at all sites.

**Table 4**
**Summary of Analytical Suite**

| Category | Stormwater and wells | Lysimeters |
|---|---|---|
| General Minerals | X | X |
| Trace Metals (total & dissolved) | X | X |
| Oil and Grease | X | Hall House |
| Perchlorate | X | X |
| Glyphosate | X | Vets Park |
| Volatile organic compounds (VOCs) | X | X |
| Semi-volatile organic compounds (SVOCs) | X | |
| NDMA | X | |
| Surfactants | X | |
| Bacteria (total coliform, fecal coliform, e. coli) | X | X |

### 3.2.5 Quality Control

In order to ensure the validity of sample results, a number of laboratory quality control procedures were followed, in accordance with our state-approved Quality Assurance Project Plan. The Quality Assurance Program Plan (QAPP) addresses field sample collection procedures, sample tracking and handling, and laboratory quality assurance and quality control (QA/QC) requirements. The laboratory selected for this project, Calscience Environmental Laboratories, is a certified laboratory with extensive experience with stormwater sampling requirements and a full range of analytical capabilities.

#### *3.2.5.1 Field Quality Assurance/Quality Control*

Field QA/QC samples were collected periodically and used to evaluate potential contamination and sampling error occurring prior to sample delivery to the analytical laboratory, and to verify laboratory results. Field QA/QC samples include trip blanks, equipment blanks, field blanks, and field duplicates.

Blank samples help verify that the equipment and the sample containers are not a source of contamination, and that the sampling techniques used are non-contaminating. Duplicates are used to assess variability attributable to shipment, storage, and/or laboratory handling and analysis. Procedures for collecting field blanks and duplicates are the same as that used for collecting the field samples.

#### *3.2.5.2 Laboratory Quality Assurance/Quality Control*

Analytical quality assurance/quality control for this study included the following:

- Employing analytical chemists trained in the procedures to be followed.
- Adherence to documented procedures, EPA methods, written Standard Operating Procedures, and other approved Standard Methods.
- Calibration of analytical instruments.
- Complete documentation of sample tracking and analysis.
- Internal laboratory quality control checks through the analysis of method blanks, MS/MSDs, lab duplicates, and lab control samples.

The last point references additional sample analysis that is performed routinely by the lab. Method blanks are run by the laboratory for each sample batch to determine the level of contamination, if any, associated with laboratory reagents and equipment. MS/MSDs, lab duplicates and lab control samples/duplicates are also run routinely for each batch, as sample volume is available and when samples are collected specifically for this purpose. Duplicate analyses results are evaluated by calculating the relative percent difference between the two sets of results. This serves as a measure of the reproducibility (precision) of the sample results.

### *3.2.5.3 Data Quality Objectives*

Data quality objectives (DQOs) are quantitative and qualitative statements that clarify study objectives, and specify the tolerable levels of potential errors in the data. As defined in the Quality Assurance Project Plan, DQOs specify the quantity and quality of data required to support the study objectives. DQOs are generally used to determine the level of error considered to be acceptable in the data produced by the monitoring program. They are also used to specify acceptable ranges of field sampling and laboratory performance. DQOs for accuracy and precision have been achieved overall in the collected QA/QC samples.

Volatile organic compounds (VOCs) are of particular concern for groundwater quality. Because of their volatile nature, VOCs are rarely included in stormwater monitoring programs, so there is little comparative data. Over the course of the study methylene chloride was detected in a number of QC samples corresponding to field detections. These detections are likely the result of laboratory contamination and are flagged as such by the laboratory. In addition, acetone, toluene and 2-butanone (MEK) were detected in at least one field blank collected on the same day at the Broadous School, Hall House, and IMAX sites, as well as in an equipment blank, which may indicate contamination by sampling equipment. Although acetone is used on occasion in the laboratory, it was not present in any trip blanks in cases where it was detected in corresponding field samples, nor was it ever reported in laboratory method blanks. MEK is also often attributed to laboratory contamination however Calscience does not use it in their laboratory.

In one source identification study undertaken by USGS, toluene, acetone and MEK were found in all stormwater samples from a parking lot (Lopes et al 2000). This study also detected acetone and MEK in direct precipitation samples, indicating atmospheric sources. Acetone is an unregulated compound and is common in the environment from solvents, air emissions, and is a by-product of photosynthesis. Acetone was present in most stormwater samples at all sites, but only present in a few lysimeter and groundwater samples.

Dissolved organic carbon (DOC) was also detected in method blanks, indicating interference from the filter material used in sample filtration. When this occurs, reported DOC results are slightly inflated and are flagged as such by the laboratory. Overall, data quality and reliability seemed more than adequate to achieve the goals of the study.

# 4. MONITORING RESULTS

This section presents the results of the monitoring performed during the course of the Phase I and II monitoring program, from 2001 to 2005. Monitoring results include all analytical results from:

- Soil samples from all sites during lysimeter installation (pre-infiltration) and at the end of the monitoring phase.
- Pre- and post-season groundwater samples from upgradient and downgradient wells.
- Stormwater samples at all sites.
- Lysimeter samples from all sites.
- Post-storm groundwater samples from downgradient wells

A schedule of storm events sampled for each monitoring site is provided in **Table 5**. Additional sampling dates for limited lysimeter sampling, and baseline and end of season groundwater sampling are reflected in the **Appendix C** tables.

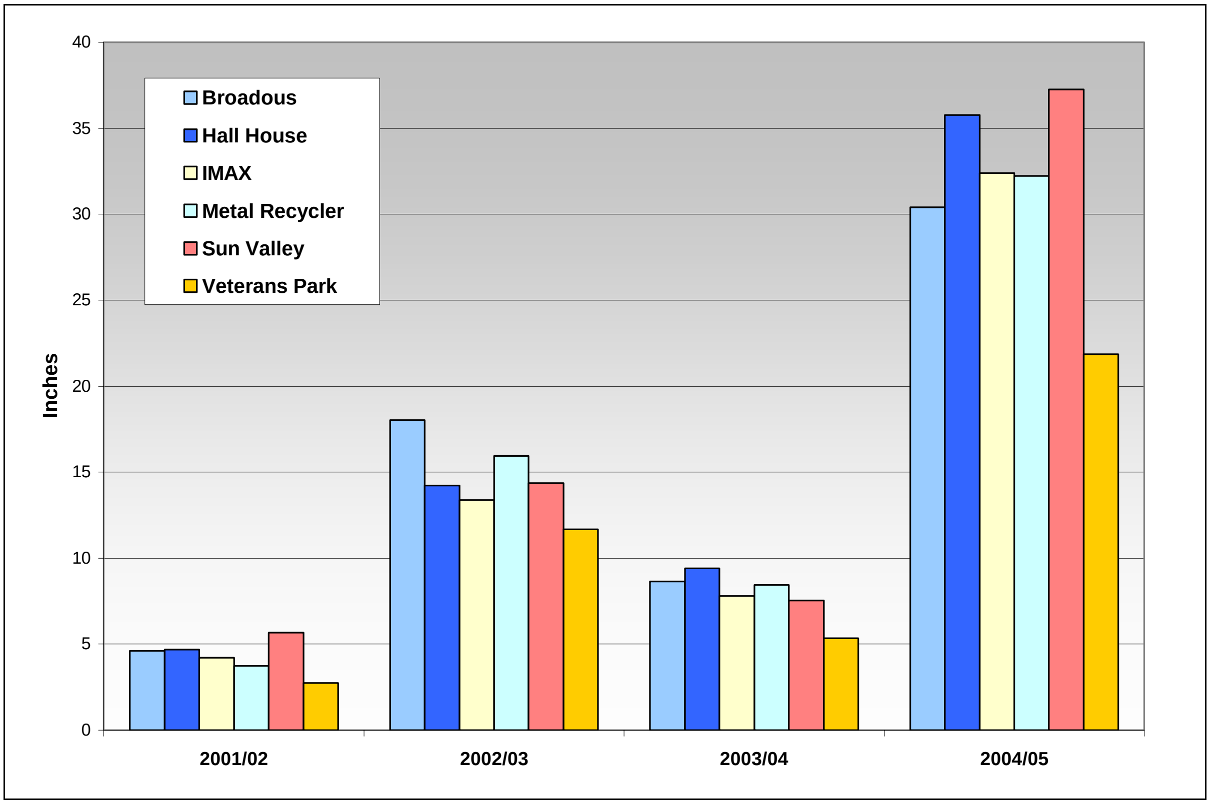
**Table 5**
**Storm Event Sample Collection Dates**

| Event Date | IMAX | Broadous | Hall House | Metal Recycler | Sun Valley | Veterans |
|---|---|---|---|---|---|---|
| 12/03/01 | | X | | | | |
| 11/08/02 | X | X | | | | |
| 12/16/02 | X | X | X | | | |
| 2/12/03 | X | X | X | | | |
| 3/15/03 | X | X | | | | |
| 2/02/04 | X | X | X | X | X | X |
| 2/18/04 | | | | X | X | X |
| 2/25/04 | X | X | X | | | |
| 10/19/04 | | | | | X | X |
| 10/26/04 | | | | X | | |
| 12/27/04 | X | X | | X | X | X |
| 1/07/05 | | | X | | | |
| 2/11/05 | | | | X | X | X |
| 2/18/05 | X | X | X | | | |
| Total Events | 8 | 9 | 6 | 5 | 5 | 5 |

## 4.1 Description of the Storm Seasons

Annual rainfall for the six monitoring locations is shown in **Figure 9**, measured from the nearest Los Angeles County rain gauge. The four years of monitoring saw a wide range of rainfall variability, from the driest year on record (2001-2002) to the second wettest year on record (2004-2005). Rainfall varied geographically as well during the study. Total rainfall amounts during 2004-05 ranged from about 22 inches at Veterans Park, to over 37 inches at the Sun Valley site (LACDPW 2005). This spatial and temporal variability presents some challenges not just for monitoring, but also for trying to appropriately size infiltration facilities to capture runoff cost-effectively.

Figure 9
Annual Rainfall by Monitoring Site



## 4.2 Groundwater Conditions

Depth to groundwater was measured whenever groundwater monitoring wells were sampled. Hydrographs depicting the groundwater elevations calculated for the sites are shown in **Appendix I**. Although groundwater elevations in the monitoring wells varied over the term of the study, all wells designated as downgradient were considered to have been subject to potential influence by stormwater infiltrated during the period of the study.

## 4.3 ANALYTICAL RESULTS

This section provides analytical results for all sampling points for selected constituents of concern in groundwater, including: general monitoring parameters (total dissolved solids [TDS], total suspended solids [TSS], nitrate, and chloride), total and dissolved metals (aluminum, arsenic, cadmium, copper, hexavalent chromium, lead, mercury, and zinc), volatile organic compounds (VOCs), semi-volatile compounds (SVOCs), biological constituents (total coliforms, fecal coliform, and E. coli), and other constituents of interest such as perchlorate, NDMA, 1,4-dioxane and glyphosate. Polycyclic aromatic hydrocarbons, or PAHs, were not detected in any sample during the course of this study.

Comprehensive water quality analytical results are presented in **Appendix C**. Concentration ranges (minimum, maximum) of selected constituents discussed in this section are presented in site-specific summary tables (**Tables 6 to 11**) at the end of this section. The summary tables contain ranges of analytical results for selected general monitoring parameters, dissolved metals, biological and other constituents, and any VOCs and SVOCs detected in at least one sample.

For comparison purposes, results from other water quality sampling programs are presented in **Appendix D**. Data from this study were compared to those from the Los Angeles County Public Works' land use monitoring program (LACDPW 2002) and the Southern California Coastal Water Research Project's (SCCWRP) region-wide comparison of constituent loads from different land uses (Ackerman 2003), to assess whether the sites sampled for this study were typical for their land use. The LACDPW data were collected between 1994 and 2000 for compliance with LACDPW's 1996 NPDES stormwater permit, and results are summarized by land use category. Values represent the mean and median of all EMCs, analyzed from flow-weighted composite samples. The constituents included in these two previous studies are similar to those included in the WAS program but not as extensive, for example VOCs and perchlorate were not included. VOCs are not typically sampled in stormwater because of their volatility, and perchlorate has not been identified as a pollutant of concern for stormwater. Although results based on EMCs and composite samples are not directly comparable, the concentrations of general monitoring parameters and metals in stormwater samples collected and analyzed for this study were generally within the range of results reported for similar land use types in the previous studies. Appendix D also includes composite results from recent groundwater samples taken from monitoring wells throughout the West and Central Basins.

### 4.3.1 Broadous School

Monitoring began at this site in October 2001. A summary of sampled storm events is contained in Table 5. Figure A-1 is a site location map showing the installed monitoring and infiltration BMP systems.

Surface stormwater samples were collected at one location in the playground (B-SW-01). At the beginning of the 2003-2004 monitoring season, the location of B-SW-01 was changed in an attempt to collect samples more representative of stormwater runoff that is infiltrated. During the 2001-2002 and 2002-2003 monitoring seasons, samples collected at B-SW-01 were single grab samples collected near the beginning of storm runoff. Samples collected from B-SW-01 during the last two monitoring seasons were time-weighted composites of aliquots collected at approximately 30-minute increments during the first two hours storm runoff.

Soil pore fluid samples were collected from a single lysimeter, B-LS-01. At the beginning of the 2003-2004 monitoring season, the original lysimeter was abandoned because of difficulty collecting samples at that depth, and a new lysimeter, B-LS-02, was installed in a position closer to the infiltration BMP. Pore fluid samples were typically collected daily over a two or three day period beginning one day after collection of a stormwater sample.

Groundwater samples were collected from two monitoring wells, B-MW-01 (upgradient) and B-MW-02 (downgradient). Because groundwater at the site is relatively deep (greater than 130 feet below ground surface [bgs]), groundwater samples were collected periodically during the season rather than in direct response to a storm event.

**Appendix H** presents soil boring logs for Broadous School. Soil analytical data for one sample, B-L-D, collected from the lysimeter borehole on August 26, 2001, are contained in Tables E-1 through E-3. The depth of sample B-L-D was 32 feet below ground surface. The boring logs indicate that the upper 35 feet of sediment at this site is composed of relatively uniform silty sands with some gravel. The soil chemical analytical results indicate VOCs were not detected. Perchlorate was reported at 330 ug/kg, but concentrations of other salts and metals were within the expected ranges for these constituents.

### 4.3.2 Hall House

Monitoring began at this site in December 2002. A summary of sampled storm events is contained in Table 5. Figure A-2 is a site location map showing the installed monitoring and infiltration BMP systems.

Surface stormwater samples were collected at two locations, the roof drain (H-SW-01) and the driveway (H-SW-02). During the 2002-2003 monitoring season, samples collected at the two monitoring stations were single grab samples collected near the beginning of storm runoff. Samples collected during the 2003-2004 and 2004-2005 monitoring seasons were time-weighted composites of aliquots collected at approximately 30-minute increments during the first two hours of storm runoff.

Soil pore fluid samples were collected from a single lysimeter, H-LS-01. Pore fluid samples were typically collected daily over a two or three day period beginning one day after collection of a stormwater sample.

No monitoring wells are installed at the Hall House site.

**Appendix H** presents soil boring logs collected at the Hall House site. Soil analytical data for samples HA-1 and HA-2, collected at depths of 1 and 8 feet bgs on October 28, 2002, and sample H-B-1, collected at a depth of 8 feet bgs on March 10, 2005, are contained in Tables E-1 through E-3. The boring logs indicate that the upper 6 feet of sediment is composed of silt with minor amounts (<10%) of sands and clay. Between 6 and 8 feet bgs some gravel and nonplastic clay were encountered. The soil chemical analytical results did not indicate detected VOCs. Concentrations of salts (nitrate, chloride, sulfate) and some metals (arsenic, lead) were near the lower end of the ranges expected for these constituents, especially considering the fine-grained fraction of sediment present in the sampled depth interval.

### 4.3.3 IMAX

Monitoring began at this site in October 2001. A summary of sampled storm events is contained in Table 5. Figure A-3 is a site location map showing the installed monitoring and infiltration BMP systems.

Surface stormwater samples were collected at two locations; a roof drain (I-SW-01) and a station for collecting parking lot runoff as it discharges into a planter area (I-SW-02). During the 2001-2002 and 2002-2003 monitoring seasons, samples collected at the two monitoring stations were single grab samples collected near the beginning of storm runoff. Samples collected from these monitoring stations during the 2003-2004 and 2004-2005 monitoring seasons were time-weighted composites of aliquots collected at approximately 30-minute increments during the first two hours of storm runoff.

For the first two years of the project, soil pore fluid samples were collected from lysimeters I-LS-01 and I-LS-02. During the summer of 2004, lysimeter I-LS-02 was damaged during road construction. At the beginning of the 2004-2005 monitoring season, this lysimeter was replaced with new lysimeter, I-LS-03, installed in the planter area about 20 feet from the original location. Pore fluid samples were typically collected daily over a two or three day period beginning one day after collection of a stormwater sample.

Groundwater samples were collected from two monitoring wells, I-MW-01 (upgradient) and I-MW-02 (downgradient). Both wells were sampled before and after each monitoring season. I-MW-02 was also sampled after each sampled storm event. Upgradient well I-MW-01 was sampled occasionally during each monitoring season, but not after each sampled storm.

**Appendix H** presents soil boring logs for IMAX and soil analytical data for two samples, I-LS-02 collected from the lysimeter borehole 5 feet bgs on October 16, 2001 and soil sample I-B1 collected approximately 8 feet west of I-LS-02 on March 10, 2005, also at 5 feet bgs. The boring logs for I-LS-2 and I–B1 indicate that the upper 5 feet of sediment at this site is composed primarily of plastic clays and silt with minor amounts (<5%) of sand. The soil chemical analytical results did not indicate detected VOCs. Concentrations of salts (nitrogen, nitrate, chloride, sulfate) and some metals (arsenic, chromium) were reported at relatively high concentration relative to other soil samples tested. Perchlorate was also reported in the sample collected in 2001 but was not detected in the sample from March 2005.

### 4.3.4 Metal Recycler

Monitoring began on this site in November 2003. A summary of sampled storm events is contained in Table 5. Figure A-4 is a site location map showing the installed monitoring and infiltration BMP systems.

Surface stormwater samples were collected at two locations, one collecting runoff from a paved work yard as it enters a catch basin (M-SW-01) and the other sampling the same runoff after pre-treatment (M-SW-02). During the 2003-2004 monitoring season, flow-weighted composite samples were collected using automated equipment. Automated sampling was discontinued because of difficulties using this equipment, and during the 2004-2005 monitoring season samples collected from these monitoring stations were time-weighted composites of aliquots collected at approximately 30-minute increments during the first two hours of storm runoff.

Soil pore fluid samples were collected from four lysimeters, M-LS-01, M-LS-02, M-LS-03, and M-LS-04. Pore fluid samples were typically collected daily over a two or three day period beginning one day after collection of a stormwater sample.

Groundwater samples were collected from one monitoring well, M-MW-01. Groundwater samples were collected at the beginning and end of each monitoring season. Because groundwater at the site is relatively deep (greater than 200 feet bgs), groundwater samples during each monitoring season were collected periodically during the season rather than in direct response to a storm event.

**Appendix H** presents soil boring logs for the Metal Recycler and soil analytical data for two soil samples, M-LS-01 and M-LS-02 collected at 20 and 36.5 feet bgs, respectively, on November 11, 2003. The boring logs indicate that the upper 50 feet of sediment is composed of relatively uniform (poorly graded) silty fine sands. The soil chemical analytical results did not report detected VOCs or perchlorate. However, some of the soil-gas samples collected during the site assessment contained tetrachloroethylene (PCE) and trichloro-fluoromethane. Concentrations of salts and metals (arsenic, chromium) were relatively low compared to those in soil samples from the other sites.

### 4.3.5 Sun Valley

Monitoring began at this site in October 2003. A summary of sampled storm events is contained in Table 5. Figure A-5 is a site location map showing the installed monitoring and infiltration BMP systems.

Surface stormwater samples were collected at three locations, representing roof runoff (S-SW-01), runoff from the paved yard into a collection basin (S-SW-02), and flow discharging from the collection basin after treatment (S-SW-03). During the 2003-2004 monitoring season, flow-weighted composite samples were collected using automated equipment. Automated sampling was discontinued because of difficulties using this equipment, and during the 2004-2005 monitoring season samples collected from these monitoring stations were time-weighted composites of aliquots collected at approximately 30-minute increments during the first two hours storm runoff.

Soil pore fluid samples were collected from five lysimeters, S-LS-01, S-LS-02, S-LS-03, S-LS-04, and S-LS-05. Pore fluid samples were typically daily collected over a two or three day period beginning one day after collection of a stormwater sample.

Groundwater beneath the site occurs at more than 300 feet bgs and no on-site monitoring wells were installed. As an indication of regional groundwater quality, samples were collected from EV-10, an inactive groundwater supply well owned by the Los Angeles Department of Water and Power and located about a mile downgradient from the site. Groundwater samples were collected from EV-10 at the beginning and ending of each monitoring season.

**Appendix H** presents soil boring logs collected at the Sun Valley site. Soil analytical data is presented in Tables E1 through E3. Five soil samples collected at this site were analyzed: S-1 (collected at 5 feet bgs on October 29, 2003), S-LS-01 and S-LS-02, (collected at 23 and 46 feet bgs, respectively, on November 11, 2003), and S-B-01-1 and S-B-01-2 (collected at 23 and 46 feet bgs, respectively, on March 17, 2005). The boring logs indicate that the upper 50 feet of sediment is composed of relatively uniform (poorly graded) sand with gravel. The soil chemical analytical results did not indicate detected VOCs or perchlorate. Concentrations of salts and metals (arsenic, chromium, nickel, zinc) were low compared to those in soil samples from the other sites.

### 4.3.6 Veterans Park

Monitoring began on this site in November 2003. A summary of sampled storm events is contained in Table 5. Figure A-6 is a site location map showing the installed monitoring and infiltration BMP systems.

Surface stormwater samples are collected at two locations where runoff enters parking lot catch basins (V-SW-01 and V-SW-02). Samples collected from these monitoring stations were time-weighted composites of aliquots collected at approximately 30-minute increments during the first two hours storm runoff.

Soil pore fluid samples were collected from two lysimeters, V-LS-01 and V-LS-02. Pore fluid samples were typically daily collected over a two or three day period beginning one day after collection of a stormwater sample.

Groundwater samples were collected from four monitoring wells. V-MW-01 is downgradient to crossgradient and is more than 100 feet from the infiltration gallery. The other three wells are within about 30 feet of the infiltration gallery: V-MW-02 (relatively upgradient), V-MW-03 (relatively upgradient), and V-MW-04 (relatively downgradient). All wells were sampled before and after each monitoring season. V-MW-04 was also sampled after each sampled storm event. The other three wells were sampled occasionally during each monitoring season, but not after each sampled storm.

**Appendix H** presents soil boring logs for Veterans Park and soil analytical data for two samples, V-LS-1 and V-B1, collected at 10 to 15 feet bgs on October 29, 2003 and March 11, 2005, respectively. The boring logs indicate that the upper 10 feet of sediment is composed of interbedded silts and fine sands. The soil chemical analytical results did not indicate detected VOCs or perchlorate. Concentrations of salts (alkalinity, calcium, potassium, chloride and sulfate) were variable, as were metals concentrations (barium, chromium, copper and zinc).

## Table 6 Summary Results – Broadous

| | | | **Monitoring Station[2]** | | | | |
|---|---|---|---|---|---|---|---|
| **Constituent** | **Units[1]** | **Fraction** | **B-SW-01** | **B-LS-01** | **B-LS-02** | **B-MW-01** | **B-MW-02** |
| **General Monitoring Parameters** | | | | | | | |
| Nitrate (as N) | mg/L | N/A | ND - 1 | 0.583 - 110 | 2.4 - 4 | 0.3 - 8.4 | 5.6 - 10.509 |
| Total Kjeldahl Nitrogen | mg/L | N/A | 1.1 - 6.2 | -- | ND | ND - 0.34 | ND - 0.35 |
| Ammonia-Nitrogen | mg/L | N/A | ND - 1.02 | ND - 0.14 | ND - 0.35 | ND | ND - 0.33 |
| Total Dissolved Solids | mg/L | N/A | 43 - 330 | 78 – 1700 | 490 - 990 | 540 - 680 | 570 - 846 |
| Total Suspended Solids | mg/L | N/A | 12 - 200 | 130 | -- | ND - 2548 | ND - 2100 |
| Chemical Oxygen Demand | mg/L | N/A | 23 - 220 | 247 | ND - 36 | ND - 32.37 | ND - 120 |
| Chloride | mg/L | N/A | 2 - 72 | 70-160 | 37 - 130 | 22-87 | 19-28.28 |
| **Metals** | | | | | | | |
| Aluminum | µg/L | Dissolved | ND - 259 | ND | ND | ND | ND |
| Aluminum | µg/L | Total | 337 - 6500 | ND - 68.7 | ND | ND - 176 | ND - 17900 |
| Arsenic | µg/L | Dissolved | ND - 2.5 | 2.18 - 5.63 | 1.91 - 11.3 | ND | ND - 1.29 |
| Arsenic | µg/L | Total | ND - 2.99 | ND - 7.92 | 2.2 - 12.3 | ND - 3.5 | ND - 2.86 |
| Cadmium | µg/L | Dissolved | ND | ND | ND - 0.215 | ND | ND |
| Chromium, Hexavalent | µg/L | Dissolved | ND - 0.49 | 0.39 – 0.59 | 0.62 - 1.2 | 0.1 - 1.7 | ND - 1.1 |
| Copper | µg/L | Dissolved | ND - 22.1 | 5.83 - 66.9 | 2.68 - 19 | ND - 5.27 | ND - 87 |
| Copper | µg/L | Total | 4.33 - 39.9 | 10.3 - 220 | 2.85 - 19 | ND - 73.1 | ND - 87 |
| Lead | µg/L | Dissolved | ND - 1.22 | ND - 0.54 | ND - 0.695 | ND | ND - 9.56 |
| Lead | µg/L | Total | ND - 36.3 | ND - 6.44 | ND - 0.84 | ND - 34.7 | ND - 30.4 |
| Mercury | µg/L | Dissolved | ND | -- | ND | ND | ND - 0.109 |
| Zinc | µg/L | Dissolved | 7.54 - 369 | 42.2 - 828 | 6.91 - 71.8 | ND - 412 | ND - 77.5 |
| Zinc | µg/L | Total | 14.1 - 369 | ND - 2060 | 11.1 - 25.9 | 5.69 - 950 | ND - 157 |
| **Other Constituents** | | | | | | | |
| MBAS (Surfactants) | mg/L | N/A | ND - 0.38 | -- | -- | ND | ND |
| Oil and Grease | µg/L | N/A | ND - 3.6 | -- | -- | ND - 1.3 | 1.6 - 2.9 |
| Perchlorate | µg/L | N/A | ND - 5.2 | ND | ND | ND | ND |

| | | | Monitoring Station[2] | | | | |
|---|---|---|---|---|---|---|---|
| **Constituent** | **Units[1]** | **Fraction** | **B-SW-01** | **B-LS-01** | **B-LS-02** | **B-MW-01** | **B-MW-02** |
| **Volatile Organic Compounds** | | | | | | | |
| Benzene | µg/L | N/A | ND | ND | ND | ND - 2.3 | ND - 0.87 |
| Toluene | µg/L | N/A | ND | ND | ND | ND - 6.4 | ND |
| Ethylbenzene | µg/L | N/A | ND | ND | ND | ND - 1.2 | ND - 1.1 |
| o-Xylene | µg/L | N/A | ND | ND | ND | ND - 8.4 | ND - 3.2 |
| p/m-Xylene | µg/L | N/A | ND | ND | ND | ND - 5.7 | ND - 3.8 |
| Tetrachloroethylene (PCE) | µg/L | N/A | ND | ND | ND | ND - 44 | ND - 1.5 |
| 1,2,4-Trimethylbenzene | µg/L | N/A | ND | ND | ND | ND - 1.1 | ND - 1 |
| 1,3,5-Trimethylbenzene | µg/L | N/A | ND | ND | ND | ND - 1.1 | ND - 0.55 |
| 2-Butanone (Methylethyl ketone) | µg/L | N/A | ND - 8.8 | ND | ND | ND - 1 | ND - 1 |
| Acetone | µg/L | N/A | ND - 37 | ND | ND - 600 | ND - 26 | ND - 2.7 |
| Carbon disulfide | µg/L | N/A | ND | ND - 5.6 | ND – 2.5 | ND | ND |
| Diethyl Ether | µg/L | N/A | ND - 0.8 | ND | ND | ND | ND |
| Naphthalene | µg/L | N/A | ND | ND | ND | ND - 1.1 | ND - 1.1 |
| Tert-Butyl Alcohol (TBA) | µg/L | N/A | ND | ND - 12 | ND | ND | ND |
| **Semi-Volatile Organic Compounds** | | | | | | | |
| Bis(2-Ethylhexyl) Phthalate | µg/L | N/A | ND - 20 | -- | -- | ND - 4.8 | ND - 74.3 |
| **Biological Parameters** | | | | | | | |
| Total Coliforms | MPN/100 mL | N/A | 1300 - 35000 | ND - 90000 | -- | 12 - 30000 | ND - 11000 |
| Fecal Coliform | MPN/100 mL | N/A | 80 - 5000 | ND | -- | 23 | ND - 1.1 |
| E. coli | MPN/100 mL | N/A | 20 - 1300 | ND | -- | 6.9 | ND |
| | | | | | | | |
| 1. Units of measure: mg/L = milligrams per liter, µg/L = micrograms per liter, MPN/100 mL = most probable number per 100 milliliters. | | | | | | | |
| 2. "--" indicates the constituent was not analyzed for. Analytes not detected are indicated by ND. | | | | | | | |

## Table 7 Summary Results – Hall House

| | | | Monitoring Station[2] | | |
|---|---|---|---|---|---|
| **Constituent** | **Units[1]** | **Fraction** | **H-SW-01** | **H-SW-02** | **H-LS-01** |
| **General Monitoring Parameters** | | | | | |
| Nitrate (as N) | mg/L | N/A | ND - 0.39 | 0.24 - 1.5 | ND - 0.28 |
| Total Kjeldahl Nitrogen | mg/L | N/A | ND - 2 | 1.4 - 24 | ND - 0.28 |
| Ammonia-Nitrogen | mg/L | N/A | ND - 0.49 | 0.28 - 2 | ND |
| Total Dissolved Solids | mg/L | N/A | 10 - 82 | 28 - 48 | 290 - 610 |
| Total Suspended Solids | mg/L | N/A | ND - 51 | 9.6 - 110 | -- |
| Chemical Oxygen Demand | mg/L | N/A | 5 - 74 | 69 - 280 | ND - 5.1 |
| Chloride | mg/L | N/A | ND-3.2 | ND-3.4 | ND-65 |
| **Metals** | | | | | |
| Aluminum | µg/L | Dissolved | ND | ND - 122 | ND |
| Aluminum | µg/L | Total | ND - 2540 | 1340 - 8210 | ND |
| Arsenic | µg/L | Dissolved | ND | ND - 1.19 | ND - 4.26 |
| Arsenic | µg/L | Total | ND - 1.31 | ND - 3.56 | ND |
| Cadmium | µg/L | Dissolved | ND - 0.396 | ND | ND - 0.245 |
| Chromium, Hexavalent | µg/L | Dissolved | ND - 0.41 | ND - 0.95 | 0.37 - 0.66 |
| Copper | µg/L | Dissolved | 1.3 - 6.93 | 3.81 - 17 | 1.58 - 7.71 |
| Copper | µg/L | Total | 1.55 - 41.3 | 28.8 - 123 | 2.43 - 6.4 |
| Lead | µg/L | Dissolved | 1.86 - 6.16 | 0.522 - 3.12 | ND - 0.591 |
| Lead | µg/L | Total | 8.81 - 99.3 | 46 - 138 | ND - 0.598 |
| Mercury | µg/L | Dissolved | ND | ND | ND |
| Zinc | µg/L | Dissolved | 86.3 - 496 | 27.4 - 88.1 | ND - 56.9 |
| Zinc | µg/L | Total | 93.4 - 933 | 189 - 849 | 6.36 - 38.3 |
| **Other Constituents** | | | | | |
| MBAS (Surfactants) | mg/L | N/A | ND - 0.37 | ND - 0.36 | -- |
| Oil and Grease | µg/L | N/A | ND - 2.2 | 1.6 - 52 | ND - 1.1 |
| **Volatile Organic Compounds** | | | | | |
| 2-Butanone (Methylethyl ketone) | µg/L | N/A | ND | ND - 1.8 | ND |
| Acetone | µg/L | N/A | 7.9 - 26 | 6.6 - 15 | ND |
| Carbon disulfide | µg/L | N/A | ND | ND | ND - 3.6 |
| Tert-Butyl Alcohol (TBA) | µg/L | N/A | ND | ND | ND - 12 |
| **Semi-Volatile Organic Compounds** | | | | | |
| Bis(2-Ethylhexyl) Phthalate | µg/L | N/A | ND | 400 | -- |
| **Biological Parameters** | | | | | |
| Total Coliforms | MPN/100 mL | N/A | ND - 600 | -- | -- |
| Fecal Coliform | MPN/100 mL | N/A | ND | -- | -- |
| E. coli | MPN/100 mL | N/A | ND | -- | -- |

1. Units of measure: mg/L = milligrams per liter, µg/L = micrograms per liter, MPN/100 mL = most probable number per 100 milliliters.
2. "--" indicates the constituent was not analyzed for. Analytes not detected are indicated by ND.

## Table 8 Summary Results – IMAX

| | | | Monitoring Station[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Constituent** | **Units[1]** | **Fraction** | **I-SW-01** | **I-SW-02** | **I-LS-01** | **I-LS-02** | **I-LS-03** | **I-MW-01** | **I-MW-02** |
| **General Monitoring Parameters** | | | | | | | | | |
| Nitrate (as N) | mg/L | N/A | 0.15 - 0.44 | ND - 1.2 | 7.7 - 320 | 0.41 - 8.2 | 0.41 - 1 | 3.2 - 16 | 7.2 - 24.365 |
| Total Kjeldahl Nitrogen | mg/L | N/A | ND - 1.5 | 0.84 - 2.1 | ND - 0.46 | ND | ND | ND - 1 | ND - 0.42 |
| Ammonia-Nitrogen | mg/L | N/A | ND - 0.35 | ND - 0.56 | ND - 0.056 | ND - 0.063 | ND | ND - 0.337 | ND |
| Total Dissolved Solids | mg/L | N/A | 6.7 - 34 | 6.7 - 37 | 710 - 3000 | 130 - 750 | 180 - 750 | 630 - 840 | 500 - 882 |
| Total Suspended Solids | mg/L | N/A | ND - 110 | ND - 140 | -- | -- | -- | 7.1 - 130 | ND - 1667 |
| Chemical Oxygen Demand | mg/L | N/A | 7.7 - 64 | 13 - 61 | ND - 58 | 6 - 36 | 5.1 - 20 | ND - 7.6 | ND - 131.6 |
| Chloride | mg/L | N/A | ND-1.8 | ND-3.6 | 53-120 | ND-94 | ND - 94 | 22-60 | 29-50 |
| **Metals** | | | | | | | | | |
| Aluminum | µg/L | Dissolved | ND | ND - 105 | ND | ND | ND | ND | ND |
| Aluminum | µg/L | Total | ND - 1180 | 105 - 952 | ND - 455 | 124 - 455 | ND | 8.8 - 3680 | ND - 495 |
| Arsenic | µg/L | Dissolved | ND | 1.3 - 138 | 1.62 - 6.78 | 2.2 - 22.1 | 3.17 - 4.77 | ND - 1.4 | ND - 2 |
| Arsenic | µg/L | Total | ND - 6.51 | 1.44 - 153 | 1.51 - 8.47 | 9.74 - 28.6 | 3.15 - 5.39 | ND - 4.3 | ND - 5.15 |
| Cadmium | µg/L | Dissolved | ND | ND | ND - 0.524 | ND | ND | ND | ND |
| Chromium, Hexavalent | µg/L | Dissolved | ND - 0.3 | ND - 0.61 | 2 - 35.2 | 0.55 - 74 | 0.55 - 1 | 5.6 - 24 | ND - 4.6 |
| Copper | µg/L | Dissolved | 1.17 - 8.2 | 1.99 - 137 | ND - 10.1 | ND - 4.48 | ND - 1.32 | ND - 5.22 | ND - 38.5 |
| Copper | µg/L | Total | 2.51 - 37.7 | 4.99 - 157 | 3.65 - 25.5 | 3.01 - 34 | ND - 1.26 | ND - 20.8 | ND - 47.3 |
| Lead | µg/L | Dissolved | ND | ND - 0.769 | ND - 0.866 | ND | ND | ND | ND - 0.816 |
| Lead | µg/L | Total | ND - 76.4 | 0.947 - 13.7 | ND - 6.3 | 0.723 - 9.4 | ND | ND - 3 | ND - 11.2 |
| Mercury | µg/L | Dissolved | ND | ND | -- | ND | ND | ND | ND - 0.154 |
| Zinc | µg/L | Dissolved | 37.7 - 169 | 32.5 - 757 | 25 - 130 | 21 - 4650 | 6.89 - 9.07 | ND - 75.3 | ND - 400 |
| Zinc | µg/L | Total | 60.6 - 566 | 50.3 - 1240 | 62.8 - 209 | 120 - 7050 | 8.5 - 14.2 | ND - 80.1 | ND - 400 |
| **Other Constituents** | | | | | | | | | |
| MBAS (Surfactants) | mg/L | N/A | ND - 0.19 | ND - 0.19 | -- | -- | -- | ND - 0.19 | ND - 0.15 |
| Oil and Grease | µg/L | N/A | ND - 58 | ND - 1.7 | -- | -- | -- | ND - 1 | 1.7 |
| Perchlorate | µg/L | N/A | ND - 14 | ND | ND | ND | -- | ND - 8.2 | ND - 15 |

| | | | Monitoring Station[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Constituent** | **Units[1]** | **Fraction** | **I-SW-01** | **I-SW-02** | **I-LS-01** | **I-LS-02** | **I-LS-03** | **I-MW-01** | **I-MW-02** |
| **Volatile Organic Compounds** | | | | | | | | | |
| Methyl-t-Butyl Ether (MtBE) | µg/L | N/A | ND | ND | ND | ND | ND | ND | ND - 1.3 |
| Benzene | µg/L | N/A | ND | ND | ND | ND | ND | ND - 3.1 | ND - 2.6 |
| Toluene | µg/L | N/A | ND | ND | ND | ND | ND | ND - 2.4 | ND - 16 |
| Ethylbenzene | µg/L | N/A | ND | ND | ND | ND - 27 | 16 - 27 | ND - 2.1 | ND - 9.3 |
| o-Xylene | µg/L | N/A | ND | ND | ND | ND - 37 | 33 - 37 | ND - 5.6 | ND - 19 |
| p/m-Xylene | µg/L | N/A | ND | ND | ND | ND - 170 | 89 - 170 | ND - 6.7 | ND - 33 |
| Tetrachloroethylene (PCE) | µg/L | N/A | ND | ND | ND | ND | ND | ND - 0.73 | ND - 38 |
| 1,2,4-Trimethylbenzene | µg/L | N/A | ND | ND | ND | ND - 2.1 | 1.2 - 2.1 | ND - 1.9 | ND - 6.9 |
| 1,3,5-Trimethylbenzene | µg/L | N/A | ND | ND | ND | ND - 0.6 | ND - 0.6 | ND - 0.81 | ND - 3 |
| 2-Butanone (Methylethyl ketone) | µg/L | N/A | ND - 1.5 | ND - 1.7 | ND | ND | ND | ND | ND |
| Acetone | µg/L | N/A | 2.5 - 17 | 2.6 - 15 | ND - 3.7 | ND - 2.1 | ND - 2.1 | ND - 2.7 | ND - 3.1 |
| Carbon disulfide | µg/L | N/A | ND | ND | ND - 1.2 | ND - 24 | 1.4 - 24 | ND | ND |
| Diethyl Ether | µg/L | N/A | ND - 0.88 | ND - 1.2 | ND | ND | ND | ND | ND |
| Naphthalene | µg/L | N/A | ND | ND | ND | ND | ND | ND - 2.1 | ND - 1.6 |
| n-Propylbenzene | µg/L | N/A | ND | ND | ND | ND | ND | ND | ND - 0.75 |
| Tert-Butyl Alcohol (TBA) | µg/L | N/A | ND | ND | ND - 13 | ND | ND | ND | ND |
| **Semi-Volatile Organic Compounds** | | | | | | | | | |
| Bis(2-Ethylhexyl) Phthalate | µg/L | N/A | ND | ND | -- | -- | -- | ND | ND - 202.3 |
| Phenol | µg/L | N/A | ND | ND | -- | -- | -- | ND | ND - 18 |
| **Biological Parameters** | | | | | | | | | |
| Total Coliforms | MPN/100 mL | N/A | 500 | ND - 13000 | ND - 8 | ND - 13 | -- | ND - 800 | 11 - 110 |
| Fecal Coliform | MPN/100 mL | N/A | 20 | ND - 260 | ND | ND | -- | ND | ND |
| E. coli | MPN/100 mL | N/A | 20 | ND - 120 | ND | ND | -- | ND | ND |

1. Units of measure: mg/L = milligrams per liter, µg/L = micrograms per liter, MPN/100 mL = most probable number per 100 milliliters.

2. "--" indicates the constituent was not analyzed for. Analytes not detected are indicated by ND.

## Table 9 Summary Results - Metal Recycler

| | | | Monitoring Station[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Constituent** | **Units[1]** | **Fraction** | **M-SW-01** | **M-SW-02** | **M-LS-01** | **M-LS-02** | **M-LS-03** | **M-LS-04** | **M-MW-01** |
| **General Monitoring Parameters** | | | | | | | | | |
| Nitrate (as N) | mg/L | N/A | 1.6 - 4.2 | 3.2 - 4.2 | 1 - 16 | 1 - 5.6 | ND - 3.8 | 5.7 - 12 | ND - 0.12 |
| Total Kjeldahl Nitrogen | mg/L | N/A | 6.4 - 11 | 8.3 - 9.5 | ND - 2.7 | ND - 1.4 | 0.98 - 1.3 | 2.1 - 2.5 | ND - 1.1 |
| Ammonia-Nitrogen | mg/L | N/A | 0.84 - 1.9 | 0.91 - 2.5 | ND - 2.1 | ND - 0.28 | ND | ND - 0.7 | ND |
| Total Dissolved Solids | mg/L | N/A | 520 - 1400 | 670 - 1400 | 570 - 1700 | 630 - 1300 | 1100 - 1200 | 820 - 1100 | 840 - 1100 |
| Total Suspended Solids | mg/L | N/A | 61 - 1200 | 100 - 1200 | -- | -- | -- | -- | ND - 20 |
| Chemical Oxygen Demand | mg/L | N/A | 570 - 3400 | 420 - 2100 | 13 - 54 | 18 - 46 | 33 - 79 | 84 - 240 | ND - 57 |
| Chloride | mg/L | N/A | 35-100 | 50-72 | 28-110 | 35-99 | 60-110 | 36-79 | 70-86 |
| **Metals** | | | | | | | | | |
| Aluminum | µg/L | Dissolved | ND - 248 | ND - 379 | ND | ND | ND | ND | ND |
| Aluminum | µg/L | Total | 434 - 8360 | 868 - 5620 | ND | ND | ND | ND | ND - 330 |
| Arsenic | µg/L | Dissolved | ND - 2.96 | ND - 2.94 | ND - 5.14 | ND - 3.1 | 3.32 - 13.9 | 2.88 - 5.67 | 0.765 - 5.65 |
| Arsenic | µg/L | Total | 1.72 - 11.9 | 4.16 - 10.3 | ND - 4.02 | 0.992 - 2.98 | 8.52 - 13.5 | 2.77 - 5.44 | 1.83 - 8.39 |
| Cadmium | µg/L | Dissolved | 0.627 - 3.26 | 0.285 - 14.1 | 0.294 - 0.761 | ND - 0.637 | ND | ND - 0.27 | ND |
| Chromium, Hexavalent | µg/L | Dissolved | 6.3 - 74 | ND - 52 | ND - 1.9 | ND - 4.2 | ND - 0.6 | 6 - 14 | ND - 0.23 |
| Copper | µg/L | Dissolved | 59.7 - 158 | 47 - 153 | 3.01 - 17.4 | 3.33 - 6.99 | 2.93 - 6.54 | 7.36 - 16.5 | ND - 1.41 |
| Copper | µg/L | Total | 148 - 792 | 124 - 330 | 3.58 - 27.2 | 4.17 - 14.6 | 3.08 - 6.69 | 8.74 - 17.3 | ND - 3.46 |
| Lead | µg/L | Dissolved | 11.8 - 120 | 3.69 - 185 | ND - 6.82 | ND - 0.632 | ND - 1.62 | ND - 0.95 | ND |
| Lead | µg/L | Total | 292 - 3020 | 460 - 1560 | 1.33 - 6.9 | 0.872 - 4.23 | ND - 0.785 | ND - 0.61 | ND - 1.16 |

| | | | Monitoring Station[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Constituent** | **Units[1]** | **Fraction** | **M-SW-01** | **M-SW-02** | **M-LS-01** | **M-LS-02** | **M-LS-03** | **M-LS-04** | **M-MW-01** |
| Mercury | µg/L | Dissolved | ND - 0.235 | ND - 0.279 | ND | ND | ND | ND | ND - 0.103 |
| Zinc | µg/L | Dissolved | 16.9 - 244 | 26.6 - 1550 | 35.7 - 101 | 20.6 - 165 | 19.5 - 26.3 | 21.2 - 27.2 | ND - 14 |
| Zinc | µg/L | Total | 957 - 3220 | 1170 - 2790 | 64 - 141 | 18.5 - 195 | 12.2 - 27.2 | 11.4 - 45 | ND - 17.3 |
| **Other Constituents** | | | | | | | | | |
| MBAS (Surfactants) | mg/L | N/A | 0.48 - 1.7 | 0.86 - 1.7 | -- | -- | -- | -- | ND |
| Oil and Grease | µg/L | N/A | 49 - 390 | 17 - 170 | -- | -- | -- | -- | ND - 2.4 |
| Perchlorate | µg/L | N/A | ND - 120 | ND - 170 | 13 - 140 | 15 - 54 | ND - 33 | 10 - 18 | ND |
| **Volatile Organic Compounds** | | | | | | | | | |
| Methyl-t-Butyl Ether (MtBE) | µg/L | N/A | ND - 1.3 | ND - 1.7 | ND - 33 | ND - 26 | ND - 10 | ND - 2.9 | ND |
| Benzene | µg/L | N/A | ND - 0.83 | ND - 2.3 | ND - 0.65 | ND - 2.3 | ND - 0.7 | ND | ND |
| Toluene | µg/L | N/A | ND - 5.8 | ND - 25 | ND - 13 | ND - 5.8 | ND - 3 | ND | ND |
| Ethylbenzene | µg/L | N/A | ND - 2 | ND - 7.1 | ND - 4.3 | ND - 0.7 | ND - 0.93 | ND | ND |
| o-Xylene | µg/L | N/A | ND - 3.8 | ND - 11 | ND - 8.1 | ND - 1.5 | ND - 2.9 | ND | ND |
| p/m-Xylene | µg/L | N/A | ND - 8.6 | ND - 28 | ND - 19 | ND - 2.7 | ND - 3.7 | ND | ND |
| Tetrachloroethylene (PCE) | µg/L | N/A | ND | ND | ND - 0.92 | ND | 0.51 - 1.1 | ND | ND |
| 1,2,4-Trimethylbenzene | µg/L | N/A | ND - 4.3 | ND - 10 | ND - 4 | ND | ND - 0.83 | ND | ND |
| 1,3,5-Trimethylbenzene | µg/L | N/A | ND - 1.1 | ND - 2.8 | ND - 1.3 | ND | ND | ND | ND |
| 2-Butanone (Methylethyl ketone) | µg/L | N/A | 5.2 - 14 | 5.4 - 32 | ND | ND - 11 | ND - 1.3 | ND | ND |
| 4-Methyl-2-pentanone (MIBK) | µg/L | N/A | ND | ND - 21 | ND | ND | ND - 10 | ND | ND |
| Acetone | µg/L | N/A | 20 - 79 | 19 - 190 | ND - 4.4 | ND - 34 | ND - 37 | ND - 16 | ND |
| Carbon disulfide | µg/L | N/A | ND | ND | ND - 6.9 | ND - 3.5 | ND - 2 | ND - 0.57 | ND - 1.7 |
| Dichlorodifluoromethane | µg/L | N/A | ND - 4.1 | ND - 3.8 | ND | ND | ND | ND | ND |
| Diethyl Ether | µg/L | N/A | ND | ND - 1.1 | ND | ND - 1.7 | ND | ND | ND |
| Ethanol | µg/L | N/A | 160 - 1200 | 120 - 22000 | ND | ND - 3200 | ND | ND | ND |
| Methyl Methacrylate | µg/L | N/A | ND - 3.9 | ND - 3.1 | ND - 2.3 | ND | ND | ND | ND |

| | | | Monitoring Station[2] | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Constituent** | **Units[1]** | **Fraction** | **M-SW-01** | **M-SW-02** | **M-LS-01** | **M-LS-02** | **M-LS-03** | **M-LS-04** | **M-MW-01** |
| Naphthalene | µg/L | N/A | ND - 1.7 | 0.51 - 8.6 | ND | ND | ND | ND | ND |
| n-Propylbenzene | µg/L | N/A | ND | ND - 1.1 | ND - 0.69 | ND | ND | ND | ND |
| Styrene | µg/L | N/A | ND - 1.3 | ND - 7.2 | ND - 1.5 | ND | ND | ND | ND |
| Tert-Butyl Alcohol (TBA) | µg/L | N/A | ND - 15 | ND - 22 | ND - 11 | ND - 17 | ND - 24 | ND | ND |
| Tetrahydrofuran | µg/L | N/A | ND | ND - 11 | ND | ND | ND - 3.6 | ND | ND |
| Trichlorofluoromethane | µg/L | N/A | ND -4.2 | ND - 28 | ND - 1 | ND - 1.8 | ND - 1.4 | ND - 0.7 | ND |
| **Semi-Volatile Organic Compounds** | | | | | | | | | |
| 4-Methylphenol (p-Cresol) | µg/L | N/A | ND | ND - 24 | -- | -- | -- | -- | ND |
| 4-Nitrophenol | µg/L | N/A | ND | ND - 19 | -- | -- | -- | -- | ND |
| Benzoic acid | µg/L | N/A | ND -770 | ND - 560 | -- | -- | -- | -- | ND |
| Benzyl alcohol | µg/L | N/A | ND | ND - 40 | -- | -- | -- | -- | ND |
| Bis(2-Ethylhexyl) Phthalate | µg/L | N/A | ND | 23 - 26 | -- | -- | -- | -- | ND |
| Butyl Benzyl Phthalate | µg/L | N/A | ND | ND - 11 | -- | -- | -- | -- | ND |
| Phenol | µg/L | N/A | ND | ND - 62 | -- | -- | -- | -- | ND |
| **Biological Parameters** | | | | | | | | | |
| Total Coliforms | MPN/100 mL | N/A | 2400 | 270 | 20 | ND | ND | ND | ND |
| Fecal Coliform | MPN/100 mL | N/A | 230 | 40 | ND | ND | ND | ND | ND |
| E. coli | MPN/100 mL | N/A | 310 | 10 | ND | ND | ND | ND | ND |
| | | | | | | | | | |
| 1. Units of measure: mg/L = milligrams per liter, µg/L = micrograms per liter, MPN/100 mL = most probable number per 100 milliliters. | | | | | | | | | |
| 2. "--" indicates the constituent was not analyzed for. Analytes not detected are indicated by ND. | | | | | | | | | |

## Table 10 Summary Results - Sun Valley

| | | | Monitoring Station[2] | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Constituent** | **Units[1]** | **Fraction** | **S-SW-01** | **S-SW-02** | **S-SW-03** | **S-LS-01** | **S-LS-02** | **S-LS-03** | **S-LS-04** | **S-LS-05** | **EV-10** |
| **General Monitoring Parameters** | | | | | | | | | | | |
| Nitrate (as N) | mg/L | N/A | ND - 0.62 | ND - 0.63 | ND - 1.8 | 2.2 - 15 | 1 - 17 | 1.9 - 17 | 0.43 - 36 | ND - 0.77 | 1.7 - 2.1 |
| Total Kjeldahl Nitrogen | mg/L | N/A | 0.7 - 3.6 | 1.4 - 11 | 1.5 - 13 | ND - 1.4 | ND - 0.84 | ND - 1.1 | ND - 0.56 | 0.98 - 6.7 | ND - 0.14 |
| Ammonia-Nitrogen | mg/L | N/A | ND - 0.35 | 0.21 - 1.8 | 0.28 - 1.2 | ND - 0.56 | ND | ND | ND - 0.28 | ND - 0.28 | ND |
| Total Dissolved Solids | mg/L | N/A | 44 - 94 | 48 - 420 | 76 - 460 | 340 - 920 | 720 - 2200 | 350 - 1000 | 310 - 1300 | 810 - 4500 | 420 - 430 |
| Total Suspended Solids | mg/L | N/A | 9.5 - 290 | 41 - 930 | 31 - 780 | -- | -- | -- | -- | -- | 1.5 - 14 |
| Chemical Oxygen Demand | mg/L | N/A | 13 - 170 | 48 - 730 | 71 - 900 | ND - 53 | ND - 20 | ND - 35 | ND - 15 | 13 - 51 | 5 - 5.1 |
| Chloride | mg/L | N/A | ND-2.7 | ND-21 | 3.5-18 | 10-28 | 13-38 | 12-30 | 8.1-35 | 34-81 | 25-26 |
| **Metals** | | | | | | | | | | | |
| Aluminum | µg/L | Dissolved | ND | ND - 97.3 | ND - 198 | ND | ND | ND | ND | ND | ND |
| Aluminum | µg/L | Total | 84.5 - 2530 | 514 - 3660 | 406 - 6570 | ND | ND - 50.3 | ND | ND | ND | ND |
| Arsenic | µg/L | Dissolved | ND - 1.05 | ND - 11.6 | 1.1 - 9.93 | 4.63 - 15.7 | 4.82 - 11.4 | ND - 5.16 | 2.16 - 6.97 | 3.17 - 31.2 | ND - 0.879 |
| Arsenic | µg/L | Total | ND - 1.65 | 0.809 - 13.9 | 1.44 - 13 | 4.38 - 13.3 | 4.58 - 13.4 | ND - 6.65 | 1.84 - 7.79 | 3.12 - 30.6 | ND - 0.849 |
| Cadmium | µg/L | Dissolved | ND - 0.244 | ND - 0.764 | ND - 0.614 | ND - 0.272 | ND - 0.501 | ND | ND - 0.23 | 0.2 - 0.586 | ND |
| Chromium, Hexavalent | µg/L | Dissolved | ND - 0.48 | ND - 0.98 | 0.37 - 1.3 | 0.43 - 6.2 | ND - 31 | 12 - 26 | 1.3 - 5.5 | ND - 1 | 0.23 - 0.26 |
| Copper | µg/L | Dissolved | 6.54 - 13.5 | 7.35 - 43.7 | 11.3 - 23.3 | 1.78 - 8.76 | ND - 7.77 | 1.14 - 7.07 | 2.74 - 41.5 | 2.3 - 5.19 | 1.03 - 1.13 |
| Copper | µg/L | Total | 8.63 - 42.2 | 19.3 - 83.5 | 19.2 - 86.2 | 2.52 - 9.04 | 1.03 - 8.23 | 2.35 - 6.73 | 3.22 - 33.7 | 2.4 - 5.99 | 4 - 5.25 |
| Lead | µg/L | Dissolved | ND - 0.603 | ND - 6.09 | ND - 58.2 | ND - 0.592 | ND | ND - 0.608 | ND - 1.68 | ND - 0.838 | ND |
| Lead | µg/L | Total | 3.66 - 63.6 | 19.4 - 108 | 10.6 - 956 | ND - 5.46 | ND - 0.847 | ND - 1.51 | ND - 1.48 | 0.582 - 3.57 | 0.652 - 1.07 |
| Mercury | µg/L | Dissolved | ND | ND - | ND - | ND | ND | ND | ND | ND | ND |

| | | | Monitoring Station[2] | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Constituent** | **Units[1]** | **Fraction** | **S-SW-01** | **S-SW-02** | **S-SW-03** | **S-LS-01** | **S-LS-02** | **S-LS-03** | **S-LS-04** | **S-LS-05** | **EV-10** |
| | | | | 0.168 | 0.192 | | | | | | |
| Zinc | µg/L | Dissolved | 23.4 - 74 | 38.5 - 174 | 43.6 - 350 | ND - 17.7 | 9.4 - 31.3 | ND - 18.6 | 18.7 - 49.7 | 7.37 - 28.6 | 14.2 - 61.6 |
| Zinc | µg/L | Total | 98.4 - 284 | 99 - 387 | 83.2 - 669 | ND - 19.8 | 12 - 61.3 | 8.37 - 59.8 | 17.7 - 52.5 | 10.2 - 38.2 | 40.8 - 42.7 |
| **Other Constituents** | | | | | | | | | | | |
| MBAS (Surfactants) | mg/L | N/A | 0.24 - 0.42 | 0.32 - 4.1 | 0.32 - 3.9 | -- | -- | -- | -- | -- | ND |
| Oil and Grease | µg/L | N/A | ND - 5.7 | 2.2 - 48 | 2 - 54 | -- | -- | -- | -- | -- | ND |
| Perchlorate | µg/L | N/A | ND | ND - 6.1 | ND - 6.5 | ND | ND | ND - 7.2 | ND - 2.4 | ND | ND |
| **Volatile Organic Compounds** | | | | | | | | | | | |
| Methyl-t-Butyl Ether (MtBE) | µg/L | N/A | ND | ND | ND | ND | ND - 7.3 | ND | ND - 1.3 | ND | ND |
| Toluene | µg/L | N/A | ND | ND - 0.59 | ND - 11 | ND | ND | ND | ND | ND | ND |
| Trichloroethylene (TCE) | µg/L | N/A | ND | ND | ND | ND | ND | ND | ND | ND | 1.2 |
| Tetrachloroethylene (PCE) | µg/L | N/A | ND | ND | ND | ND | ND | ND | ND | ND | 4.1 - 4.9 |
| 1,1,1-Trichloroethane | µg/L | N/A | ND | ND | ND | 5.4 - 18 | 3.3 - 17 | 5.2 - 18 | 3.7 - 17 | ND - 1.4 | ND |
| 1,1-Dichloroethane | µg/L | N/A | ND | ND | ND | 0.56 - 1.6 | 0.56 - 2.1 | ND - 1.4 | ND - 1.3 | ND | 3.5 - 3.6 |
| 1,1-Dichloroethylene | µg/L | N/A | ND | ND | ND | 0.97 - 3.7 | 0.76 - 4.4 | 1.3 - 4.1 | 1.3 - 4.4 | ND | ND |
| 1,2-Dichloroethane | µg/L | N/A | ND | ND | ND | ND | ND | ND | ND | ND | ND - 6.4 |
| 1,4-Dichlorobenzene | µg/L | N/A | ND | ND - 4.7 | ND - 1.3 | ND | ND | ND | ND | ND | ND |
| 2,2-Dichloropropane | µg/L | N/A | ND | ND | ND | ND | ND | ND - 0.97 | ND | ND | ND |
| 2-Butanone (Methylethyl ketone) | µg/L | N/A | ND - 3.7 | 1.7 - 6.1 | 1 - 12 | ND | ND - 1.2 | ND | ND | ND - 670 | ND |
| 2-Hexanone | µg/L | N/A | ND | ND | ND | ND | ND | ND | ND | ND - 6.5 | ND |
| 4-Methyl-2-pentanone (MIBK) | µg/L | N/A | ND | ND - 7.2 | ND - 64 | ND | ND | ND | ND | ND | ND |
| Acetone | µg/L | N/A | 4 - 40 | 16 - 70 | 12 - 130 | ND - 7.3 | 6.4 - 30 | ND - 4.4 | ND - 5.5 | 56 - 2200 | ND - 2.5 |
| Carbon disulfide | µg/L | N/A | ND | ND | ND | ND - 54 | 1.6 - 10 | ND - 76 | 0.57 - 2.2 | ND - 1.8 | ND |
| Chloroform | µg/L | N/A | ND | ND | ND | ND | ND | ND | ND | ND - 2.1 | ND |
| Dichlorodifluoromethane | µg/L | N/A | ND | ND | ND | ND | ND | ND | ND | ND | 5.1 |

| | | | Monitoring Station[2] | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Constituent** | **Units[1]** | **Fraction** | **S-SW-01** | **S-SW-02** | **S-SW-03** | **S-LS-01** | **S-LS-02** | **S-LS-03** | **S-LS-04** | **S-LS-05** | **EV-10** |
| Diethyl Ether | µg/L | N/A | ND | ND - 0.94 | ND - 0.78 | ND | ND | ND | ND | ND | ND |
| Ethanol | µg/L | N/A | ND - 290 | 130 - 1900 | ND - 840 | ND | ND | ND | ND | ND | ND |
| Methyl Chloride | µg/L | N/A | ND - 0.56 | ND | ND | ND | ND | ND | ND | ND | ND |
| Tert-Butyl Alcohol (TBA) | µg/L | N/A | ND | ND | ND | ND - 24 | ND - 23 | ND | ND - 54 | ND | ND |
| Trichlorofluoromethane | µg/L | N/A | ND | ND | ND | ND | ND | ND | ND | ND | 1.1 |
| **Semi-Volatile Organic Compounds** | | | | | | | | | | | |
| 2-Methylphenol (o-Cresol) | µg/L | N/A | ND | ND - 12 | ND - 19 | -- | -- | -- | -- | -- | ND |
| Benzoic acid | µg/L | N/A | ND | ND | 150 - 280 | -- | -- | -- | -- | -- | ND |
| Benzyl alcohol | µg/L | N/A | ND | ND | ND - 12 | -- | -- | -- | -- | -- | ND |
| Bis(2-Ethylhexyl) Phthalate | µg/L | N/A | ND | ND | 13 - 32 | -- | -- | -- | -- | -- | ND |
| Diethyl Phthalate | µg/L | N/A | ND | ND - 12 | 18 - 21 | -- | -- | -- | -- | -- | ND |
| Di-n-Butyl Phthalate | µg/L | N/A | ND | ND | ND - 16 | -- | -- | -- | -- | -- | ND |
| **Biological Parameters** | | | | | | | | | | | |
| Total Coliforms | MPN/100 mL | N/A | 2300 | > 160000 | > 160000 | ND | ND | ND | ND | -- | -- |
| Fecal Coliform | MPN/100 mL | N/A | 2300 | 90000 | 160000 | ND | ND | ND | ND | -- | -- |
| E. coli | MPN/100 mL | N/A | 5040 | 73800 | 18500 | ND | ND | ND | ND | -- | -- |

1. Units of measure: mg/L = milligrams per liter, µg/L = micrograms per liter, MPN/100 mL = most probable number per 100 milliliters.
2. "--" indicates the constituent was not analyzed for. Analytes not detected are indicated by ND.

## Table 11 Summary Results - Veterans Park

| | | | Monitoring Station[2] | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Constituent** | **Units[1]** | **Fraction** | **V-SW-01** | **V-SW-02** | **V-LS-01** | **V-LS-02** | **V-MW-01** | **V-MW-02** | **V-MW-03** | **V-MW-04** |
| **General Monitoring Parameters** | | | | | | | | | | |
| Nitrate (as N) | mg/L | N/A | 0.11 - 0.95 | ND - 1.9 | 1.6 - 4.4 | 0.91 - 8.9 | 2.3 - 4.7 | 0.56 - 3.7 | 2.1 - 6 | 20 - 44 |
| Total Kjeldahl Nitrogen | mg/L | N/A | 2.5 - 10 | 4.2 - 6.6 | 0.56 - 1.4 | 0.98 - 3.4 | 0.42 - 0.84 | ND - 0.98 | ND - 0.98 | 0.98 - 1.7 |
| Ammonia-Nitrogen | mg/L | N/A | 0.6 - 1.6 | 0.21 - 1.8 | ND | ND - 0.56 | ND | ND | ND | ND |
| Total Dissolved Solids | mg/L | N/A | 20 - 290 | 130 - 470 | 610 - 2700 | 2200 - 4000 | 4200 - 6000 | 1500 - 2900 | 1300 - 2100 | 4300 - 6600 |
| Total Suspended Solids | mg/L | N/A | 20 - 390 | 42 - 210 | -- | -- | 4.1 - 43 | ND - 28 | ND - 110 | ND - 230 |
| Chemical Oxygen Demand | mg/L | N/A | 53 - 530 | 150 - 690 | ND - 23 | 41 - 250 | 61 - 90 | 13 - 75 | ND - 94 | 46 - 160 |
| Chloride | mg/L | N/A | 1.6-26 | 5.2-31 | 12-240 | 180-440 | 1000-1400 | 130-180 | 130-180 | 820-1400 |
| **Metals** | | | | | | | | | | |
| Aluminum | µg/L | Dissolved | ND - 67.7 | ND - 120 | ND | ND | ND - 65.3 | ND | ND - 141 | ND - 218 |
| Aluminum | µg/L | Total | 302 - 2140 | 491 - 2740 | ND | ND | 108 - 612 | 51.4 - 805 | ND - 1440 | 55.7 - 1900 |
| Arsenic | µg/L | Dissolved | ND - 1.03 | ND - 1.94 | 16.1 - 29 | 5.34 - 8.16 | 2.41 - 19.6 | 5.32 - 10.6 | 1.9 - 5.83 | 5.17 - 17.7 |
| Arsenic | µg/L | Total | ND - 1.79 | 0.584 - 2.54 | 16 - 29.3 | 5.22 - 9.28 | 4.85 - 19.6 | 6.03 - 12.1 | 1.96 - 6.03 | 5.79 - 17.5 |
| Cadmium | µg/L | Dissolved | ND | ND - 0.316 | 0.23 - 0.41 | ND - 0.306 | ND - 0.285 | ND | ND | ND |
| Chromium, Hexavalent | µg/L | Dissolved | ND - 0.67 | 0.29 - 1.4 | 0.88 - 1.3 | ND | ND - 0.27 | 0.51 - 2.9 | ND - 2.7 | ND |
| Copper | µg/L | Dissolved | 7.37 - 24.1 | 8.77 - 33.8 | 3.26 - 6.49 | 9.03 - 20.7 | 2.93 - 5.04 | 2.27 - 6.74 | 2.14 - 3.57 | 4.82 – 200 |
| Copper | µg/L | Total | 11.4 - 45.9 | 23 - 52.3 | 3.18 - 7.76 | 9.41 - 23.6 | 2.72 - 6.2 | 2.37 - 7.94 | 2.13 - 5.39 | 6.01 – 228 |
| Lead | µg/L | Dissolved | ND - 3.41 | 0.954 - 3.3 | ND | ND | ND | ND | ND | ND - 0.536 |
| Lead | µg/L | Total | 3.96 - 27.8 | 4.59 - 22.6 | ND | ND | ND | ND - 0.712 | ND - 1.89 | ND - 2.24 |
| Mercury | µg/L | Dissolved | ND - 0.111 | ND - 0.117 | ND | ND | ND | ND - 0.105 | -0.1 - 0.164 | ND - 0.149 |
| Zinc | µg/L | Dissolved | 38.2 - 114 | 34.5 - 207 | ND - | ND - 25.8 | ND | ND - 9.9 | ND - 5.51 | ND - 25.3 |

| | | | Monitoring Station[2] | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Constituent** | **Units[1]** | **Fraction** | **V-SW-01** | **V-SW-02** | **V-LS-01** | **V-LS-02** | **V-MW-01** | **V-MW-02** | **V-MW-03** | **V-MW-04** |
| | | | | | 19.1 | | | | | |
| Zinc | µg/L | Total | 59.4 - 221 | 73.5 - 157 | ND - 27.3 | 13.2 - 26.2 | ND | ND - 11.7 | ND - 22.8 | ND - 28.5 |
| **Other Constituents** | | | | | | | | | | |
| MBAS (Surfactants) | mg/L | N/A | 0.24 - 1.1 | 0.11 - 0.77 | -- | -- | ND - 0.21 | ND - 0.13 | ND - 0.11 | ND - 0.35 |
| Oil and Grease | µg/L | N/A | 1.5 | 2.1 - 6.1 | -- | -- | ND - 1.2 | ND - 3.5 | ND - 7.4 | ND - 19 |
| Perchlorate | µg/L | N/A | ND | ND | ND | ND | ND - 9 | ND | ND - 4.5 | ND - 8.3 |
| Glyphosate | µg/L | N/A | ND - 16.2 | ND | ND | ND | ND | ND | ND | ND |
| **Volatile Organic Compounds** | | | | | | | | | | |
| 2-Butanone (Methylethyl ketone) | µg/L | N/A | ND - 2.9 | ND - 4.3 | ND | ND | ND | ND | ND | ND |
| Acetone | µg/L | N/A | 5.8 - 19 | 2.6 - 18 | ND - 2.5 | ND | ND | ND - 2.7 | ND | ND - 4.1 |
| Chloroform | µg/L | N/A | ND | ND | ND - 1.7 | ND - 0.95 | ND | ND | ND - 0.61 | ND |
| Dibromochloromethane | µg/L | N/A | ND | ND - 0.69 | ND | ND | ND | ND | ND | ND |
| Dichlorobromomethane | µg/L | N/A | ND | ND - 0.51 | ND | ND | ND | ND | ND | ND |
| Diethyl Ether | µg/L | N/A | ND - 0.97 | ND - 0.71 | ND | ND | ND | ND | ND | ND |
| Ethanol | µg/L | N/A | ND | ND - 250 | ND | ND | ND | ND | ND | ND |
| Methyl Chloride | µg/L | N/A | ND | ND | ND - 0.6 | ND - 0.72 | ND | ND | ND | ND |
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| Bis(2-Ethylhexyl) Phthalate | µg/L | N/A | ND - 18 | ND - 20 | -- | -- | ND | ND | ND | ND |
| **Biological Parameters** | | | | | | | | | | |
| Total Coliforms | MPN/100 mL | N/A | 30000 | 30000 | ND | ND | ND | ND | ND | -- |
| Fecal Coliform | MPN/100 mL | N/A | ND | 700 | ND | ND | ND | ND | ND | -- |
| E. coli | MPN/100 mL | N/A | 200 | 100 | ND | ND | ND | ND | ND | -- |

1. Units of measure: mg/L = milligrams per liter, µg/L = micrograms per liter, MPN/100 mL = most probable number per 100 milliliters.

2. "--" indicates the constituent was not analyzed for. Analytes not detected are indicated by ND.

## 5. DISCUSSION

The potential influence of stormwater infiltrated during this project on soil pore fluid and groundwater quality beneath the site is discussed in this section. The following discussion focuses on analytical results for typical constituents of concern for stormwater and groundwater, including COD, copper, lead, zinc, and arsenic. Additionally, analytical results for other groundwater constituents of concern (TDS, nitrate, chloride, perchlorate, and MtBE) are discussed in detail. PAHs are not discussed as they were not detected in any sample.

TSS, a stormwater constituent of concern, and other metals are not discussed in detail because they are typically not of concern in groundwater. Cadmium, for example, was detected at low concentrations in some stormwater samples, but was not detected in groundwater with the exception of low levels in one well sample at IMAX and Veterans Park.

Analytical results are analyzed both temporally and spatially. Time-concentration charts and the results of Mann-Kendall trend analysis are contained in **Appendix F**. Depth-concentration charts, which show the variation in concentrations between each sampling point by depth, are contained in **Appendix G**. Examples of the time-concentration and depth-concentration charts are included for chloride at Veterans Park, at the end of this discussion.

### 5.1 Broadous Elementary School

Based on the relative locations and distances of the on-site groundwater monitoring wells, monitoring well B-MW-01 is considered to represent a background well in the site monitoring network. Groundwater quality at B-MW-02 is considered more likely to have been subject to potential influence by stormwater infiltrated during this study.

<u>Nitrate</u>
Concentrations of nitrate in stormwater samples were generally consistent and relatively lower than those in lysimeter and groundwater samples. Concentrations in lysimeter samples remained relatively consistent and low with the exception of the 2002/2003 season where nitrate concentrations were significantly higher. Nitrate concentrations in groundwater samples were slightly higher than concentrations in the lysimeters except for the noted 2002/2003 season. Nitrate concentrations in samples collected from the two groundwater wells were similar. Based on these results, stormwater infiltration has not had an adverse effect on nitrate concentration in groundwater.

<u>TDS</u>
TDS concentrations in stormwater samples were significantly lower than those in lysimeter and groundwater samples. TDS concentrations in lysimeter samples were variable and exhibited concentrations over a broader range. TDS concentrations in groundwater were generally consistent, decreasing slightly during the study period. Groundwater at

monitoring wells B-MW-01 and B-MW-02 had similar TDS concentrations. Based on these results, stormwater infiltration has not had an adverse effect on TDS concentration in groundwater, and may have slightly improved groundwater quality as measured by TDS concentration.

### Chloride

In general, chloride concentrations in stormwater samples were low and decreased slightly during the study period. Groundwater samples had slightly higher concentrations than those in stormwater samples and were generally consistent or decreased slightly. Chloride concentrations were higher in B-MW-01 than those in B-MW-02 at the beginning of the study, but then were relatively similar subsequently. Chloride concentrations in lysimeter samples were higher than those in the stormwater and groundwater samples and showed more variability but appeared to decrease slightly over the course of the study. Groundwater degradation by chloride from stormwater infiltration during the study does not appear to have occurred at this site.

### Chemical Oxygen Demand

Stormwater samples generally had higher concentrations of COD than groundwater and lysimeter samples and were the most variable. COD in the lysimeter samples was higher initially and lowers toward the end of the study. Groundwater samples were slightly more consistent and had lower COD concentrations than the stormwater and lysimeter samples. COD concentrations in the groundwater samples appeared to decrease during the study. COD was slightly higher in samples from B-MW-02 than in those from B-MW-01. Although no significant trends were seen, COD concentrations appeared to decrease in all types of samples during the study period. Based on these results, stormwater infiltration for this project does not appear to have resulted in groundwater quality degradation by COD.

### Total Copper

Total copper concentrations in stormwater and lysimeter samples were generally variable and within similar ranges. Total copper concentrations in groundwater samples were higher initially, but subsequently decreased and were generally lower than those in stormwater and lysimeter samples. Although total copper concentrations in stormwater samples were generally higher, it does not appear that total copper concentrations in groundwater or soil pore water increased as the result of stormwater infiltration over the study period.

### Dissolved Copper

Concentrations of dissolved copper in stormwater samples were generally consistent or decreased slightly over the course of the study. Concentrations of dissolved copper in lysimeter samples were more variable and periodically were higher than those in stormwater samples; but these concentrations also decreased slightly during the study. In groundwater samples, dissolved copper concentrations were generally lower than in the other types of samples except in the first season of monitoring when the dissolved copper concentration for B-MW-02 was much higher than that for B-MW-01. Dissolved copper concentrations in groundwater samples appeared to decrease during the study. Although dissolved copper concentrations in stormwater and lysimeter sample concentrations were generally higher than those in groundwater, it does not appear that dissolved copper in groundwater or soil pore water increased as the result of stormwater infiltration over the study period.

Total Lead

Total lead was detected in all of the stormwater samples collected at Broadous, but concentrations were generally variable. Total lead was detected in only three of the lysimeter samples and, in general, total lead concentrations in lysimeter samples were lower than stormwater samples. Total lead was detected in approximately half of the groundwater samples and decreased during the study. Because concentrations of total lead decreased in groundwater samples and were not detected in most of the lysimeter samples, it does not appear that total lead in groundwater or soil pore water increased as the result of stormwater infiltration over the study period.

Dissolved Lead

Dissolved lead was detected in only one stormwater sample, at a low concentration. Dissolved lead was detected in only one groundwater sample collected at the beginning of the study from B-MW-02. Three lysimeter samples had detected concentrations of dissolved lead during the middle of the study. Based on the limited number of detected concentrations, it does not appear that dissolved lead in groundwater or soil pore water increased as the result of stormwater infiltration.

Total Zinc

Total zinc was detected in all of the stormwater samples and most of the lysimeter and groundwater samples. Concentrations of total zinc in stormwater were higher than those in lysimeter or groundwater samples. Total zinc concentrations in lysimeter samples were generally low except for during the 2002/2003 season when the concentrations were significantly higher than in stormwater or groundwater samples. In the first part of the study, lysimeter and groundwater samples were higher in total zinc concentrations than that the stormwater samples, but lower than stormwater samples in the second half of the study. By the second half of the study, total zinc decreased to low levels in all samples. Total zinc in the two groundwater monitoring wells were generally similar except in the initial part of the study when concentrations in B-MW-01 were higher than those in B-MW-02. Based on these results, it appears that stormwater infiltration does not have an adverse affect on total zinc concentrations in groundwater.

Dissolved Zinc

Dissolved zinc was detected in all of the stormwater samples and in most of the groundwater and lysimeter samples. Dissolved zinc concentrations in stormwater were generally consistent although slightly higher in the 2001/2002 and 2003/2004 season and in lysimeter samples were generally low except for the 2002/2003 season when the concentrations were significantly higher than any of the other dissolved zinc concentrations detected in any of the sample types. Dissolved zinc concentrations were generally similar in groundwater samples from the two monitoring wells except in the initial part of the study when groundwater samples from B-MW-01 were slightly higher.

In general, concentrations of dissolved zinc in all three types of samples appeared to decrease during the study. Based on these results, it does not appear that dissolved zinc in groundwater or soil pore water increased as the result of stormwater infiltration over the study period.

Arsenic

Arsenic was periodically detected in the stormwater samples from this site. Arsenic concentrations in the lysimeter samples were higher than those in the stormwater samples and were more variable during the study with a significantly higher concentration detected during the 2003/2004 season. Arsenic concentrations in groundwater samples were mainly below detection except in the samples from B-MW 01 in the beginning of the study and in samples from both B MW 01 and B-MW-02 at the end of the study. Based on these results, it does not appear that arsenic present in the stormwater or pore water has affected the water quality in the groundwater wells.

Perchlorate

Perchlorate was not detected in any lysimeter or groundwater samples. Perchlorate was detected in one stormwater sample collected during the 2003/2004 season, but not in any of the other stormwater samples. Because perchlorate was not detected in lysimeter or groundwater samples collected for this study, it does not appear that stormwater infiltration from this study has contributed to degradation of groundwater.

## 5.2 Hall House

A single lysimeter, H-LS-01, is present at the site beneath the edge of the infiltration lawn area. Because there are no groundwater monitoring wells at this site, soil pore fluid quality may be used as an indicator of potential influence on groundwater quality.

Nitrate

Concentrations of nitrate in stormwater were consistently low or not detected at H SW 01 and variable at H-SW-02. Nitrate concentrations in surface water samples collected during 2003 and 2004 were variable in comparison with those detected in lysimeter samples; surface water and lysimeter samples results for samples collected in 2005 were similar. Nitrate concentrations in lysimeter samples were relatively higher during the initial sampling event and low or non-detected and generally consistent during subsequent events. Based on these results, soil pore fluid does not appear to have been degraded by nitrate from stormwater infiltrated as part of this study.

TDS

TDS concentrations in stormwater samples were significantly lower than those in lysimeter samples. TDS data from the lysimeter were not available for the 2002/2003 season. TDS concentrations in lysimeter samples were relatively consistent during the two sampling events in the 2003/2004 season and the first event in the 2004/2005 season, then decreased during the final two events of the study. Based on these results, soil pore fluid does not appear to have been degraded by TDS from stormwater infiltrated as part of this study.

Chloride

Chloride concentrations in stormwater samples were significantly lower than those in lysimeter samples during most of the study period. TDS concentrations in lysimeter samples were variable from the initial sampling event through the first event in the 2004/2005 season, then, similar to TDS, decreased during the final two events of the study. Chloride was not detected in the lysimeter sample from the final sampling event. Based on these results, soil pore fluid does not appear to have been degraded by chloride from stormwater infiltrated as part of this study.

Chemical Oxygen Demand

COD values in stormwater were relatively consistent at H-SW-01 and variable at H-SW-02. Stormwater samples had higher concentrations of COD than did lysimeter samples. COD in lysimeter samples was not detected during the three initial sampling events for which data are available, and was detected at concentrations at or only very slightly greater than the reporting limit during the two subsequent monitoring events. Based on these results, stormwater infiltration for this project does not appear to have resulted in degradation of soil pore fluid by COD.

Total Copper

Concentrations of total copper in stormwater samples were variable and generally higher than those in lysimeter samples. Lysimeter sample concentrations of total copper were low and showed a statistically significant decreasing trend. Based on these results, soil pore fluid does not appear to have been degraded by chloride from stormwater infiltrated as part of this study.

Dissolved Copper

Concentrations of dissolved copper in stormwater samples were variable. Concentrations at H-SW-02 were in all cases higher than those in lysimeter samples; concentrations at H-SW-01 were higher than those in lysimeter samples during three sampling events and lower during three sampling events. Lysimeter sample concentrations of dissolved copper showed a statistically significant decreasing trend during the study period. Based on these results, soil pore fluid does not appear to have been degraded by chloride from stormwater infiltrated as part of this study.

Total Lead

Concentrations of total lead in stormwater samples were variable but significantly greater than those in lysimeter samples. The initial lysimeter sample for which total lead results are available (February 2004) showed a total lead concentration slightly above its reporting limit; total lead was not detected in any of the subsequent lysimeter samples from this site. Based on these results, stormwater infiltration for this project does not appear to have resulted in degradation of soil pore fluid by total lead.

Dissolved Lead

Concentrations of dissolved lead in stormwater samples were variable but significantly greater than those in lysimeter samples during most sampling events. The initial lysimeter sample (December 2002) showed a dissolved lead concentration slightly above its reporting limit; dissolved lead was not detected in any of the subsequent lysimeter samples from this site. Based on these results, stormwater infiltration for this project does not appear to have resulted degradation of soil pore fluid by dissolved lead.

Total Zinc

Concentrations of total zinc in stormwater samples were variable but significantly greater than those in lysimeter samples. Lysimeter samples were analyzed for total zinc during February 2004 and subsequent monitoring events, and showed total zinc concentrations that were variable but did not show a clear trend. Based on these results, stormwater infiltration for this project does not appear to have resulted in degradation of soil pore fluid by total zinc.

Dissolved Zinc

Dissolved zinc was detected in all of the stormwater samples. For all sampling events, concentrations of dissolved zinc were higher at surface water sampling point H-SW-01 than at surface water sampling point H-SW-02 or in the lysimeter sample. Concentrations at H-SW-02 were generally more similar to those in the lysimeter samples. Lysimeter sample concentrations of dissolved zinc showed a statistically significant decreasing trend during the study period. Based on these results, stormwater infiltration for this project does not appear to have resulted in degradation of soil pore fluid by dissolved zinc.

Arsenic

Arsenic was detected in only one of the stormwater samples from this site (the sample collected in February 2004 from H-SW-02) and in only the initial lysimeter sample (from December 2002). Consequently, stormwater infiltration for this project does not appear to have resulted in degradation of soil pore fluid by arsenic.

Perchlorate

Perchlorate was not detected in stormwater samples from this site. Lysimeter samples from this site were not analyzed for perchlorate.

## 5.3 IMAX

Based on the relative locations and distances of the on-site groundwater monitoring wells, monitoring well I-MW-01 represents an “upgradient background” well in the site monitoring network. Groundwater quality at I-MW-02 is considered much more likely than that at I-MW-01 to have been subject to influence by stormwater infiltrated during this study.

Nitrate

Concentrations of nitrate in stormwater samples were typically lower than those in lysimeter and groundwater samples. Nitrate concentrations in lysimeter samples from I-LS-01 and I-LS-02 were significantly different, with higher concentrations in I-LS-01 (area of roof runoff). Concentrations of nitrate in I-LS-02 were typically low and decreased slightly over the study period. The decreasing concentration trend in I-LS-02 is statistically significant. Groundwater samples from both wells were similar, with slightly higher concentrations in I-MW-02 during the first two years of the study. Based on these results, stormwater infiltration for this project does not appear to have resulted in groundwater quality degradation by nitrate.

TDS

Concentrations of TDS in stormwater samples were typically lower than those in lysimeter and groundwater samples. TDS concentrations in lysimeter samples from I-LS-01 and I-LS-02 were significantly different, with higher concentrations in I-LS-01 (area of roof runoff). Lysimeter sample concentrations did not exhibit statistically significant trends over time. Concentrations from the two groundwater monitoring wells appeared to have similar concentrations with no statistically significant trends. The most recent TDS concentration from I-MW-02 (potentially influenced by infiltrated stormwater) was the lowest observed during the study period. Based on these results, stormwater infiltration for this project does not appear to have resulted in groundwater quality degradation by TDS.

Chloride

Concentrations of chloride in stormwater were typically lower than both those in lysimeter and groundwater samples. Chloride concentrations in lysimeter samples from I-LS-01 and I-LS-02 were significantly different, with higher concentrations in I-LS-01 (area of roof runoff). Lysimeter sample concentrations did not exhibit statistically significant trends over time. Samples from the groundwater monitoring well nearest the infiltrator (I-MW-02) exhibited typically higher concentrations than samples from I-MW-01 but showed a statistically significant slightly decreasing trend over the study period. Concentrations of chloride in I-MW-01 appeared relatively consistent throughout the study period. Stormwater infiltration for this project does not appear to have resulted in groundwater quality degradation by chloride.

Chemical Oxygen Demand

Concentrations of COD in stormwater appeared variable. COD in lysimeter samples were variable with slightly higher concentrations in samples from I-LS-01 over the last two years of the study. COD concentrations in groundwater were generally higher in I-MW-02 than in I-MW-01, including a notably higher concentration in the initial sample collected in 2001. No trends for COD in groundwater or lysimeter samples were apparent. Based on these results, stormwater infiltration for this project does not appear to have resulted in groundwater quality degradation by COD.

Total Copper

Concentrations of total copper in stormwater samples from I-SW-02 (parking lot runoff) were variable and typically higher than those in groundwater samples. Lysimeter sample concentrations appeared variable with slightly decreasing concentrations during the 2004/2005 wet season. Except for the initial samples collected in 2001, total copper concentrations in groundwater samples were typically low and lower than lysimeter and stormwater samples during the last two years of the study. While stormwater and lysimeter sample concentrations are generally higher than groundwater, it does not appear that total copper concentrations in groundwater or soil pore water increased as the result of stormwater infiltration over the study period.

Dissolved Copper
Concentrations of dissolved copper in stormwater samples from I-SW-02 (parking lot runoff) were variable and typically higher than those in groundwater samples. Lysimeter sample concentrations appeared variable with slightly decreasing concentrations over the study period. Except for the initial samples collected in 2001, groundwater samples were typically low and lower than both lysimeter and stormwater samples during the last two years of the study. While stormwater and lysimeter sample concentrations were generally higher than groundwater, it does not appear that total copper concentrations in groundwater or soil pore water increased as the result of stormwater infiltration over the study period.

Total Lead
Concentrations of total lead in stormwater samples were typically higher than those in lysimeter or groundwater samples. One notably higher concentration was detected at I-SW-01 during the storm event sample collected on February 18, 2005. Concentration of total lead from both lysimeter locations showed low and generally decreasing concentrations, with total lead not detected in the last two sampling events. The decreasing concentration trend in I-LS-01 is statistically significant. Total lead concentrations in groundwater were generally lower, except for the initial sampling event, in groundwater well I-MW-02 (potentially influenced by infiltrated stormwater). I-MW-02 also had a higher percentage of non-detect samples during the study period. Although concentrations of total lead were generally higher in stormwater samples than in groundwater, it does not appear that total lead in groundwater or soil pore water increased as the result of stormwater infiltration over the study period.

Dissolved Lead
Dissolved lead was detected in only one stormwater sample, one lysimeter sample, and one groundwater sample during the study. Based on the limited number of detected concentrations, it does not appear that dissolved lead in groundwater or soil pore water increased as the result of stormwater infiltration.

Total Zinc
Total zinc was detected in all of the stormwater samples. Concentrations of total zinc in stormwater were typically similar to or higher than those in groundwater samples. Lysimeter sample concentrations from I-LS-02 were highly variable with the lowest concentrations detected in the last three sample events. I-LS-01 remained generally consistent over the study duration. Total zinc concentrations in groundwater samples were typically lower than those in stormwater and in the majority of lysimeter samples. Total zinc concentrations were generally lower in groundwater well I-MW-02 than in I-MW-01 in all but the initial and most recent samples. Although concentrations of total zinc were generally higher in stormwater samples than in groundwater, it does not appear that total zinc in groundwater or soil pore water increased as the result of stormwater infiltration over the study period.

Dissolved Zinc

Dissolved zinc was detected in all of the stormwater samples. Concentrations of dissolved zinc in stormwater were typically higher than those in groundwater samples. Lysimeter sample concentrations in I-LS-02 appeared variable with slightly decreasing concentrations during the 2004/2005 wet season. Lysimeter sample concentrations in I-LS-02 appeared variable with slightly increasing concentrations during the 2004/2005 wet season. Dissolved zinc concentrations in groundwater samples were typically lower than those in stormwater and in the majority of lysimeter samples. Dissolved zinc concentrations were generally lower in groundwater well I-MW-02 than in I-MW-01 in all but the initial and most recent samples. Although concentrations of dissolved zinc were generally higher in stormwater samples than in groundwater, it does not appear that dissolved zinc in groundwater or soil pore water increased as the result of stormwater infiltration over the study period.

Arsenic

Arsenic was not detected in stormwater samples collected from I-SW-01 (roof runoff). Arsenic concentrations in stormwater from I-SW-02 (parking lot runoff) were variable but generally higher than groundwater and lysimeter sample concentrations. Lysimeter sample concentrations from I-LS-02 remained relatively consistent or decreased slightly over the study period. Lysimeter sample concentrations from I-LS-01 were relatively low but may have increased slightly. Samples from both groundwater monitoring wells showed similar concentrations with no statistically significant trends. While stormwater sample concentrations are generally higher than soil pore water and groundwater, it does not appear that arsenic concentrations in groundwater or soil pore water increased as the result of stormwater infiltration over the study period.

Perchlorate

Perchlorate was detected in only one stormwater sample and was not detected in lysimeter samples from this site. Perchlorate concentrations in I-MW-02 were typically higher than at I-MW-01 but appeared to decrease slightly over the study duration. Perchlorate concentrations in I-MW-01 were variable with a slightly increasing trend over the duration of the study. Perchlorate was also detected in groundwater samples taken at the beginning of the study, thus it is likely a pre-existing condition and not a result of stormwater infiltration.

MtBE

MtBE was not detected in the majority of the stormwater and lysimeter samples. MtBE concentrations were variable in groundwater well I-MW-02 with no detections since 2003. MtBE was not detected in I-MW-01. Because MtBE was only detected in one stormwater and lysimeter sample, it does not appear that stormwater infiltration from this study has contributed MtBE to groundwater.

## 5.4 Metal Recycler

At the metal recycler site, groundwater occurs at more than 200 feet bgs. A single groundwater monitoring well, M-MW-01, was constructed approximately 25 feet south of the infiltrator.

Nitrate

Concentrations of nitrate in stormwater were generally near the lower portion of the range of concentrations in lysimeter samples. Nitrate was detected in the baseline sample from well M-MW-01 at a concentration just above its detection limit. Nitrate was not detected in any of the subsequent groundwater samples. There was not a consistent concentration trend with depth in samples collected from the two sets of shallow/deep paired lysimeters at the site. Nitrate concentrations in samples from deep lysimeter M-LS-01 were generally similar to or greater than those in samples from its paired shallower lysimeter, M-LS-02. However, both samples collected from deep lysimeter M-LS-03 had lower concentrations than those in samples from its shallower companion, M-LS-04. Concentrations in stormwater and lysimeter samples remained relatively consistent during the study, and nitrate was not detected in groundwater samples after the initial sampling event.

TDS

TDS concentrations in stormwater samples had an average concentration of about 1000 mg/L. TDS concentrations in lysimeter and groundwater samples were similar. There is no apparent trend in concentration with depth in samples collected from the two sets of paired lysimeters. Concentrations in stormwater, lysimeter, and groundwater samples remained relatively consistent during the study.

Chloride

Chloride concentrations were generally similar in stormwater, lysimeter, and groundwater samples. Chloride concentrations in samples collected from deep lysimeter M-LS-03 were consistently higher than those in samples from its shallow pair, M-LS-04. Concentrations in stormwater and lysimeter samples remained relatively consistent during the study. An increasing trend in chloride concentration in groundwater samples collected from M-MW-01 is statistically significant. Because groundwater is deep and because chloride concentrations in stormwater and lysimeter samples is similar to those in groundwater, it is likely that the increasing trend in chloride in groundwater samples is due to factors other than stormwater infiltration.

Chemical Oxygen Demand

Stormwater samples generally had higher concentrations of COD than groundwater and lysimeter samples. No time or depth trends for COD in groundwater or lysimeter samples are evident. Based on these results, stormwater infiltration for this project does not appear to have resulted in groundwater quality degradation by COD.

Total Copper

Concentrations of total copper in stormwater samples were variable and consistently higher than those in lysimeter samples and groundwater. Concentrations in lysimeter samples were variable and consistently higher than those in groundwater samples. Samples collected from deep lysimeter M-LS-03 had a consistently lower concentration than did those in samples collected from its shallower companion, M-LS-04. No concentration trends are evident for the study period. While stormwater and lysimeter sample concentrations are consistently higher than groundwater concentration, it does not appear that total copper concentrations in groundwater or soil pore water increased as the result of stormwater infiltration over the study period.

Dissolved Copper

Concentrations of dissolved copper in stormwater samples were variable and consistently higher than those in lysimeter samples. Concentrations in lysimeter samples were variable and consistently higher than those in groundwater samples. Samples collected from deep lysimeter M-LS-03 had a consistently lower concentration than detected in samples collected from its shallower companion, M-LS-04. No concentration trends are evident for the study period. While stormwater and lysimeter sample concentrations were consistently higher than groundwater concentrations, it does not appear that dissolved copper concentrations in groundwater or soil pore water increased as the result of stormwater infiltration over the study period.

Total Lead

Concentrations of total lead in stormwater samples were variable and consistently higher than those in lysimeter samples. Concentrations in lysimeter samples were variable and consistently higher than those in groundwater samples. No concentration trends with depth are evident in the paired lysimeters, but concentrations in samples from the M-LS-01/M-LS-02 pair were consistently higher than those in samples from the M-LS-03/M-LS-04 pair. No concentration trends with time were evident for the study period. Although stormwater and lysimeter sample concentrations were consistently higher than groundwater concentrations, it does not appear that total lead concentrations in groundwater or soil pore water increased as the result of stormwater infiltration over the study period.

Dissolved Lead

Dissolved lead was detected in all stormwater samples at concentrations ranging from about 3 to 180 µg/L. Dissolved lead was detected in lysimeter samples at concentrations less than 7 µg/L, and was not detected in about half the samples. Dissolved lead was not detected in groundwater samples. Based on the limited number of detected concentrations, it does not appear that dissolved lead in groundwater or soil pore water increased as the result of stormwater infiltration.

Total Zinc

Concentrations of total zinc in stormwater samples were variable and consistently much higher than those in lysimeter or groundwater samples. Concentrations in lysimeter samples were variable and consistently higher than those in groundwater samples. There are no evident concentration trends with depth in the paired lysimeters, but concentrations in samples from the M-LS-01/M-LS-02 pair were consistently higher than those in samples from the M-LS-03/M-LS-04 pair. There are no evident concentration trends over time during the study period. While stormwater and lysimeter sample concentrations are consistently higher than groundwater concentrations, it does not appear that total lead concentrations in groundwater or soil pore water increased as the result of stormwater infiltration over the study period.

Dissolved Zinc

Dissolved zinc was detected in all of the stormwater samples. Concentrations of dissolved zinc in stormwater were variable and were similar to or higher than those in lysimeter samples. Concentrations in the lysimeter samples were consistently higher than those in groundwater samples. Although concentrations of dissolved zinc were generally higher in stormwater samples than in groundwater, it does not appear that dissolved zinc in groundwater or soil pore water increased as the result of stormwater infiltration over the study period.

Dissolved Arsenic

With the exception of two samples from M-LS-03, dissolved arsenic concentrations in stormwater, lysimeter, and groundwater samples were similar at approximately 6 µg/L or less. There are no evident trends in concentration during the study period. Concentrations in samples from the deep lysimeters (M-LS-01 and M-LS-03) were generally greater than concentrations in samples from the shallow lysimeters (M-LS-02 and M-LS-04).

Perchlorate

Perchlorate was detected in most stormwater and lysimeter samples from this site. Perchlorate was not detected in groundwater samples. Although a statistically significant trend was not evident, the perchlorate data from M-LS-01 suggests greater variability and detection of sporadically higher concentrations during the later times of the study.

MtBE

MtBE was detected in a few stormwater samples in concentrations consistently less than those in lysimeter samples. The highest concentrations were detected in samples collected from the M-LS-01/M-LS02 lysimeter pair. An increasing trend in MtBE concentration in M-LS-01 is statistically significant. Because of low stormwater MtBE concentration, infiltrating stormwater is not the likely source of increasing MtBE concentration in soil pore water.

## 5.5 Sun Valley

At the Sun Valley site, groundwater occurs at more than 300 feet bgs. The potential influence of stormwater infiltrated during this project on groundwater quality in off-site well EV-10 is not considered likely. However, groundwater quality conditions in EV-10 may represent background groundwater quality conditions for the site.

Nitrate

Concentrations of nitrate detected in stormwater samples were generally low and consistent during the study. Nitrate concentrations were slightly higher in most of the lysimeters than in the stormwater samples. Nitrate concentrations in samples from shallow lysimeters S-LS-01 and S-LS-03 showed a statistically significant decrease during the study; concentrations in mid-depth lysimeter S-LS-04 were more erratic but also appeared to decrease. Nitrate concentrations in S-LS-02 were variable. Nitrate concentrations in S-LS-05 were non-detect to low. Nitrate concentrations generally were lower in the shallower lysimeters than in the mid-depth lysimeters, but the deep lysimeter S-LS-05 had very low concentrations. Nitrate was detected in well EV-10 at similar and low concentrations the two times it was sampled.

### TDS

TDS concentrations in stormwater samples were generally low with the exception of one sample each from S-SW-02 and S-SW-03 during the second year of monitoring, when concentrations were much higher (near 1000 mg/L). Concentrations in S-SW-01, from the roof sampling point, were generally low and decreased during the study. TDS concentrations in the shallow lysimeters S-LS-01 and S-LS-03 and in the mid-depth lysimeter S-LS-04 decreased during the study but were variable in S-LS-02. The decreasing trends in TDS concentration in samples from S-LS-01 and S-LS-03 were statistically significant. Deep lysimeter S-LS-05 had an initially high TDS concentration, but the concentration decreased in the next two sampling events. The initially high TDS concentration may have been caused by dewatering of grout from this recently installed lysimeter. TDS concentrations in well EV-10, which was only sampled twice, were generally low. Based on these results, there may be a trend in depth for TDS in soil pore concentrations where TDS increases in depth, particularly at lysimeter pair S-LS-01/S-LS-02. It appears that stormwater infiltration does not have an adverse effect on pore water at the site.

### Chloride

Chloride concentrations in stormwater samples were generally similar to or lower than those in lysimeter samples. In stormwater samples collected at S-SW-01, chloride concentrations were mainly below detection but concentrations in stormwater samples S-SW-02 and S-SW-03 were more variable. Chloride concentrations in shallow and mid-depth lysimeter samples generally decreased during the study; decreasing trends in S-LS-02 and S-LS-03 were statistically significant. Chloride concentrations in deep lysimeter S-LS-05 were significantly higher than those in the other lysimeters. In general, chloride concentrations were slightly higher in the mid-depth lysimeters versus the shallow lysimeter pairs. Chloride concentrations in samples collected from deep lysimeter S-LS-04 were consistently higher than those in samples from its shallow pair, S-LS-03. In the groundwater samples collected from EV-10, chloride concentrations were generally low and consistent.

### Chemical Oxygen Demand

Stormwater samples generally had higher concentrations of COD than groundwater and lysimeter samples. Of the three stormwater locations, S-SW-01 had the lowest and most consistent COD concentrations with a slight decreasing trend over the course of the study. COD was detected in approximately half of the lysimeter samples. No time or depth trends for COD in lysimeter samples are evident. COD concentrations detected in groundwater samples from EV-10 were just above the reporting limit.

Total Copper

Concentrations of total copper in stormwater samples were variable and consistently higher than those in lysimeter samples. Concentrations in lysimeter samples were similar to those in groundwater samples from EV-10 except that S-LS-04, a mid-depth lysimeter, had relatively high total copper concentrations in the first year of monitoring. Total copper concentrations appeared to increase slightly in the lysimeters. A slight but statistically significant increasing trend was noted in samples from S-LS-03. No significant differences in concentrations were noted between the different lysimeters, except that the deeper lysimeter S-LS-05 had slightly lower concentrations than the other lysimeters. Because total copper concentration in lysimeter samples was low and generally remained stable or increased slightly, it does not appear that soil pore water quality was adversely impacted by total copper.

Dissolved Copper

Concentrations of dissolved copper in stormwater samples were generally higher in the samples from S-SW-02 and S-SW-03. Concentrations were variable from S-SW-02, and concentrations from S-SW-03 showed a decreasing trend. Concentrations from S-SW-01 (roof run-off), were generally consistent and low. Dissolved copper concentrations in stormwater samples were generally higher than those in lysimeter samples with the exception of S-LS-04, a mid-depth lysimeter, which had relatively high dissolved copper concentrations in the first year of monitoring. The deep lysimeter S-LS-05 had slightly lower concentrations than the other lysimeters. Dissolved copper concentrations appeared to increase slightly in the lysimeters. A slight but statistically significant increasing trend was noted in concentrations from S-LS-01 and S-LS-03. Concentrations in lysimeter samples were higher than those in the groundwater samples collected from EV-10. While stormwater concentrations are higher than lysimeter sample concentrations, it does not appear that dissolved copper concentrations in soil pore water increased significantly as the result of stormwater infiltration over the study period.

Total Lead

In general, concentrations of total lead in stormwater samples were higher than those in lysimeter samples. Concentrations of total lead in stormwater samples at S-SW-02 and S-SW-03 were variable and consistently higher than those in the stormwater samples at S-SW-01, in which they appeared to decrease slightly and were generally more consistent. Total lead was detected in approximately half of the lysimeter samples, and when detected, were generally low. No concentration trends were evident with depth in the lysimeters. Total lead in the groundwater samples collected from EV-10 also was low. While stormwater concentrations are consistently higher than lysimeter concentrations, it does not appear that total lead concentrations in soil pore water increased significantly as the result of stormwater infiltration over the study period.

Dissolved Lead

Dissolved lead was detected in most of the stormwater samples, but at generally low concentrations except in one sample at S-SW-03, which was significantly higher than the other concentrations. Dissolved lead was detected in lysimeter samples at concentrations less than 2 µg/L and was not detected in most of the samples. Dissolved lead was not detected in the groundwater samples collected from EV-10. Based on the relatively few detections of dissolved lead, it does not appear that dissolved lead in soil pore water increased as the result of stormwater infiltration.

Total Zinc

Concentrations of total zinc in stormwater samples were variable and consistently much higher than those in lysimeter samples. Concentrations in groundwater samples from EV-10 were similar to those in the lysimeter samples. Concentrations of total zinc were generally lower in the shallower lysimeters than in the deeper lysimeters. While stormwater concentrations are consistently higher than lysimeter concentrations, it does not appear that total zinc concentrations in soil pore water increased as the result of stormwater infiltration over the study period. Samples from EV-10 appear to indicate that zinc is present in regional groundwater at higher concentrations than what is detected in the lysimeters.

Dissolved Zinc

Dissolved zinc was detected in all of the stormwater samples. Concentrations of dissolved zinc in stormwater samples were variable except for samples at S-SW-01, which were fairly consistent, and were similar to or higher than those in lysimeter samples. Concentrations of dissolved zinc in lysimeter samples were generally low and consistent. Concentrations of dissolved zinc were generally lower in the shallower lysimeters than in the deeper lysimeters. Groundwater samples from EV-10 were lower in the first sampling event than the samples collected at the site and higher than most of the lysimeter samples and lower than the stormwater samples in the second sampling event. Although concentrations of dissolved zinc were generally higher in stormwater samples than in lysimeter samples, it does not appear that dissolved zinc in soil pore water increased as the result of stormwater infiltration over the study period.

Dissolved Arsenic

Dissolved arsenic concentrations in stormwater samples were generally similar to or lower than those in lysimeter samples. Dissolved arsenic was not detected in any samples from S-SW-01 and, for the other stormwater locations, the concentrations were lower in the samples collected in the second season of monitoring than in the first season of monitoring. Dissolved arsenic concentrations in lysimeter samples were consistent or decreased slightly, except for the deepest lysimeter S-LS-05, which had increasing concentrations of which the last two concentrations were significantly higher than any of the other samples for the other lysimeters. The slightly decreasing trends in dissolved arsenic concentrations in S-LS-01 and S-LS-04 were statistically significant. No evident trends were noted with depth for the lysimeters. Dissolved arsenic was not detected in groundwater from EV-10 during the initial monitoring event and was detected at a concentration only slightly above the reporting limit in the second monitoring event.

Perchlorate

Perchlorate was detected in the initial stormwater samples from S-SW-02 and S-SW-03 but was not detected in any of the subsequent samples or in any of the samples from

S-SW-01. Perchlorate was detected sporadically in lysimeters S-LS-03 and S-LS-04, with concentrations decreasing with depth. Perchlorate concentrations detected in the stormwater samples were similar to those detected in the lysimeter samples. Perchlorate was not detected in the deepest lysimeter or in groundwater samples collected at EV-10.

MtBE

MtBE was not detected in any of the stormwater samples or in the groundwater samples from EV-10. MtBE was detected in only two lysimeters (lysimeter pair S-LS-02 and S-LS-04) during the first year of monitoring. Because MtBE was not detected in any stormwater samples, infiltrating stormwater is not a likely source of MtBE concentrations in soil pore water.

TKN

TKN was detected in all of the stormwater samples and in most of the lysimeter samples. TKN concentrations generally were higher in the stormwater samples than in the lysimeter samples with the exception of one lysimeter sample (S-LS-05). TKN concentrations in the lysimeter samples were consistent and low. TKN was detected in only one of the two groundwater samples collected from EV-10 at a concentration just above the reporting limit.

## 5.6 Veterans Park

Based on the relative locations and distances of the on-site groundwater monitoring wells, there is not a clear "background" well in the site monitoring network. The monitoring wells at the site were used for interpretation of groundwater quality data in the following context:

- Based on its distance from the infiltrator, groundwater at monitoring well V-MW-01 is considered less likely to have been subject to influence by stormwater infiltrated during the study.
- Because of its proximity to the infiltrator, groundwater quality at V-MW-02 is considered more likely to have been subject to influence by stormwater infiltrated during this study.
- Groundwater quality at V-MW-03 is considered to have a moderate likelihood to have been subject to influence by stormwater infiltrated during this study.
- Groundwater quality at V-MW-04 is considered to have a moderate likelihood to have been subject to influence by stormwater infiltrated during this study.

Nitrate

Concentrations of nitrate in stormwater were relatively lower than those in lysimeter and groundwater samples. Concentrations in lysimeter samples remained relatively consistent or may have decreased slightly during the study. Groundwater samples from the well nearest the infiltrator (V-MW-02) showed concentrations of nitrate that were lower than those in samples from other wells but increased slightly during the study. Groundwater samples from V-MW-04 showed nitrate concentrations that were much higher than those from other wells but decreased during the study. Using the Mann-Kendall test for trend, decreasing concentration trends in samples collected from V-LS-02, V-MW-03, and V-MW-04 are statistically significant. The observed increasing trend in samples collected V-MW-02 is also statistically significant. The relationships, if any, between the changes in nitrate concentrations at these monitoring wells and the infiltration of stormwater for this project, were not apparent from the data reviewed.

### TDS

TDS concentrations in stormwater samples were significantly lower than those in lysimeter and groundwater samples. TDS concentrations in lysimeter samples generally decreased over the study period. Groundwater at monitoring wells V-MW-01 and V-MW-04 had significantly higher concentrations of TDS than did groundwater at monitoring wells V-MW-02 and V-MW-03; this relationship was apparent in initial samples as well as samples collected later during the study. Similar to the lysimeter samples, TDS concentrations at all four groundwater monitoring wells decreased over the study period. These concentration decreases may have been the result of infiltration of relatively low-TDS stormwater to shallow groundwater, both through the project infiltrator and through the landscaped area comprising much of the site. Decreasing concentration trends in samples collected from V-LS-02, V-MW-02, and V-MW-04 are statistically significant.

### Chloride

Time-concentration and depth-concentration charts for chloride are presented in Figures 10 and 11. Chloride was not detected in stormwater samples from this site during the study period. Samples from both lysimeters showed decreasing chloride concentrations. Groundwater samples from wells V-MW-01 and V-MW-04 had significantly higher concentrations of chloride than did those from V-MW-02 and V-MW-03; these differences were apparent in data from the initial sampling and subsequent events. Chloride concentrations in groundwater at V-MW-04 and V-MW-02 decreased over the duration of the study, while those at V-MW-03 were relatively consistent, and those at V-MW-01 appeared variable. Decreasing concentration trends in samples collected from V-LS-01, V-LS-02, V-MW-02, and V-MW-04 were statistically significant. Groundwater degradation by chloride from stormwater infiltration during the study does not appear to have occurred at this site, and some improvement to groundwater quality may have occurred .

### Chemical Oxygen Demand

Stormwater samples generally had higher concentrations of COD than groundwater and lysimeter samples. COD in lysimeter samples were variable, with slightly higher concentrations in V-LS-02. COD concentrations in groundwater also were variable, with slightly higher concentrations in V-MW-04. No trends for COD in groundwater or lysimeter samples are evident. Based on these results, stormwater infiltration for this project does not appear to have resulted in groundwater quality degradation by COD.

### Total Copper

Concentrations of total copper in stormwater samples were variable and generally higher than those in groundwater samples and the majority of those in the lysimeter samples.

Lysimeter sample concentrations of total copper were generally slightly higher in V-LS-02 than V-LS-01, with V-LS-02 concentrations typically higher than concentrations found in groundwater. V-MW-04 had slightly higher concentrations of total copper than the other three groundwater wells. V-MW-03 sample concentrations were generally lower than the other groundwater wells and concentrations at V-MW-02 showed a slight but statistically significant decreasing trend over the project period. Although stormwater and lysimeter sample concentrations are generally higher than groundwater, it does not appear that total copper concentrations in groundwater or soil pore water increased as the result of stormwater infiltration over the study period.

### Dissolved Copper

Concentrations of dissolved copper in stormwater samples were variable and generally higher than those in groundwater samples and those in the majority of the lysimeter samples. Lysimeter sample concentrations of dissolved copper were generally slightly higher in V-LS-02 than in V-LS-01, with V-LS-02 concentrations typically higher than concentrations found in groundwater. V-MW-04 had slightly higher concentrations of dissolved copper than the other three groundwater wells. Dissolved copper concentrations in samples from V-MW-03 were generally lower than those in samples from the other groundwater wells, and concentrations at V-MW-02 showed a slight but statistically significant decreasing trend over the project period. Although dissolved copper concentrations in stormwater and lysimeter sample concentrations were generally higher than those in groundwater, it does not appear that dissolved copper in groundwater or soil pore water increased as the result of stormwater infiltration over the study period.

### Total Lead

Concentrations of total lead in stormwater samples from V-SW-02 were typically higher than those in groundwater samples, as were the most recent samples from V-SW-01. Total lead was not detected in any lysimeter samples collected. Total lead was also not detected in groundwater samples from V-MW-01. Concentrations of total lead detected in groundwater samples from the other three wells were generally low and varied through the study period. Although concentrations of total lead were generally higher in stormwater samples than in groundwater, it does not appear that total lead in groundwater or soil pore water increased as the result of stormwater infiltration over the study period.

### Dissolved Lead

Dissolved lead was detected at low concentrations in the majority of stormwater samples. Dissolved lead was detected in only one of the groundwater samples, and was not detected in any of the lysimeter samples. Based on the limited number of detected concentrations, it does not appear that dissolved lead in groundwater or soil pore water increased as the result of stormwater infiltration.

### Total Zinc

Total zinc was detected in all of the stormwater samples. Concentrations of total zinc in stormwater were higher than those in lysimeter or groundwater samples. Total zinc concentrations in lysimeter samples remained generally consistent over the study duration. Total zinc was not detected in groundwater samples from V-MW-01, and concentrations in

V-MW-04 were generally higher than those in V-MW-02 and V-MW-03, but concentrations at each monitoring well remained relatively consistent during the study. Although concentrations of total zinc were generally higher in stormwater samples than in groundwater, it does not appear that total zinc in groundwater or soil pore water increased as the result of stormwater infiltration over the study period.

Dissolved Zinc

Dissolved zinc was detected in all of the stormwater samples. Concentrations of dissolved zinc in stormwater were higher than lysimeter and groundwater sample concentrations in all cases. Some lysimeter sample concentrations were slightly higher than those in the groundwater samples. Concentrations of dissolved zinc were generally similar in groundwater samples from the four monitoring wells. Lysimeter and groundwater sample concentrations were fairly stable over the study duration. Although concentrations of dissolved zinc were generally higher in stormwater samples than in groundwater, it does not appear that dissolved zinc in groundwater or soil pore water increased as the result of stormwater infiltration over the study period.

Arsenic

Arsenic was not detected in most of the stormwater samples; low concentrations were detected during the two most recent sampling events. Arsenic concentrations in lysimeter samples remained relatively consistent over the study period. Arsenic concentrations in groundwater samples from V-MW-01 and V-MW-04 were slightly higher than those from V-MW-02 and V-MW-03 during the 2004/2005 wet season, and concentrations at V-MW-02 and V-MW-03 showed a slight decrease during the study period. Based on these results and the groundwater flow and monitoring well location conditions summarized previously, it does not appear that the increase in arsenic concentrations in groundwater at V-MW-01 and V-MW-04 is the result of arsenic concentrations in stormwater infiltrated during this study. Decreasing concentration trends in samples collected from V-MW-02 and V-MW-03 are statistically significant.

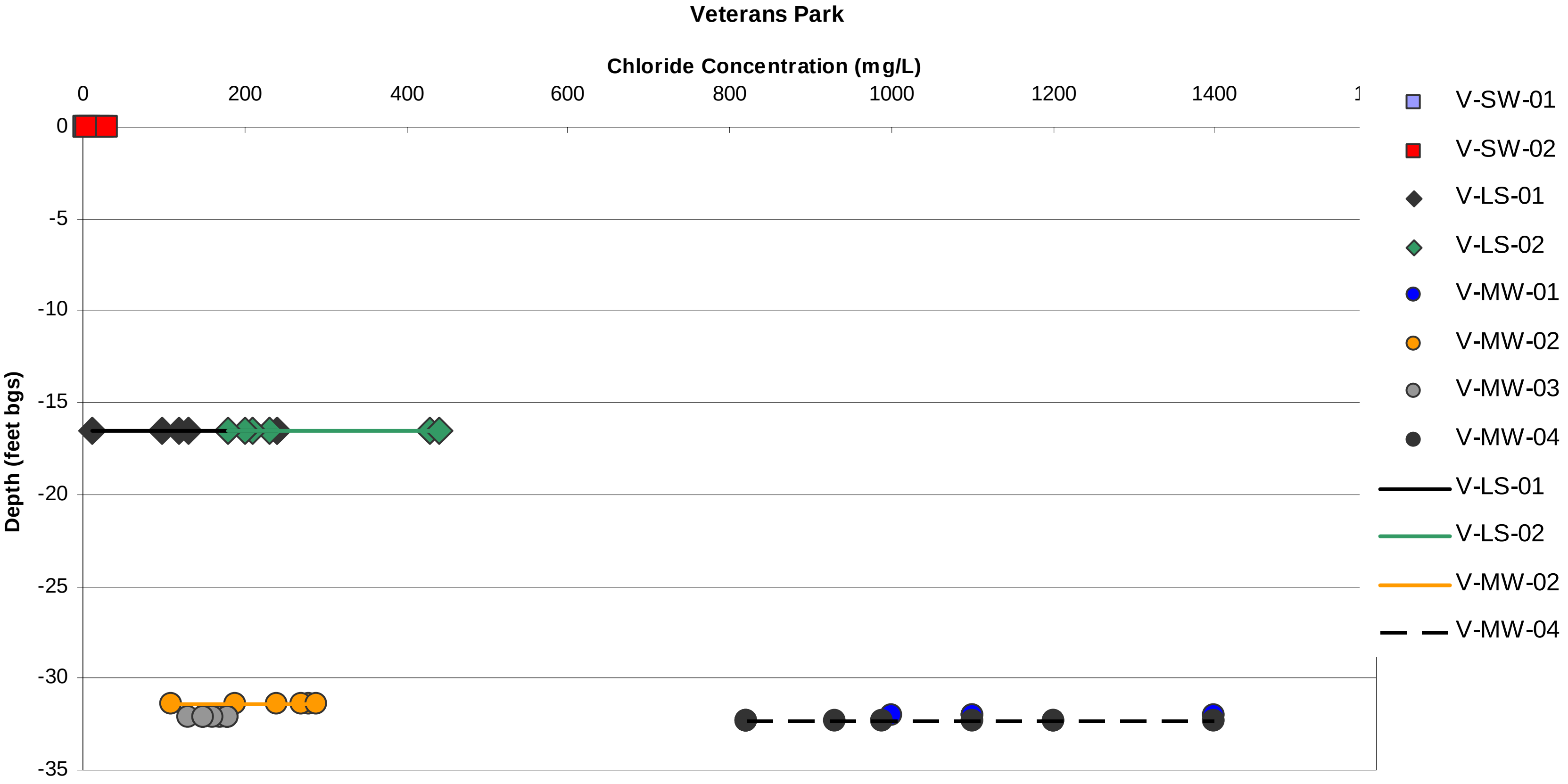
Perchlorate

Perchlorate was not detected in stormwater or lysimeter samples from this site. Concentrations of perchlorate in groundwater were sporadic and variable, and included some relatively higher values in samples from V-MW-01 and V-MW-04. Because perchlorate was not detected in lysimeter or stormwater samples, it is unlikely that stormwater infiltration has contributed perchlorate to groundwater.

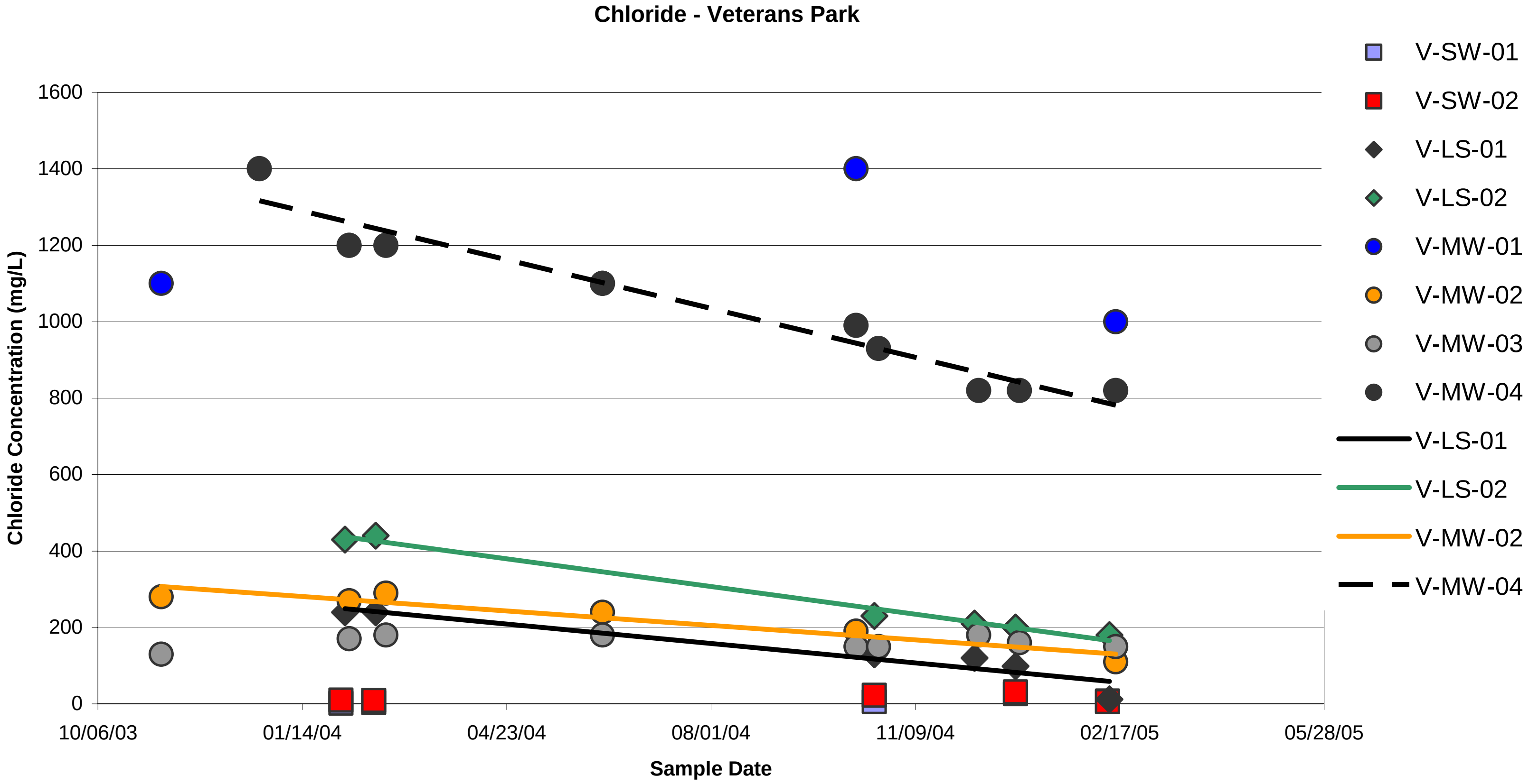
MtBE

MtBE was not detected in any of the samples.

# Figure 10
# Depth Concentrations for Chloride - Veterans Park



## Figure 11
## Chloride Concentrations Over Time - Veterans Park



## 5.7 Land Use Variation

The biggest difference in constituents detected between the sites that can be attributed to land use is in the organic compounds. Some VOCs were detected in stormwater collected at all sites, but were much more abundant in the samples collected at the industrial sites. Organics detected at the non-industrial sites were primarily acetone, MEK and oil and grease. The industrial sites had higher concentrations of those constituents, plus other compounds such as benzene, toluene, ethanol, and phthalates. Petroleum hydrocarbons were also detected in small quantities at the industrial sites, but not at the other sites.

Nitrate in stormwater was low at all sites. Concentrations of metals, dissolved solids and suspended solids were higher at the industrial sites than at the other sites, undoubtedly related to the business activities conducted at those sites. Total copper and zinc were lowest at the Broadous School. Concentrations of TDS at Veterans Park were higher in lysimeters and groundwater than samples collected at the industrial sites, which may be the result of pre-study infiltration from irrigation and the application of fertilizer that does not occur at industrial sites. No other significant differences in constituent concentrations were discernable between the commercial, educational, and residential land uses.

Total coliform bacteria concentrations were high in most stormwater samples. Detections of total coliform were highest at Sun Valley and lowest at the residential site and the metal recycler. Differences in the two industrial sites may be attributed to the types of material handled. Beverage containers brought in for sorting at the Sun Valley site may contain residual liquid that would promote bacterial growth, as opposed to the relatively dry scrap metal handled at the metal recycler.

At the three sites where roof runoff was sampled (IMAX, Hall House and Sun Valley), concentrations of most constituents were lower in roof samples than in samples taken from the ground surface. Concentrations of metals (especially total aluminum, lead and zinc), TDS, TSS and acetone in roof runoff were not insignificant however, indicating that atmospheric deposition may be a major contributor to stormwater pollution.

## 5.8 CONCLUSIONS

Soil appears to be very efficient at removing bacteria from stormwater. Fecal coliform and E. coli were detected in at least one stormwater sample from each site except Hall House, and total coliforms were detected at high levels in nearly all stormwater samples at all sites. With the exception of one sample at the Broadous School, bacteria were not detected, or detected at very low concentrations, in lysimeter and groundwater samples.

Concentrations of metals tended to be higher in stormwater than in subsurface water samples. Concentrations in subsurface samples were variable and generally stable or decreasing. Exceptions are increasing trends of copper in lysimeter samples collected at the Sun Valley site that could be associated with infiltration of storm water with relatively higher concentrations of copper. Most inorganic groundwater quality constituents do not show clear trends or show decreasing concentrations over the study period. In only one instance, involving low concentrations of nitrate, did concentrations of a constituent show a statistically significant, although slight, increase. Groundwater quality data from the shallow groundwater sites show groundwater quality improvement (decreasing salt concentrations) potentially associated with dilution by infiltrating stormwater.

At the non-industrial sites the concentrations of general monitoring parameters such as TDS and chloride tended to be less than or similar to concentrations in lysimeter and groundwater samples. This suggests that the infiltration of stormwater is not likely to have a significant negative impact to groundwater from these constituents. At the Veterans Park site, concentrations of TDS, nitrate, chloride, and other salts in groundwater samples (including pre-infiltration background samples) was much higher than concentrations in stormwater samples. This result is likely due to historical application of fertilizers. Data collected to date suggest that concentrations of many of these constituents in lysimeter and groundwater samples are decreasing with time, possibly due to dilution by infiltrated stormwater.

Other than acetone, VOCs and SVOCs detected in storm water are different than VOCs detected in subsurface samples. VOCs detected in groundwater samples during the monitoring period were also detected in initial background samples. With the possible exception of occasional low level detections of acetone, VOCs in stormwater do not appear to impact groundwater at all. At the industrial sites, groundwater constituents such as MtBE and chlorinated solvents were present in some lysimeter samples at greater concentrations than present in any stormwater samples. This finding suggests the presence of subsurface contamination prior to stormwater infiltration.

The industrial sites had detections of more organic compounds and higher concentrations of metals than the non-industrial sites. The filtration system in the detention basins at Sun Valley and the Metal Recycler site was somewhat effective at reducing concentrations of certain constituents, particularly the dissolved metals. For example, at the Metal Recycler site, concentrations of dissolved arsenic, copper, chromium VI and lead were lower after filtration. The sedimentation basin at Veterans Park and the soil layers at the other sites would also be expected to reduce concentrations of metals and other solids, although effluent was not analyzed separately to verify this.

Although perchlorate was detected in some stormwater samples, there is no evidence of groundwater degradation by perchlorate from stormwater infiltration during this study. The occurrence of perchlorate in stormwater samples was unexpected, as the focus is typically on subsurface sources of perchlorate contamination. Perchlorate is a salt, which in addition to being a component of solid rocket fuel, is also an ingredient in fireworks and road flares. Other constituents of concern for groundwater (disinfection byproducts, 1,4-Dioxane, PAHs and DBCP) were not detected in stormwater.

Soil samples collected from four of the sites at the conclusion of the study indicated no significant increases in parameters monitored, and in many cases constituent concentrations were reduced.

The concentrations of many constituents vary throughout the sampling period, but there is no apparent pattern that can be tied to effects from infiltration. As stated above, VOCs detected in groundwater are routinely different than those in stormwater. VOCs detected in groundwater samples collected during the storm season were also detected in pre-season background samples, thus they do not appear to be the result of infiltration. Given the depth to groundwater at the two industrial sites and at Broadous, it seems unlikely that constituents introduced into the soil from stormwater infiltration would migrate all the way to the groundwater at a detectable concentration.

Data collected to date indicate that there is no statistically significant degradation of groundwater quality from the infiltration of stormwater-borne constituents. Groundwater quality has generally improved for most constituents at sites with shallow groundwater.

# 6. SUMMARY

## 6.1 Evaluation of Project Success

The data collected during this study show no immediate impacts, and no apparent trends to indicate that stormwater infiltration will negatively impact groundwater at these sites. While variations in stormwater and groundwater constituents between types of land use were apparent, they may not be a barrier to infiltration. Filtration methods employed at the industrial sites seemed to be effective at removing certain constituents prior to entering the infiltration system, which may make infiltration more feasible at these more contaminated sites. However, site characterization of surface and soil constituents at industrial sites should be conducted prior to implementing infiltration strategies.

Overall the goals of our Phase II study have been met. The specific goals of Phase II were to assess the cumulative impact of infiltration on soil and groundwater, and evaluate the effects of different land uses on constituent types and concentrations. While we see the value in long-term monitoring to better characterize these issues, the data so far have shown positive results for infiltration potential.

## 6.2 Next Steps

### 6.2.1 Long-term Monitoring Program

While the data collected during this program do provide significant information, monitoring will continue in order to better assess the cumulative effects of infiltration. A reduced program of subsurface monitoring is under currently development. This program will likely include annual or bi-annual monitoring of lysimeters and groundwater wells at four or five sites. No stormwater samples will be collected, as surface runoff quality has been well-characterized at these sites. Monitoring will be scheduled after significant storm events and late in the storm season, to ensure that infiltration to the deepest lysimeters has occurred. The analytical suite will be reduced but should include metals, general parameters, some organics, and perchlorate. We expect to continue monitoring for at least two additional years, and possibly longer if funding is available.

### 6.2.2 Phase III Work Plan

Infiltration is not the only means of addressing water supply and water quality issues. We believe that an integrated, comprehensive approach to water management is necessary to maximize efficient use of our water resources. Thus the third phase of the study will incorporate demonstration projects on a neighborhood scale. We propose to retrofit one or more small neighborhoods with state of the art Best Management Practices to address stormwater infiltration as well as water conservation, pollution reduction and treatment, flooding, and habitat and stream restoration. Specific techniques will depend upon the sites selected, but may include conversion to native drought-tolerant landscapes, use of irrigation controllers, facilities to capture runoff for infiltration and/or reuse, restoring buried stream channels, and adding green space and habitat areas. The demonstration projects will be monitored for water quality as well as for reduction of runoff and water use, changes in property values, and other potential benefits. These neighborhood projects will provide real-world models of addressing existing infrastructure and will serve to integrate many on-going efforts in the region to address flood management, water quality, water supply and environmental restoration. Our goal is to demonstrate how these approaches can be applied on a regional scale in Southern California as well as in other geographic regions.

In addition to the demonstration project, we are assessing the overall feasibility of utilizing infiltration techniques to capture stormwater for groundwater recharge. The Bureau of Reclamation is currently developing a groundwater augmentation model to predict the amount of additional water that could be available for deep percolation if infiltration is increased. They are also developing a regional cost and benefit assessment to determine the real cost of this new water supply. Researchers at UC Riverside are assessing costs on a site-specific scale. The long-term goal of this project is a regional strategy for implementation.

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# 8. APPENDICES

Appendix A  Site Location Maps
Appendix B  Analytical List

On cd:
Appendix C  Complete Stormwater, Lysimeter, and Groundwater Water Quality Results.
Appendix D  Comparative Water Quality Results
Appendix E  Soil Analytical Results
Appendix F  Time-Concentration Charts and Results of Trend Analysis
Appendix G  Depth-Concentration Charts
Appendix H  Boring logs
Appendix I  Groundwater Hydrographs

# Appendix A.  Site Location Maps

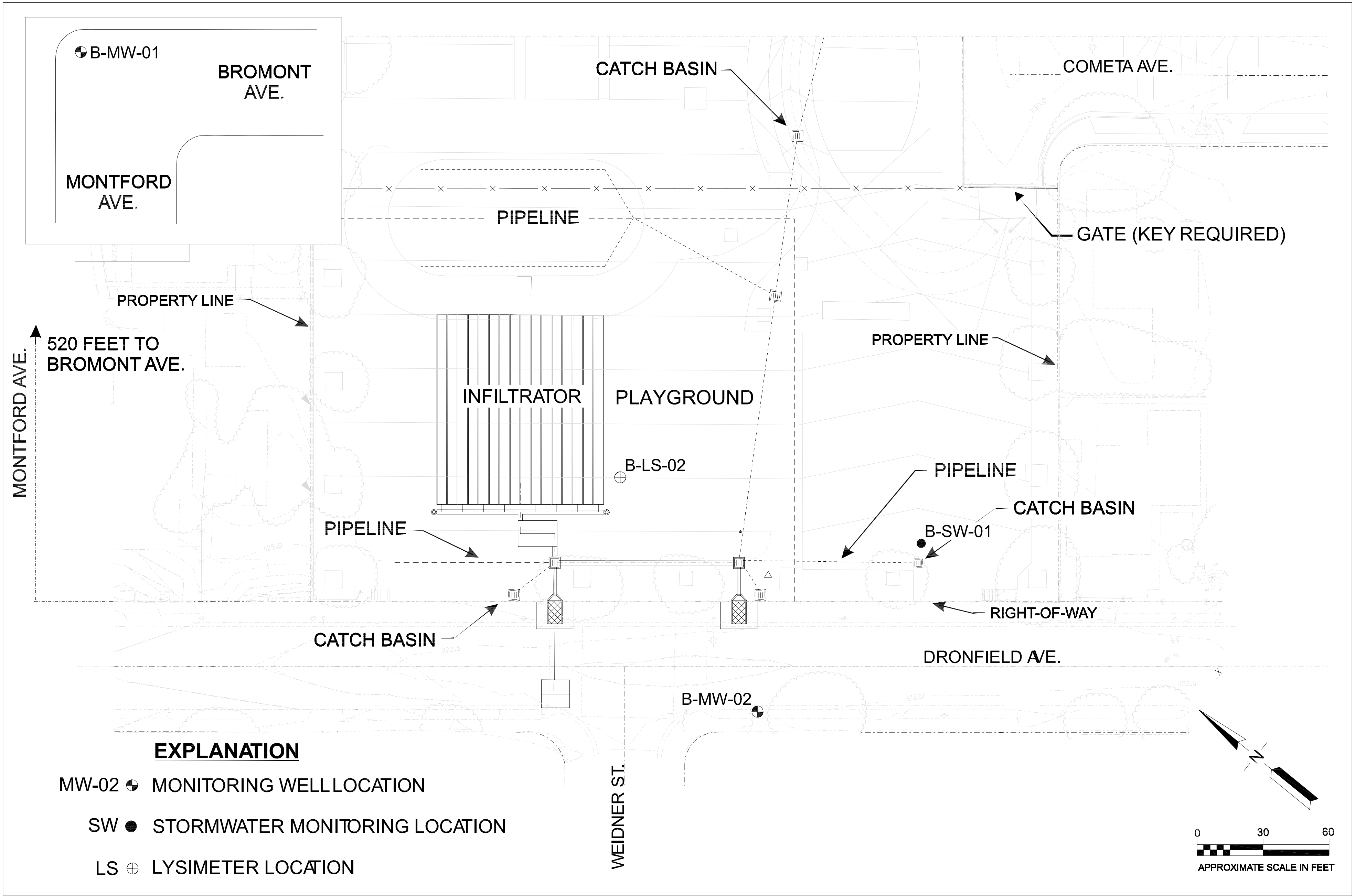
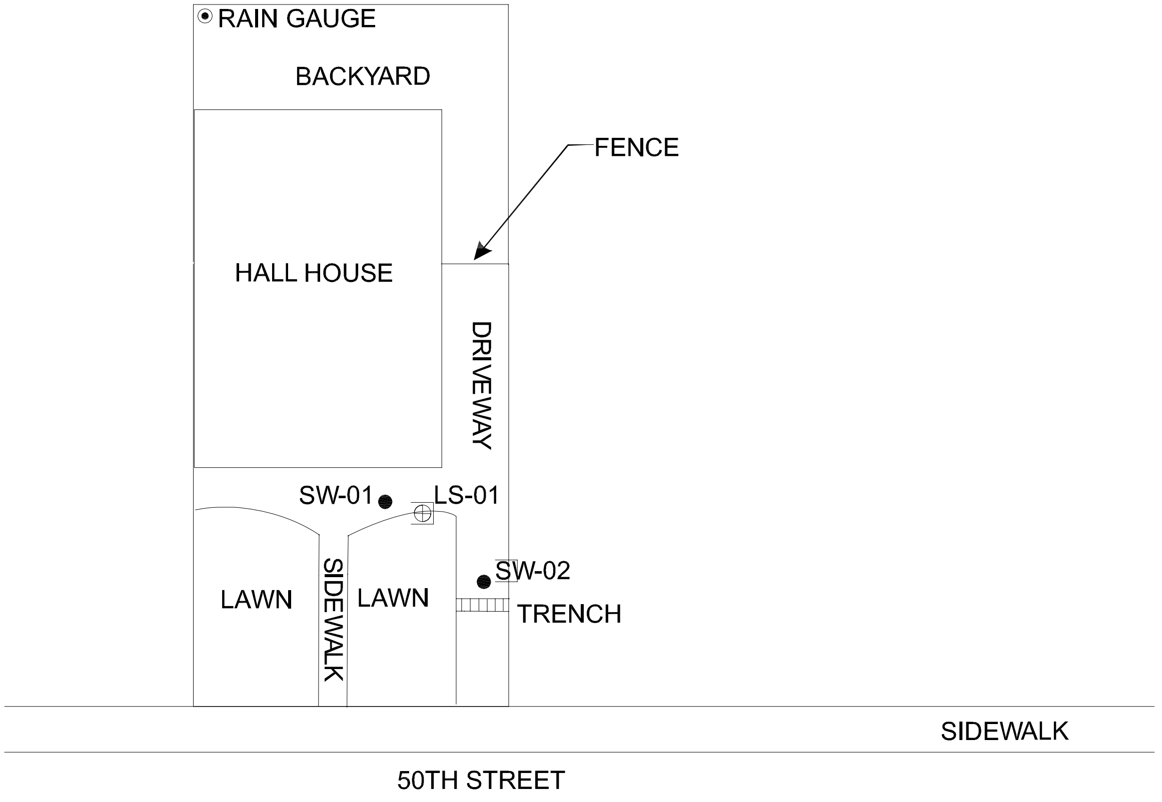


FIGURE A-1

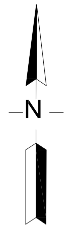
INFILTRATION AND BMP MONITORING SYSTEM - BROADUS SCHOOL SITE



**EXPLANATION**

SW-01 ● STORMWATER MONITORING LOCATION

LS-01 ⊕ LYSIMETER LOCATION



NOT TO SCALE

FIGURE A-2
MONITORING LOCATION MAP - HALL HOUSE

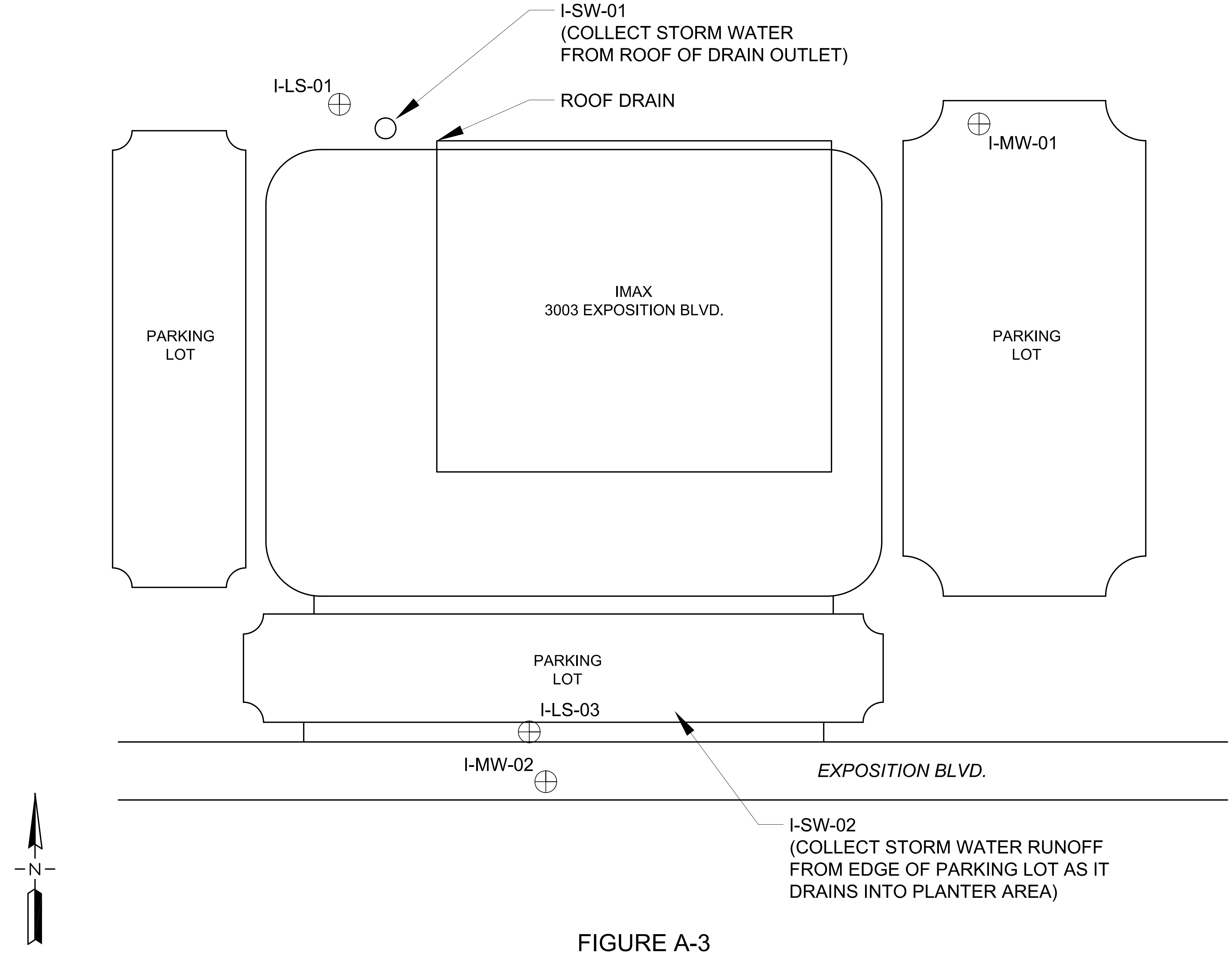


FIGURE A-3
MONITORING LOCATION MAP - IMAX BUILDING

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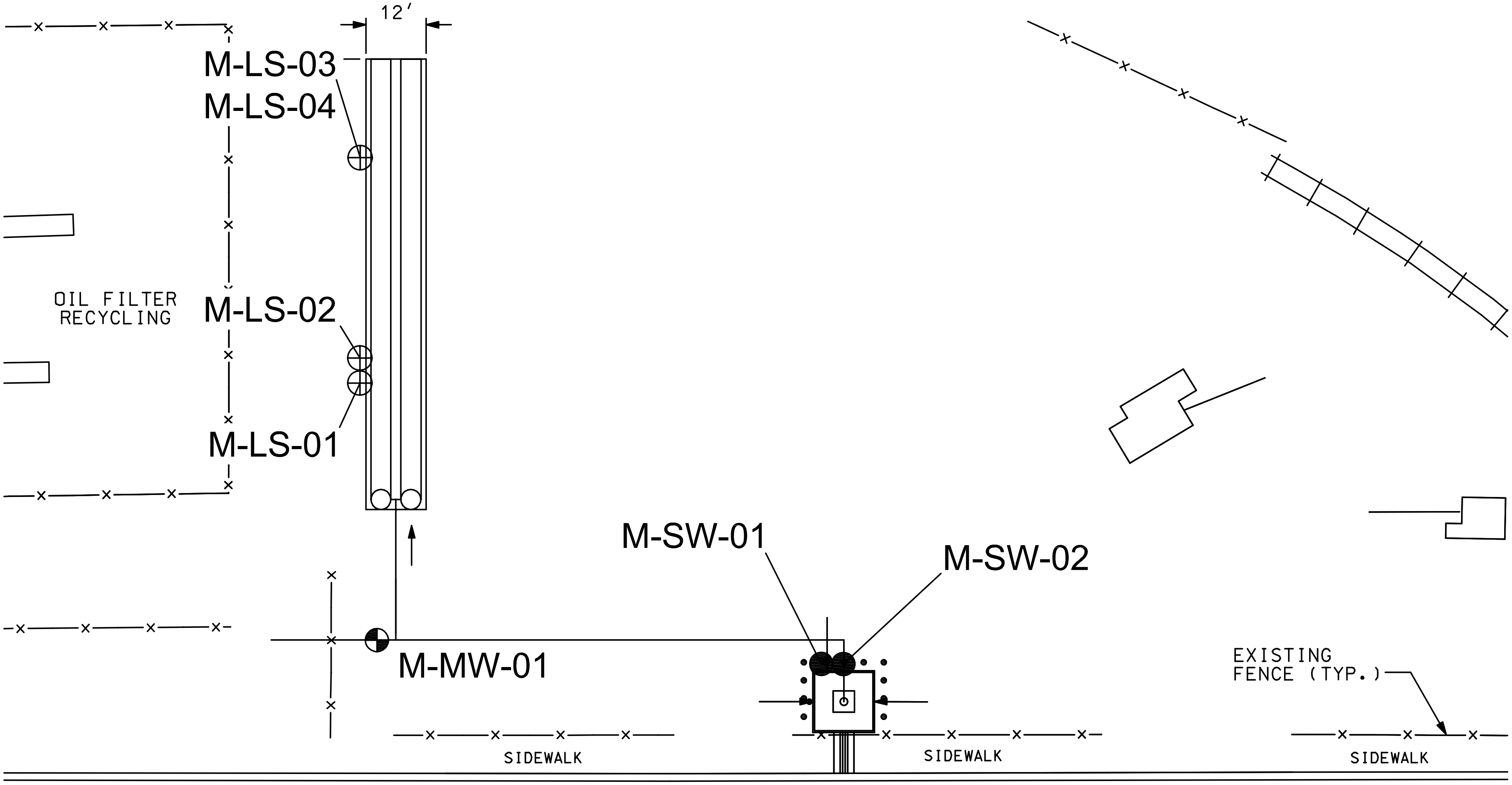

EXPLANATION

| | |
|---|---|
| M-MW-01 ◐ | MONITORING WELL LOCATION |
| M-SW-01 ● | STORMWATER MONITORING LOCATION |
| M-LS-01 ⊕ | LYSIMETER LOCATION |

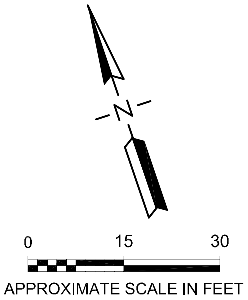

FIGURE A-4

INSTALLED MONITORING SYSTEM - METAL RECYCLER

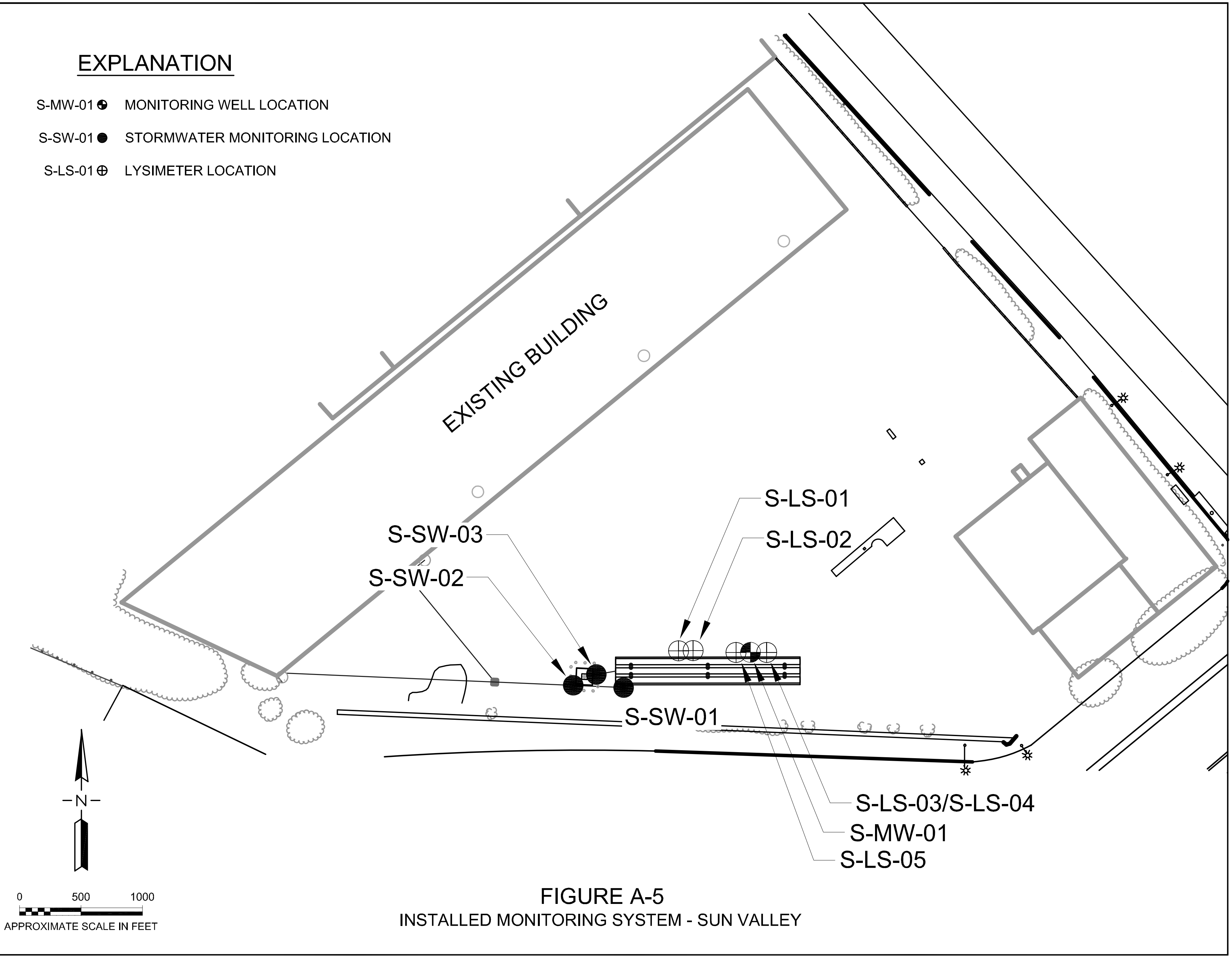

FIGURE A-5

INSTALLED MONITORING SYSTEM - SUN VALLEY

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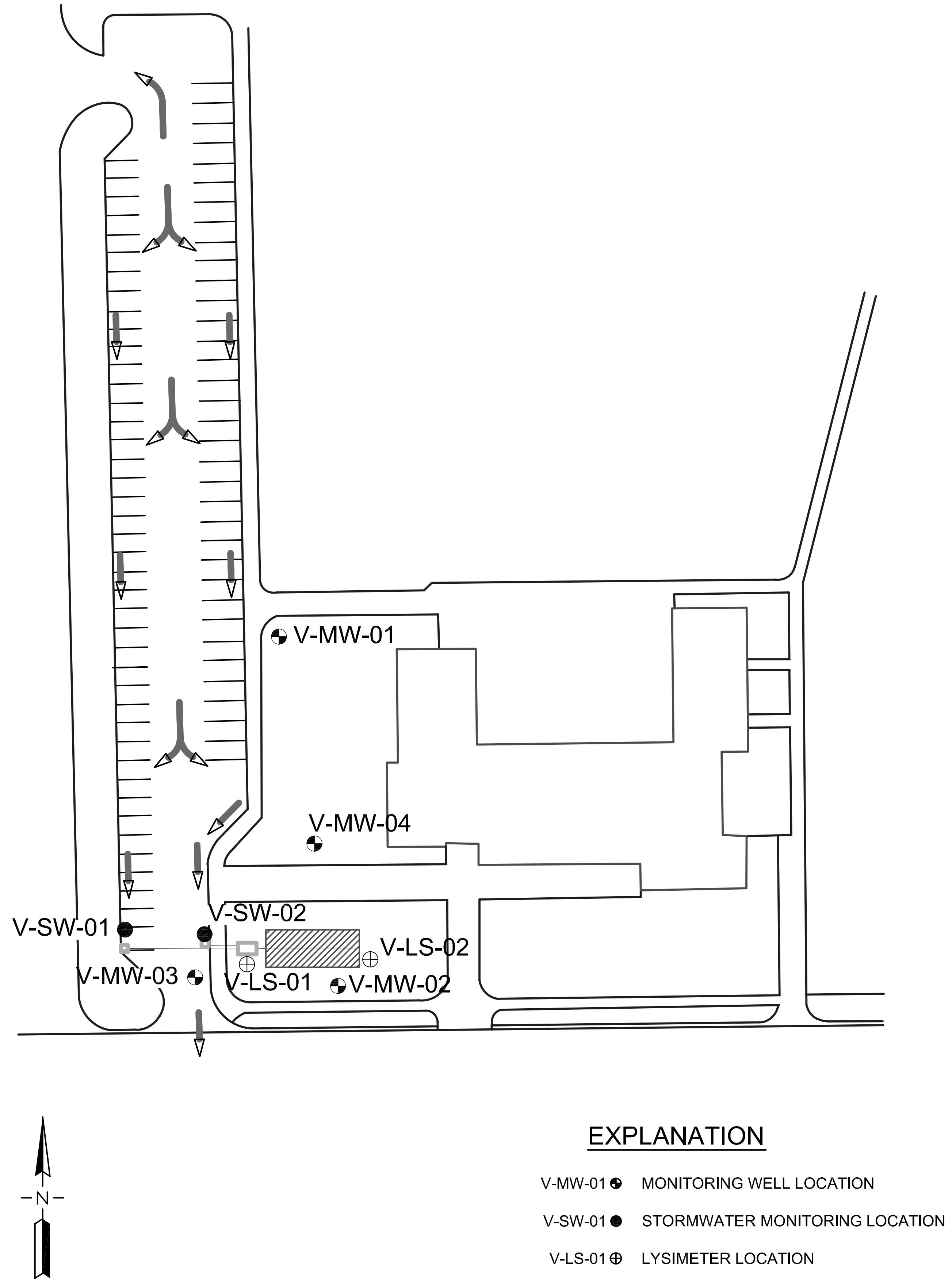


EXPLANATION

V-MW-01 ⊕ MONITORING WELL LOCATION

V-SW-01 ● STORMWATER MONITORING LOCATION

V-LS-01 ⊕ LYSIMETER LOCATION

FIGURE A-6
INSTALLED MONITORING SYSTEM - VETERANS PARK

Plot Date: 05/11/05 - 10:23am, Plotted by: dmcgowen
Drawing Path: N:\8000s\008952\acad\, Drawing Name: 8952_veterans_park.dwg

# Appendix B. Analytical Suite

| Constituent | Detect Limit | Lab Method | Surface & GW | Lysimeter List | Soils |
|---|---|---|---|---|---|
| **General:** | | | | | |
| Alkalinity | 1 mg/L | SM2320B | Y | N | Y |
| Bicarbonate | 1 mg/L | SM2320B | Y | N | Y |
| Bromide | 0.1 mg/L | EPA 300 | Y | Y | Y |
| Calcium | 0.1 mg/L | EPA 200.7 | Y | N | Y |
| Carbonate | 1 mg/L | SM2320B | Y | N | Y |
| Chloride | 1 mg/L | EPA 300.0 | Y | Y | Y |
| COD | 5 mg/L | EPA 410.4 | Y | Y | Y |
| Fluoride | 0.1 mg/L | EPA 340.2 | Y | N | Y |
| Hardness | 2 mg/L | EPA 130.2 | Y | N | N |
| Hydroxide | 1 mg/L | SM2320B | Y | N | Y |
| Magnesium | 0.1 mg/L | EPA 200.7 | Y | N | Y |
| MBAS | 0.1 mg/L | EPA 425.1 | Y | N | Y |
| Nitrate as N | 0.1 mg/L | EPA 300 | Y | Y | Y |
| Nitrite as N | 0.1 mg/L | EPA 300 | Y | Y | Y |
| Total Organic Carbon | 0.5 mg/L | EPA 415.1 | Y | Y | Y |
| Dissolved Organic Carbon | 0.5 mg/L | EPA 415.1 | Y | N | N |
| Organic N | 0.5 mg/L | SM4500NorgE | Y | Y | Y |
| NH3 | 0.1 mg/L | EPA 350.2 | Y | Y | Y |
| pH | na | EPA 150.1 | Y | field | Y |
| Phosphorous - total | 0.03 mg/L | EPA 365.3 | Y | Y | Y |
| Phosphorous - dissolved | 0.03 mg/L | EPA 365.3 | Y | N | N |
| Potassium | 0.5 mg/L | EPA 200.7 | Y | N | Y |
| Sodium | 0.5 mg/L | EPA 200.7 | Y | N | Y |
| Specific Conductance | 4 umho/cm | EPA 120.1 | Y | field | N |
| Sulfate | 1 mg/L | EPA 300 | Y | Y | Y |
| TDS | 1 mg/L | EPA 160.1 | Y | Y | N |
| TSS | 1 mg/L | EPA 160.2 | Y | N | N |
| Turbidity | 0.05 NTU | EPA 180.1 | Y | N | N |
| **Metals (total & dissolved)** | | | | | total |
| Aluminum | 50 µg/L | EPA 200.8 | Y | Y | Y |
| Antimony | 1 µg/L | EPA 200.8 | Y | Y | Y |
| Arsenic | 2 µg/L | EPA 200.8 | Y | Y | Y |
| Barium | 1 µg/L | EPA 200.8 | Y | Y | Y |
| Beryllium | 1 µg/L | EPA 200.8 | Y | Y | Y |
| Boron | 50 µg/L | EPA 200.8 | Y | Y | Y |
| Cadmium | 0.2 µg/L | EPA 200.8 | Y | Y | Y |
| Chromium | 1 µg/L | EPA 200.8 | Y | Y | Y |
| Chromium VI | 0.2 µg/L | EPA 218.6 | Y | Y | Y |
| Cobalt | 1 µg/L | EPA 200.8 | Y | Y | Y |
| Copper | 1 µg/L | EPA 200.8 | Y | Y | Y |
| Iron | 100 µg/L | EPA 200.8 | Y | Y | Y |
| Lead | 0.5 µg/L | EPA 200.8 | Y | Y | Y |

| **Constituent** | **Detect Limit** | **Lab Method** | **Surface & GW** | **Lysimeter List** | **Soils** |
|---|---|---|---|---|---|
| Manganese | 1 µg/L | EPA 200.8 | Y | Y | Y |
| Mercury | 0.1 µg/L | EPA 7470.A | Y | N | Y |
| Molybdenum | 1 µg/L | EPA 200.8 | Y | Y | Y |
| Nickel | 1 µg/L | EPA 200.8 | Y | Y | Y |
| Selenium | 1 µg/L | EPA 200.8 | Y | Y | Y |
| Silver | 1 µg/L | EPA 200.8 | Y | Y | Y |
| Thallium | 1 µg/L | EPA 200.8 | Y | Y | Y |
| Zinc | 5 µg/L | EPA 200.8 | Y | Y | Y |
| **Volatile Organic Compounds** (full suite) | | | Y | Y | EPA 8260 |
| Methyl Bromide | 0.5 µg/L | EPA 524.2 | inc | inc | inc |
| BTEX | 0.5 µg/L | EPA 524.2 | inc | inc | inc |
| MtBE | 1 µg/L | EPA 524.2 | inc | inc | inc |
| DIPE | 2 µg/L | EPA 524.2 | inc | inc | inc |
| ETBE | 2 µg/L | EPA 524.2 | inc | inc | inc |
| TAME | 2 µg/L | EPA 524.2 | inc | inc | inc |
| TBA | 10 µg/L | EPA 524.2 | inc | inc | inc |
| Ethanol | 100 µg/L | EPA 524.2 | inc | inc | inc |
| TCE | 0.5 µg/L | EPA 524.2 | inc | inc | inc |
| PCE | 0.5 µg/L | EPA 524.2 | inc | inc | inc |
| Disinfection Byproducts (THMs) | 0.5 µg/L | EPA 524.2 | inc | inc | inc |
| 1,2,3-TCP | 0.005 µg/L | GC/MS Isotope Dilution | Y (1 time) | N | Inc |
| Trip blanks | N/A | upon request | | | |
| **Other** | | | | | |
| Oil and Grease | 1 mg/L | EPA 1664 | Y | Y | Y |
| Perchlorate | 2 µg/L | EPA 314 | Y | N | Y |
| Semi-volatile Organics (full suite) | 5-50 µg/L | EPA 625/8270C | Y | N | Y |
| NDMA | .002 µg/L | EPA 1625mod | Y | N | N |
| Round-up (Glyphosate) | 10 µg/L | EPA 547 | Y | N | Y |
| 1,4 Dioxane | 2µg/L | GC/MS Isotope Dilution | Y | N | N |
| DBCP | 0.02 µg/L | EPA 504.1 | Y | N | Y (8260) |
| **Biological:** | | | | | |
| HPC | <1 CFU/mL | SMEWW 20th | Y | Y | Y |
| Total coliforms | 1.1 MPN/100ml | SMEWW 20th | Y | Y | Y |
| Fecal coliform | 1.1 MPN/100ml | SMEWW 20th | Y | Y | Y |
| E. coli | 1.1 MPN/100ml | SMEWW 19th | Y | Y | Y |

# TABLE C-1

## STORM WATER ANALYTICAL RESULTS – BROADOUS SCHOOL

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | B-SW-01 | | | | | | | | |
| | | | 12/03/01 | 11/08/02 | 12/16/02 | 02/12/03 | 03/15/03 | 02/02/04 | 02/25/04 | 12/27/04 | 02/18/05 |
| **General Monitoring Parameters** | | | | | | | | | | | |
| Alkalinity, Total (as $CaCO_3$) | mg/L | N/A | 45.6 | 18 | 100 | 36 | 28 | 22 | 36 | 26 | 12 |
| Bicarbonate (as $CaCO_3$) | mg/L | N/A | 55.6 | 18 | 100 | 36 | 28 | 22 | 36 | 26 | 12 |
| Bromide | mg/L | N/A | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Calcium | mg/L | Total | 20 | 6.7 | 38.8 | 7.28 | 8.15 | 14.9 | 14.8 | 10.3 | 4.7 |
| Carbonate (as $CaCO_3$) | mg/L | N/A | <2 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Chloride | mg/L | N/A | 2.17 | 5 | 72 | 5.1 | 9.3 | 17 | 6.8 | 8.7 | 2 |
| Chemical Oxygen Demand | mg/L | N/A | 71.67 | 69 | 200 | 36 | 54 | 120 | 220 | 38 | 23 |
| Fluoride | mg/L | N/A | 0.25 | <0.1 | 0.51 | 0.14 | <0.1 | <0.1 | <0.1 | 0.11 | <0.1 |
| Hardness (as $CaCO_3$) | mg/L | Total | 80 | 26 | 150 | 36 | 30 | 42 | 58 | 56 | 14 |
| Hydroxide (as $CaCO_3$) | mg/L | N/A | <2 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Magnesium | mg/L | Total | 7.29 | 1.03 | 14.3 | 2.37 | 2.98 | 4.03 | 4.26 | 1.95 | 1.20 |
| MBAS (Surfactants) | mg/L | N/A | 0.076 | 0.16 | 0.18 | 0.13 | <0.1 | 0.22 | 0.38 | 0.18 | <0.1 |
| Nitrate (as N) | mg/L | N/A | 0.508 | 0.14 | 0.14 | <0.1 | 0.15 | 1 | 0.7 | 0.73 | 0.36 |
| Nitrite (as N) | mg/L | N/A | <0.03 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total Kjeldahl Nitrogen | mg/L | Total | -- | -- | -- | -- | -- | 4.1 | 6.2 | 1.3 | 1.1 |
| Carbon, Total Organic | mg/L | N/A | 38.2 | 13 | 5.6 | 9 | 19 | 21 | 24 | 8.1 | 3.7 |
| Carbon, Dissolved Organic | mg/L | N/A | -- | 12 | 4.9 | 10 | 17 | 19 | 19 | 7.6 | 4.1 |
| Nitrogen, Organic | mg/L | N/A | 7.48 | 1.3 | 4.1 | <0.5 | 2 | 3.5 | 5.5 | 0.95 | 0.98 |
| Ammonia-Nitrogen | mg/L | Total | 1.02 | <0.1 | 0.28 | <0.1 | 0.11 | 0.56 | 0.7 | 0.35 | 0.14 |
| pH | pH units | N/A | 6.35 | 7.43 | 7.02 | 6.62 | 7.02 | 7.08 | 6.73 | 6.81 | 6.34 |
| Phosphorus | mg/L | Dissolved | -- | 0.41 | 0.37 | 0.15 | 0.74 | 0.32 | 0.49 | 0.42 | 0.11 |
| Phosphorus | mg/L | Total | -- | 0.53 | 0.41 | 0.44 | 0.78 | 0.46 | 0.64 | 0.56 | 0.3 |
| Potassium | mg/L | Total | 15.2 | 7.68 | 12 | 2.18 | 5.67 | 7.33 | 6.77 | 4.07 | 2.08 |
| Sodium | mg/L | Total | 10.5 | 4.76 | 61.8 | 7.01 | 11.5 | 10.3 | 6.89 | 8.18 | 2.46 |
| Specific Conductance | µmhos/cm | N/A | 232 | 79 | 520 | 100 | 120 | 160 | 140 | 120 | 44 |
| Sulfate | mg/L | N/A | 17.77 | 4.7 | 49 | 3.2 | 17 | 16 | 12 | 11 | 4 |
| Total Dissolved Solids | mg/L | N/A | 162 | 43 | 330 | 73 | 83 | 100 | 110 | 69 | 48 |
| Total Suspended Solids | mg/L | N/A | 151 | 38 | 38 | 16 | 12 | 200 | 26 | 34 | 51 |
| Turbidity | NTU | N/A | 58.9 | 35 | 89 | 11 | 15 | 110 | 290 | 33 | 75 |
| **Metals[2]** | | | | | | | | | | | |
| Aluminum | µg/L | Dissolved | -- | 54 | <50 | <50 | <50 | <50 | 259 | <25 | <25 |
| Aluminum | µg/L | Total | -- | 1,620 | 1,170 | 337 | 396 | 2,460 | 6,500 | 783 | 1,250 |
| Antimony | µg/L | Dissolved | -- | -- | <1 | <1 | <1 | <1 | 1.01 | <1 | <1 |
| Antimony | µg/L | Total | -- | -- | 1.26 | 1.11 | <1 | <1 | 1.73 | <1 | 2.5 |

# TABLE C-1

## STORM WATER ANALYTICAL RESULTS – BROADOUS SCHOOL

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | B-SW-01 | | | | | | | | |
| | | | 12/03/01 | 11/08/02 | 12/16/02 | 02/12/03 | 03/15/03 | 02/02/04 | 02/25/04 | 12/27/04 | 02/18/05 |
| Arsenic | µg/L | Dissolved | 5.82 | <1 | 2.29 | 1.09 | 2.99 | <0.5 | 1.67 | 0.806 | <0.5 |
| Arsenic | µg/L | Total | 6.62 | 1.82 | 3 | <1 | 3.75 | 1.88 | 3.92 | 0.798 | <0.5 |
| Barium | µg/L | Dissolved | -- | -- | 33.9 | 10.5 | 8.43 | 9.1 | 10.8 | 10.4 | 4.17 |
| Barium | µg/L | Total | -- | -- | 52.7 | 15.6 | 16.6 | 66.5 | 112 | 23.3 | 26.8 |
| Beryllium | µg/L | Dissolved | -- | -- | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Beryllium | µg/L | Total | -- | -- | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Boron | µg/L | Dissolved | 323 | 78.8 | 336 | 63.5 | 143 | 61.7 | 69.4 | 73 | <50 |
| Boron | µg/L | Total | 362 | 77.1 | 348 | 143 | 162 | 76.8 | 81 | 117 | <50 |
| Cadmium | µg/L | Dissolved | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.2 | <0.2 | <0.2 | <0.2 |
| Cadmium | µg/L | Total | <1 | <0.5 | <0.5 | <0.5 | <0.5 | 0.388 | 0.663 | <0.2 | <0.2 |
| Chromium | µg/L | Dissolved | -- | 1.29 | <1 | <1 | <1 | <1 | 2.3 | 1.02 | 1.9 |
| Chromium | µg/L | Total | <10 | 4.25 | 3.75 | 1.06 | 1.11 | 4.74 | 15.8 | 2.17 | 3.62 |
| Chromium, Hexavalent | µg/L | Dissolved | <10 | 0.49 | 0.25 | <0.2 | <0.2 | 0.36 | 0.23 | <0.2 | <0.2 |
| Cobalt | µg/L | Dissolved | -- | -- | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Cobalt | µg/L | Total | -- | -- | 1.34 | <1 | <1 | 2.75 | 5.55 | <1 | 1.1 |
| Copper | µg/L | Dissolved | 22.1 | 7.28 | 8.21 | 2.23 | 4.18 | 7.1 | 9.49 | 4.62 | <1 |
| Copper | µg/L | Total | 27.8 | 20 | 14 | 4.33 | 6.89 | 23.6 | 39.9 | 7.06 | 5.03 |
| Iron | µg/L | Dissolved | -- | -- | -- | -- | -- | 177 | 354 | <100 | <100 |
| Iron | µg/L | Total | -- | -- | -- | -- | -- | 3,900 | 9,630 | 1,090 | 1,900 |
| Lead | µg/L | Dissolved | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 1.22 | <0.5 | <0.5 |
| Lead | µg/L | Total | <5 | 14.3 | 3.31 | 1.62 | 0.716 | 19.8 | 36.3 | 6.07 | 5.84 |
| Manganese | µg/L | Dissolved | -- | -- | 3.31 | <1 | 1.57 | 17.9 | 16.1 | 3.03 | 9.62 |
| Manganese | µg/L | Total | -- | -- | 61.6 | 12 | 28.3 | 134 | 250 | 35.5 | 47.3 |
| Mercury | µg/L | Dissolved | -- | -- | -- | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Mercury | µg/L | Total | <1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | 0.122 | <0.1 | <0.1 |
| Molybdenum | µg/L | Dissolved | -- | -- | 4.76 | 1.24 | 1.33 | 2.32 | 2.49 | 1.63 | <1 |
| Molybdenum | µg/L | Total | -- | -- | 4.58 | 1.19 | 1.62 | 2.15 | 2.62 | 1.58 | <1 |
| Nickel | µg/L | Dissolved | 5.22 | 1.23 | 1.64 | 1.29 | 1.27 | 2.7 | <2 | <2 | <2 |
| Nickel | µg/L | Total | 6.06 | 4.27 | 3.68 | <1 | 1.29 | 8.8 | 14 | <2 | 2.4 |
| Selenium | µg/L | Dissolved | -- | <5 | <5 | <5 | <5 | <1 | 1.5 | <1 | <1 |
| Selenium | µg/L | Total | -- | <5 | <5 | <5 | <5 | <1 | 1.04 | <1 | <1 |
| Silver | µg/L | Dissolved | -- | -- | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Silver | µg/L | Total | -- | -- | <1 | <1 | <1 | <1 | <1 | <1 | 1.1 |
| Strontium | µg/L | Dissolved | -- | -- | 243 | 52.6 | 35.7 | 54.5 | 60 | 51.6 | 17.4 |
| Strontium | µg/L | Total | -- | -- | 249 | 55.6 | 53.9 | 87.2 | 107 | 56 | 23.4 |
| Thallium | µg/L | Dissolved | -- | -- | <1 | <1 | <1 | <1 | <1 | <1 | <1 |

# TABLE C-1

## STORM WATER ANALYTICAL RESULTS – BROADOUS SCHOOL

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | B-SW-01 | | | | | | | | |
| | | | 12/03/01 | 11/08/02 | 12/16/02 | 02/12/03 | 03/15/03 | 02/02/04 | 02/25/04 | 12/27/04 | 02/18/05 |
| Thallium | µg/L | Total | -- | -- | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Tin | µg/L | Dissolved | -- | -- | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Tin | µg/L | Total | -- | -- | <1 | 3.57 | <1 | <1 | 1.08 | <1 | <1 |
| Titanium | µg/L | Dissolved | -- | -- | 3 | 1.04 | 2.46 | 3.19 | 17.5 | 4.47 | 4.24 |
| Titanium | µg/L | Total | -- | -- | 64.2 | 17.2 | 23 | 141 | 427 | 59.4 | 92.8 |
| Vanadium | µg/L | Dissolved | -- | -- | 3.6 | 1.75 | 2.81 | 3.59 | 5.69 | 2.46 | <1 |
| Vanadium | µg/L | Total | -- | -- | 7.12 | 3.04 | 4.55 | 11.4 | 25.2 | 4.48 | 4.03 |
| Zinc | µg/L | Dissolved | 369 | 60.9 | 37.7 | 7.54 | 7.87 | 21.3 | 24.4 | 11.9 | 9.38 |
| Zinc | µg/L | Total | 369 | 58.8 | 58 | 19.3 | 14.1 | 116 | 178 | 38.3 | 34.4 |
| **Other Constituents** | | | | | | | | | | | |
| Oil and Grease | mg/L | N/A | 1 | <1 | <1 | <1 | 1.4 | 2.2 | 3.6 | 1.6 | 1.5 |
| Perchlorate | µg/L | N/A | <4 | <2 | <2 | <2 | <2 | 5.2 | <2 | <2 | <2 |
| N-Nitrosodimethylamine (NDMA) | ng/L | N/A | <3,000 | <2 | <2 | <10 | <10 | <10 | <10 | -- | -- |
| Glyphosate | µg/L | N/A | -- | <6 | <6 | <6 | <6 | -- | -- | -- | -- |
| 1,4-Dioxane | µg/L | N/A | -- | <2 | <2 | <2 | <2 | -- | -- | -- | -- |
| 1,2-Dibromo-3-chloropropane (DBCP) | µg/L | N/A | <0.01 | <0.02 | <0.02 | <0.02 | <0.02 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Volatile Organic Compounds** | | | | | | | | | | | |
| Methyl Bromide | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl-t-Butyl Ether (MTBE) | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <1 | <1 | <1 |
| Benzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Toluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethylbenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| o-Xylene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| p/m-Xylene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Trichloroethylene (TCE) | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Tetrachloroethylene (PCE) | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,1,2-Tetrachloroethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,1-Trichloroethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2,2-Tetrachloroethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2-Trichloroethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloroethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloroethylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloropropene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,3-Trichlorobenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

# TABLE C-1

## STORM WATER ANALYTICAL RESULTS – BROADOUS SCHOOL

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | B-SW-01 | | | | | | | | |
| | | | 12/03/01 | 11/08/02 | 12/16/02 | 02/12/03 | 03/15/03 | 02/02/04 | 02/25/04 | 12/27/04 | 02/18/05 |
| 1,2,3-Trichloropropane (1,2,3-TCP) | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,4-Trichlorobenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,4-Trimethylbenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dibromoethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichlorobenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichloroethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichloropropane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Trans-Dichloroethylene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3,5-Trimethylbenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3-Dichlorobenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3-Dichloropropane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,4-Dichlorobenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2,2-Dichloropropane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Butanone (Methylethyl ketone) | µg/L | N/A | -- | <1 | <1 | <1 | <1 | 8.8 | 2.6 | 1.8 | 1.4 |
| 2-Chlorotoluene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Hexanone | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | 0.93 | <0.5 | <0.5 | <0.5 |
| 4-Chlorotoluene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 4-Methyl-2-pentanone (MIBK) | µg/L | N/A | -- | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Acetone | µg/L | N/A | -- | 5.4 | 3.5 | <2 | 3.4 | 37 | 17 | 13 | 11 |
| Acrylonitrile | µg/L | N/A | -- | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Allyl Chloride | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromobenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromochloromethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromoform | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Carbon disulfide | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Carbon Tetrachloride | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chlorobenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chloroethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chloroform | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| cis-1,2-Dichloroethene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| cis-1,3-Dichloropropene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dibromochloromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dibromomethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dichlorobromomethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dichlorodifluoromethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Diethyl Ether | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.8 | <0.5 |

## TABLE C-1

## STORM WATER ANALYTICAL RESULTS – BROADOUS SCHOOL

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | B-SW-01 | | | | | | | | |
| | | | 12/03/01 | 11/08/02 | 12/16/02 | 02/12/03 | 03/15/03 | 02/02/04 | 02/25/04 | 12/27/04 | 02/18/05 |
| Diisopropyl Ether (DIPE) | µg/L | N/A | -- | -- | -- | -- | -- | <2 | <2 | <2 | <2 |
| Ethanol | µg/L | N/A | -- | -- | -- | -- | -- | <100 | <100 | <100 | <100 |
| Ethyl Methacrylate | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethyl-t-Butyl Ether (ETBE) | µg/L | N/A | -- | -- | -- | -- | -- | <2 | <2 | <2 | <2 |
| Hexachloro-1,3-Butadiene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Iodomethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Isopropylbenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl Chloride | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl Methacrylate | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methylene Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 1.6 |
| Naphthalene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| n-Butylbenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| n-Propylbenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| p-Isopropyltoluene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| sec-Butylbenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Styrene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| t-1,4-Dichloro-2-Butene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Tert-Amyl-Methyl Ether (TAME) | µg/L | N/A | -- | -- | -- | -- | -- | <2 | <2 | <2 | <2 |
| Tert-Butyl Alcohol (TBA) | µg/L | N/A | -- | -- | -- | -- | -- | <10 | <10 | <10 | <10 |
| tert-Butylbenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Tetrahydrofuran | µg/L | N/A | -- | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| trans-1,3-Dichloropropene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Trichlorofluoromethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Vinyl Chloride | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Semi-Volatile Organic Compounds** | | | | | | | | | | | |
| 1-Methylnaphthalene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| 2,4,5-Trichlorophenol | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| 2,4,6-Trichlorophenol | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| 2,4-Dichlorophenol | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| 2,4-Dimethylphenol | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| 2,4-Dinitrophenol | µg/L | N/A | -- | <50 | <50 | <50 | <50 | <50 | <50 | -- | -- |
| 2,4-Dinitrotoluene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| 2,6-Dinitrotoluene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| 2-Chloronaphthalene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| 2-Chlorophenol | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |

# TABLE C-1

## STORM WATER ANALYTICAL RESULTS – BROADOUS SCHOOL

| | | | Sample Number / Date Sampled | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | B-SW-01 | | | | | | | | |
| **Constituent** | **Units[1]** | **Fraction** | **12/03/01** | **11/08/02** | **12/16/02** | **02/12/03** | **03/15/03** | **02/02/04** | **02/25/04** | **12/27/04** | **02/18/05** |
| 2-Methylnaphthalene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| 2-Methylphenol (o-Cresol) | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| 2-Nitroaniline | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| 2-Nitrophenol | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| 3,3'-Dichlorobenzidine | µg/L | N/A | -- | <25 | <25 | <25 | <25 | <25 | <25 | -- | -- |
| 3-Nitroaniline | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| 4,6-Dinitro-2-Methylphenol | µg/L | N/A | -- | <50 | <50 | <50 | <50 | <50 | <50 | -- | -- |
| 4-Bromophenyl-Phenyl Ether | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| 4-Chloro-3-Methylphenol | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| 4-Chloroaniline | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| 4-Chlorophenyl-Phenyl Ether | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| 4-Methylphenol (p-Cresol) | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| 4-Nitroaniline | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| 4-Nitrophenol | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| Acenaphthene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| Acenaphthylene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| Aniline | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| Anthracene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| Azobenzene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| Benzidine | µg/L | N/A | -- | <50 | <50 | <50 | <50 | <50 | <50 | -- | -- |
| Benzo (a) Anthracene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| Benzo (a) Pyrene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| Benzo (b) Fluoranthene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| Benzo (g,h,i) Perylene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| Benzo (k) Fluoranthene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| Benzoic acid | µg/L | N/A | -- | <50 | <50 | <50 | <50 | <50 | <50 | -- | -- |
| Benzyl alcohol | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| Bis(2-Chloroethoxy) Methane | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| Bis(2-Chloroethyl) Ether | µg/L | N/A | -- | <25 | <25 | <25 | <25 | <25 | <25 | -- | -- |
| Bis(2-Chloroisopropyl) Ether | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| Bis(2-Ethylhexyl) Phthalate | µg/L | N/A | 3.9 | <10 | <10 | <10 | <10 | <10 | 20 | -- | -- |
| Butyl Benzyl Phthalate | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| Chrysene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| Dibenz (a,h) Anthracene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| Dibenzofuran | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| Diethyl Phthalate | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |

# TABLE C-1

## STORM WATER ANALYTICAL RESULTS – BROADOUS SCHOOL

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | B-SW-01 | | | | | | | | |
| | | | 12/03/01 | 11/08/02 | 12/16/02 | 02/12/03 | 03/15/03 | 02/02/04 | 02/25/04 | 12/27/04 | 02/18/05 |
| Dimethyl Phthalate | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| Di-n-Butyl Phthalate | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| Di-n-Octyl Phthalate | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| Fluoranthene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| Fluorene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| Hexachlorobenzene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| Hexachlorocyclopentadiene | µg/L | N/A | -- | <25 | <25 | <25 | <25 | <25 | <25 | -- | -- |
| Hexachloroethane | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| Indeno (1,2,3-c,d) Pyrene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| Isophorone | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| Nitrobenzene | µg/L | N/A | -- | <25 | <25 | <25 | <25 | <25 | <25 | -- | -- |
| N-Nitroso-di-n-propylamine | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| N-Nitrosodiphenylamino | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| Pentachlorophenol | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| Phenanthrene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| Phenol | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| Pyrene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| Pyridine | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- |
| **Biological Parameters** | | | | | | | | | | | |
| Heterotrophic Plate Count | CFU/mL | N/A | >5,700 | 170,000 | 1,500,000 | 18,000 | 1,700,000 | -- | -- | -- | -- |
| Total Coliforms | MPN/100 mL | N/A | 35,000 | 3,000 | 2,100 | 1,300 | 5,000 | -- | -- | -- | -- |
| Fecal Coliform | MPN/100 mL | N/A | -- | 80 | 80 | 170 | 5,000 | -- | -- | -- | -- |
| E. coli | MPN/100 mL | N/A | -- | 20 | 80 | 170 | 1,300 | -- | -- | -- | -- |
| E. coli + Fecal Coliform | MPN/100 mL | N/A | 21 | -- | -- | -- | -- | -- | -- | -- | -- |

-- indicates the constituent was not analyzed for. Analytes not detected are indicated with a "<" symbol; the associated numerical value is the detection limit.

1. Units of measure: mg/L = milligrams per liter, µg/L = micrograms per liter, µhmos/cm = microhmos per centimeter, NTU = Nephelometric Turbidity Unit.
2. In cases in which the filtered concentrations exceeded the total, the differences are considered by the laboratory statistically insignificant and can be attributed to the variability inherent with the analytical met

## TABLE C-2

## LYSIMETER ANALYTICAL RESULTS – BROADOUS SCHOOL

| | | | Sample Number / Date Sampled | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | B-LS-01 | | | | B-LS-02 | | | | | |
| Constituent | Units[1] | Fraction | 12/04/01 | 11/10/02 | 12/23/02 | 03/21/03 | 02/04/04 | 02/26/04 | 04/03/04 | 10/20/04 | 12/28/04 | 02/18/05 |
| **General Monitoring Parameters** | | | | | | | | | | | | |
| Alkalinity, Total (as CaCO$_3$) | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Bicarbonate (as CaCO$_3$) | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Bromide | mg/L | N/A | -- | <0.1 | <0.1 | 0.42 | 0.11 | <0.1 | -- | 0.11 | <0.1 | <0.1 |
| Calcium | mg/L | Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Carbonate (as CaCO$_3$) | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Chloride | mg/L | N/A | -- | 160 | 93 | 70 | 100 | 37 | -- | 47 | 130 | 45 |
| Chemical Oxygen Demand | mg/L | N/A | 247 | -- | -- | -- | <5 | 5 | -- | 20 | 36 | 13 |
| Fluoride | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Hardness (as CaCO$_3$) | mg/L | Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Hydroxide (as CaCO$_3$) | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Magnesium | mg/L | Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MBAS (Surfactants) | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Nitrate (as N) | mg/L | N/A | 0.583 | 110 | 100 | 41 | 4 | 2.8 | -- | 2.4 | 3.5 | 2.4 |
| Nitrite (as N) | mg/L | N/A | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | -- | <0.1 | <0.1 | <0.1 |
| Total Kjeldahl Nitrogen | mg/L | Total | -- | -- | -- | -- | 0.7 | <0.1 | -- | 1.1 | 0.28 | <0.5 |
| Carbon, Total Organic | mg/L | N/A | 14.4 | -- | -- | -- | 11 | 2.8 | -- | 5 | 5.3 | 8.5 |
| Carbon, Dissolved Organic | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Nitrogen, Organic | mg/L | N/A | 3.5 | -- | -- | -- | <0.5 | <0.5 | -- | 1.1 | <0.5 | <0.5 |
| Ammonia-Nitrogen | mg/L | Total | 0.14 | -- | -- | -- | 0.35 | <0.2 | -- | <0.1 | <0.2 | <0.2 |
| pH | pH units | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Phosphorus | mg/L | Dissolved | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Phosphorus | mg/L | Total | -- | -- | -- | -- | 0.58 | 15 | -- | 0.32 | 1.4 | 0.54 |
| Potassium | mg/L | Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Sodium | mg/L | Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Specific Conductance | µmhos/cm | N/A | -- | -- | -- | -- | 1400 | -- | -- | -- | -- | -- |
| Sulfate | mg/L | N/A | -- | 340 | 430 | 230 | 260 | 490 | -- | 110 | 140 | 97 |
| Total Dissolved Solids | mg/L | N/A | 78 | 1,300 | 1,700 | 710 | 990 | 940 | -- | 720 | 810 | 490 |
| Total Suspended Solids | mg/L | N/A | 130 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Turbidity | NTU | N/A | 539 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **Metals[2]** | | | | | | | | | | | | |
| Aluminum | µg/L | Dissolved | -- | <50 | <50 | <50 | <50 | <50 | -- | <25 | <25 | <25 |
| Aluminum | µg/L | Total | -- | 54.4 | <50 | 68.7 | <50 | <50 | -- | <25 | <25 | <25 |
| Antimony | µg/L | Dissolved | -- | -- | <1 | <1 | 1.64 | 1.26 | -- | 1.61 | <1 | 1.72 |
| Antimony | µg/L | Total | -- | -- | 2.36 | <1 | 1.85 | 1.26 | -- | 1.37 | <1 | 2.12 |

## TABLE C-2

## LYSIMETER ANALYTICAL RESULTS – BROADOUS SCHOOL

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | B-LS-01 | | | | B-LS-02 | | | | | |
| | | | 12/04/01 | 11/10/02 | 12/23/02 | 03/21/03 | 02/04/04 | 02/26/04 | 04/03/04 | 10/20/04 | 12/28/04 | 02/18/05 |
| Arsenic | µg/L | Dissolved | -- | 5.63 | 2.68 | 2.18 | 11.3 | 8.03 | -- | 2.23 | 1.91 | 4.43 |
| Arsenic | µg/L | Total | <5 | 7.92 | 3.92 | 3.14 | 12.3 | 7.66 | -- | 2.32 | 2.2 | 4.04 |
| Barium | µg/L | Dissolved | -- | -- | 69.2 | 72.2 | 251 | 208 | -- | 168 | 247 | 116 |
| Barium | µg/L | Total | -- | -- | 105 | 31.3 | 250 | 212 | -- | 182 | 256 | 136 |
| Beryllium | µg/L | Dissolved | -- | -- | <1 | <1 | <1 | <1 | -- | <1 | <1 | <1 |
| Beryllium | µg/L | Total | -- | -- | <1 | <1 | <1 | <1 | -- | <1 | <1 | <1 |
| Boron | µg/L | Dissolved | -- | 614 | 291 | 402 | 179 | 282 | -- | 267 | 368 | 203 |
| Boron | µg/L | Total | -- | 693 | 409 | 361 | 150 | 284 | -- | 306 | 364 | 194 |
| Cadmium | µg/L | Dissolved | -- | <0.5 | <0.5 | <0.5 | 0.215 | <0.2 | -- | <0.2 | <0.2 | <0.2 |
| Cadmium | µg/L | Total | <1 | 1.21 | 32.8 | <0.5 | <0.2 | <0.2 | -- | <0.2 | <0.2 | <0.2 |
| Chromium | µg/L | Dissolved | -- | <1 | <1 | <1 | 1.32 | 1.27 | 2.67 | 2.74 | 3.66 | 2.18 |
| Chromium | µg/L | Total | <10 | 2.63 | 1.31 | <1 | 2.05 | 1.56 | -- | 2.71 | 13.7 | 2.2 |
| Chromium, Hexavalent | µg/L | Dissolved | <10 | 0.39 | 0.59 | 0.51 | -- | -- | 0.62 | 1.1 | 0.8 | 1.2 |
| Cobalt | µg/L | Dissolved | -- | -- | <1 | <1 | 1.11 | <1 | -- | <1 | 3.39 | <1 |
| Cobalt | µg/L | Total | -- | -- | <1 | 1.07 | 1.4 | <1 | -- | <1 | 3.48 | <1 |
| Copper | µg/L | Dissolved | 33.2 | 11.3 | 5.83 | 66.9 | 4.11 | 2.68 | -- | 3.85 | 17.6 | 19 |
| Copper | µg/L | Total | 13.6 | 25.9 | 10.3 | 220 | 3.37 | 2.85 | -- | 3.96 | 19 | 18 |
| Iron | µg/L | Dissolved | -- | -- | -- | -- | <100 | <100 | -- | <100 | 198 | <100 |
| Iron | µg/L | Total | -- | -- | -- | -- | 108 | <100 | -- | <100 | 295 | <100 |
| Lead | µg/L | Dissolved | -- | 0.54 | <0.5 | 0.533 | 0.695 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Lead | µg/L | Total | <5 | 6.44 | <0.5 | 4.4 | <0.5 | <0.5 | -- | <0.5 | 0.84 | 0.634 |
| Manganese | µg/L | Dissolved | -- | -- | 6.09 | 11.2 | 536 | 206 | -- | 55.4 | 43.1 | 8.06 |
| Manganese | µg/L | Total | -- | -- | 9.25 | 32.2 | 625 | 186 | -- | 56.3 | 44.9 | 19.2 |
| Mercury | µg/L | Dissolved | -- | -- | -- | -- | -- | <0.1 | -- | -- | -- | <0.25 |
| Mercury | µg/L | Total | <1 | -- | -- | -- | -- | <0.1 | -- | -- | -- | <0.25 |
| Molybdenum | µg/L | Dissolved | -- | -- | 6.39 | 7.04 | 60.1 | 54.3 | -- | 20.1 | 13.3 | 20.8 |
| Molybdenum | µg/L | Total | -- | -- | 10.1 | 6.67 | 57.4 | 53.5 | -- | 21.2 | 14.1 | 22.2 |
| Nickel | µg/L | Dissolved | -- | 10.5 | 4.58 | 6.09 | 49 | 12 | -- | 20 | 290 | 18 |
| Nickel | µg/L | Total | <5 | 13.3 | 6.95 | 10.9 | 67 | 11 | -- | 20 | 290 | 76 |
| Selenium | µg/L | Dissolved | -- | 6.57 | <5 | <5 | 4.98 | 5.73 | -- | 2.15 | 1.76 | <1 |
| Selenium | µg/L | Total | -- | 9.96 | <5 | <5 | 2.77 | 4.84 | -- | 2.46 | 1.85 | 1.44 |
| Silver | µg/L | Dissolved | -- | -- | <1 | <1 | <1 | <1 | -- | <1 | 1.87 | 3.21 |
| Silver | µg/L | Total | -- | -- | <1 | <1 | <1 | <1 | -- | <1 | 4.55 | 9.11 |
| Strontium | µg/L | Dissolved | -- | -- | 915 | 1,100 | 863 | 621 | -- | 478 | 810 | 387 |
| Strontium | µg/L | Total | -- | -- | 1,440 | 473 | 910 | 629 | -- | 532 | 829 | 457 |
| Thallium | µg/L | Dissolved | -- | -- | <1 | <1 | <1 | <1 | -- | <1 | <1 | <1 |
| Thallium | µg/L | Total | -- | -- | <1 | <1 | <1 | <1 | -- | <1 | <1 | <1 |

## TABLE C-2

## LYSIMETER ANALYTICAL RESULTS – BROADOUS SCHOOL

| | | | Sample Number / Date Sampled | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | B-LS-01 | | | | B-LS-02 | | | | | |
| **Constituent** | **Units[1]** | **Fraction** | **12/04/01** | **11/10/02** | **12/23/02** | **03/21/03** | **02/04/04** | **02/26/04** | **04/03/04** | **10/20/04** | **12/28/04** | **02/18/05** |
| Tin | µg/L | Dissolved | -- | -- | <1 | <1 | <1 | <1 | -- | <1 | <1 | <1 |
| Tin | µg/L | Total | -- | -- | 1,920 | 3.33 | <1 | <1 | -- | <1 | <1 | <1 |
| Titanium | µg/L | Dissolved | -- | -- | 1.41 | 1.49 | 10 | 8.26 | -- | 5.45 | 6.89 | 3.89 |
| Titanium | µg/L | Total | -- | -- | 2.2 | 7.18 | 10.3 | 8.61 | -- | 5.74 | 7.79 | 7.38 |
| Vanadium | µg/L | Dissolved | -- | -- | 5.9 | 4.68 | 8.71 | 6.99 | -- | 2.77 | 2.93 | 2.74 |
| Vanadium | µg/L | Total | -- | -- | 8.99 | 3.74 | 8.34 | 7.03 | -- | 2.97 | 2.77 | 2.97 |
| Zinc | µg/L | Dissolved | -- | 432 | 42.2 | 828 | 71.8 | 19.3 | -- | 8.87 | 22.7 | 6.91 |
| Zinc | µg/L | Total | <50 | 602 | 53.1 | 2,060 | 25.2 | 19.3 | -- | 11.1 | 25.9 | 14.7 |
| **Other Constituents** | | | | | | | | | | | | |
| Oil and Grease | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Perchlorate | µg/L | N/A | <4 | -- | -- | -- | -- | -- | <2 | <2 | <2 | <2 |
| N-Nitrosodimethylamine (NDMA) | ng/L | N/A | <3,000 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Glyphosate | µg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 1,4-Dioxane | µg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 1,2-Dibromo-3-chloropropane (DBCP) | µg/L | N/A | <0.01 | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| **Volatile Organic Compounds** | | | | | | | | | | | | |
| Methyl Bromide | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Methyl-t-Butyl Ether (MTBE) | µg/L | N/A | -- | <2.5 | -- | -- | <1 | <1 | -- | <1 | <1 | <1 |
| Benzene | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Toluene | µg/L | N/A | <0.5 | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Ethylbenzene | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| o-Xylene | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| p/m-Xylene | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Trichloroethylene (TCE) | µg/L | N/A | <0.5 | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Tetrachloroethylene (PCE) | µg/L | N/A | <0.5 | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 1,1,1,2-Tetrachloroethane | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 1,1,1-Trichloroethane | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 1,1,2,2-Tetrachloroethane | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 1,1,2-Trichloroethane | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloroethane | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloroethylene | µg/L | N/A | <0.5 | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloropropene | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 1,2,3-Trichlorobenzene | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 1,2,3-Trichloropropane (1,2,3-TCP) | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 1,2,4-Trichlorobenzene | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |

## TABLE C-2

## LYSIMETER ANALYTICAL RESULTS – BROADOUS SCHOOL

| | | | Sample Number / Date Sampled | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | B-LS-01 | | | | B-LS-02 | | | | | |
| **Constituent** | **Units[1]** | **Fraction** | **12/04/01** | **11/10/02** | **12/23/02** | **03/21/03** | **02/04/04** | **02/26/04** | **04/03/04** | **10/20/04** | **12/28/04** | **02/18/05** |
| 1,2,4-Trimethylbenzene | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 1,2-Dibromoethane | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 1,2-Dichlorobenzene | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 1,2-Dichloroethane | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 1,2-Dichloropropane | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 1,2-Trans-Dichloroethylene | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 1,3,5-Trimethylbenzene | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 1,3-Dichlorobenzene | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 1,3-Dichloropropane | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 1,4-Dichlorobenzene | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 2,2-Dichloropropane | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 2-Butanone (Methylethyl ketone) | µg/L | N/A | -- | 40 | -- | -- | <1 | <1 | -- | <1 | <1 | <1 |
| 2-Chlorotoluene | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 2-Hexanone | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 4-Chlorotoluene | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 4-Methyl-2-pentanone (MIBK) | µg/L | N/A | -- | <10 | -- | -- | <2 | <2 | -- | <2 | <2 | <2 |
| Acetone | µg/L | N/A | -- | <10 | -- | -- | 600 | <2 | -- | <2 | <2 | <2 |
| Acrylonitrile | µg/L | N/A | -- | <10 | -- | -- | <2 | <2 | -- | <2 | <2 | <2 |
| Allyl Chloride | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Bromobenzene | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Bromochloromethane | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Bromoform | µg/L | N/A | <0.5 | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Carbon disulfide | µg/L | N/A | -- | 5.6 | -- | -- | 5.6 | 2.3 | -- | <0.5 | <0.5 | 2.5 |
| Carbon Tetrachloride | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Chlorobenzene | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Chloroethane | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Chloroform | µg/L | N/A | <0.5 | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| cis-1,2-Dichloroethene | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| cis-1,3-Dichloropropene | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Dibromochloromethane | µg/L | N/A | <0.5 | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Dibromomethane | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Dichlorobromomethane | µg/L | N/A | <0.5 | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Dichlorodifluoromethane | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Diethyl Ether | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Diisopropyl Ether (DIPE) | µg/L | N/A | -- | -- | -- | -- | <2 | <2 | -- | <2 | <2 | <2 |
| Ethanol | µg/L | N/A | -- | -- | -- | -- | <100 | <100 | -- | <100 | <100 | <100 |
| Ethyl Methacrylate | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |

# TABLE C-2

## LYSIMETER ANALYTICAL RESULTS – BROADOUS SCHOOL

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | B-LS-01 | | | | B-LS-02 | | | | | |
| | | | 12/04/01 | 11/10/02 | 12/23/02 | 03/21/03 | 02/04/04 | 02/26/04 | 04/03/04 | 10/20/04 | 12/28/04 | 02/18/05 |
| Ethyl-t-Butyl Ether (ETBE) | µg/L | N/A | -- | -- | -- | -- | <2 | <2 | -- | <2 | <2 | <2 |
| Hexachloro-1,3-Butadiene | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Iodomethane | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Isopropylbenzene | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Methyl Chloride | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Methyl Methacrylate | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Methylene Chloride | µg/L | N/A | <0.5 | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | 0.93 |
| Naphthalene | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| n-Butylbenzene | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| n-Propylbenzene | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| p-Isopropyltoluene | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| sec-Butylbenzene | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Styrene | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| t-1,4-Dichloro-2-Butene | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Tert-Amyl-Methyl Ether (TAME) | µg/L | N/A | -- | -- | -- | -- | <2 | <2 | -- | <2 | <2 | <2 |
| Tert-Butyl Alcohol (TBA) | µg/L | N/A | -- | -- | -- | -- | 12 | <10 | -- | <10 | <10 | <10 |
| tert-Butylbenzene | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Tetrahydrofuran | µg/L | N/A | -- | 94 | -- | -- | <1 | <1 | -- | <1 | <1 | <1 |
| trans-1,3-Dichloropropene | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Trichlorofluoromethane | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Vinyl Chloride | µg/L | N/A | -- | <2.5 | -- | -- | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| **Semi-Volatile Organic Compounds** | | | | | | | | | | | | |
| NOT SAMPLED | µg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **Biological Parameters** | | | | | | | | | | | | |
| Heterotrophic Plate Count | CFU/mL | N/A | -- | -- | -- | 16,000 | -- | -- | -- | -- | -- | -- |
| Total Coliforms | MPN/100 mL | N/A | 90,000 | -- | -- | <1.1 | -- | -- | -- | -- | -- | -- |
| Fecal Coliform | MPN/100 mL | N/A | -- | -- | -- | <1.1 | -- | -- | -- | -- | -- | -- |
| E. coli | MPN/100 mL | N/A | -- | -- | -- | <1.1 | -- | -- | -- | -- | -- | -- |
| E. coli + Fecal Coliform | MPN/100 mL | N/A | 300 | -- | -- | -- | -- | -- | -- | -- | -- | -- |

-- indicates the constituent was not analyzed for. Analytes not detected are indicated with a "<" symbol; the associated numerical value is the detection limit.

1. Units of measure: mg/L = milligrams per liter, µg/L = micrograms per liter, µhmos/cm = microhmos per centimeter, NTU = Nephelometric Turbidity Unit.

2. In cases in which the filtered concentrations exceeded the total, the differences are considered by the laboratory statistically insignificant and can be attributed to the variability inherent with the analytical method.

## GROUNDWATER ANALYTICAL RESULTS – BROADOUS SCHOOL

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | B-MW-01 | | | | | | | | | | |
| | | | 10/10/01 | 01/02/02 | 10/08/02 | 10/07/03 | 06/04/04 | 10/15/04 | 03/05/05 | 10/31/01 | 12/05/01 | 10/08/02 | 11/12/02 |
| **General Monitoring Parameters** | | | | | | | | | | | | | |
| Alkalinity, Total (as $CaCO_3$) | mg/L | N/A | 292 | 116 | 350 | 330 | 540 | 320 | 340 | 360.4 | 332 | 350 | 350 |
| Bicarbonate (as $CaCO_3$) | mg/L | N/A | 356 | 141 | 350 | 330 | 540 | 320 | 340 | 440 | 405 | 350 | 350 |
| Bromide | mg/L | N/A | 0.12 | 0.073 | 0.13 | <0.1 | 0.12 | 0.12 | <0.1 | -- | 0.11 | <0.1 | <0.1 |
| Calcium | mg/L | Total | 84.2 | 130 | 140 | 140 | 126 | 130 | 137 | 176 | 128 | 137 | 144 |
| Carbonate (as $CaCO_3$) | mg/L | N/A | <2 | 0.578 | <1 | <1 | <1 | <1 | <1 | <2 | <2 | <1 | <1 |
| Chloride | mg/L | N/A | 41.89 | 87 | 24 | 24 | 22 | 24 | 25 | 28.28 | 27.6 | 23 | 22 |
| Chemical Oxygen Demand | mg/L | N/A | 32.37 | <5 | 5.1 | <10 | <5 | <5 | 5.1 | 51.3 | 120 | <5 | 46 |
| Fluoride | mg/L | N/A | 0.43 | 0.27 | 0.33 | 0.31 | 0.2 | 0.39 | 0.32 | 0.19 | 0.15 | 0.12 | 0.12 |
| Hardness (as $CaCO_3$) | mg/L | Total | 328 | 485 | 470 | 470 | 460 | 470 | 480 | 520 | 470 | 460 | 470 |
| Hydroxide (as $CaCO_3$) | mg/L | N/A | <2 | 0.01 | <1 | <1 | <1 | <1 | <1 | <2 | <2 | <1 | <1 |
| Magnesium | mg/L | Total | -- | 39 | 41.9 | 39.8 | 39.1 | 36.9 | 40.7 | 19.4 | 36.5 | 37.1 | 40.8 |
| MBAS (Surfactants) | mg/L | N/A | -- | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | -- | <0.05 | <0.1 | <0.1 |
| Nitrate (as N) | mg/L | N/A | 6.59 | 0.3 | 8.4 | 7.6 | 7.8 | 8.4 | 8.1 | 10.509 | 8.33 | 7.4 | 7.4 |
| Nitrite (as N) | mg/L | N/A | <0.03 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.03 | <0.03 | <0.1 | <0.1 |
| Total Kjeldahl Nitrogen | mg/L | Total | -- | 0.34 | | 0.14 | <0.1 | <0.5 | <0.5 | -- | -- | -- | -- |
| Carbon, Total Organic | mg/L | N/A | 2.7 | 1.3 | 1.4 | 1.2 | 1.6 | 2.5 | 1.3 | 1.55 | 2.1 | 1.4 | 1.6 |
| Carbon, Dissolved Organic | mg/L | N/A | -- | -- | 2.4 | 1.5 | 2.5 | 1.2 | 3.1 | -- | -- | 2.5 | 3.4 |
| Nitrogen, Organic | mg/L | N/A | 0.121 | 0.34 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.1 | <0.1 | <0.5 | <0.5 |
| Ammonia-Nitrogen | mg/L | Total | <0.1 | <0.05 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| pH | pH units | N/A | 7.68 | 7.8 | 7.41 | 7.22 | 7.39 | 7.16 | 7.15 | 7.83 | 7.79 | 7.12 | 7.01 |
| Phosphorus | mg/L | Dissolved | -- | -- | 0.11 | 0.079 | 0.066 | 0.068 | 0.089 | -- | -- | 0.085 | 0.052 |
| Phosphorus | mg/L | Total | -- | -- | 0.11 | 0.2 | 0.087 | 0.6 | 0.25 | -- | -- | 0.14 | 0.32 |
| Potassium | mg/L | Total | 10 | 9.3 | 7.15 | 6.98 | 6.74 | 7.15 | 7.00 | 7.89 | 7.8 | 7.45 | 9.35 |
| Sodium | mg/L | Total | 99 | 82 | 35.9 | 34.9 | 34 | 35.3 | 35.3 | 49.8 | 36.5 | 37.3 | 40.5 |
| Specific Conductance | µmhos/cm | N/A | 1,045 | 775 | 980 | 920 | 990 | 940 | 880 | 1340 | 984 | 980 | 990 |
| Sulfate | mg/L | N/A | 142 | 180 | 150 | 150 | 130 | 140 | 160 | 157.72 | 124 | 140 | 140 |
| Total Dissolved Solids | mg/L | N/A | 640 | 540 | 680 | 600 | 590 | 610 | 650 | 846 | 658 | 670 | 640 |
| Total Suspended Solids | mg/L | N/A | 2,548 | 45 | 3.3 | <1 | <1 | 8.4 | 12 | 721 | 186 | 2.2 | 630 |
| Turbidity | NTU | N/A | 1,130 | 16 | 3.3 | 1.1 | 0.68 | 5.7 | 5.4 | 265 | 166 | 2.4 | 220 |
| **Metals[2]** | | | | | | | | | | | | | |
| Aluminum | µg/L | Dissolved | -- | <0.025 | <50 | <50 | <50 | <25 | <25 | -- | -- | <50 | <50 |
| Aluminum | µg/L | Total | -- | 5 | 67 | <50 | <50 | 89.4 | 176 | -- | -- | 66.3 | 130 |
| Antimony | µg/L | Dissolved | -- | -- | <1 | <1 | <1 | <1 | <1 | -- | -- | <1 | <1 |
| Antimony | µg/L | Total | -- | <1 | <1 | <1 | <1 | <1 | <1 | -- | -- | <1 | <1 |

# TABLE C-3

## GROUNDWATER ANALYTICAL RESULTS – BROADOUS SCHOOL

| | | | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | B-MW-01 | | | | | | | | | | |
| Constituent | Units[1] | Fraction | 10/10/01 | 01/02/02 | 10/08/02 | 10/07/03 | 06/04/04 | 10/15/04 | 03/05/05 | 10/31/01 | 12/05/01 | 10/08/02 | 11/12/02 |
| Arsenic | µg/L | Dissolved | <5 | 1 | <1 | <0.5 | <0.5 | <0.5 | 0.765 | -- | -- | <1 | <1 |
| Arsenic | µg/L | Total | <5 | 3.5 | <1 | <0.5 | <0.5 | <0.5 | 0.955 | <5 | <5 | <1 | <1 |
| Barium | µg/L | Dissolved | -- | 82 | 174 | 202 | 218 | 211 | 226 | -- | -- | 255 | 216 |
| Barium | µg/L | Total | -- | 170 | 198 | 213 | 222 | 210 | 238 | -- | -- | 243 | 252 |
| Beryllium | µg/L | Dissolved | -- | -- | <1 | <1 | <1 | <1 | <1 | -- | -- | <1 | <1 |
| Beryllium | µg/L | Total | -- | <1 | <1 | <1 | <1 | <1 | <1 | -- | -- | <1 | <1 |
| Boron | µg/L | Dissolved | -- | 150 | 111 | 147 | 143 | 137 | 111 | 282 | 360 | 150 | 231 |
| Boron | µg/L | Total | 156 | 190 | 110 | 148 | 144 | 135 | 121 | 328 | 405 | 176 | 234 |
| Cadmium | µg/L | Dissolved | -- | <0.5 | <0.5 | <0.2 | <0.2 | <0.2 | <0.2 | -- | -- | <0.5 | <0.5 |
| Cadmium | µg/L | Total | <1 | 0.63 | <0.5 | <0.2 | <0.2 | <0.2 | <0.2 | <1 | <1 | <0.5 | <0.5 |
| Chromium | µg/L | Dissolved | 21 | <1 | 1.68 | 5.44 | 2.52 | 2.51 | <1 | 11.2 | -- | 1.08 | <1 |
| Chromium | µg/L | Total | 56.8 | 13 | 8.48 | 6.24 | 3.17 | 3.73 | 3.74 | 20.6 | <10 | 4.06 | 14.3 |
| Chromium, Hexavalent | µg/L | Dissolved | <10 | 0.1 | 1.7 | 1.6 | 1.7 | 1.5 | 1.2 | <10 | <10 | 0.79 | 1.1 |
| Cobalt | µg/L | Dissolved | -- | -- | <1 | <1 | <1 | <1 | <1 | -- | -- | <1 | <1 |
| Cobalt | µg/L | Total | -- | -- | <1 | <1 | <1 | <1 | <1 | -- | -- | <1 | 1.35 |
| Copper | µg/L | Dissolved | 5.27 | 2.6 | 4.17 | 1.36 | <1 | <1 | <1 | 87 | <5 | 5.14 | 1.26 |
| Copper | µg/L | Total | 73.1 | 14 | 4.77 | 1.42 | <1 | <1 | <1 | 87 | 14.3 | 4.56 | 9.51 |
| Iron | µg/L | Dissolved | <0.1 | <0.1 | -- | -- | <100 | <100 | <100 | -- | -- | -- | -- |
| Iron | µg/L | Total | 32.2 | 10 | -- | <100 | <100 | <100 | 233 | -- | -- | -- | -- |
| Lead | µg/L | Dissolved | <5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 9.56 | -- | <0.5 | <0.5 |
| Lead | µg/L | Total | 34.7 | 6.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 18 | <5 | <0.5 | <0.5 |
| Manganese | µg/L | Dissolved | 73 | <2 | 3.43 | 3.41 | <1 | <1 | 1.28 | -- | -- | 4.22 | 2.44 |
| Manganese | µg/L | Total | 836 | 190 | 7.47 | 3.85 | 1.79 | 2.87 | 8.61 | -- | -- | 5.73 | 6.98 |
| Mercury | µg/L | Dissolved | -- | -- | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | -- | -- | <0.1 | -- |
| Mercury | µg/L | Total | <1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <1 | <0.1 | <0.1 |
| Molybdenum | µg/L | Dissolved | -- | -- | 2.22 | 3.36 | 3.14 | 3.34 | 3.54 | -- | -- | 2.21 | 1.31 |
| Molybdenum | µg/L | Total | -- | -- | 4.39 | 3.47 | 3.23 | 3.42 | 3.45 | -- | -- | 2.08 | 2.97 |
| Nickel | µg/L | Dissolved | <5 | <5 | 2.89 | 5.7 | 3.8 | 5 | 5.3 | 18.8 | <5 | 2.44 | 1.95 |
| Nickel | µg/L | Total | 34.7 | 13 | 4.7 | 5.6 | 3.8 | 5.1 | 4.8 | 22.2 | 6.02 | 2.8 | 8.5 |
| Selenium | µg/L | Dissolved | -- | -- | <5 | <1 | <1 | 1.41 | 1.06 | -- | -- | <5 | <5 |
| Selenium | µg/L | Total | -- | <5 | <5 | <1 | <1 | 1.75 | 1.27 | -- | -- | <5 | <5 |
| Silver | µg/L | Dissolved | -- | -- | <1 | <1 | <1 | <1 | <1 | -- | -- | <1 | <1 |
| Silver | µg/L | Total | -- | <0.5 | <1 | <1 | <1 | 1.22 | <1 | -- | -- | <1 | <1 |
| Strontium | µg/L | Dissolved | -- | -- | 698 | 859 | 860 | 814 | 906 | -- | -- | 897 | 867 |
| Strontium | µg/L | Total | -- | -- | 811 | 882 | 868 | 813 | 951 | -- | -- | 882 | 918 |
| Thallium | µg/L | Dissolved | -- | -- | <1 | <1 | <1 | <1 | <1 | -- | -- | <1 | <1 |

## TABLE C-3

## GROUNDWATER ANALYTICAL RESULTS – BROADOUS SCHOOL

| Constituent | Units$^1$ | Fraction | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | B-MW-01 | | | | | | | | | | |
| | | | 10/10/01 | 01/02/02 | 10/08/02 | 10/07/03 | 06/04/04 | 10/15/04 | 03/05/05 | 10/31/01 | 12/05/01 | 10/08/02 | 11/12/02 |
| Thallium | µg/L | Total | -- | <1 | <1 | <1 | <1 | <1 | <1 | -- | -- | <1 | <1 |
| Tin | µg/L | Dissolved | -- | -- | <1 | 2.45 | <1 | <1 | <1 | -- | -- | <1 | <1 |
| Tin | µg/L | Total | -- | -- | <1 | 1.42 | <1 | <1 | <1 | -- | -- | <1 | <1 |
| Titanium | µg/L | Dissolved | -- | -- | <1 | 2.15 | 2.51 | 1.98 | 2.88 | -- | -- | <1 | <1 |
| Titanium | µg/L | Total | -- | -- | 5.3 | 3.17 | 4.73 | 6 | 18.2 | -- | -- | 5.42 | 8.69 |
| Vanadium | µg/L | Dissolved | -- | -- | 2.15 | 3.65 | 2.22 | 2.18 | 3.86 | -- | -- | 2.41 | 1.97 |
| Vanadium | µg/L | Total | -- | -- | 2.82 | 3.77 | 2.14 | 2.02 | 4.58 | -- | -- | 2.31 | 2.88 |
| Zinc | µg/L | Dissolved | 412 | 46 | 42.8 | 19.9 | 6.54 | 13.6 | <5 | 77.5 | -- | 52.8 | 27.3 |
| Zinc | µg/L | Total | 950 | 150 | 42.5 | 21.4 | 5.69 | 19.7 | 7.44 | 88.9 | <50 | 41.6 | 76.8 |
| **Other Constituents** | | | | | | | | | | | | | |
| Oil and Grease | mg/L | N/A | 1.3 | <3 | <1 | <1 | <1 | <1 | <1 | 1.6 | 2.9 | <1 | <1 |
| Perchlorate | µg/L | N/A | <4 | <4 | <2 | <2 | <2 | <2 | <2 | <4 | <4 | <2 | <2 |
| N-Nitrosodimethylamine (NDMA) | ng/L | N/A | <3,000 | 26 | <2 | <10 | <10 | -- | -- | <3,000 | <3,000 | <2 | <2 |
| Glyphosate | µg/L | N/A | -- | -- | <6 | -- | -- | -- | -- | -- | -- | <6 | -- |
| 1,4-Dioxane | µg/L | N/A | -- | -- | <2 | -- | -- | -- | -- | -- | -- | <2 | <2 |
| 1,2-Dibromo-3-chloropropane (DBCP) | µg/L | N/A | <0.01 | <0.01 | <0.01 | <0.5 | <0.5 | <0.5 | <0.5 | <0.01 | <0.01 | <0.01 | <0.02 |
| **Volatile Organic Compounds** | | | | | | | | | | | | | |
| Methyl Bromide | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| Methyl-t-Butyl Ether (MTBE) | µg/L | N/A | -- | -- | <0.5 | <0.5 | <1 | <1 | <1 | -- | -- | <0.5 | <0.5 |
| Benzene | µg/L | N/A | -- | -- | 2.3 | 0.95 | <0.5 | <0.5 | <0.5 | -- | -- | 1.6 | <0.5 |
| Toluene | µg/L | N/A | <0.5 | <0.5 | 6.4 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 5.2 | 1.3 |
| Ethylbenzene | µg/L | N/A | -- | -- | 1 | 1.2 | <0.5 | <0.5 | <0.5 | -- | -- | 0.97 | <0.5 |
| o-Xylene | µg/L | N/A | -- | -- | 8.4 | 3.4 | <0.5 | <0.5 | <0.5 | -- | -- | 8.2 | 1.2 |
| p/m-Xylene | µg/L | N/A | -- | -- | 5.7 | 3.9 | <0.5 | <0.5 | <0.5 | -- | -- | 5.2 | 2.1 |
| Trichloroethylene (TCE) | µg/L | N/A | <0.5 | <0.5 | 2 | 1.1 | 0.68 | 0.64 | 0.64 | <0.5 | <0.5 | 1.4 | <0.5 |
| Tetrachloroethylene (PCE) | µg/L | N/A | <0.5 | <0.5 | 44 | 2.4 | 2.1 | 2.6 | 2.3 | <0.5 | 1.2 | 40 | 1.8 |
| 1,1,1,2-Tetrachloroethane | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| 1,1,1-Trichloroethane | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| 1,1,2,2-Tetrachloroethane | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | 0.54 |
| 1,1,2-Trichloroethane | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| 1,1-Dichloroethane | µg/L | N/A | -- | -- | 0.8 | 1.1 | 1.1 | 1.1 | 1.2 | -- | -- | <0.5 | <0.5 |
| 1,1-Dichloroethylene | µg/L | N/A | <0.5 | <0.5 | 3.3 | 4.7 | 4.6 | 4.2 | 5.2 | 1.3 | -- | 1.2 | 0.98 |
| 1,1-Dichloropropene | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| 1,2,3-Trichlorobenzene | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |

# TABLE C-3

## GROUNDWATER ANALYTICAL RESULTS – BROADOUS SCHOOL

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | B-MW-01 | | | | | | | | | | |
| | | | 10/10/01 | 01/02/02 | 10/08/02 | 10/07/03 | 06/04/04 | 10/15/04 | 03/05/05 | 10/31/01 | 12/05/01 | 10/08/02 | 11/12/02 |
| 1,2,3-Trichloropropane (1,2,3-TCP) | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| 1,2,4-Trichlorobenzene | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| 1,2,4-Trimethylbenzene | µg/L | N/A | -- | -- | 0.98 | 1.1 | <0.5 | <0.5 | <0.5 | -- | -- | 1 | <0.5 |
| 1,2-Dibromoethane | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| 1,2-Dichlorobenzene | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| 1,2-Dichloroethane | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| 1,2-Dichloropropane | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| 1,2-Trans-Dichloroethylene | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| 1,3,5-Trimethylbenzene | µg/L | N/A | -- | -- | 1.1 | 0.61 | <0.5 | <0.5 | <0.5 | -- | -- | 1.3 | <0.5 |
| 1,3-Dichlorobenzene | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| 1,3-Dichloropropane | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| 1,4-Dichlorobenzene | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| 2,2-Dichloropropane | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| 2-Butanone (Methylethyl ketone) | µg/L | N/A | -- | -- | <1 | <2 | <1 | <1 | 1 | -- | -- | <1 | <1 |
| 2-Chlorotoluene | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| 2-Hexanone | µg/L | N/A | -- | -- | <0.5 | <5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| 4-Chlorotoluene | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| 4-Methyl-2-pentanone (MIBK) | µg/L | N/A | -- | -- | <2 | <5 | <2 | <2 | <2 | -- | -- | <2 | <2 |
| Acetone | µg/L | N/A | -- | -- | <2 | <10 | <2 | <2 | 26 | -- | -- | <2 | <2 |
| Acrylonitrile | µg/L | N/A | -- | -- | <2 | <2 | <2 | <2 | <2 | -- | -- | <2 | <2 |
| Allyl Chloride | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| Bromobenzene | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| Bromochloromethane | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| Bromoform | µg/L | N/A | <0.5 | 3.8 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Carbon disulfide | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| Carbon Tetrachloride | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| Chlorobenzene | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| Chloroethane | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| Chloroform | µg/L | N/A | <0.5 | 5.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.5 | <0.5 | <0.5 | <0.5 |
| cis-1,2-Dichloroethene | µg/L | N/A | -- | -- | <0.5 | 0.69 | 0.65 | 0.57 | 0.65 | -- | -- | <0.5 | <0.5 |
| cis-1,3-Dichloropropene | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| Dibromochloromethane | µg/L | N/A | <0.5 | 11 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 1.1 | <0.5 | <0.5 | <0.5 |
| Dibromomethane | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| Dichlorobromomethane | µg/L | N/A | <0.5 | 8.6 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.6 J | <0.5 | <0.5 | <0.5 |
| Dichlorodifluoromethane | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| Diethyl Ether | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |

# TABLE C-3

## GROUNDWATER ANALYTICAL RESULTS – BROADOUS SCHOOL

| | | | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | B-MW-01 | | | | | | | | | | |
| **Constituent** | **Units[1]** | **Fraction** | **10/10/01** | **01/02/02** | **10/08/02** | **10/07/03** | **06/04/04** | **10/15/04** | **03/05/05** | **10/31/01** | **12/05/01** | **10/08/02** | **11/12/02** |
| Diisopropyl Ether (DIPE) | µg/L | N/A | -- | -- | -- | -- | <2 | <2 | <2 | -- | -- | -- | -- |
| Ethanol | µg/L | N/A | -- | -- | -- | -- | <100 | <100 | <100 | -- | -- | -- | -- |
| Ethyl Methacrylate | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| Ethyl-t-Butyl Ether (ETBE) | µg/L | N/A | -- | -- | -- | -- | <2 | <2 | <2 | -- | -- | -- | -- |
| Hexachloro-1,3-Butadiene | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| Iodomethane | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| Isopropylbenzene | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| Methyl Chloride | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| Methyl Methacrylate | µg/L | N/A | -- | -- | <0.5 | <5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| Methylene Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| Naphthalene | µg/L | N/A | -- | -- | <10 | 1.1 | <0.5 | <0.5 | <0.5 | -- | -- | <10 | <0.5 |
| n-Butylbenzene | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| n-Propylbenzene | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| p-Isopropyltoluene | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| sec-Butylbenzene | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| Styrene | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| t-1,4-Dichloro-2-Butene | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| Tert-Amyl-Methyl Ether (TAME) | µg/L | N/A | -- | -- | -- | -- | <2 | <2 | <2 | -- | -- | -- | -- |
| Tert-Butyl Alcohol (TBA) | µg/L | N/A | -- | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- |
| tert-Butylbenzene | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| Tetrahydrofuran | µg/L | N/A | -- | -- | <1 | <5 | <1 | <1 | <1 | -- | -- | <1 | <1 |
| trans-1,3-Dichloropropene | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| Trichlorofluoromethane | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| Vinyl Chloride | µg/L | N/A | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 | <0.5 |
| **Semi-Volatile Organic Compounds** | | | | | | | | | | | | | |
| 1-Methylnaphthalene | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| 2,4,5-Trichlorophenol | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| 2,4,6-Trichlorophenol | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| 2,4-Dichlorophenol | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| 2,4-Dimethylphenol | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| 2,4-Dinitrophenol | µg/L | N/A | -- | -- | <50 | <50 | <50 | -- | -- | -- | -- | <50 | <50 |
| 2,4-Dinitrotoluene | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| 2,6-Dinitrotoluene | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| 2-Chloronaphthalene | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| 2-Chlorophenol | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |

# TABLE C-3

## GROUNDWATER ANALYTICAL RESULTS – BROADOUS SCHOOL

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | B-MW-01 | | | | | | | | | | |
| | | | 10/10/01 | 01/02/02 | 10/08/02 | 10/07/03 | 06/04/04 | 10/15/04 | 03/05/05 | 10/31/01 | 12/05/01 | 10/08/02 | 11/12/02 |
| 2-Methylnaphthalene | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| 2-Methylphenol (o-Cresol) | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| 2-Nitroaniline | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| 2-Nitrophenol | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| 3,3'-Dichlorobenzidine | µg/L | N/A | -- | -- | <25 | <25 | <25 | -- | -- | -- | -- | <25 | <25 |
| 3-Nitroaniline | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| 4,6-Dinitro-2-Methylphenol | µg/L | N/A | -- | -- | <50 | <50 | <50 | -- | -- | -- | -- | <50 | <50 |
| 4-Bromophenyl-Phenyl Ether | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| 4-Chloro-3-Methylphenol | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| 4-Chloroaniline | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| 4-Chlorophenyl-Phenyl Ether | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| 4-Methylphenol (p-Cresol) | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| 4-Nitroaniline | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| 4-Nitrophenol | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| Acenaphthene | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| Acenaphthylene | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| Aniline | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| Anthracene | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| Azobenzene | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| Benzidine | µg/L | N/A | -- | -- | <50 | <50 | <50 | -- | -- | -- | -- | <50 | <50 |
| Benzo (a) Anthracene | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| Benzo (a) Pyrene | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| Benzo (b) Fluoranthene | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| Benzo (g,h,i) Perylene | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| Benzo (k) Fluoranthene | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| Benzoic acid | µg/L | N/A | -- | -- | <50 | <50 | <50 | -- | -- | -- | -- | <50 | <50 |
| Benzyl alcohol | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| Bis(2-Chloroethoxy) Methane | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| Bis(2-Chloroethyl) Ether | µg/L | N/A | -- | -- | <25 | <25 | <25 | -- | -- | -- | -- | <25 | <25 |
| Bis(2-Chloroisopropyl) Ether | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| Bis(2-Ethylhexyl) Phthalate | µg/L | N/A | 4.8 | 0.7 | 150 | <10 | <10 | -- | -- | 74.3 | <3 | <10 | <10 |
| Butyl Benzyl Phthalate | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| Chrysene | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| Dibenz (a,h) Anthracene | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| Dibenzofuran | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| Diethyl Phthalate | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |

# TABLE C-3

## GROUNDWATER ANALYTICAL RESULTS – BROADOUS SCHOOL

| | | | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | B-MW-01 | | | | | | | | | | |
| Constituent | Units[1] | Fraction | 10/10/01 | 01/02/02 | 10/08/02 | 10/07/03 | 06/04/04 | 10/15/04 | 03/05/05 | 10/31/01 | 12/05/01 | 10/08/02 | 11/12/02 |
| Dimethyl Phthalate | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| Di-n-Butyl Phthalate | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| Di-n-Octyl Phthalate | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| Fluoranthene | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| Fluorene | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| Hexachlorobenzene | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| Hexachlorocyclopentadiene | µg/L | N/A | -- | -- | <25 | <25 | <25 | -- | -- | -- | -- | <25 | <25 |
| Hexachloroethane | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| Indeno (1,2,3-c,d) Pyrene | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| Isophorone | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| Nitrobenzene | µg/L | N/A | -- | -- | <25 | <25 | <25 | -- | -- | -- | -- | <25 | <25 |
| N-Nitroso-di-n-propylamine | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| N-Nitrosodiphenylamino | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| Pentachlorophenol | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| Phenanthrene | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| Phenol | µg/L | N/A | -- | <5 | <10 | <10 | <10 | -- | -- | -- | <1 | <10 | <10 |
| Pyrene | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| Pyridine | µg/L | N/A | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 | <10 |
| **Biological Parameters** | | | | | | | | | | | | | |
| Heterotrophic Plate Count | CFU/mL | N/A | >5,700 | 41,000 | 49,000 | -- | -- | -- | -- | >5,700 | >5,700 | 51,000 | 72,000 |
| Total Coliforms | MPN/100 mL | N/A | 12 | 30,000 | 23 | -- | -- | -- | -- | 17 | 11,000 | 2.2 | <1.1 |
| Fecal Coliform | MPN/100 mL | N/A | -- | -- | 23 | -- | -- | -- | -- | -- | -- | 1.1 | <1.1 |
| E. coli | MPN/100 mL | N/A | -- | -- | 6.9 | -- | -- | -- | -- | -- | -- | <1.1 | <1.1 |
| E. coli + Fecal Coliform | MPN/100 mL | N/A | <2 | 25 | -- | -- | -- | -- | -- | <2 | <2 | -- | -- |

-- indicates the constituent was not analyzed for. Analytes not detected are indicated with a "<" symbol; the associated numerical value is the detection limit.

1. Units of measure: mg/L = milligrams per liter, µg/L = micrograms per liter, µhmos/cm = microhmos per centimeter, NTU = Nephelometric Turbidity Unit.
2. In cases in which the filtered concentrations exceeded the total, the differences are considered by the laboratory statistically insignificant and can be attributed to the variability inherent with the analytical method.

## TABLE C-3

## GROUNDWATER ANALYTICAL RESULTS – BROADOUS SCHOOL

| Constituent | Units[1] | Fraction | B-MW-02 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | 02/18/03 | 10/07/03 | 02/13/04 | 06/04/04 | 10/15/04 | 12/30/04 | 03/05/05 |
| **General Monitoring Parameters** | | | | | | | | | |
| Alkalinity, Total (as $CaCO_3$) | mg/L | N/A | 350 | 350 | 340 | 340 | 350 | 330 | 320 |
| Bicarbonate (as $CaCO_3$) | mg/L | N/A | 350 | 350 | 340 | 340 | 350 | 330 | 320 |
| Bromide | mg/L | N/A | <0.1 | <0.1 | <0.1 | 0.1 | <0.1 | <0.1 | <0.1 |
| Calcium | mg/L | Total | 154 | 144 | 94 | 128 | 126 | 130 | 131 |
| Carbonate (as $CaCO_3$) | mg/L | N/A | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Chloride | mg/L | N/A | 24 | 22 | 19 | 19 | 20 | 20 | 21 |
| Chemical Oxygen Demand | mg/L | N/A | 49 | <10 | 5 | 13 | <5 | 23 | 5.1 |
| Fluoride | mg/L | N/A | 0.23 | 0.21 | 0.16 | <0.1 | 0.28 | 0.23 | 0.19 |
| Hardness (as $CaCO_3$) | mg/L | Total | 530 | 460 | 460 | 450 | 460 | 450 | 460 |
| Hydroxide (as $CaCO_3$) | mg/L | N/A | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Magnesium | mg/L | Total | 45 | 37.4 | 26.9 | 35.1 | 32.9 | 35.5 | 35.5 |
| MBAS (Surfactants) | mg/L | N/A | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Nitrate (as N) | mg/L | N/A | 8.1 | 6.6 | 5.6 | 6.4 | 6.6 | 6.8 | 6.3 |
| Nitrite (as N) | mg/L | N/A | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total Kjeldahl Nitrogen | mg/L | Total | -- | 0.28 | 0.35 | <0.1 | <0.5 | <0.5 | <0.5 |
| Carbon, Total Organic | mg/L | N/A | 1.5 | 1.5 | 9.5 | 1.8 | 2.7 | 1.5 | 1.5 |
| Carbon, Dissolved Organic | mg/L | N/A | 1.3 | 1.7 | 10 | 2.7 | 1.2 | 2.9 | 3.3 |
| Nitrogen, Organic | mg/L | N/A | 0.65 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Ammonia-Nitrogen | mg/L | Total | 0.33 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| pH | pH units | N/A | 7.28 | 7.03 | 7.1 | 7.1 | 6.94 | 7.09 | 7.1 |
| Phosphorus | mg/L | Dissolved | 0.072 | 0.082 | 0.061 | 0.047 | <0.03 | 0.27 | 0.074 |
| Phosphorus | mg/L | Total | 19 | 0.21 | 0.067 | 0.64 | 0.56 | 1.3 | 0.34 |
| Potassium | mg/L | Total | 14.2 | 7.75 | 5.94 | 7.23 | 7.80 | 7.56 | 7.31 |
| Sodium | mg/L | Total | 37.4 | 39 | 27.4 | 38.5 | 37.6 | 37.4 | 34.1 |
| Specific Conductance | µmhos/cm | N/A | 960 | 920 | 920 | 980 | 910 | 930 | 880 |
| Sulfate | mg/L | N/A | 140 | 150 | 140 | 140 | 130 | 130 | 140 |
| Total Dissolved Solids | mg/L | N/A | 640 | 600 | 660 | 600 | 600 | 570 | 610 |
| Total Suspended Solids | mg/L | N/A | 2,100 | <1 | 110 | 3.9 | 1.4 | 33 | 13 |
| Turbidity | NTU | N/A | 1,000 | 5.3 | 28 | 2.2 | 2.1 | 17 | 5.6 |
| **Metals[2]** | | | | | | | | | |
| Aluminum | µg/L | Dissolved | <50 | <50 | <50 | <50 | <25 | <25 | <25 |
| Aluminum | µg/L | Total | 17,900 | 103 | 3,650 | <50 | <25 | 378 | 171 |
| Antimony | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Antimony | µg/L | Total | <1 | <1 | <1 | <1 | <1 | <1 | <1 |

## TABLE C-3

## GROUNDWATER ANALYTICAL RESULTS – BROADOUS SCHOOL

| Constituent | Units[1] | Fraction | B-MW-02 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | 02/18/03 | 10/07/03 | 02/13/04 | 06/04/04 | 10/15/04 | 12/30/04 | 03/05/05 |
| Arsenic | µg/L | Dissolved | <1 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 1.29 |
| Arsenic | µg/L | Total | 2.86 | <0.5 | 0.613 | <0.5 | <0.5 | <0.5 | 1.1 |
| Barium | µg/L | Dissolved | 255 | 249 | 263 | 236 | 241 | 240 | 248 |
| Barium | µg/L | Total | 608 | 248 | 314 | 258 | 241 | 255 | 253 |
| Beryllium | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Beryllium | µg/L | Total | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Boron | µg/L | Dissolved | 123 | 224 | 217 | 213 | 212 | 209 | 170 |
| Boron | µg/L | Total | 180 | 225 | 218 | 211 | 205 | 208 | 178 |
| Cadmium | µg/L | Dissolved | <0.5 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Cadmium | µg/L | Total | <0.5 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Chromium | µg/L | Dissolved | 1.49 | 2.22 | 1.67 | 1.76 | 1.9 | 1.95 | <1 |
| Chromium | µg/L | Total | 38 | 5.19 | 13.6 | 2.22 | 2.61 | 3.76 | 1.14 |
| Chromium, Hexavalent | µg/L | Dissolved | 0.92 | 0.72 | 0.85 | 0.91 | 0.55 | 0.65 | 0.65 |
| Cobalt | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Cobalt | µg/L | Total | 18.7 | <1 | 2.25 | <1 | <1 | <1 | <1 |
| Copper | µg/L | Dissolved | 4.01 | 1.46 | 1.2 | <1 | <1 | <1 | <1 |
| Copper | µg/L | Total | 31.6 | 1.89 | 5.02 | <1 | <1 | 1.06 | <1 |
| Iron | µg/L | Dissolved | -- | -- | 113 | <100 | <100 | <100 | <100 |
| Iron | µg/L | Total | -- | 280 | 4,490 | <100 | <100 | 508 | 208 |
| Lead | µg/L | Dissolved | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Lead | µg/L | Total | 30.4 | 0.777 | 2.21 | <0.5 | <0.5 | 0.599 | <0.5 |
| Manganese | µg/L | Dissolved | 2.45 | 2.29 | 2.09 | <1 | 1.4 | <1 | <1 |
| Manganese | µg/L | Total | 725 | 5.54 | 79.2 | 1.31 | 1.6 | 13.3 | 4.83 |
| Mercury | µg/L | Dissolved | <0.1 | <0.1 | 0.109 | <0.1 | <0.1 | <0.1 | <0.1 |
| Mercury | µg/L | Total | 0.125 | <0.1 | 0.228 | <0.1 | <0.1 | <0.1 | <0.1 |
| Molybdenum | µg/L | Dissolved | 1.62 | 1.36 | 1.76 | 1.48 | 1.53 | 1.53 | 1.23 |
| Molybdenum | µg/L | Total | 1.43 | 1.42 | 2.54 | 1.25 | 1.51 | 1.6 | 1.35 |
| Nickel | µg/L | Dissolved | 5.96 | 4.7 | 6.9 | 4 | 4.5 | 3.9 | 3 |
| Nickel | µg/L | Total | 29 | 5.2 | 12 | 3.3 | 4.9 | 4.2 | 3.4 |
| Selenium | µg/L | Dissolved | <5 | <1 | <1 | 1.38 | 1.04 | <1 | <1 |
| Selenium | µg/L | Total | <5 | <1 | <1 | 1.69 | 1.1 | <1 | <1 |
| Silver | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Silver | µg/L | Total | <1 | <1 | <1 | <1 | <1 | 3.04 | <1 |
| Strontium | µg/L | Dissolved | 870 | 928 | 953 | 948 | 858 | 876 | 950 |
| Strontium | µg/L | Total | 860 | 932 | 1,010 | 941 | 859 | 897 | 952 |
| Thallium | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | <1 |

## TABLE C-3

## GROUNDWATER ANALYTICAL RESULTS – BROADOUS SCHOOL

| Constituent | Units[1] | Fraction | B-MW-02 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | 02/18/03 | 10/07/03 | 02/13/04 | 06/04/04 | 10/15/04 | 12/30/04 | 03/05/05 |
| Thallium | µg/L | Total | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Tin | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Tin | µg/L | Total | 1.66 | <1 | <1 | <1 | <1 | <1 | <1 |
| Titanium | µg/L | Dissolved | 1.66 | 2.06 | 2.89 | 3.59 | 2.23 | 3.4 | 2.74 |
| Titanium | µg/L | Total | 541 | 8.97 | 205 | 5.75 | 4.28 | 36.6 | 16.6 |
| Vanadium | µg/L | Dissolved | 2.55 | 2.76 | 2.21 | 2.37 | 1.97 | 2.2 | 3.7 |
| Vanadium | µg/L | Total | 40.8 | 3.29 | 9.25 | 2.09 | 1.75 | 3.01 | 3.85 |
| Zinc | µg/L | Dissolved | 39.3 | 21.4 | 17.4 | 6.51 | 34.3 | <5 | <5 |
| Zinc | µg/L | Total | 157 | 25.6 | 28.5 | 6.51 | 41.9 | <5 | <5 |
| **Other Constituents** | | | | | | | | | |
| Oil and Grease | mg/L | N/A | 5.7 | <1 | <1 | <1 | <1 | <1 | <1 |
| Perchlorate | µg/L | N/A | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| N-Nitrosodimethylamine (NDMA) | ng/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| Glyphosate | µg/L | N/A | <6 | -- | -- | -- | -- | -- | -- |
| 1,4-Dioxane | µg/L | N/A | <2 | -- | -- | -- | -- | -- | -- |
| 1,2-Dibromo-3-chloropropane (DBCP) | µg/L | N/A | <0.02 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Volatile Organic Compounds** | | | | | | | | | |
| Methyl Bromide | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl-t-Butyl Ether (MTBE) | µg/L | N/A | <0.5 | <0.5 | <1 | <1 | <1 | <1 | <1 |
| Benzene | µg/L | N/A | <0.5 | 0.87 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Toluene | µg/L | N/A | 2.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethylbenzene | µg/L | N/A | 1 | 1.1 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| o-Xylene | µg/L | N/A | 2.3 | 3.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| p/m-Xylene | µg/L | N/A | 4.1 | 3.8 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Trichloroethylene (TCE) | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Tetrachloroethylene (PCE) | µg/L | N/A | 1.3 | 1.3 | 1.2 | 1.3 | 1.4 | 1.5 | 1.5 |
| 1,1,1,2-Tetrachloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,1-Trichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2,2-Tetrachloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2-Trichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloroethylene | µg/L | N/A | 1.1 | 1.3 | 1.3 | 1.7 | 1.5 | 1.7 | 1.7 |
| 1,1-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,3-Trichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

## TABLE C-3

## GROUNDWATER ANALYTICAL RESULTS – BROADOUS SCHOOL

| | | | B-MW-02 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Constituent | Units[1] | Fraction | 02/18/03 | 10/07/03 | 02/13/04 | 06/04/04 | 10/15/04 | 12/30/04 | 03/05/05 |
| 1,2,3-Trichloropropane (1,2,3-TCP) | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,4-Trichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,4-Trimethylbenzene | µg/L | N/A | 0.64 | 1 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dibromoethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Trans-Dichloroethylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3,5-Trimethylbenzene | µg/L | N/A | <0.5 | 0.55 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,4-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2,2-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Butanone (Methylethyl ketone) | µg/L | N/A | <1 | <2 | <1 | <1 | <1 | <1 | <1 |
| 2-Chlorotoluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Hexanone | µg/L | N/A | <0.5 | <5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 4-Chlorotoluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 4-Methyl-2-pentanone (MIBK) | µg/L | N/A | <2 | <5 | <2 | <2 | <2 | <2 | <2 |
| Acetone | µg/L | N/A | <2 | <10 | <2 | <2 | <2 | <2 | 2.7 |
| Acrylonitrile | µg/L | N/A | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Allyl Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromochloromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromoform | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Carbon disulfide | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Carbon Tetrachloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chloroform | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| cis-1,2-Dichloroethene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| cis-1,3-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dibromochloromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dibromomethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dichlorobromomethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dichlorodifluoromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Diethyl Ether | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

# TABLE C-3

## GROUNDWATER ANALYTICAL RESULTS – BROADOUS SCHOOL

| Constituent | Units[1] | Fraction | B-MW-02 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | 02/18/03 | 10/07/03 | 02/13/04 | 06/04/04 | 10/15/04 | 12/30/04 | 03/05/05 |
| Diisopropyl Ether (DIPE) | µg/L | N/A | -- | -- | <2 | <2 | <2 | <2 | <2 |
| Ethanol | µg/L | N/A | -- | -- | <100 | <100 | <100 | <100 | <100 |
| Ethyl Methacrylate | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethyl-t-Butyl Ether (ETBE) | µg/L | N/A | -- | -- | <2 | <2 | <2 | <2 | <2 |
| Hexachloro-1,3-Butadiene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Iodomethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Isopropylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl Methacrylate | µg/L | N/A | <0.5 | <5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methylene Chloride | µg/L | N/A | <0.5 | <2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Naphthalene | µg/L | N/A | <0.5 | 1.1 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| n-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| n-Propylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| p-Isopropyltoluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| sec-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Styrene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| t-1,4-Dichloro-2-Butene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Tert-Amyl-Methyl Ether (TAME) | µg/L | N/A | -- | -- | <2 | <2 | <2 | <2 | <2 |
| Tert-Butyl Alcohol (TBA) | µg/L | N/A | -- | -- | <10 | <10 | <10 | <10 | <10 |
| tert-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Tetrahydrofuran | µg/L | N/A | <1 | <5 | <1 | <1 | <1 | <1 | <1 |
| trans-1,3-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Trichlorofluoromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Vinyl Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Semi-Volatile Organic Compounds** | | | | | | | | | |
| 1-Methylnaphthalene | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| 2,4,5-Trichlorophenol | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| 2,4,6-Trichlorophenol | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| 2,4-Dichlorophenol | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| 2,4-Dimethylphenol | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| 2,4-Dinitrophenol | µg/L | N/A | <50 | <50 | <50 | <50 | -- | -- | -- |
| 2,4-Dinitrotoluene | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| 2,6-Dinitrotoluene | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| 2-Chloronaphthalene | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| 2-Chlorophenol | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |

## TABLE C-3

## GROUNDWATER ANALYTICAL RESULTS – BROADOUS SCHOOL

| Constituent | Units[1] | Fraction | B-MW-02 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | 02/18/03 | 10/07/03 | 02/13/04 | 06/04/04 | 10/15/04 | 12/30/04 | 03/05/05 |
| 2-Methylnaphthalene | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| 2-Methylphenol (o-Cresol) | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| 2-Nitroaniline | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| 2-Nitrophenol | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| 3,3'-Dichlorobenzidine | µg/L | N/A | <25 | <25 | <25 | <25 | -- | -- | -- |
| 3-Nitroaniline | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| 4,6-Dinitro-2-Methylphenol | µg/L | N/A | <50 | <50 | <50 | <50 | -- | -- | -- |
| 4-Bromophenyl-Phenyl Ether | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| 4-Chloro-3-Methylphenol | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| 4-Chloroaniline | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| 4-Chlorophenyl-Phenyl Ether | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| 4-Methylphenol (p-Cresol) | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| 4-Nitroaniline | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| 4-Nitrophenol | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| Acenaphthene | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| Acenaphthylene | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| Aniline | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| Anthracene | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| Azobenzene | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| Benzidine | µg/L | N/A | <50 | <50 | <50 | <50 | -- | -- | -- |
| Benzo (a) Anthracene | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| Benzo (a) Pyrene | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| Benzo (b) Fluoranthene | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| Benzo (g,h,i) Perylene | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| Benzo (k) Fluoranthene | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| Benzoic acid | µg/L | N/A | <50 | <50 | <50 | <50 | -- | -- | -- |
| Benzyl alcohol | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| Bis(2-Chloroethoxy) Methane | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| Bis(2-Chloroethyl) Ether | µg/L | N/A | <25 | <25 | <25 | <25 | -- | -- | -- |
| Bis(2-Chloroisopropyl) Ether | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| Bis(2-Ethylhexyl) Phthalate | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| Butyl Benzyl Phthalate | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| Chrysene | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| Dibenz (a,h) Anthracene | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| Dibenzofuran | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| Diethyl Phthalate | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |

# TABLE C-3

## GROUNDWATER ANALYTICAL RESULTS – BROADOUS SCHOOL

| Constituent | Units[1] | Fraction | B-MW-02 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | 02/18/03 | 10/07/03 | 02/13/04 | 06/04/04 | 10/15/04 | 12/30/04 | 03/05/05 |
| Dimethyl Phthalate | μg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| Di-n-Butyl Phthalate | μg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| Di-n-Octyl Phthalate | μg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| Fluoranthene | μg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| Fluorene | μg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| Hexachlorobenzene | μg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| Hexachlorocyclopentadiene | μg/L | N/A | <25 | <25 | <25 | <25 | -- | -- | -- |
| Hexachloroethane | μg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| Indeno (1,2,3-c,d) Pyrene | μg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| Isophorone | μg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| Nitrobenzene | μg/L | N/A | <25 | <25 | <25 | <25 | -- | -- | -- |
| N-Nitroso-di-n-propylamine | μg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| N-Nitrosodiphenylamino | μg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| Pentachlorophenol | μg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| Phenanthrene | μg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| Phenol | μg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| Pyrene | μg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| Pyridine | μg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- |
| **Biological Parameters** | | | | | | | | | |
| Heterotrophic Plate Count | CFU/mL | N/A | 45,000 | -- | -- | -- | -- | -- | -- |
| Total Coliforms | MPN/100 mL | N/A | 300 | -- | -- | -- | -- | -- | -- |
| Fecal Coliform | MPN/100 mL | N/A | <1.1 | -- | -- | -- | -- | -- | -- |
| E. coli | MPN/100 mL | N/A | <1.1 | -- | -- | -- | -- | -- | -- |
| E. coli + Fecal Coliform | MPN/100 mL | N/A | -- | -- | -- | -- | -- | -- | -- |

-- indicates the constituent was not analyzed for.  Analytes not detected are indicate

1. Units of measure:  mg/L = milligrams per liter, μg/L = micrograms per liter, μhr

2. In cases in which the filtered concentrations exceeded the total, the differences a

# TABLE C-4

## STORM WATER ANALYTICAL RESULTS – HALL HOUSE

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | H-SW-01 | | | | | | H-SW-02 | | | | |
| | | | 12/16/02 | 02/12/03 | 02/02/04 | 02/25/04 | 01/07/05 | 02/18/05 | 12/16/02 | 02/12/03 | 02/02/04 | 02/25/04 | 01/07/05 |
| **General Monitoring Parameters** | | | | | | | | | | | | | |
| Alkalinity, Total (as $CaCO_3$) | mg/L | N/A | <1 | 1 | 2.5 | 2 | 1.5 | 3.2 | -- | -- | 16 | 16 | 23 |
| Bicarbonate (as $CaCO_3$) | mg/L | N/A | <1 | 1 | 2.5 | 2 | 1.5 | 3.2 | -- | -- | 16 | 16 | 23 |
| Bromide | mg/L | N/A | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | -- | -- | <0.1 | <0.1 | <0.1 |
| Calcium | mg/L | Total | 0.79 | 1.08 | 1.82 | 1.57 | 0.420 | 2.60 | 10.2 | 2.17 | 4.92 | 8.13 | 3.07 |
| Carbonate (as $CaCO_3$) | mg/L | N/A | <1 | <1 | <1 | <1 | <1 | <1 | -- | -- | <1 | <1 | <1 |
| Chloride | mg/L | N/A | 3.2 | <1 | 1.8 | 2.5 | <1 | 1.8 | -- | -- | 3.4 | 1.1 | <1 |
| Chemical Oxygen Demand | mg/L | N/A | 56 | 41 | 33 | 33 | 5 | 74 | -- | -- | 280 | 120 | 69 |
| Fluoride | mg/L | N/A | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | -- | -- | 0.2 | -- | <0.1 |
| Hardness (as $CaCO_3$) | mg/L | Total | 12 | 2.4 | 10 | 4 | 6 | 26 | 46 | 50 | 22 | 32 | 14 |
| Hydroxide (as $CaCO_3$) | mg/L | N/A | <1 | <1 | <1 | <1 | <1 | <1 | -- | -- | <1 | <1 | <1 |
| Magnesium | mg/L | Total | 0.19 | 0.23 | 0.405 | 0.345 | <0.1 | 0.614 | 0.848 | 1.01 | 0.938 | 1.28 | 0.227 |
| MBAS (Surfactants) | mg/L | N/A | <0.1 | <0.1 | 0.17 | 0.3 | <0.1 | 0.37 | -- | -- | 0.21 | 0.36 | <0.1 |
| Nitrate (as N) | mg/L | N/A | 0.16 | <0.1 | 0.15 | 0.39 | <0.1 | 0.25 | 1.1 | 4.2 | 1.5 | 0.36 | 0.24 |
| Nitrite (as N) | mg/L | N/A | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | -- | -- | <0.1 | <0.1 | <0.1 |
| Total Kjeldahl Nitrogen | mg/L | Total | -- | -- | 1.5 | 0.84 | <0.5 | 2 | 1.8 | 24 | 5.7 | 4.5 | 1.4 |
| Carbon, Total Organic | mg/L | N/A | 6 | 6.8 | 12 | 8.1 | 1.5 | 15 | -- | -- | 30 | 7.6 | 7.4 |
| Carbon, Dissolved Organic | mg/L | N/A | 4.6 | 6.2 | 11 | 7.7 | 1.7 | 14 | -- | -- | 23 | 5.4 | 6.4 |
| Nitrogen, Organic | mg/L | N/A | 1.1 | <0.5 | 1.4 | 0.84 | <0.5 | 1.5 | -- | -- | 5 | 4.2 | 1.1 |
| Ammonia-Nitrogen | mg/L | Total | 0.22 | <0.1 | 0.11 | <0.1 | <0.1 | 0.49 | 0.65 | 2 | 0.74 | 0.28 | 0.35 |
| pH | pH units | N/A | 4.68 | 5.79 | 5.88 | 5.71 | 6.5 | 5.74 | 7.21 | 6.7 | 6.82 | 6.55 | 5.43 |
| Phosphorus | mg/L | Dissolved | <0.03 | 0.03 | 0.18 | 0.11 | 0.064 | 0.13 | 0.21 | 0.62 | 0.49 | 0.13 | 0.16 |
| Phosphorus | mg/L | Total | 0.13 | 0.14 | 0.24 | 0.11 | 0.19 | 0.23 | -- | -- | 0.5 | 0.37 | 0.3 |
| Potassium | mg/L | Total | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.59 | -- | -- | 4.56 | 1.96 | 1.58 |
| Sodium | mg/L | Total | <0.5 | 0.56 | 1.17 | 1.34 | <0.5 | 3.56 | -- | -- | 4 | 2.97 | 1.80 |
| Specific Conductance | µmhos/cm | N/A | 19 | 11 | 27 | 35 | 12 | 34 | 110 | 150 | 82 | 83 | 31 |
| Sulfate | mg/L | N/A | 2.7 | 1.6 | 5.1 | 6.3 | 1.6 | 5.4 | -- | -- | 6.1 | 2.3 | 2.7 |
| Total Dissolved Solids | mg/L | N/A | 13 | 6.7 | 16 | 18 | 10 | 82 | 77 | 130 | 48 | 34 | 28 |
| Total Suspended Solids | mg/L | N/A | 64 | 27 | 12 | <1 | 3 | 51 | 790 | 430 | 110 | 9.6 | 110 |
| Turbidity | NTU | N/A | 13 | 3.3 | 3.4 | 4.1 | 2.5 | 7.4 | -- | -- | 37 | 54 | 41 |
| **Metals[2]** | | | | | | | | | | | | | |
| Aluminum | µg/L | Dissolved | <50 | <50 | <50 | <50 | <25 | <25 | 122 | <50 | <50 | 59.7 | <25 |
| Aluminum | µg/L | Total | 395 | 138 | 143 | 131 | <25 | 2,540 | 8,210 | 7,160 | 4,900 | 4,220 | 1,340 |
| Antimony | µg/L | Dissolved | <1 | <1 | <1 | 1.14 | <1 | <1 | 1.29 | 1.6 | <1 | <1 | <1 |
| Antimony | µg/L | Total | <1 | 1.02 | <1 | 1.2 | <1 | 1.57 | 5.97 | 9.35 | 4.31 | 2.79 | 2.28 |

# TABLE C-4

## STORM WATER ANALYTICAL RESULTS – HALL HOUSE

| | | | **Sample Number / Date Sampled** | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | **H-SW-01** | | | | | | **H-SW-02** | | | | |
| **Constituent** | **Units[1]** | **Fraction** | **12/16/02** | **02/12/03** | **02/02/04** | **02/25/04** | **01/07/05** | **02/18/05** | **12/16/02** | **02/12/03** | **02/02/04** | **02/25/04** | **01/07/05** |
| Arsenic | µg/L | Dissolved | <1 | <1 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <1 | <0.5 | 1.19 | <0.5 |
| Arsenic | µg/L | Total | <1 | <1 | <0.5 | <0.5 | <0.5 | 1.31 | 2.81 | <1 | 2.99 | 3.56 | 0.674 |
| Barium | µg/L | Dissolved | 1.94 | <1 | 3.53 | 2.39 | 1.68 | 6.2 | 29.3 | 8.45 | 11.3 | 7.57 | 3.52 |
| Barium | µg/L | Total | 12.4 | 4.79 | 7.71 | 7.47 | 3.07 | 69.1 | 384 | 199 | 231 | 211 | 47.5 |
| Beryllium | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Beryllium | µg/L | Total | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Boron | µg/L | Dissolved | <20 | <20 | <50 | <50 | <50 | <50 | 49 | 68.6 | 71 | <50 | <50 |
| Boron | µg/L | Total | 27 | <20 | <50 | <50 | <50 | <50 | 106 | 173 | 89.4 | <50 | <50 |
| Cadmium | µg/L | Dissolved | <0.5 | <0.5 | 0.37 | 0.308 | <0.2 | 0.396 | <0.5 | <0.5 | <0.2 | <0.2 | <0.2 |
| Cadmium | µg/L | Total | <0.5 | <0.5 | 0.489 | 0.315 | <0.2 | 1.22 | 1.52 | 1.16 | 1.64 | 2.09 | 0.936 |
| Chromium | µg/L | Dissolved | 1.61 | 1.39 | 2.14 | 1.61 | <1 | 2.99 | 1.97 | <1 | 1.1 | <1 | 1.07 |
| Chromium | µg/L | Total | 1.79 | 1.5 | 2.39 | 2.51 | 1.19 | 8.07 | 30.3 | 18.2 | 15.2 | 14.8 | 5.87 |
| Chromium, Hexavalent | µg/L | Dissolved | -- | <0.2 | 0.41 | <0.2 | <0.2 | <0.2 | -- | -- | 0.95 | <0.2 | 0.51 |
| Cobalt | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | 1.07 | <1 | <1 | <1 | <1 | <1 |
| Cobalt | µg/L | Total | <1 | <1 | <1 | <1 | <1 | 3.59 | 6.24 | 5.51 | 4.68 | 8.06 | 1.2 |
| Copper | µg/L | Dissolved | 3.32 | 3.9 | 6.8 | 6.93 | 1.3 | 6.62 | 14.7 | 17 | 12.7 | 5.71 | 3.81 |
| Copper | µg/L | Total | 13.3 | 5.45 | 10.2 | 8.67 | 1.55 | 41.3 | 62.4 | 123 | 117 | 61.7 | 28.8 |
| Iron | µg/L | Dissolved | -- | -- | 176 | <100 | <100 | <100 | -- | -- | 165 | <100 | <100 |
| Iron | µg/L | Total | -- | -- | 210 | 222 | 114 | 3,530 | -- | -- | 7,850 | 5,770 | 1,900 |
| Lead | µg/L | Dissolved | 4.39 | 1.86 | 6.16 | 2.82 | 3.82 | 2.91 | 3.12 | 1.48 | 1.49 | 1.81 | 0.522 |
| Lead | µg/L | Total | 23.1 | 8.81 | 13 | 15.4 | 9.98 | 99.3 | 90.8 | 120 | 130 | 138 | 46 |
| Manganese | µg/L | Dissolved | 18.2 | 15.9 | 39.9 | 28.9 | 5.93 | 62.7 | 49.5 | 16.9 | 9.75 | 2.31 | 2.68 |
| Manganese | µg/L | Total | 19.9 | 21 | 49.5 | 32.6 | 6.49 | 167 | 295 | 256 | 266 | 298 | 50.7 |
| Mercury | µg/L | Dissolved | -- | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | -- | -- | <0.1 | <0.1 | <0.1 |
| Mercury | µg/L | Total | -- | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | -- | -- | 0.139 | <0.1 | 0.106 |
| Molybdenum | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Molybdenum | µg/L | Total | <1 | <1 | <1 | <1 | <1 | <1 | 2.31 | 3.66 | 2.14 | 1.63 | <1 |
| Nickel | µg/L | Dissolved | <1 | 1.51 | 2.1 | <2 | <2 | 2.5 | 7.23 | 1.94 | 5.1 | 12 | 3.1 |
| Nickel | µg/L | Total | 1.83 | 1.24 | 2.6 | <2 | <2 | 8.4 | 20.4 | 16.3 | 23 | 69 | 13 |
| Selenium | µg/L | Dissolved | <5 | <5 | <1 | <1 | <1 | <1 | <5 | <5 | <1 | <1 | <1 |
| Selenium | µg/L | Total | <5 | <5 | <1 | <1 | <1 | <1 | <5 | <5 | <1 | <1 | <1 |
| Silver | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Silver | µg/L | Total | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Strontium | µg/L | Dissolved | 4.7 | 4.47 | 12.1 | 11.2 | 2.55 | 16.4 | 65.5 | 26.1 | 27.6 | 15 | 12.7 |
| Strontium | µg/L | Total | 8.71 | 6.46 | 14.3 | 12.3 | 2.47 | 32.2 | 123 | 125 | 167 | 59.6 | 23.2 |
| Thallium | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |

## TABLE C-4

## STORM WATER ANALYTICAL RESULTS – HALL HOUSE

| | | | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | H-SW-01 | | | | | | H-SW-02 | | | | |
| **Constituent** | **Units$^1$** | **Fraction** | **12/16/02** | **02/12/03** | **02/02/04** | **02/25/04** | **01/07/05** | **02/18/05** | **12/16/02** | **02/12/03** | **02/02/04** | **02/25/04** | **01/07/05** |
| Thallium | µg/L | Total | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Tin | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | 1.2 | <1 | <1 | <1 | <1 |
| Tin | µg/L | Total | <1 | 1.77 | <1 | <1 | <1 | 1.12 | 6.49 | 11.1 | 1.54 | 3.38 | 1.37 |
| Titanium | µg/L | Dissolved | <1 | <1 | 1.13 | <1 | <1 | 1.2 | 5.63 | 1.56 | 3.9 | 4.17 | 1.45 |
| Titanium | µg/L | Total | 23.4 | 6.72 | 9.66 | 8.12 | 1.69 | 214 | 480 | 501 | 257 | 291 | 96.5 |
| Vanadium | µg/L | Dissolved | 1.33 | 1.2 | 1.43 | 1.42 | <1 | 2.38 | 1.5 | 1.97 | 1.61 | 1.3 | <1 |
| Vanadium | µg/L | Total | 2.72 | 2.17 | 1.91 | 1.8 | <1 | 9.84 | 18 | 23.9 | 14.6 | 11.2 | 4.37 |
| Zinc | µg/L | Dissolved | 141 | 131 | 279 | 251 | 86.3 | 496 | 29.4 | 27.4 | 50.4 | 88.1 | 28.7 |
| Zinc | µg/L | Total | 145 | 179 | 396 | 261 | 93.4 | 933 | 336 | 335 | 441 | 849 | 189 |
| **Other Constituents** | | | | | | | | | | | | | |
| Oil and Grease | mg/L | N/A | 1.7 | 1.8 | <1 | 2.2 | 1.1 | 2 | 3.1 | 5.8 | -- | 52 | 1.6 |
| Perchlorate | µg/L | N/A | <2 | <2 | <2 | <2 | <2 | <2 | -- | -- | <2 | <2 | <2 |
| N-Nitrosodimethylamine (NDMA) | ng/L | N/A | <2 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| Glyphosate | µg/L | N/A | <6 | <6 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 1,4-Dioxane | µg/L | N/A | <2 | <2 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 1,2-Dibromo-3-chloropropane (DBCP) | µg/L | N/A | <0.02 | <0.02 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| **Volatile Organic Compounds** | | | | | | | | | | | | | |
| Methyl Bromide | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl-t-Butyl Ether (MTBE) | µg/L | N/A | <0.5 | <0.5 | <1 | <1 | <1 | <1 | -- | <0.5 | <1 | <1 | <1 |
| Benzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Toluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| o-Xylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| p/m-Xylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Trichloroethylene (TCE) | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Tetrachloroethylene (PCE) | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,1,2-Tetrachloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,1-Trichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2,2-Tetrachloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2-Trichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloroethylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,3-Trichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |

# TABLE C-4

## STORM WATER ANALYTICAL RESULTS – HALL HOUSE

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | H-SW-01 | | | | | | H-SW-02 | | | | |
| | | | 12/16/02 | 02/12/03 | 02/02/04 | 02/25/04 | 01/07/05 | 02/18/05 | 12/16/02 | 02/12/03 | 02/02/04 | 02/25/04 | 01/07/05 |
| 1,2,3-Trichloropropane (1,2,3-TCP) | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,4-Trichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,4-Trimethylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dibromoethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Trans-Dichloroethylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3,5-Trimethylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,4-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 2,2-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Butanone (Methylethyl ketone) | µg/L | N/A | <1 | <1 | <1 | <1 | <1 | <1 | -- | <1 | <1 | 1.8 | 1.3 |
| 2-Chlorotoluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Hexanone | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 4-Chlorotoluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 4-Methyl-2-pentanone (MIBK) | µg/L | N/A | <2 | <2 | <2 | <2 | <2 | <2 | -- | <2 | <2 | <2 | <2 |
| Acetone | µg/L | N/A | 5 | 6.6 | 26 | 13 | 12 | 7.9 | -- | 5.6 | 6.6 | 15 | 15 |
| Acrylonitrile | µg/L | N/A | <2 | <2 | <2 | <2 | <2 | <2 | -- | <2 | <2 | <2 | <2 |
| Allyl Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromochloromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromoform | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Carbon disulfide | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Carbon Tetrachloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Chlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Chloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Chloroform | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| cis-1,2-Dichloroethene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| cis-1,3-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Dibromochloromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Dibromomethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Dichlorobromomethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Dichlorodifluoromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Diethyl Ether | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |

# TABLE C-4

## STORM WATER ANALYTICAL RESULTS – HALL HOUSE

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | H-SW-01 | | | | | | H-SW-02 | | | | |
| | | | 12/16/02 | 02/12/03 | 02/02/04 | 02/25/04 | 01/07/05 | 02/18/05 | 12/16/02 | 02/12/03 | 02/02/04 | 02/25/04 | 01/07/05 |
| Diisopropyl Ether (DIPE) | µg/L | N/A | -- | -- | <2 | <2 | <2 | <2 | -- | -- | <2 | <2 | <2 |
| Ethanol | µg/L | N/A | -- | -- | <100 | <100 | <100 | <100 | -- | -- | <100 | <100 | <100 |
| Ethyl Methacrylate | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethyl-t-Butyl Ether (ETBE) | µg/L | N/A | -- | -- | <2 | <2 | <2 | <2 | -- | -- | <2 | <2 | <2 |
| Hexachloro-1,3-Butadiene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Iodomethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Isopropylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl Methacrylate | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Methylene Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.6 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Naphthalene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| n-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| n-Propylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| p-Isopropyltoluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | 0.66 |
| sec-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Styrene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| t-1,4-Dichloro-2-Butene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Tert-Amyl-Methyl Ether (TAME) | µg/L | N/A | -- | -- | <2 | <2 | <2 | <2 | -- | -- | <2 | <2 | <2 |
| Tert-Butyl Alcohol (TBA) | µg/L | N/A | -- | -- | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| tert-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Tetrahydrofuran | µg/L | N/A | <1 | <1 | <1 | <1 | <1 | <1 | -- | <1 | <1 | <1 | <1 |
| trans-1,3-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Trichlorofluoromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Vinyl Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| **Semi-Volatile Organic Compounds** | | | | | | | | | | | | | |
| 1-Methylnaphthalene | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| 2,4,5-Trichlorophenol | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| 2,4,6-Trichlorophenol | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| 2,4-Dichlorophenol | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| 2,4-Dimethylphenol | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| 2,4-Dinitrophenol | µg/L | N/A | <50 | <50 | <50 | <50 | -- | -- | -- | -- | -- | <500 | -- |
| 2,4-Dinitrotoluene | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| 2,6-Dinitrotoluene | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| 2-Chloronaphthalene | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| 2-Chlorophenol | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |

# TABLE C-4

## STORM WATER ANALYTICAL RESULTS – HALL HOUSE

| Constituent | Units$^1$ | Fraction | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | H-SW-01 | | | | | | H-SW-02 | | | | |
| | | | 12/16/02 | 02/12/03 | 02/02/04 | 02/25/04 | 01/07/05 | 02/18/05 | 12/16/02 | 02/12/03 | 02/02/04 | 02/25/04 | 01/07/05 |
| 2-Methylnaphthalene | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| 2-Methylphenol (o-Cresol) | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| 2-Nitroaniline | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| 2-Nitrophenol | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| 3,3'-Dichlorobenzidine | µg/L | N/A | <25 | <25 | <25 | <25 | -- | -- | -- | -- | -- | <250 | -- |
| 3-Nitroaniline | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| 4,6-Dinitro-2-Methylphenol | µg/L | N/A | <50 | <50 | <50 | <50 | -- | -- | -- | -- | -- | <500 | -- |
| 4-Bromophenyl-Phenyl Ether | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| 4-Chloro-3-Methylphenol | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| 4-Chloroaniline | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| 4-Chlorophenyl-Phenyl Ether | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| 4-Methylphenol (p-Cresol) | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| 4-Nitroaniline | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| 4-Nitrophenol | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| Acenaphthene | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| Acenaphthylene | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| Aniline | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| Anthracene | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| Azobenzene | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| Benzidine | µg/L | N/A | <50 | <50 | <50 | <50 | -- | -- | -- | -- | -- | <500 | -- |
| Benzo (a) Anthracene | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| Benzo (a) Pyrene | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| Benzo (b) Fluoranthene | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| Benzo (g,h,i) Perylene | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| Benzo (k) Fluoranthene | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| Benzoic acid | µg/L | N/A | <50 | <50 | <50 | <50 | -- | -- | -- | -- | -- | <500 | -- |
| Benzyl alcohol | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| Bis(2-Chloroethoxy) Methane | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| Bis(2-Chloroethyl) Ether | µg/L | N/A | <25 | <25 | <25 | <25 | -- | -- | -- | -- | -- | <250 | -- |
| Bis(2-Chloroisopropyl) Ether | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| Bis(2-Ethylhexyl) Phthalate | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | 400 | -- |
| Butyl Benzyl Phthalate | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| Chrysene | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| Dibenz (a,h) Anthracene | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| Dibenzofuran | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| Diethyl Phthalate | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |

# TABLE C-4

## STORM WATER ANALYTICAL RESULTS – HALL HOUSE

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | H-SW-01 | | | | | | H-SW-02 | | | | |
| | | | 12/16/02 | 02/12/03 | 02/02/04 | 02/25/04 | 01/07/05 | 02/18/05 | 12/16/02 | 02/12/03 | 02/02/04 | 02/25/04 | 01/07/05 |
| Dimethyl Phthalate | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| Di-n-Butyl Phthalate | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| Di-n-Octyl Phthalate | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| Fluoranthene | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| Fluorene | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| Hexachlorobenzene | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| Hexachlorocyclopentadiene | µg/L | N/A | <25 | <25 | <25 | <25 | -- | -- | -- | -- | -- | <250 | -- |
| Hexachloroethane | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| Indeno (1,2,3-c,d) Pyrene | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| Isophorone | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| Nitrobenzene | µg/L | N/A | <25 | <25 | <25 | <25 | -- | -- | -- | -- | -- | <250 | -- |
| N-Nitroso-di-n-propylamine | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| N-Nitrosodiphenylamino | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| Pentachlorophenol | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| Phenanthrene | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| Phenol | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| Pyrene | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| Pyridine | µg/L | N/A | <10 | <10 | <10 | <10 | -- | -- | -- | -- | -- | <100 | -- |
| **Biological Parameters** | | | | | | | | | | | | | |
| Heterotrophic Plate Count | CFU/mL | N/A | 30,000 | 13,000 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Total Coliforms | MPN/100 mL | N/A | 600 | <1.1 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Fecal Coliform | MPN/100 mL | N/A | <1.1 | <1.1 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| E. coli | MPN/100 mL | N/A | <1.1 | <1.1 | -- | -- | -- | -- | -- | -- | -- | -- | -- |

-- indicates the constituent was not analyzed for. Analytes not detected are indicated with a "<" symbol; the associated numerical value is the detection limit.

1. Units of measure: mg/L = milligrams per liter, µg/L = micrograms per liter, µhmos/cm = microhmos per centimeter, NTU = Nephelometric Turbidity Unit.
2. In cases in which the filtered concentrations exceeded the total, the differences are considered by the laboratory statistically insignificant and can be attributed to the variability inherent with the analytical method.

# TABLE C-5

## LYSIMETER ANALYTICAL RESULTS – HALL HOUSE

| Constituent | Units$^1$ | Fraction | Sample Number / Date Sampled | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | H-LS-01 | | | | | |
| | | | 12/23/02 | 02/04/04 | 02/27/04 | 10/20/04 | 01/07/05 | 02/18/05 |
| **General Monitoring Parameters** | | | | | | | | |
| Alkalinity, Total (as $CaCO_3$) | mg/L | N/A | -- | -- | -- | -- | -- | -- |
| Bicarbonate (as $CaCO_3$) | mg/L | N/A | -- | -- | -- | -- | -- | -- |
| Bromide | mg/L | N/A | <0.1 | <0.1 | <0.1 | 0.12 | <0.1 | <0.1 |
| Calcium | mg/L | Total | -- | -- | -- | -- | -- | -- |
| Carbonate (as $CaCO_3$) | mg/L | N/A | -- | -- | -- | -- | -- | -- |
| Chloride | mg/L | N/A | 65 | 19 | 19 | 56 | 33 | <1 |
| Chemical Oxygen Demand | mg/L | N/A | -- | <5 | <5 | <5 | 5 | 5.1 |
| Fluoride | mg/L | N/A | -- | -- | -- | -- | -- | -- |
| Hardness (as $CaCO_3$) | mg/L | Total | -- | -- | -- | -- | -- | -- |
| Hydroxide (as $CaCO_3$) | mg/L | N/A | -- | -- | -- | -- | -- | -- |
| Magnesium | mg/L | Total | -- | -- | -- | -- | -- | -- |
| MBAS (Surfactants) | mg/L | N/A | -- | -- | -- | -- | -- | -- |
| Nitrate (as N) | mg/L | N/A | 1.5 | 0.11 | <0.1 | <0.1 | 0.28 | 0.28 |
| Nitrite (as N) | mg/L | N/A | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total Kjeldahl Nitrogen | mg/L | Total | -- | 0.28 | <0.5 | <1 | <0.5 | <0.5 |
| Carbon, Total Organic | mg/L | N/A | -- | 13 | 3.8 | 2.9 | 3.1 | 3 |
| Carbon, Dissolved Organic | mg/L | N/A | -- | -- | -- | -- | -- | -- |
| Nitrogen, Organic | mg/L | N/A | -- | <0.5 | <0.5 | <1 | <0.5 | <0.5 |
| Ammonia-Nitrogen | mg/L | Total | -- | <0.2 | <0.2 | <0.1 | <0.2 | <0.2 |
| pH | pH units | N/A | -- | -- | -- | -- | -- | -- |
| Phosphorus | mg/L | Dissolved | -- | -- | -- | -- | -- | -- |
| Phosphorus | mg/L | Total | -- | <0.03 | 12 | <0.03 | 0.13 | 0.74 |
| Potassium | mg/L | Total | -- | -- | -- | -- | -- | -- |
| Sodium | mg/L | Total | -- | -- | -- | -- | -- | -- |
| Specific Conductance | µmhos/cm | N/A | -- | 970 | -- | -- | -- | -- |
| Sulfate | mg/L | N/A | 110 | 31 | 44 | 91 | 50 | 19 |
| Total Dissolved Solids | mg/L | N/A | -- | 610 | 580 | 610 | 410 | 290 |
| Total Suspended Solids | mg/L | N/A | -- | -- | -- | -- | -- | -- |
| Turbidity | NTU | N/A | -- | -- | -- | -- | -- | -- |
| **Metals$^2$** | | | | | | | | |
| Aluminum | µg/L | Dissolved | <50 | <50 | <50 | <25 | <25 | <25 |
| Aluminum | µg/L | Total | -- | <50 | <50 | <25 | <25 | <25 |
| Antimony | µg/L | Dissolved | 1.26 | <1 | <1 | 1.13 | 1.36 | <1 |
| Antimony | µg/L | Total | -- | 1.02 | 1.01 | 1.18 | 1.13 | <1 |

## TABLE C-5

## LYSIMETER ANALYTICAL RESULTS – HALL HOUSE

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | H-LS-01 | | | | | |
| | | | 12/23/02 | 02/04/04 | 02/27/04 | 10/20/04 | 01/07/05 | 02/18/05 |
| Arsenic | µg/L | Dissolved | 4.26 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Arsenic | µg/L | Total | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Barium | µg/L | Dissolved | 28.5 | 77.5 | 107 | 103 | 45 | 29.9 |
| Barium | µg/L | Total | -- | 78.4 | 112 | 102 | 47.6 | 33.1 |
| Beryllium | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 |
| Beryllium | µg/L | Total | -- | <1 | <1 | <1 | <1 | <1 |
| Boron | µg/L | Dissolved | 304 | 305 | 243 | 288 | 245 | 152 |
| Boron | µg/L | Total | -- | 279 | 249 | 286 | 269 | 159 |
| Cadmium | µg/L | Dissolved | <0.5 | 0.245 | 0.221 | <0.2 | <0.2 | <0.2 |
| Cadmium | µg/L | Total | -- | 0.231 | 0.223 | <0.2 | <0.2 | <0.2 |
| Chromium | µg/L | Dissolved | 22.5 | 2.37 | <1 | 1.09 | 1.61 | <1 |
| Chromium | µg/L | Total | -- | 2.45 | <1 | 1.13 | 1.75 | <1 |
| Chromium, Hexavalent | µg/L | Dissolved | 25 | -- | -- | 0.37 | 0.56 | 0.66 |
| Cobalt | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 |
| Cobalt | µg/L | Total | -- | <1 | <1 | <1 | <1 | <1 |
| Copper | µg/L | Dissolved | 7.71 | 3.66 | 3.96 | 2.01 | 2.93 | 1.58 |
| Copper | µg/L | Total | -- | 4.86 | 6.4 | 4.74 | 3.45 | 2.43 |
| Iron | µg/L | Dissolved | -- | 143 | <100 | <100 | <100 | <100 |
| Iron | µg/L | Total | -- | 321 | 197 | <100 | <100 | <100 |
| Lead | µg/L | Dissolved | 0.591 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Lead | µg/L | Total | -- | 0.598 | <0.5 | <0.5 | <0.5 | <0.5 |
| Manganese | µg/L | Dissolved | 1.26 | 476 | 444 | 16.8 | 3.68 | 2.06 |
| Manganese | µg/L | Total | -- | 467 | 449 | 8.55 | 3.72 | 2.05 |
| Mercury | µg/L | Dissolved | -- | -- | -- | -- | -- | <0.1 |
| Mercury | µg/L | Total | -- | -- | -- | -- | -- | <0.1 |
| Molybdenum | µg/L | Dissolved | 29.2 | 90.9 | 70.6 | 48.8 | 60.2 | 49.3 |
| Molybdenum | µg/L | Total | -- | 89.1 | 72 | 46.4 | 62.5 | 51.1 |
| Nickel | µg/L | Dissolved | 4.67 | 14 | 11 | 7.1 | 3.9 | 2.4 |
| Nickel | µg/L | Total | -- | 14 | 11 | 7 | 3.9 | 2.6 |
| Selenium | µg/L | Dissolved | <5 | <1 | <1 | 1.17 | <1 | <1 |
| Selenium | µg/L | Total | -- | <1 | <1 | <1 | <1 | <1 |
| Silver | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 |
| Silver | µg/L | Total | -- | <1 | <1 | <1 | <1 | <1 |
| Strontium | µg/L | Dissolved | 545 | 576 | 685 | 987 | 538 | 389 |
| Strontium | µg/L | Total | -- | 561 | 701 | 935 | 563 | 395 |
| Thallium | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 |

## TABLE C-5

## LYSIMETER ANALYTICAL RESULTS – HALL HOUSE

| Constituent | Units$^1$ | Fraction | Sample Number / Date Sampled | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | H-LS-01 | | | | | |
| | | | 12/23/02 | 02/04/04 | 02/27/04 | 10/20/04 | 01/07/05 | 02/18/05 |
| Thallium | µg/L | Total | -- | <1 | <1 | <1 | <1 | <1 |
| Tin | µg/L | Dissolved | 2.12 | <1 | <1 | <1 | <1 | <1 |
| Tin | µg/L | Total | -- | <1 | <1 | <1 | <1 | <1 |
| Titanium | µg/L | Dissolved | 5.54 | 1.94 | 3.91 | 3.67 | 4.59 | 1.67 |
| Titanium | µg/L | Total | -- | 3.42 | 5.07 | 3.26 | 5.04 | 2.49 |
| Vanadium | µg/L | Dissolved | 44.2 | 2.38 | 1.23 | 1.94 | 1.37 | 1.21 |
| Vanadium | µg/L | Total | -- | 1.25 | 1.32 | 1.35 | 1.54 | 1.28 |
| Zinc | µg/L | Dissolved | 56.9 | 22.9 | 11.2 | 16 | 6.77 | <5 |
| Zinc | µg/L | Total | -- | 33.2 | 10.1 | 38.3 | 7.04 | 6.36 |
| **Other Constituents** | | | | | | | | |
| Oil and Grease | mg/L | N/A | -- | 1.1 | -- | <1 | <1 | -- |
| Perchlorate | µg/L | N/A | -- | -- | -- | -- | -- | -- |
| N-Nitrosodimethylamine (NDMA) | ng/L | N/A | -- | -- | -- | -- | -- | -- |
| Glyphosate | µg/L | N/A | -- | -- | -- | -- | -- | -- |
| 1,4-Dioxane | µg/L | N/A | -- | -- | -- | -- | -- | -- |
| 1,2-Dibromo-3-chloropropane (DBCP) | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Volatile Organic Compounds** | | | | | | | | |
| Methyl Bromide | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl-t-Butyl Ether (MTBE) | µg/L | N/A | -- | <1 | <1 | <1 | <1 | <1 |
| Benzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Toluene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethylbenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| o-Xylene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| p/m-Xylene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Trichloroethylene (TCE) | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Tetrachloroethylene (PCE) | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,1,2-Tetrachloroethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,1-Trichloroethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2,2-Tetrachloroethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2-Trichloroethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloroethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloroethylene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloropropene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,3-Trichlorobenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

## TABLE C-5

## LYSIMETER ANALYTICAL RESULTS – HALL HOUSE

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | H-LS-01 | | | | | |
| | | | 12/23/02 | 02/04/04 | 02/27/04 | 10/20/04 | 01/07/05 | 02/18/05 |
| 1,2,3-Trichloropropane (1,2,3-TCP) | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,4-Trichlorobenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,4-Trimethylbenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dibromoethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichlorobenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichloroethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichloropropane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Trans-Dichloroethylene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3,5-Trimethylbenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3-Dichlorobenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3-Dichloropropane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,4-Dichlorobenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2,2-Dichloropropane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Butanone (Methylethyl ketone) | µg/L | N/A | -- | <1 | <1 | <1 | <1 | <1 |
| 2-Chlorotoluene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Hexanone | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 4-Chlorotoluene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 4-Methyl-2-pentanone (MIBK) | µg/L | N/A | -- | <2 | <2 | <2 | <2 | <2 |
| Acetone | µg/L | N/A | -- | <2 | <2 | <2 | <2 | <2 |
| Acrylonitrile | µg/L | N/A | -- | <2 | <2 | <2 | <2 | <2 |
| Allyl Chloride | µg/L | N/A | -- | 1.1 | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromobenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromochloromethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromoform | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Carbon disulfide | µg/L | N/A | -- | 3.6 | <0.5 | 2.4 | 2.1 | <0.5 |
| Carbon Tetrachloride | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chlorobenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chloroethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chloroform | µg/L | N/A | -- | <0.5 | <0.5 | 1.6 | 5.7 | 0.92 |
| cis-1,2-Dichloroethene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| cis-1,3-Dichloropropene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dibromochloromethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dibromomethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dichlorobromomethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | 1.9 | <0.5 |
| Dichlorodifluoromethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Diethyl Ether | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

# TABLE C-5

## LYSIMETER ANALYTICAL RESULTS – HALL HOUSE

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | H-LS-01 | | | | | |
| | | | 12/23/02 | 02/04/04 | 02/27/04 | 10/20/04 | 01/07/05 | 02/18/05 |
| Diisopropyl Ether (DIPE) | µg/L | N/A | -- | <2 | <2 | <2 | <2 | <2 |
| Ethanol | µg/L | N/A | -- | <100 | <100 | <100 | <100 | <100 |
| Ethyl Methacrylate | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethyl-t-Butyl Ether (ETBE) | µg/L | N/A | -- | <2 | <2 | <2 | <2 | <2 |
| Hexachloro-1,3-Butadiene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Iodomethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Isopropylbenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl Chloride | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl Methacrylate | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methylene Chloride | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | 0.51 | 1 |
| Naphthalene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| n-Butylbenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| n-Propylbenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| p-Isopropyltoluene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| sec-Butylbenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Styrene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| t-1,4-Dichloro-2-Butene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Tert-Amyl-Methyl Ether (TAME) | µg/L | N/A | -- | <2 | <2 | <2 | <2 | <2 |
| Tert-Butyl Alcohol (TBA) | µg/L | N/A | -- | 12 | <10 | <10 | <10 | <10 |
| tert-Butylbenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Tetrahydrofuran | µg/L | N/A | -- | <1 | <1 | <1 | <1 | <1 |
| trans-1,3-Dichloropropene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Trichlorofluoromethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Vinyl Chloride | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Semi-Volatile Organic Compounds** | | | | | | | | |
| NOT SAMPLED | µg/L | N/A | -- | -- | -- | -- | -- | -- |
| **Biological Parameters** | | | | | | | | |
| Heterotrophic Plate Count | CFU/mL | N/A | -- | -- | -- | -- | -- | -- |
| Total Coliforms | MPN/100 mL | N/A | -- | -- | -- | -- | -- | -- |
| Fecal Coliform | MPN/100 mL | N/A | -- | -- | -- | -- | -- | -- |
| E. coli | MPN/100 mL | N/A | -- | -- | -- | -- | -- | -- |

-- indicates the constituent was not analyzed for. Analytes not detected are indicated with a "<" symbol; the associated numerical value is the detection limit.

1. Units of measure: mg/L = milligrams per liter, µg/L = micrograms per liter, µhmos/cm = microhmos per centimeter, NTU = Nephelometric Turbidity Unit.
2. In cases in which the filtered concentrations exceeded the total, the differences are considered by the laboratory statistically insignificant and can be attributed to the

# TABLE C-6

## STORM WATER ANALYTICAL RESULTS – IMAX

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | I-SW-01 | | | | | | | | | | |
| | | | 11/08/02 | 12/16/02 | 02/12/03 | 03/15/03 | 02/02/04 | 02/25/04 | 12/28/04 | 02/18/05 | 11/08/02 | 12/16/02 | 02/12/03 |
| **General Monitoring Parameters** | | | | | | | | | | | | | |
| Alkalinity, Total (as $CaCO_3$) | mg/L | N/A | 2 | <1 | 3 | 2.4 | 3.8 | 4 | 7.7 | 3.7 | 10 | <1 | 3 |
| Bicarbonate (as $CaCO_3$) | mg/L | N/A | 2 | <1 | 3 | 2.4 | 3.8 | 4 | 7.7 | 3.7 | 10 | <1 | 3 |
| Bromide | mg/L | N/A | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Calcium | mg/L | Total | 1.18 | 0.483 | 0.797 | 0.509 | 1.01 | 1.71 | 0.600 | 0.931 | 2.22 | 1.12 | 1.81 |
| Carbonate (as $CaCO_3$) | mg/L | N/A | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Chloride | mg/L | N/A | <1 | <1 | <1 | <1 | 1.6 | 1.8 | 1.3 | <1 | 1.6 | 1.8 | <1 |
| Chemical Oxygen Demand | mg/L | N/A | 7.7 | 64 | 33 | 15 | 36 | 21 | 23 | 10 | 18 | 59 | 21 |
| Fluoride | mg/L | N/A | <0.1 | <0.1 | <0.1 | <0.1 | 0.11 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Hardness (as $CaCO_3$) | mg/L | Total | 4 | 8 | 6.8 | <2 | 6 | 8 | 4 | 8 | 8 | 8 | 10 |
| Hydroxide (as $CaCO_3$) | mg/L | N/A | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Magnesium | mg/L | Total | 0.179 | 0.174 | 0.168 | 0.136 | 0.186 | 0.438 | 0.145 | 0.258 | 0.234 | 0.36 | 0.248 |
| MBAS (Surfactants) | mg/L | N/A | 0.15 | <0.1 | <0.1 | <0.1 | <0.1 | 0.19 | 0.11 | <0.1 | 0.19 | <0.1 | <0.1 |
| Nitrate (as N) | mg/L | N/A | 0.19 | 0.15 | 0.15 | 0.16 | 0.19 | 0.44 | 0.23 | 0.17 | 0.42 | 0.18 | <0.1 |
| Nitrite (as N) | mg/L | N/A | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total Kjeldahl Nitrogen | mg/L | Total | -- | -- | -- | -- | 1.5 | 0.98 | <0.5 | 0.56 | -- | -- | -- |
| Carbon, Total Organic | mg/L | N/A | 4 | 1.3 | 2 | 2.6 | 3.5 | 3.9 | 1.6 | 2.8 | 6.3 | 2 | 1.5 |
| Carbon, Dissolved Organic | mg/L | N/A | 4.5 | 1.2 | 2.5 | 2.6 | 3 | 3.8 | 1.6 | 3 | 7.2 | 1.8 | 2.4 |
| Nitrogen, Organic | mg/L | N/A | <0.5 | 1.1 | 0.56 | <0.5 | 1.4 | 0.63 | <0.5 | 0.56 | 0.6 | <0.5 | <0.5 |
| Ammonia-Nitrogen | mg/L | Total | <0.1 | <0.1 | <0.1 | 0.21 | 0.11 | 0.35 | <0.1 | <0.1 | 0.52 | 0.35 | <0.1 |
| pH | pH units | N/A | 7.05 | 7.29 | 6.19 | 5.94 | 6.52 | 6.24 | 7.65 | 6.53 | 6.31 | 6.22 | 6.37 |
| Phosphorus | mg/L | Dissolved | <0.03 | 0.09 | <0.03 | <0.03 | <0.03 | <0.03 | 0.064 | <0.03 | <0.03 | <0.1 | <0.03 |
| Phosphorus | mg/L | Total | <0.03 | 0.11 | 0.63 | <0.03 | <0.03 | 0.062 | 0.16 | 0.14 | <0.03 | <0.1 | 0.084 |
| Potassium | mg/L | Total | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Sodium | mg/L | Total | 0.71 | <0.5 | <0.5 | <0.5 | 0.882 | 1.48 | 1.26 | 0.539 | 1.53 | <0.5 | <0.5 |
| Specific Conductance | µmhos/cm | N/A | 12 | 8.3 | 8.7 | 6.3 | 17 | 28 | 18 | 14 | 29 | 14 | 12 |
| Sulfate | mg/L | N/A | <1 | <1 | <1 | 2.3 | 2.3 | 3.7 | 2.2 | 3.1 | 2.4 | <1 | <1 |
| Total Dissolved Solids | mg/L | N/A | 10 | 20 | 6.7 | 6.7 | 10 | 22 | 14 | 34 | 20 | 37 | 6.7 |
| Total Suspended Solids | mg/L | N/A | <1 | 110 | 10 | 1.5 | 30 | 3.4 | 22 | 14 | 1.1 | 89 | 9.6 |
| Turbidity | NTU | N/A | 2.8 | 26 | 9.1 | 2.2 | 4.6 | 11 | 4 | 5.5 | 4.8 | 36 | 11 |
| **Metals[2]** | | | | | | | | | | | | | |
| Aluminum | µg/L | Dissolved | <50 | <50 | <50 | <50 | <50 | <50 | <25 | <25 | <50 | <50 | <50 |
| Aluminum | µg/L | Total | <50 | 308 | 803 | 50.3 | 316 | 333 | 192 | 1,180 | 105 | 373 | 204 |
| Antimony | µg/L | Dissolved | 1.38 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 7.69 | <1 | <1 |
| Antimony | µg/L | Total | 1.54 | <1 | 2.18 | <1 | 1.2 | 1.18 | <1 | 2.83 | 7.68 | <1 | <1 |

## TABLE C-6

## STORM WATER ANALYTICAL RESULTS – IMAX

| | | | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | I-SW-01 | | | | | | | | | | |
| Constituent | Units[1] | Fraction | 11/08/02 | 12/16/02 | 02/12/03 | 03/15/03 | 02/02/04 | 02/25/04 | 12/28/04 | 02/18/05 | 11/08/02 | 12/16/02 | 02/12/03 |
| Arsenic | µg/L | Dissolved | <1 | <1 | <1 | <1 | <0.5 | <0.5 | <0.5 | <0.5 | 138 | 1.3 | 1.75 |
| Arsenic | µg/L | Total | <1 | 6.51 | <1 | <1 | <0.5 | <0.5 | <0.5 | 0.9 | 153 | 1.44 | 1.84 |
| Barium | µg/L | Dissolved | 72.7 | <1 | <1 | <1 | <1 | 1.43 | <1 | <1 | 106 | 2.66 | 1.5 |
| Barium | µg/L | Total | 1.29 | 9.26 | 16.7 | <1 | 8.12 | 6.44 | 4.26 | 32.5 | 8.05 | 23.1 | 9.04 |
| Beryllium | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Beryllium | µg/L | Total | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Boron | µg/L | Dissolved | <20 | <20 | <20 | <20 | <50 | <50 | <50 | <50 | <20 | <20 | <20 |
| Boron | µg/L | Total | <20 | <20 | <20 | <20 | <50 | <50 | <50 | <50 | 23.6 | <20 | <20 |
| Cadmium | µg/L | Dissolved | <0.5 | <0.5 | <0.5 | <0.5 | <0.2 | <0.2 | <0.2 | <0.2 | <0.5 | <0.5 | <0.5 |
| Cadmium | µg/L | Total | <0.5 | <0.5 | <0.5 | <0.5 | <0.2 | <0.2 | <0.2 | 0.997 | <0.5 | <0.5 | <0.5 |
| Chromium | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | 1.39 | 1.04 | 2.09 | <1 | <1 | 1.05 |
| Chromium | µg/L | Total | <1 | 1.26 | 2.58 | <1 | 1.61 | 3.12 | 1.42 | 4.91 | 1.21 | 1.68 | 1.07 |
| Chromium, Hexavalent | µg/L | Dissolved | 0.3 | <0.2 | <0.2 | 0.27 | 0.24 | <0.2 | 0.25 | <0.2 | 0.61 | <0.2 | <0.2 |
| Cobalt | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Cobalt | µg/L | Total | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Copper | µg/L | Dissolved | 8.2 | 1.17 | 2.56 | 2.51 | 2.51 | 5.24 | 1.61 | 2.62 | 137 | 1.99 | 2.97 |
| Copper | µg/L | Total | 7.74 | 9.65 | 12.5 | 2.51 | 14.9 | 9.31 | 5.32 | 37.7 | 157 | 12.1 | 4.99 |
| Iron | µg/L | Dissolved | -- | -- | -- | -- | 114 | <100 | <100 | <100 | -- | -- | -- |
| Iron | µg/L | Total | -- | -- | -- | -- | 407 | 447 | 268 | 1,710 | -- | -- | -- |
| Lead | µg/L | Dissolved | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.769 | <0.5 | <0.5 |
| Lead | µg/L | Total | 0.741 | 9.48 | 11.9 | <0.5 | 5.81 | 3.73 | 4.23 | 76.4 | 1.66 | 10.6 | 2.08 |
| Manganese | µg/L | Dissolved | <1 | <1 | 1.81 | <1 | 1.23 | <1 | <1 | 5.45 | 8.38 | 2.49 | <1 |
| Manganese | µg/L | Total | 1.89 | 19.8 | 28.5 | 1.47 | 14 | 10.2 | 6.19 | 35.7 | 11.3 | 17.9 | 8.52 |
| Mercury | µg/L | Dissolved | -- | -- | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | -- | -- | <0.1 |
| Mercury | µg/L | Total | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Molybdenum | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Molybdenum | µg/L | Total | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Nickel | µg/L | Dissolved | <1 | <1 | <1 | <1 | <2 | <2 | <2 | <2 | 2.97 | <1 | <1 |
| Nickel | µg/L | Total | <1 | 1 | 2.16 | <1 | <2 | <2 | <2 | 4.3 | 3.4 | 1.31 | <1 |
| Selenium | µg/L | Dissolved | <5 | <5 | <5 | 1.11 | <1 | <1 | <1 | <1 | <5 | <5 | <5 |
| Selenium | µg/L | Total | <5 | <5 | <5 | <5 | <1 | <1 | <1 | <1 | <5 | <5 | <5 |
| Silver | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Silver | µg/L | Total | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Strontium | µg/L | Dissolved | 3.48 | 1.69 | 3.66 | 2.39 | 4.58 | 9.66 | 3.21 | 4.24 | 10.3 | 3.99 | 5.91 |
| Strontium | µg/L | Total | 4.73 | 4.9 | 8.2 | 2.33 | 12.5 | 11.1 | 4.45 | 15.3 | 11.2 | 7.38 | 5.83 |
| Thallium | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |

## TABLE C-6

## STORM WATER ANALYTICAL RESULTS – IMAX

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | I-SW-01 | | | | | | | | | | |
| | | | 11/08/02 | 12/16/02 | 02/12/03 | 03/15/03 | 02/02/04 | 02/25/04 | 12/28/04 | 02/18/05 | 11/08/02 | 12/16/02 | 02/12/03 |
| Thallium | µg/L | Total | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Tin | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 1.97 | <1 | <1 |
| Tin | µg/L | Total | <1 | <1 | 1.99 | <1 | <1 | <1 | <1 | 1.35 | <1 | <1 | 1.26 |
| Titanium | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | 1.22 | <1 | <1 | 1.22 | <1 | <1 |
| Titanium | µg/L | Total | 3.64 | 8.79 | 63.2 | 5.96 | 20.3 | 22 | 14.2 | 75.4 | 8.96 | 11.8 | 11.5 |
| Vanadium | µg/L | Dissolved | <1 | 1.37 | <1 | <1 | <1 | <1 | <1 | <1 | 1.47 | 1.42 | <1 |
| Vanadium | µg/L | Total | 1.28 | 2.46 | 3.71 | <1 | 1.63 | 2.19 | <1 | 2.4 | 1.56 | 2.7 | 1.36 |
| Zinc | µg/L | Dissolved | 39.2 | 37.7 | 63.3 | 64.4 | 169 | 96.4 | 41.7 | 109 | 715 | 64.9 | 32.5 |
| Zinc | µg/L | Total | 81.9 | 80.1 | 125 | 60.6 | 241 | 105 | 63.9 | 566 | 1,000 | 214 | 50.3 |
| **Other Constituents** | | | | | | | | | | | | | |
| Oil and Grease | mg/L | N/A | <1 | 1.2 | 1.6 | 58 | <1 | 1 | <1 | <1 | <1 | 1 | 2 |
| Perchlorate | µg/L | N/A | <2 | <2 | <2 | 14 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| N-Nitrosodimethylamine (NDMA) | ng/L | N/A | <2 | <2 | <10 | <10 | <10 | <10 | -- | -- | <2 | <10 | <10 |
| Glyphosate | µg/L | N/A | <6 | <6 | <6 | <6 | -- | -- | -- | -- | <6 | <6 | <6 |
| 1,4-Dioxane | µg/L | N/A | <2 | <2 | <2 | <2 | -- | -- | -- | -- | <2 | <2 | <2 |
| 1,2-Dibromo-3-chloropropane (DBCP) | µg/L | N/A | <0.02 | <0.02 | <0.02 | <0.02 | <0.5 | <0.5 | <0.5 | <0.5 | <0.02 | <0.02 | <0.02 |
| **Volatile Organic Compounds** | | | | | | | | | | | | | |
| Methyl Bromide | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl-t-Butyl Ether (MTBE) | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <1 | <1 | <1 | 0.52 | <0.5 | <0.5 |
| Benzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Toluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| o-Xylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| p/m-Xylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Trichloroethylene (TCE) | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Tetrachloroethylene (PCE) | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,1,2-Tetrachloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,1-Trichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2,2-Tetrachloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2-Trichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloroethylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,3-Trichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

## TABLE C-6

## STORM WATER ANALYTICAL RESULTS – IMAX

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | I-SW-01 | | | | | | | | | | |
| | | | 11/08/02 | 12/16/02 | 02/12/03 | 03/15/03 | 02/02/04 | 02/25/04 | 12/28/04 | 02/18/05 | 11/08/02 | 12/16/02 | 02/12/03 |
| 1,2,3-Trichloropropane (1,2,3-TCP) | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,4-Trichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,4-Trimethylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dibromoethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Trans-Dichloroethylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3,5-Trimethylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,4-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2,2-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Butanone (Methylethyl ketone) | µg/L | N/A | <1 | <1 | <1 | <1 | <1 | 1.1 | 1.5 | 1.2 | <1 | <1 | <1 |
| 2-Chlorotoluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Hexanone | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 4-Chlorotoluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 4-Methyl-2-pentanone (MIBK) | µg/L | N/A | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Acetone | µg/L | N/A | 15 | 4.3 | 3.8 | 4.2 | 2.5 | 11 | 17 | 12 | 13 | 3.8 | 5.1 |
| Acrylonitrile | µg/L | N/A | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Allyl Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromochloromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromoform | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Carbon disulfide | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Carbon Tetrachloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chloroform | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| cis-1,2-Dichloroethene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| cis-1,3-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dibromochloromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dibromomethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dichlorobromomethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dichlorodifluoromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Diethyl Ether | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.88 | <0.5 | <0.5 | <0.5 | <0.5 |

## TABLE C-6

## STORM WATER ANALYTICAL RESULTS – IMAX

| | | | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | I-SW-01 | | | | | | | | | | |
| **Constituent** | **Units[1]** | **Fraction** | **11/08/02** | **12/16/02** | **02/12/03** | **03/15/03** | **02/02/04** | **02/25/04** | **12/28/04** | **02/18/05** | **11/08/02** | **12/16/02** | **02/12/03** |
| Diisopropyl Ether (DIPE) | µg/L | N/A | -- | -- | -- | -- | <2 | <2 | <2 | <2 | -- | -- | -- |
| Ethanol | µg/L | N/A | -- | -- | -- | -- | <100 | <100 | <100 | <100 | -- | -- | -- |
| Ethyl Methacrylate | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethyl-t-Butyl Ether (ETBE) | µg/L | N/A | -- | -- | -- | -- | <2 | <2 | <2 | <2 | -- | -- | -- |
| Hexachloro-1,3-Butadiene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Iodomethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Isopropylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl Methacrylate | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methylene Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.56 | <0.5 | <0.5 | <0.5 |
| Naphthalene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| n-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| n-Propylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| p-Isopropyltoluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| sec-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Styrene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| t-1,4-Dichloro-2-Butene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Tert-Amyl-Methyl Ether (TAME) | µg/L | N/A | -- | -- | -- | -- | <2 | <2 | <2 | <2 | -- | -- | -- |
| Tert-Butyl Alcohol (TBA) | µg/L | N/A | -- | -- | -- | -- | <10 | <10 | <10 | <10 | -- | -- | -- |
| tert-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Tetrahydrofuran | µg/L | N/A | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| trans-1,3-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Trichlorofluoromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Vinyl Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Semi-Volatile Organic Compounds** | | | | | | | | | | | | | |
| 1-Methylnaphthalene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| 2,4,5-Trichlorophenol | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| 2,4,6-Trichlorophenol | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| 2,4-Dichlorophenol | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| 2,4-Dimethylphenol | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| 2,4-Dinitrophenol | µg/L | N/A | <50 | <50 | <50 | <50 | <50 | <50 | -- | -- | <50 | <50 | <50 |
| 2,4-Dinitrotoluene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| 2,6-Dinitrotoluene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| 2-Chloronaphthalene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| 2-Chlorophenol | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |

# TABLE C-6

## STORM WATER ANALYTICAL RESULTS – IMAX

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | I-SW-01 | | | | | | | | | | |
| | | | 11/08/02 | 12/16/02 | 02/12/03 | 03/15/03 | 02/02/04 | 02/25/04 | 12/28/04 | 02/18/05 | 11/08/02 | 12/16/02 | 02/12/03 |
| 2-Methylnaphthalene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| 2-Methylphenol (o-Cresol) | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| 2-Nitroaniline | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| 2-Nitrophenol | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| 3,3'-Dichlorobenzidine | µg/L | N/A | <25 | <25 | <25 | <25 | <25 | <25 | -- | -- | <25 | <25 | <25 |
| 3-Nitroaniline | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| 4,6-Dinitro-2-Methylphenol | µg/L | N/A | <50 | <50 | <50 | <50 | <50 | <50 | -- | -- | <50 | <50 | <50 |
| 4-Bromophenyl-Phenyl Ether | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| 4-Chloro-3-Methylphenol | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| 4-Chloroaniline | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| 4-Chlorophenyl-Phenyl Ether | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| 4-Methylphenol (p-Cresol) | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| 4-Nitroaniline | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| 4-Nitrophenol | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| Acenaphthene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| Acenaphthylene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| Aniline | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| Anthracene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| Azobenzene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| Benzidine | µg/L | N/A | <50 | <50 | <50 | <50 | <50 | <50 | -- | -- | <50 | <50 | <50 |
| Benzo (a) Anthracene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| Benzo (a) Pyrene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| Benzo (b) Fluoranthene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| Benzo (g,h,i) Perylene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| Benzo (k) Fluoranthene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| Benzoic acid | µg/L | N/A | <50 | <50 | <50 | <50 | <50 | <50 | -- | -- | <50 | <50 | <50 |
| Benzyl alcohol | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| Bis(2-Chloroethoxy) Methane | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| Bis(2-Chloroethyl) Ether | µg/L | N/A | <25 | <25 | <25 | <25 | <25 | <25 | -- | -- | <25 | <25 | <25 |
| Bis(2-Chloroisopropyl) Ether | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| Bis(2-Ethylhexyl) Phthalate | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| Butyl Benzyl Phthalate | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| Chrysene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| Dibenz (a,h) Anthracene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| Dibenzofuran | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| Diethyl Phthalate | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |

# TABLE C-6

## STORM WATER ANALYTICAL RESULTS – IMAX

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | I-SW-01 | | | | | | | | | | |
| | | | 11/08/02 | 12/16/02 | 02/12/03 | 03/15/03 | 02/02/04 | 02/25/04 | 12/28/04 | 02/18/05 | 11/08/02 | 12/16/02 | 02/12/03 |
| Dimethyl Phthalate | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| Di-n-Butyl Phthalate | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| Di-n-Octyl Phthalate | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| Fluoranthene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| Fluorene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| Hexachlorobenzene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| Hexachlorocyclopentadiene | µg/L | N/A | <25 | <25 | <25 | <25 | <25 | <25 | -- | -- | <25 | <25 | <25 |
| Hexachloroethane | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| Indeno (1,2,3-c,d) Pyrene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| Isophorone | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| Nitrobenzene | µg/L | N/A | <25 | <25 | <25 | <25 | <25 | <25 | -- | -- | <25 | <25 | <25 |
| N-Nitroso-di-n-propylamine | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| N-Nitrosodiphenylamino | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| Pentachlorophenol | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| Phenanthrene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| Phenol | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| Pyrene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| Pyridine | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | <10 | <10 | <10 |
| **Biological Parameters** | | | | | | | | | | | | | |
| Heterotrophic Plate Count | CFU/mL | N/A | 800 | 160 | 1,300 | 1,700 | -- | -- | -- | -- | 500 | 6,400 | 2,000 |
| Total Coliforms | MPN/100 mL | N/A | <1.1 | <1.1 | 500 | <1.1 | -- | -- | -- | -- | <1.1 | 700 | 13,000 |
| Fecal Coliform | MPN/100 mL | N/A | <1.1 | <1.1 | 20 | <1.1 | -- | -- | -- | -- | <1.1 | <1.1 | 260 |
| E. coli | MPN/100 mL | N/A | <1.1 | <1.1 | 20 | <1.1 | -- | -- | -- | -- | <1.1 | <1.1 | 120 |

-- indicates the constituent was not analyzed for. Analytes not detected are indicated with a "<" symbol; the associated numerical value is the detection limit.

1. Units of measure: mg/L = milligrams per liter, µg/L = micrograms per liter, µhmos/cm = microhmos per centimeter, NTU = Nephelometric Turbidity Unit.
2. In cases in which the filtered concentrations exceeded the total, the differences are considered by the laboratory statistically insignificant and can be attributed to the variability inherent with the analytical method.

# TABLE C-6

## STORM WATER ANALYTICAL RESULTS – IMAX

| | | | I-SW-02 | | | | |
|---|---|---|---|---|---|---|---|
| **Constituent** | **Units[1]** | **Fraction** | **03/15/03** | **02/02/04** | **02/25/04** | **12/28/04** | **02/18/05** |
| **General Monitoring Parameters** | | | | | | | |
| Alkalinity, Total (as $CaCO_3$) | mg/L | N/A | 6.1 | 3.2 | 6 | 5 | 4 |
| Bicarbonate (as $CaCO_3$) | mg/L | N/A | 6.1 | 3.2 | 6 | 5 | 4 |
| Bromide | mg/L | N/A | <0.1 | <0.1 | 2.5 | <0.1 | <0.1 |
| Calcium | mg/L | Total | 0.585 | 1.99 | 1.17 | 0.990 | 1.33 |
| Carbonate (as $CaCO_3$) | mg/L | N/A | <1 | <1 | <1 | <1 | <1 |
| Chloride | mg/L | N/A | <1 | 3.6 | 1.7 | 2.5 | <1 |
| Chemical Oxygen Demand | mg/L | N/A | 13 | 41 | 13 | 43 | 61 |
| Fluoride | mg/L | N/A | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Hardness (as $CaCO_3$) | mg/L | Total | <2 | 10 | 6 | 22 | 10 |
| Hydroxide (as $CaCO_3$) | mg/L | N/A | <1 | <1 | <1 | <1 | <1 |
| Magnesium | mg/L | Total | 0.202 | 0.473 | 0.265 | 0.288 | 0.213 |
| MBAS (Surfactants) | mg/L | N/A | <0.1 | 0.1 | 0.13 | 0.11 | <0.1 |
| Nitrate (as N) | mg/L | N/A | 0.32 | 1.1 | <0.1 | 1.2 | 0.24 |
| Nitrite (as N) | mg/L | N/A | 0.12 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total Kjeldahl Nitrogen | mg/L | Total | -- | 2.1 | 0.84 | 1.1 | 0.84 |
| Carbon, Total Organic | mg/L | N/A | 1.6 | 6 | 2.8 | 2.4 | 3.1 |
| Carbon, Dissolved Organic | mg/L | N/A | 2.3 | 4.7 | 2.8 | 2.4 | 3.1 |
| Nitrogen, Organic | mg/L | N/A | <0.5 | 1.5 | <0.5 | 0.61 | 0.84 |
| Ammonia-Nitrogen | mg/L | Total | 0.21 | 0.56 | 0.35 | 0.49 | <0.1 |
| pH | pH units | N/A | 5.97 | 6.06 | 6.37 | 6.02 | 6.29 |
| Phosphorus | mg/L | Dissolved | <0.03 | 0.045 | <0.03 | 0.13 | <0.03 |
| Phosphorus | mg/L | Total | <0.03 | 0.097 | 0.067 | 0.23 | 0.23 |
| Potassium | mg/L | Total | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Sodium | mg/L | Total | <0.5 | 2.36 | 1.41 | 3.20 | 0.686 |
| Specific Conductance | µmhos/cm | N/A | 12 | 39 | 25 | 35 | 19 |
| Sulfate | mg/L | N/A | 2.2 | 2.9 | 3.8 | 2.6 | 3.5 |
| Total Dissolved Solids | mg/L | N/A | 10 | 14 | 22 | 20 | 30 |
| Total Suspended Solids | mg/L | N/A | 16 | 96 | <1 | 38 | 140 |
| Turbidity | NTU | N/A | 2.7 | 14 | 11 | 9.1 | 23 |
| **Metals[2]** | | | | | | | |
| Aluminum | µg/L | Dissolved | <50 | <50 | 105 | <25 | <25 |
| Aluminum | µg/L | Total | 255 | 168 | 503 | 851 | 952 |
| Antimony | µg/L | Dissolved | <1 | 1.13 | 1.62 | <1 | 2.01 |
| Antimony | µg/L | Total | <1 | 1.27 | 3.15 | <1 | 4.28 |

# TABLE C-6

## STORM WATER ANALYTICAL RESULTS – IMAX

| | | | I-SW-02 | | | | |
|---|---|---|---|---|---|---|---|
| **Constituent** | **Units[1]** | **Fraction** | **03/15/03** | **02/02/04** | **02/25/04** | **12/28/04** | **02/18/05** |
| Arsenic | µg/L | Dissolved | 17.4 | 32.4 | 31.7 | 60.9 | 43.3 |
| Arsenic | µg/L | Total | 22.8 | 58.7 | 35.2 | 69.4 | 53.2 |
| Barium | µg/L | Dissolved | 1.44 | 5.06 | 3.7 | 3.06 | 2.06 |
| Barium | µg/L | Total | 8.96 | 7.42 | 15.6 | 20.7 | 29.3 |
| Beryllium | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 |
| Beryllium | µg/L | Total | <1 | <1 | <1 | <1 | <1 |
| Boron | µg/L | Dissolved | <20 | <50 | <50 | <50 | <50 |
| Boron | µg/L | Total | <20 | <50 | <50 | <50 | <50 |
| Cadmium | µg/L | Dissolved | <0.5 | <0.2 | <0.2 | <0.2 | <0.2 |
| Cadmium | µg/L | Total | <0.5 | 0.229 | <0.2 | 0.267 | 0.226 |
| Chromium | µg/L | Dissolved | <1 | <1 | 1.41 | <1 | 1.99 |
| Chromium | µg/L | Total | 1.16 | <1 | 2.64 | 3.07 | 4.35 |
| Chromium, Hexavalent | µg/L | Dissolved | 0.22 | 0.41 | 0.26 | 0.37 | 0.25 |
| Cobalt | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 |
| Cobalt | µg/L | Total | <1 | <1 | <1 | <1 | <1 |
| Copper | µg/L | Dissolved | 7.82 | 38.6 | 23.8 | 35.2 | 21 |
| Copper | µg/L | Total | 18.4 | 69.8 | 52.7 | 87.1 | 94.8 |
| Iron | µg/L | Dissolved | -- | <100 | <100 | <100 | <100 |
| Iron | µg/L | Total | -- | <100 | 672 | 1,010 | 1,190 |
| Lead | µg/L | Dissolved | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Lead | µg/L | Total | 2.71 | 0.947 | 5.52 | 10.1 | 13.7 |
| Manganese | µg/L | Dissolved | 4.12 | 6.47 | 4.95 | 3.35 | 3.15 |
| Manganese | µg/L | Total | 8.04 | 9.53 | 14 | 20.8 | 24.9 |
| Mercury | µg/L | Dissolved | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Mercury | µg/L | Total | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Molybdenum | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 |
| Molybdenum | µg/L | Total | <1 | <1 | <1 | <1 | <1 |
| Nickel | µg/L | Dissolved | <1 | <2 | <2 | <2 | <2 |
| Nickel | µg/L | Total | <1 | <2 | <2 | <2 | 5.1 |
| Selenium | µg/L | Dissolved | 1.24 | <1 | <1 | <1 | <1 |
| Selenium | µg/L | Total | <5 | <1 | <1 | <1 | <1 |
| Silver | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 |
| Silver | µg/L | Total | <1 | <1 | <1 | <1 | <1 |
| Strontium | µg/L | Dissolved | 1.94 | 10.6 | 6.6 | 6.57 | 5.41 |
| Strontium | µg/L | Total | 2.83 | 12 | 8.85 | 10.2 | 9.35 |
| Thallium | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 |

# TABLE C-6

## STORM WATER ANALYTICAL RESULTS – IMAX

| Constituent | Units[1] | Fraction | I-SW-02 | | | | |
|---|---|---|---|---|---|---|---|
| | | | 03/15/03 | 02/02/04 | 02/25/04 | 12/28/04 | 02/18/05 |
| Thallium | µg/L | Total | <1 | <1 | <1 | <1 | <1 |
| Tin | µg/L | Dissolved | <1 | <1 | 2.13 | <1 | <1 |
| Tin | µg/L | Total | <1 | <1 | 2.84 | 1.96 | 2.13 |
| Titanium | µg/L | Dissolved | <1 | <1 | 1.15 | 1.07 | <1 |
| Titanium | µg/L | Total | 14.6 | 4.96 | 30.6 | 45.9 | 43.5 |
| Vanadium | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 |
| Vanadium | µg/L | Total | <1 | <1 | 2.03 | 2.11 | 1.39 |
| Zinc | µg/L | Dissolved | 112 | 757 | 390 | 633 | 535 |
| Zinc | µg/L | Total | 198 | 1,240 | 548 | 899 | 1,080 |
| **Other Constituents** | | | | | | | |
| Oil and Grease | mg/L | N/A | 1.2 | 1 | 1.2 | <1 | 1.7 |
| Perchlorate | µg/L | N/A | <2 | <2 | <2 | <2 | <2 |
| N-Nitrosodimethylamine (NDMA) | ng/L | N/A | <10 | <10 | <10 | -- | -- |
| Glyphosate | µg/L | N/A | <6 | -- | -- | -- | -- |
| 1,4-Dioxane | µg/L | N/A | <2 | -- | -- | -- | -- |
| 1,2-Dibromo-3-chloropropane (DBCP) | µg/L | N/A | <0.02 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Volatile Organic Compounds** | | | | | | | |
| Methyl Bromide | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl-t-Butyl Ether (MTBE) | µg/L | N/A | <0.5 | <1 | <1 | <1 | <1 |
| Benzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Toluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| o-Xylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| p/m-Xylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Trichloroethylene (TCE) | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Tetrachloroethylene (PCE) | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,1,2-Tetrachloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,1-Trichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2,2-Tetrachloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2-Trichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloroethylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,3-Trichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

# TABLE C-6

## STORM WATER ANALYTICAL RESULTS – IMAX

| Constituent | Units[1] | Fraction | I-SW-02 03/15/03 | 02/02/04 | 02/25/04 | 12/28/04 | 02/18/05 |
|---|---|---|---|---|---|---|---|
| 1,2,3-Trichloropropane (1,2,3-TCP) | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,4-Trichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,4-Trimethylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dibromoethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Trans-Dichloroethylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3,5-Trimethylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,4-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2,2-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Butanone (Methylethyl ketone) | µg/L | N/A | <1 | <1 | <1 | 1.7 | 1.1 |
| 2-Chlorotoluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Hexanone | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 4-Chlorotoluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 4-Methyl-2-pentanone (MIBK) | µg/L | N/A | <2 | <2 | <2 | <2 | <2 |
| Acetone | µg/L | N/A | 2.7 | 2.6 | 13 | 15 | 11 |
| Acrylonitrile | µg/L | N/A | <2 | <2 | <2 | <2 | <2 |
| Allyl Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromochloromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromoform | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Carbon disulfide | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Carbon Tetrachloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chloroform | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| cis-1,2-Dichloroethene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| cis-1,3-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dibromochloromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dibromomethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dichlorobromomethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dichlorodifluoromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Diethyl Ether | µg/L | N/A | <0.5 | <0.5 | <0.5 | 1.2 | <0.5 |

# TABLE C-6

## STORM WATER ANALYTICAL RESULTS – IMAX

| Constituent | Units[1] | Fraction | I-SW-02 | | | | |
|---|---|---|---|---|---|---|---|
| | | | 03/15/03 | 02/02/04 | 02/25/04 | 12/28/04 | 02/18/05 |
| Diisopropyl Ether (DIPE) | µg/L | N/A | -- | <2 | <2 | <2 | <2 |
| Ethanol | µg/L | N/A | -- | <100 | <100 | <100 | <100 |
| Ethyl Methacrylate | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethyl-t-Butyl Ether (ETBE) | µg/L | N/A | -- | <2 | <2 | <2 | <2 |
| Hexachloro-1,3-Butadiene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Iodomethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Isopropylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl Methacrylate | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methylene Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Naphthalene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| n-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| n-Propylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| p-Isopropyltoluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| sec-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Styrene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| t-1,4-Dichloro-2-Butene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Tert-Amyl-Methyl Ether (TAME) | µg/L | N/A | -- | <2 | <2 | <2 | <2 |
| Tert-Butyl Alcohol (TBA) | µg/L | N/A | -- | <10 | <10 | <10 | <10 |
| tert-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Tetrahydrofuran | µg/L | N/A | <1 | <1 | <1 | <1 | <1 |
| trans-1,3-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Trichlorofluoromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Vinyl Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Semi-Volatile Organic Compounds** | | | | | | | |
| 1-Methylnaphthalene | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| 2,4,5-Trichlorophenol | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| 2,4,6-Trichlorophenol | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| 2,4-Dichlorophenol | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| 2,4-Dimethylphenol | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| 2,4-Dinitrophenol | µg/L | N/A | <50 | <50 | <50 | -- | -- |
| 2,4-Dinitrotoluene | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| 2,6-Dinitrotoluene | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| 2-Chloronaphthalene | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| 2-Chlorophenol | µg/L | N/A | <10 | <10 | <10 | -- | -- |

## TABLE C-6

## STORM WATER ANALYTICAL RESULTS – IMAX

| Constituent | Units[1] | Fraction | I-SW-02<br>03/15/03 | 02/02/04 | 02/25/04 | 12/28/04 | 02/18/05 |
|---|---|---|---|---|---|---|---|
| 2-Methylnaphthalene | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| 2-Methylphenol (o-Cresol) | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| 2-Nitroaniline | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| 2-Nitrophenol | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| 3,3'-Dichlorobenzidine | µg/L | N/A | <25 | <25 | <25 | -- | -- |
| 3-Nitroaniline | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| 4,6-Dinitro-2-Methylphenol | µg/L | N/A | <50 | <50 | <50 | -- | -- |
| 4-Bromophenyl-Phenyl Ether | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| 4-Chloro-3-Methylphenol | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| 4-Chloroaniline | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| 4-Chlorophenyl-Phenyl Ether | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| 4-Methylphenol (p-Cresol) | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| 4-Nitroaniline | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| 4-Nitrophenol | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| Acenaphthene | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| Acenaphthylene | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| Aniline | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| Anthracene | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| Azobenzene | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| Benzidine | µg/L | N/A | <50 | <50 | <50 | -- | -- |
| Benzo (a) Anthracene | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| Benzo (a) Pyrene | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| Benzo (b) Fluoranthene | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| Benzo (g,h,i) Perylene | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| Benzo (k) Fluoranthene | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| Benzoic acid | µg/L | N/A | <50 | <50 | <50 | -- | -- |
| Benzyl alcohol | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| Bis(2-Chloroethoxy) Methane | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| Bis(2-Chloroethyl) Ether | µg/L | N/A | <25 | <25 | <25 | -- | -- |
| Bis(2-Chloroisopropyl) Ether | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| Bis(2-Ethylhexyl) Phthalate | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| Butyl Benzyl Phthalate | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| Chrysene | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| Dibenz (a,h) Anthracene | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| Dibenzofuran | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| Diethyl Phthalate | µg/L | N/A | <10 | <10 | <10 | -- | -- |

# TABLE C-6

## STORM WATER ANALYTICAL RESULTS – IMAX

| Constituent | Units[1] | Fraction | I-SW-02 | | | | |
|---|---|---|---|---|---|---|---|
| | | | 03/15/03 | 02/02/04 | 02/25/04 | 12/28/04 | 02/18/05 |
| Dimethyl Phthalate | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| Di-n-Butyl Phthalate | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| Di-n-Octyl Phthalate | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| Fluoranthene | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| Fluorene | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| Hexachlorobenzene | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| Hexachlorocyclopentadiene | µg/L | N/A | <25 | <25 | <25 | -- | -- |
| Hexachloroethane | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| Indeno (1,2,3-c,d) Pyrene | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| Isophorone | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| Nitrobenzene | µg/L | N/A | <25 | <25 | <25 | -- | -- |
| N-Nitroso-di-n-propylamine | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| N-Nitrosodiphenylamino | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| Pentachlorophenol | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| Phenanthrene | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| Phenol | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| Pyrene | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| Pyridine | µg/L | N/A | <10 | <10 | <10 | -- | -- |
| **Biological Parameters** | | | | | | | |
| Heterotrophic Plate Count | CFU/mL | N/A | 1,700 | -- | -- | -- | -- |
| Total Coliforms | MPN/100 mL | N/A | <1.1 | -- | -- | -- | -- |
| Fecal Coliform | MPN/100 mL | N/A | 40 | -- | -- | -- | -- |
| E. coli | MPN/100 mL | N/A | <1.1 | -- | -- | -- | -- |

-- indicates the constituent was not analyzed for.  Analytes not detected are indicate

1.  Units of measure:  mg/L = milligrams per liter, µg/L = micrograms per liter, µhr

2.  In cases in which the filtered concentrations exceeded the total, the differences a

## TABLE C-7

## LYSIMETER ANALYTICAL RESULTS – IMAX

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | I-LS-01 | | | | | | | | | | |
| | | | 03/20/02 | 01/03/03 | 02/27/03 | 03/18/03 | 02/04/04 | 02/27/04 | 10/21/04 | 12/29/04 | 02/23/05 | 03/20/02 | 11/10/02 |
| **General Monitoring Parameters** | | | | | | | | | | | | | |
| Alkalinity, Total (as $CaCO_3$) | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Bicarbonate (as $CaCO_3$) | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Bromide | mg/L | N/A | 0.13 | 0.72 | -- | 2 | <0.2 | <0.1 | 2.4 | 1.7 | 0.59 | 0.13 | <0.1 |
| Calcium | mg/L | Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Carbonate (as $CaCO_3$) | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Chloride | mg/L | N/A | -- | 120 | -- | 100 | 110 | 120 | 100 | 110 | 53 | -- | 9.5 |
| Chemical Oxygen Demand | mg/L | N/A | <5 | -- | -- | -- | -- | 23 | 58 | 28 | -- | 6 | 36 |
| Fluoride | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Hardness (as $CaCO_3$) | mg/L | Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Hydroxide (as $CaCO_3$) | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Magnesium | mg/L | Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MBAS (Surfactants) | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Nitrate (as N) | mg/L | N/A | 7.7 | 310 | -- | 280 | 300 | 300 | 310 | 320 | 120 | 8.2 | 3.4 |
| Nitrite (as N) | mg/L | N/A | <0.2 | <0.1 | -- | <0.1 | <0.2 | <0.1 | <0.1 | <0.2 | <0.1 | <0.5 | <0.1 |
| Total Kjeldahl Nitrogen | mg/L | Total | 0.46 | -- | -- | -- | -- | <0.5 | -- | <0.5 | -- | <0.2 | -- |
| Carbon, Total Organic | mg/L | N/A | 1.7 | -- | -- | -- | -- | 10 | 7.3 | 7.6 | -- | 1.9 | 14 |
| Carbon, Dissolved Organic | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Nitrogen, Organic | mg/L | N/A | 0.404 | -- | -- | -- | -- | <0.5 | -- | <0.5 | -- | <0.2 | 1.3 |
| Ammonia-Nitrogen | mg/L | Total | 0.056 | -- | -- | -- | -- | <0.2 | -- | <0.2 | -- | 0.063 | 0.46 |
| pH | pH units | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Phosphorus | mg/L | Dissolved | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Phosphorus | mg/L | Total | -- | -- | -- | 0.18 | -- | 14 | 0.26 | 0.34 | -- | -- | 0.1 |
| Potassium | mg/L | Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Sodium | mg/L | Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Specific Conductance | µmhos/cm | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Sulfate | mg/L | N/A | -- | 650 | -- | 460 | 500 | 490 | 440 | 470 | 140 | -- | 130 |
| Total Dissolved Solids | mg/L | N/A | 710 | 3,000 | -- | 2,400 | 3,000 | 2,800 | 2,900 | 2,400 | -- | 700 | 330 |
| Total Suspended Solids | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Turbidity | NTU | N/A | 271 | -- | -- | -- | -- | -- | -- | -- | -- | 269 | -- |
| **Metals[2]** | | | | | | | | | | | | | |
| Aluminum | µg/L | Dissolved | -- | <50 | -- | <50 | -- | <50 | <25 | <25 | <25 | -- | <50 |
| Aluminum | µg/L | Total | -- | <50 | <50 | <50 | <50 | 455 | <25 | <25 | <25 | -- | 398 |
| Antimony | µg/L | Dissolved | -- | <1 | -- | 2.41 | -- | <1 | 1.03 | <1 | <1 | -- | 2.02 |
| Antimony | µg/L | Total | -- | 1.32 | 2.49 | <1 | <1 | <1 | <1 | <1 | <1 | -- | 2.87 |

# TABLE C-7

## LYSIMETER ANALYTICAL RESULTS – IMAX

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | I-LS-01 | | | | | | | | | | |
| | | | 03/20/02 | 01/03/03 | 02/27/03 | 03/18/03 | 02/04/04 | 02/27/04 | 10/21/04 | 12/29/04 | 02/23/05 | 03/20/02 | 11/10/02 |
| Arsenic | µg/L | Dissolved | 2 | 1.65 | -- | 3.06 | -- | 1.62 | 6.78 | 6.57 | 6.17 | 2.2 | 22.1 |
| Arsenic | µg/L | Total | 7.4 | 4.87 | 4.01 | 4.12 | 2.31 | 1.51 | 8.47 | 5.61 | 6.8 | 9.9 | 28.6 |
| Barium | µg/L | Dissolved | -- | 132 | -- | 97.5 | -- | 132 | 122 | 132 | 96.4 | -- | 58.7 |
| Barium | µg/L | Total | -- | 160 | 81.3 | 95.3 | 128 | 132 | 143 | 143 | 106 | -- | 32.3 |
| Beryllium | µg/L | Dissolved | -- | <1 | -- | <1 | -- | <1 | <1 | <1 | <1 | -- | <1 |
| Beryllium | µg/L | Total | -- | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | -- | <1 |
| Boron | µg/L | Dissolved | -- | 99.4 | -- | 125 | -- | 110 | 118 | 136 | 53.2 | -- | 30 |
| Boron | µg/L | Total | -- | 142 | 144 | 129 | 139 | 109 | 118 | 135 | 59.1 | -- | 30.2 |
| Cadmium | µg/L | Dissolved | -- | <0.5 | -- | 0.524 | -- | 0.372 | 0.283 | 0.4 | <0.2 | -- | <0.5 |
| Cadmium | µg/L | Total | <0.5 | <0.5 | 0.591 | 0.626 | 0.397 | 0.388 | 0.392 | 0.409 | 0.218 | <0.5 | <0.5 |
| Chromium | µg/L | Dissolved | 34 | 1.16 | -- | 3.86 | -- | 4.45 | 5.16 | 9.05 | 3.03 | 33 | 23.5 |
| Chromium | µg/L | Total | 64 | 3.9 | 4.23 | 2.77 | 7.16 | 5.14 | 4.73 | 10 | 3.59 | 83 | 36.5 |
| Chromium, Hexavalent | µg/L | Dissolved | 35.2 | 2 | -- | 3.6 | -- | -- | 7.2 | 8.7 | 3.3 | 35.1 | 28 |
| Cobalt | µg/L | Dissolved | -- | <1 | -- | 1 | -- | <1 | <1 | <1 | <1 | -- | <1 |
| Cobalt | µg/L | Total | -- | <1 | 4.15 | <1 | 1.19 | <1 | <1 | <1 | <1 | -- | <1 |
| Copper | µg/L | Dissolved | <2 | 9.85 | -- | 10.1 | -- | 6.65 | 3.18 | 5.02 | 3.55 | <2 | 4.48 |
| Copper | µg/L | Total | 22 | 13.4 | 23.1 | 11 | 25.5 | 7.95 | 6.91 | 6.04 | 3.65 | 34 | 9.3 |
| Iron | µg/L | Dissolved | -- | -- | -- | -- | -- | <100 | <100 | 760 | 126 | -- | -- |
| Iron | µg/L | Total | -- | -- | -- | -- | 156 | 132 | <100 | 796 | 172 | -- | -- |
| Lead | µg/L | Dissolved | <0.5 | <0.5 | -- | 0.866 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Lead | µg/L | Total | 6.3 | 1.17 | 4.12 | 1.48 | <0.5 | 1.14 | <0.5 | <0.5 | <0.5 | 9.4 | 1.49 |
| Manganese | µg/L | Dissolved | -- | 1.32 | -- | <1 | -- | <1 | <1 | <1 | 1.34 | -- | 18.4 |
| Manganese | µg/L | Total | -- | 2.22 | 4.66 | <1 | 1.07 | 2.1 | <1 | <1 | 1.32 | -- | 31 |
| Mercury | µg/L | Dissolved | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Mercury | µg/L | Total | <0.2 | -- | -- | -- | -- | -- | -- | -- | -- | <0.2 | -- |
| Molybdenum | µg/L | Dissolved | -- | 1.35 | -- | 3.13 | -- | 3.32 | 3.63 | 4.62 | 1.53 | -- | 6.91 |
| Molybdenum | µg/L | Total | -- | 1.74 | 2.39 | 2.87 | 3.17 | 3.62 | 3.83 | 4.82 | 1.83 | -- | 8.3 |
| Nickel | µg/L | Dissolved | 5.2 | 6.74 | -- | 32 | -- | 12 | 9.3 | 17 | 5.5 | 5.6 | 3.17 |
| Nickel | µg/L | Total | 22 | 10.1 | 21.8 | 24.9 | 35 | 14.7 | 9.8 | 12 | 6.4 | 32 | 4.39 |
| Selenium | µg/L | Dissolved | -- | 5.32 | -- | <5 | -- | <1 | 10.9 | <1 | 3.08 | -- | <5 |
| Selenium | µg/L | Total | -- | 20.9 | <5 | <5 | 2.43 | <1 | 10 | <1 | 3.97 | -- | <5 |
| Silver | µg/L | Dissolved | -- | <1 | -- | <1 | -- | <1 | 2.49 | <1 | <1 | -- | <1 |
| Silver | µg/L | Total | -- | <1 | <1 | <1 | <1 | <1 | 2.41 | <1 | <1 | -- | <1 |
| Strontium | µg/L | Dissolved | -- | 1,390 | -- | 2,060 | -- | 1,990 | 1,500 | 1,810 | 703 | -- | 131 |
| Strontium | µg/L | Total | -- | 1,630 | 1,340 | 2,200 | 1,960 | 2,060 | 1,710 | 2,010 | 780 | -- | 158 |
| Thallium | µg/L | Dissolved | -- | <1 | -- | <1 | -- | <1 | <1 | <1 | <1 | -- | <1 |

## TABLE C-7

## LYSIMETER ANALYTICAL RESULTS – IMAX

| | | | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | I-LS-01 | | | | | | | | | | |
| **Constituent** | **Units[1]** | **Fraction** | **03/20/02** | **01/03/03** | **02/27/03** | **03/18/03** | **02/04/04** | **02/27/04** | **10/21/04** | **12/29/04** | **02/23/05** | **03/20/02** | **11/10/02** |
| Thallium | µg/L | Total | -- | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | -- | <1 |
| Tin | µg/L | Dissolved | -- | 1.06 | -- | 1.14 | -- | <1 | <1 | <1 | <1 | -- | 1.29 |
| Tin | µg/L | Total | -- | 3.66 | 1.29 | <1 | 1.34 | <1 | <1 | <1 | <1 | -- | 2.85 |
| Titanium | µg/L | Dissolved | -- | 1.42 | -- | 3.11 | -- | 6.18 | 4.79 | 7.39 | 8.96 | -- | 1.06 |
| Titanium | µg/L | Total | -- | 3.57 | 10 | 2.87 | 4.58 | 6.8 | 4.88 | 8.42 | 8.91 | -- | 9.9 |
| Vanadium | µg/L | Dissolved | -- | 4.28 | -- | 4.64 | -- | 3.46 | 3.48 | 4.8 | 4.93 | -- | 1.84 |
| Vanadium | µg/L | Total | -- | 5.18 | 4.45 | 4.34 | 6.62 | 3.62 | 4.45 | 5.41 | 5.64 | -- | 3.67 |
| Zinc | µg/L | Dissolved | 25 | 130 | -- | 129 | -- | 80.9 | 39.3 | 64 | 104 | 21 | 4,650 |
| Zinc | µg/L | Total | 70 | 181 | 209 | 124 | 116 | 107 | 77.9 | 62.8 | 105 | 120 | 6,400 |
| **Other Constituents** | | | | | | | | | | | | | |
| Oil and Grease | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Perchlorate | µg/L | N/A | <4 | -- | -- | -- | -- | -- | -- | -- | -- | <4 | -- |
| N-Nitrosodimethylamine (NDMA) | ng/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Glyphosate | µg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 1,4-Dioxane | µg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 1,2-Dibromo-3-chloropropane (DBCP) | µg/L | N/A | <0.01 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.01 | <0.5 |
| **Volatile Organic Compounds** | | | | | | | | | | | | | |
| Methyl Bromide | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Methyl-t-Butyl Ether (MTBE) | µg/L | N/A | -- | <0.5 | <0.5 | <1 | <1 | <1 | <1 | <1 | <1 | -- | 0.54 |
| Benzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Toluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethylbenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| o-Xylene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| p/m-Xylene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Trichloroethylene (TCE) | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Tetrachloroethylene (PCE) | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,1,2-Tetrachloroethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 1,1,1-Trichloroethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 1,1,2,2-Tetrachloroethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 1,1,2-Trichloroethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 1,1-Dichloroethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 1,1-Dichloroethylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloropropene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 1,2,3-Trichlorobenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |

## TABLE C-7

## LYSIMETER ANALYTICAL RESULTS – IMAX

| | | | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | I-LS-01 | | | | | | | | | | |
| Constituent | Units[1] | Fraction | 03/20/02 | 01/03/03 | 02/27/03 | 03/18/03 | 02/04/04 | 02/27/04 | 10/21/04 | 12/29/04 | 02/23/05 | 03/20/02 | 11/10/02 |
| 1,2,3-Trichloropropane (1,2,3-TCP) | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 1,2,4-Trichlorobenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 1,2,4-Trimethylbenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 1,2-Dibromoethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 1,2-Dichlorobenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 1,2-Dichloroethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 1,2-Dichloropropane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 1,2-Trans-Dichloroethylene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 1,3,5-Trimethylbenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 1,3-Dichlorobenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 1,3-Dichloropropane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 1,4-Dichlorobenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 2,2-Dichloropropane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 2-Butanone (Methylethyl ketone) | µg/L | N/A | -- | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | -- | <1 |
| 2-Chlorotoluene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 2-Hexanone | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 4-Chlorotoluene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 4-Methyl-2-pentanone (MIBK) | µg/L | N/A | -- | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | -- | <2 |
| Acetone | µg/L | N/A | -- | 5.7 | <2 | 4.3 | <2 | <2 | <2 | 3.7 | <2 | -- | 13 |
| Acrylonitrile | µg/L | N/A | -- | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | -- | <2 |
| Allyl Chloride | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Bromobenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Bromochloromethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Bromoform | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Carbon disulfide | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 1.2 | -- | <0.5 |
| Carbon Tetrachloride | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Chlorobenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Chloroethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Chloroform | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| cis-1,2-Dichloroethene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| cis-1,3-Dichloropropene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Dibromochloromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dibromomethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Dichlorobromomethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dichlorodifluoromethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Diethyl Ether | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |

# TABLE C-7

## LYSIMETER ANALYTICAL RESULTS – IMAX

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | I-LS-01 | | | | | | | | | | |
| | | | 03/20/02 | 01/03/03 | 02/27/03 | 03/18/03 | 02/04/04 | 02/27/04 | 10/21/04 | 12/29/04 | 02/23/05 | 03/20/02 | 11/10/02 |
| Diisopropyl Ether (DIPE) | µg/L | N/A | -- | -- | -- | -- | <2 | <2 | <2 | <2 | <2 | -- | -- |
| Ethanol | µg/L | N/A | -- | -- | -- | -- | <100 | <100 | <100 | <100 | <100 | -- | -- |
| Ethyl Methacrylate | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Ethyl-t-Butyl Ether (ETBE) | µg/L | N/A | -- | -- | -- | -- | <2 | <2 | <2 | <2 | <2 | -- | -- |
| Hexachloro-1,3-Butadiene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Iodomethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Isopropylbenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Methyl Chloride | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Methyl Methacrylate | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Methylene Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 1.1 | <0.5 | <0.5 |
| Naphthalene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| n-Butylbenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| n-Propylbenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| p-Isopropyltoluene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| sec-Butylbenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Styrene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| t-1,4-Dichloro-2-Butene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Tert-Amyl-Methyl Ether (TAME) | µg/L | N/A | -- | -- | -- | -- | <2 | <2 | <2 | <2 | <2 | -- | -- |
| Tert-Butyl Alcohol (TBA) | µg/L | N/A | -- | -- | -- | -- | <10 | <10 | 13 | <10 | <10 | -- | -- |
| tert-Butylbenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Tetrahydrofuran | µg/L | N/A | -- | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | -- | <1 |
| trans-1,3-Dichloropropene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Trichlorofluoromethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Vinyl Chloride | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| **Semi-Volatile Organic Compounds** | | | | | | | | | | | | | |
| NOT SAMPLED | µg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **Biological Parameters** | | | | | | | | | | | | | |
| Heterotrophic Plate Count | CFU/mL | N/A | -- | -- | -- | 48,000 | -- | -- | -- | -- | -- | -- | 5,000,000 |
| Total Coliforms | MPN/100 mL | N/A | 8 | -- | -- | <1.1 | -- | -- | -- | -- | -- | 13 | <1.1 |
| Fecal Coliform | MPN/100 mL | N/A | -- | -- | -- | <1.1 | -- | -- | -- | -- | -- | -- | <1.1 |
| E. coli | MPN/100 mL | N/A | -- | -- | -- | <1.1 | -- | -- | -- | -- | -- | -- | <1.1 |
| E. coli + Fecal Coliform | MPN/100 mL | N/A | <2 | -- | -- | -- | -- | -- | -- | -- | -- | <2 | -- |

-- indicates the constituent was not analyzed for. Analytes not detected are indicated with a "<" symbol; the associated numerical value is the detection limit.

1. Units of measure: mg/L = milligrams per liter, µg/L = micrograms per liter, µhmos/cm = microhmos per centimeter, NTU = Nephelometric Turbidity Unit.
2. In cases in which the filtered concentrations exceeded the total, the differences are considered by the laboratory statistically insignificant and can be attributed to the variability inherent with the analytical method.

## TABLE C-7

## LYSIMETER ANALYTICAL RESULTS – IMAX

| Constituent | Units[1] | Fraction | I-LS-02 | | | I-LS-03 | | |
|---|---|---|---|---|---|---|---|---|
| | | | 12/23/02 | 03/18/03 | 02/26/04 | 10/21/04 | 12/28/04 | 02/18/05 |
| **General Monitoring Parameters** | | | | | | | | |
| Alkalinity, Total (as $CaCO_3$) | mg/L | N/A | -- | -- | -- | -- | -- | -- |
| Bicarbonate (as $CaCO_3$) | mg/L | N/A | -- | -- | -- | -- | -- | -- |
| Bromide | mg/L | N/A | <0.1 | <0.1 | <0.1 | 0.16 | <0.1 | <0.1 |
| Calcium | mg/L | Total | -- | -- | -- | -- | -- | -- |
| Carbonate (as $CaCO_3$) | mg/L | N/A | -- | -- | -- | -- | -- | -- |
| Chloride | mg/L | N/A | 15 | 2.7 | 2.2 | 94 | 20 | <1 |
| Chemical Oxygen Demand | mg/L | N/A | -- | -- | 21 | 20 | 13 | 5.1 |
| Fluoride | mg/L | N/A | -- | -- | -- | -- | -- | -- |
| Hardness (as $CaCO_3$) | mg/L | Total | -- | -- | -- | -- | -- | -- |
| Hydroxide (as $CaCO_3$) | mg/L | N/A | -- | -- | -- | -- | -- | -- |
| Magnesium | mg/L | Total | -- | -- | -- | -- | -- | -- |
| MBAS (Surfactants) | mg/L | N/A | -- | -- | -- | -- | -- | -- |
| Nitrate (as N) | mg/L | N/A | 2.6 | 1.2 | 0.77 | 1 | 0.48 | 0.41 |
| Nitrite (as N) | mg/L | N/A | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total Kjeldahl Nitrogen | mg/L | Total | -- | -- | <0.5 | <1 | <0.5 | <0.5 |
| Carbon, Total Organic | mg/L | N/A | -- | -- | 4.9 | 3 | 2.4 | 1.7 |
| Carbon, Dissolved Organic | mg/L | N/A | -- | -- | -- | -- | -- | -- |
| Nitrogen, Organic | mg/L | N/A | -- | -- | <0.5 | <1 | <0.5 | <0.5 |
| Ammonia-Nitrogen | mg/L | Total | <0.2 | -- | <0.2 | <0.1 | <0.2 | <0.2 |
| pH | pH units | N/A | -- | -- | -- | -- | -- | -- |
| Phosphorus | mg/L | Dissolved | -- | -- | -- | -- | -- | -- |
| Phosphorus | mg/L | Total | -- | 0.054 | 2.6 | 0.73 | 0.44 | 0.58 |
| Potassium | mg/L | Total | -- | -- | -- | -- | -- | -- |
| Sodium | mg/L | Total | -- | -- | -- | -- | -- | -- |
| Specific Conductance | µmhos/cm | N/A | -- | -- | -- | -- | -- | -- |
| Sulfate | mg/L | N/A | 200 | 39 | 39 | 170 | 81 | 23 |
| Total Dissolved Solids | mg/L | N/A | 610 | -- | 130 | 750 | 450 | 180 |
| Total Suspended Solids | mg/L | N/A | -- | -- | -- | -- | -- | -- |
| Turbidity | NTU | N/A | -- | -- | -- | -- | -- | -- |
| **Metals[2]** | | | | | | | | |
| Aluminum | µg/L | Dissolved | <50 | <50 | <50 | <25 | <25 | <25 |
| Aluminum | µg/L | Total | 168 | 124 | 455 | <25 | <25 | <25 |
| Antimony | µg/L | Dissolved | <1 | 2.72 | <1 | <1 | <1 | <1 |
| Antimony | µg/L | Total | 1.62 | 1.76 | <1 | <1 | <1 | <1 |

# TABLE C-7

## LYSIMETER ANALYTICAL RESULTS – IMAX

| Constituent | Units[1] | Fraction | I-LS-02 | | | I-LS-03 | | |
|---|---|---|---|---|---|---|---|---|
| | | | 12/23/02 | 03/18/03 | 02/26/04 | 10/21/04 | 12/28/04 | 02/18/05 |
| Arsenic | μg/L | Dissolved | 6.76 | 20.3 | 12.5 | 4.77 | 3.17 | 4.49 |
| Arsenic | μg/L | Total | 9.74 | 23 | 13.8 | 5.39 | 3.15 | 4.25 |
| Barium | μg/L | Dissolved | 18.7 | 11 | 31.7 | 140 | 57.4 | 13.8 |
| Barium | μg/L | Total | 20.9 | 11.9 | 41.3 | 141 | 57.3 | 13.8 |
| Beryllium | μg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 |
| Beryllium | μg/L | Total | <1 | <1 | <1 | <1 | <1 | <1 |
| Boron | μg/L | Dissolved | 32.6 | <20 | <50 | 80.4 | 140 | <50 |
| Boron | μg/L | Total | 45.8 | 21 | <50 | 85.2 | 152 | <50 |
| Cadmium | μg/L | Dissolved | <0.5 | <0.5 | <0.2 | <0.2 | <0.2 | <0.2 |
| Cadmium | μg/L | Total | <0.5 | <0.5 | <0.2 | <0.2 | <0.2 | <0.2 |
| Chromium | μg/L | Dissolved | 41.6 | 8.71 | 5.66 | <1 | 1.38 | 1.31 |
| Chromium | μg/L | Total | 80.7 | 11.1 | 8.59 | <1 | 1.36 | 1.4 |
| Chromium, Hexavalent | μg/L | Dissolved | 74 | 8.4 | -- | 0.55 | 0.57 | 1 |
| Cobalt | μg/L | Dissolved | <1 | 1.34 | <1 | <1 | <1 | <1 |
| Cobalt | μg/L | Total | <1 | <1 | <1 | <1 | <1 | <1 |
| Copper | μg/L | Dissolved | 2.36 | 2.24 | 2.81 | <1 | 1.32 | <1 |
| Copper | μg/L | Total | 4.4 | 3.01 | 10.4 | <1 | 1.26 | <1 |
| Iron | μg/L | Dissolved | -- | -- | <100 | <100 | <100 | <100 |
| Iron | μg/L | Total | -- | -- | 1,290 | <100 | 101 | <100 |
| Lead | μg/L | Dissolved | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Lead | μg/L | Total | 0.723 | 0.737 | 3.29 | <0.5 | <0.5 | <0.5 |
| Manganese | μg/L | Dissolved | 12.7 | 20.9 | 18.1 | 5.36 | 1.02 | <1 |
| Manganese | μg/L | Total | 26.9 | 26.3 | 29.8 | 5.11 | <1 | 1.03 |
| Mercury | μg/L | Dissolved | -- | -- | <0.1 | -- | -- | <0.1 |
| Mercury | μg/L | Total | -- | -- | <0.1 | -- | -- | <0.1 |
| Molybdenum | μg/L | Dissolved | 11.5 | 2.9 | 1.84 | 3.88 | 3.26 | 5.7 |
| Molybdenum | μg/L | Total | 18.5 | 2.52 | 1.89 | 4.13 | 3.3 | 5.64 |
| Nickel | μg/L | Dissolved | 1.3 | 1.64 | 4 | 4.5 | <2 | <2 |
| Nickel | μg/L | Total | 2.4 | 1.19 | 6.6 | 4.1 | <2 | <2 |
| Selenium | μg/L | Dissolved | <5 | <5 | <1 | 1.62 | <1 | <1 |
| Selenium | μg/L | Total | <5 | <5 | <1 | 1.59 | <1 | <1 |
| Silver | μg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 |
| Silver | μg/L | Total | <1 | <1 | <1 | 3.58 | <1 | <1 |
| Strontium | μg/L | Dissolved | 74.9 | 54.1 | 73.9 | 617 | 322 | 94.3 |
| Strontium | μg/L | Total | 120 | 52.2 | 79.2 | 633 | 321 | 94.2 |
| Thallium | μg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 |

# TABLE C-7

## LYSIMETER ANALYTICAL RESULTS – IMAX

| Constituent | Units[1] | Fraction | I-LS-02 | | | I-LS-03 | | |
|---|---|---|---|---|---|---|---|---|
| | | | 12/23/02 | 03/18/03 | 02/26/04 | 10/21/04 | 12/28/04 | 02/18/05 |
| Thallium | µg/L | Total | <1 | <1 | <1 | <1 | <1 | <1 |
| Tin | µg/L | Dissolved | <1 | 1.67 | 2.96 | <1 | <1 | <1 |
| Tin | µg/L | Total | 1.72 | 4.76 | 6.1 | <1 | <1 | 1.12 |
| Titanium | µg/L | Dissolved | <1 | <1 | 1.03 | 4.75 | 7.95 | 4.14 |
| Titanium | µg/L | Total | 4.53 | 4.75 | 17.6 | 4.71 | 7.82 | 5.18 |
| Vanadium | µg/L | Dissolved | <1 | <1 | <1 | 8.22 | 7.66 | 8.27 |
| Vanadium | µg/L | Total | 2.42 | 1.43 | 1.76 | 8.91 | 7.44 | 7.88 |
| Zinc | µg/L | Dissolved | 4,080 | 1,720 | 546 | 9.07 | 8.82 | 6.89 |
| Zinc | µg/L | Total | 7,050 | 1,930 | 747 | 8.5 | 14.2 | 12.3 |
| **Other Constituents** | | | | | | | | |
| Oil and Grease | mg/L | N/A | -- | -- | -- | -- | -- | -- |
| Perchlorate | µg/L | N/A | -- | -- | -- | -- | -- | -- |
| N-Nitrosodimethylamine (NDMA) | ng/L | N/A | -- | -- | -- | -- | -- | -- |
| Glyphosate | µg/L | N/A | -- | -- | -- | -- | -- | -- |
| 1,4-Dioxane | µg/L | N/A | -- | -- | -- | -- | -- | -- |
| 1,2-Dibromo-3-chloropropane (DBCP) | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Volatile Organic Compounds** | | | | | | | | |
| Methyl Bromide | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl-t-Butyl Ether (MTBE) | µg/L | N/A | <0.5 | <1 | <1 | <1 | <1 | <1 |
| Benzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Toluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | 27 | 17 | 16 |
| o-Xylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | 37 | 33 | 34 |
| p/m-Xylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | 170 | 93 | 89 |
| Trichloroethylene (TCE) | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Tetrachloroethylene (PCE) | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,1,2-Tetrachloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,1-Trichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2,2-Tetrachloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2-Trichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloroethylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,3-Trichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

## TABLE C-7

## LYSIMETER ANALYTICAL RESULTS – IMAX

| Constituent | Units$^1$ | Fraction | I-LS-02 | | | I-LS-03 | | |
|---|---|---|---|---|---|---|---|---|
| | | | 12/23/02 | 03/18/03 | 02/26/04 | 10/21/04 | 12/28/04 | 02/18/05 |
| 1,2,3-Trichloropropane (1,2,3-TCP) | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,4-Trichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,4-Trimethylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | 2 | 1.2 | 2.1 |
| 1,2-Dibromoethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Trans-Dichloroethylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3,5-Trimethylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | 0.59 | <0.5 | 0.6 |
| 1,3-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,4-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2,2-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Butanone (Methylethyl ketone) | µg/L | N/A | 1 | <1 | <1 | <1 | <1 | <1 |
| 2-Chlorotoluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Hexanone | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 4-Chlorotoluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 4-Methyl-2-pentanone (MIBK) | µg/L | N/A | <2 | <2 | <2 | <2 | <2 | <2 |
| Acetone | µg/L | N/A | 7 | <2 | <2 | <2 | 2.1 | <2 |
| Acrylonitrile | µg/L | N/A | <2 | <2 | <2 | <2 | <2 | <2 |
| Allyl Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromochloromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromoform | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Carbon disulfide | µg/L | N/A | <0.5 | 1 | <0.5 | 24 | 19 | 1.4 |
| Carbon Tetrachloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chloroform | µg/L | N/A | <0.5 | <0.5 | <0.5 | 0.77 | <0.5 | <0.5 |
| cis-1,2-Dichloroethene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| cis-1,3-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dibromochloromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dibromomethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dichlorobromomethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dichlorodifluoromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Diethyl Ether | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

# TABLE C-7

## LYSIMETER ANALYTICAL RESULTS – IMAX

| Constituent | Units$^1$ | Fraction | I-LS-02 | | | I-LS-03 | | |
|---|---|---|---|---|---|---|---|---|
| | | | 12/23/02 | 03/18/03 | 02/26/04 | 10/21/04 | 12/28/04 | 02/18/05 |
| Diisopropyl Ether (DIPE) | µg/L | N/A | -- | -- | <2 | <2 | <2 | <2 |
| Ethanol | µg/L | N/A | -- | -- | <100 | <100 | <100 | <100 |
| Ethyl Methacrylate | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethyl-t-Butyl Ether (ETBE) | µg/L | N/A | -- | -- | <2 | <2 | <2 | <2 |
| Hexachloro-1,3-Butadiene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Iodomethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Isopropylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl Methacrylate | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methylene Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 1.2 |
| Naphthalene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| n-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| n-Propylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| p-Isopropyltoluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| sec-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Styrene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| t-1,4-Dichloro-2-Butene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Tert-Amyl-Methyl Ether (TAME) | µg/L | N/A | -- | -- | <2 | <2 | <2 | <2 |
| Tert-Butyl Alcohol (TBA) | µg/L | N/A | -- | -- | <10 | <10 | <10 | <10 |
| tert-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Tetrahydrofuran | µg/L | N/A | <1 | <1 | <1 | <1 | <1 | <1 |
| trans-1,3-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Trichlorofluoromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Vinyl Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Semi-Volatile Organic Compounds** | | | | | | | | |
| NOT SAMPLED | µg/L | N/A | -- | -- | -- | -- | -- | -- |
| **Biological Parameters** | | | | | | | | |
| Heterotrophic Plate Count | CFU/mL | N/A | -- | 76,000 | -- | -- | -- | -- |
| Total Coliforms | MPN/100 mL | N/A | -- | <1.1 | -- | -- | -- | -- |
| Fecal Coliform | MPN/100 mL | N/A | -- | <1.1 | -- | -- | -- | -- |
| E. coli | MPN/100 mL | N/A | -- | <1.1 | -- | -- | -- | -- |
| E. coli + Fecal Coliform | MPN/100 mL | N/A | -- | -- | -- | -- | -- | -- |

-- indicates the constituent was not analyzed for. Analytes not detected are indicate

1. Units of measure: mg/L = milligrams per liter, µg/L = micrograms per liter, µhr

2. In cases in which the filtered concentrations exceeded the total, the differences a

# TABLE C-8

## GROUNDWATER ANALYTICAL RESULTS – IMAX

| Constituent | Units$^1$ | Fraction | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | I-MW-01 | | | | | | | | | | |
| | | | 11/09/01 | 01/03/02 | 03/20/02 | 10/07/02 | 10/06/03 | 06/07/04 | 10/13/04 | 02/23/05 | 10/31/01 | 03/25/02 | 10/07/02 |
| **General Monitoring Parameters** | | | | | | | | | | | | | |
| Alkalinity, Total (as $CaCO_3$) | mg/L | N/A | 530 | 536 | 261 | 490 | 510 | 510 | 520 | 570 | 312.7 | 316 | 340 |
| Bicarbonate (as $CaCO_3$) | mg/L | N/A | 647 | 654 | 318 | 490 | 510 | 510 | 520 | 570 | 381 | 385 | 340 |
| Bromide | mg/L | N/A | -- | 0.24 | 0.15 | 0.19 | 0.27 | 0.27 | 0.25 | 0.18 | -- | 0.33 | 0.28 |
| Calcium | mg/L | Total | 116 | 120 | 78 | 119 | 124 | 128 | 126 | 150 | 88.2 | 96 | 98.5 |
| Carbonate (as $CaCO_3$) | mg/L | N/A | <2 | 0.848 | 1.3 | <1 | <1 | <1 | <1 | <1 | <2 | 0.397 | <1 |
| Chloride | mg/L | N/A | 25.73 | 23 | 60 | 27 | 26 | 25 | 22 | 30 | 46.58 | 50 | 46 |
| Chemical Oxygen Demand | mg/L | N/A | <10 | <5 | 7 | 5.1 | <10 | <5 | <5 | 7.6 | 131.6 | <5 | 5.1 |
| Fluoride | mg/L | N/A | 0.56 | 0.59 | 0.38 | 0.61 | 0.73 | 0.5 | 0.58 | 0.57 | 0.55 | 0.67 | 0.65 |
| Hardness (as $CaCO_3$) | mg/L | Total | 550 | 517 | 330 | 490 | 540 | 530 | 510 | 620 | 410 | 416 | 380 |
| Hydroxide (as $CaCO_3$) | mg/L | N/A | <2 | 0.003 | 0.01 | <1 | <1 | <1 | <1 | <1 | <2 | 0.003 | <0.2 |
| Magnesium | mg/L | Total | 63.2 | 53 | 33 | 54.9 | 56 | 59.8 | 54.6 | 67.1 | 46.2 | 43 | 46.8 |
| MBAS (Surfactants) | mg/L | N/A | -- | <0.05 | 0.054 | <0.1 | 0.19 | <0.1 | <0.1 | <0.1 | <0.05 | 0.079 | <0.1 |
| Nitrate (as N) | mg/L | N/A | 11.34 | 14 | 3.2 | 10 | 14 | 15 | 11 | 16 | 24.365 | 20 | 20 |
| Nitrite (as N) | mg/L | N/A | <0.03 | <0.5 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.03 | <0.5 | <0.1 |
| Total Kjeldahl Nitrogen | mg/L | Total | -- | 0.7 | 1 | -- | <0.1 | <0.1 | <0.5 | <0.5 | -- | <0.2 | -- |
| Carbon, Total Organic | mg/L | N/A | 1.8 | 0.6 | 2.9 | 2 | 2.7 | 2.7 | 8.1 | 2.5 | 1.68 | 0.9 | 1.7 |
| Carbon, Dissolved Organic | mg/L | N/A | -- | -- | -- | 3 | 2.5 | 4.3 | 3.8 | 8.1 | -- | -- | 2.4 |
| Nitrogen, Organic | mg/L | N/A | <0.1 | 0.7 | 0.663 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.1 | <0.2 | <0.5 |
| Ammonia-Nitrogen | mg/L | Total | <0.1 | <0.05 | 0.337 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.05 | <0.1 |
| pH | pH units | N/A | 7.48 | 7.3 | 7.8 | 6.99 | 8.91 | 6.93 | 6.58 | 6.73 | 8.02 | 7.2 | 7.02 |
| Phosphorus | mg/L | Dissolved | -- | -- | -- | 0.18 | 0.17 | 0.18 | 0.042 | 0.18 | -- | -- | 0.29 |
| Phosphorus | mg/L | Total | -- | -- | -- | 0.26 | 0.21 | 0.19 | 0.65 | 0.59 | -- | -- | 0.31 |
| Potassium | mg/L | Total | 4.02 | 1.5 | 4 | 1.14 | 0.87 | 0.958 | 0.821 | 0.783 | 3.1 | 1.3 | 1.06 |
| Sodium | mg/L | Total | 94.8 | 79 | 78 | 75.6 | 92.8 | 81.5 | 79.7 | 88.0 | 116 | 120 | 118 |
| Specific Conductance | µmhos/cm | N/A | 1,070 | 1,120 | 917 | 1,100 | 1,100 | 1,200 | 1,300 | 1,400 | 1,340 | 1,110 | 1,200 |
| Sulfate | mg/L | N/A | 85.68 | 81 | 150 | 85 | 97 | 95 | 88 | 110 | 157.72 | 150 | 170 |
| Total Dissolved Solids | mg/L | N/A | 718 | 750 | 630 | 770 | 760 | 760 | 750 | 840 | 882 | 760 | 750 |
| Total Suspended Solids | mg/L | N/A | 130 | 30 | 93 | 7.1 | 56 | 100 | 13 | 11 | 1667 | 10 | 1.9 |
| Turbidity | NTU | N/A | 85.8 | 23 | 258 | 9.7 | 56 | 28 | 6.1 | 16 | 454 | 21 | 0.97 |
| **Metals$^2$** | | | | | | | | | | | | | |
| Aluminum | µg/L | Dissolved | -- | <0.025 | -- | <50 | <50 | <50 | <25 | <25 | -- | -- | <50 |
| Aluminum | µg/L | Total | -- | 9 | -- | 189 | 3,680 | 1,140 | 296 | 287 | -- | -- | <50 |
| Antimony | µg/L | Dissolved | -- | -- | -- | <1 | <1 | <1 | <1 | <1 | -- | -- | <1 |
| Antimony | µg/L | Total | -- | <1 | -- | 1.33 | <1 | <1 | 1.17 | <1 | -- | -- | <1 |

# TABLE C-8

## GROUNDWATER ANALYTICAL RESULTS – IMAX

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | I-MW-01 | | | | | | | | | | |
| | | | 11/09/01 | 01/03/02 | 03/20/02 | 10/07/02 | 10/06/03 | 06/07/04 | 10/13/04 | 02/23/05 | 10/31/01 | 03/25/02 | 10/07/02 |
| Arsenic | µg/L | Dissolved | -- | 1.2 | 1.4 | 1.35 | 1.09 | <0.5 | 0.758 | <0.5 | <5 | 2 | <1 |
| Arsenic | µg/L | Total | <5 | 3.5 | 4.3 | 1.46 | 1.86 | 1.31 | 0.649 | 0.753 | 5.15 | <2 | 1.06 |
| Barium | µg/L | Dissolved | -- | 37 | -- | 46.9 | 58.6 | 67 | 60.6 | 79.3 | -- | -- | 54 |
| Barium | µg/L | Total | -- | 47 | -- | 55.5 | 92.8 | 82.9 | 69.9 | 87.4 | -- | -- | 57.8 |
| Beryllium | µg/L | Dissolved | -- | -- | -- | <1 | <1 | <1 | <1 | <1 | -- | -- | <1 |
| Beryllium | µg/L | Total | -- | <1 | -- | <1 | <1 | <1 | <1 | <1 | -- | -- | <1 |
| Boron | µg/L | Dissolved | -- | 190 | -- | 210 | 209 | 200 | 169 | 168 | 202 | -- | 142 |
| Boron | µg/L | Total | <100 | 200 | 150 | 210 | 225 | 206 | 170 | 176 | 282 | 200 | 160 |
| Cadmium | µg/L | Dissolved | -- | -- | -- | <0.5 | <0.2 | <0.2 | <0.2 | <0.2 | -- | -- | <0.5 |
| Cadmium | µg/L | Total | <1 | <0.5 | <0.5 | 0.751 | <0.2 | <0.2 | <0.2 | <0.2 | <1 | <0.5 | <0.5 |
| Chromium | µg/L | Dissolved | 24 | 16 | 11 | 7.88 | 3.2 | 23.5 | 22.4 | 21.9 | 23.5 | 3 | 2.09 |
| Chromium | µg/L | Total | 27.4 | 32 | 24 | 23.8 | 33.3 | 28.5 | 23.3 | 24.3 | 29.4 | 8.1 | 5.07 |
| Chromium, Hexavalent | µg/L | Dissolved | 17 | 19.8 | 11.9 | 5.6 | <0.2 | 21 | 24 | 24 | <10 | 2 | 1 |
| Cobalt | µg/L | Dissolved | -- | -- | -- | <1 | <1 | <1 | <1 | <1 | -- | -- | <1 |
| Cobalt | µg/L | Total | -- | -- | -- | <1 | 2.36 | 1.25 | <1 | <1 | -- | -- | <1 |
| Copper | µg/L | Dissolved | 5.22 | <2 | 2 | 4.45 | <1 | <1 | <1 | <1 | 38.5 | <2 | 1.73 |
| Copper | µg/L | Total | 20.8 | 5.1 | 11 | 3.79 | 6.77 | 3.38 | <1 | 1.99 | 47.3 | 2.7 | 1.69 |
| Iron | µg/L | Dissolved | -- | <0.1 | -- | -- | | <100 | <100 | <100 | -- | -- | -- |
| Iron | µg/L | Total | -- | 1 | -- | -- | <100 | 2,520 | 445 | 539 | -- | -- | -- |
| Lead | µg/L | Dissolved | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <5 | -- | <0.5 |
| Lead | µg/L | Total | <5 | 1.5 | 3 | <0.5 | 1.76 | 1.14 | <0.5 | <0.5 | 11.2 | <0.5 | <0.5 |
| Manganese | µg/L | Dissolved | -- | 70 | -- | 9.94 | 22.4 | 21.5 | 4.31 | 1.09 | -- | -- | 5.34 |
| Manganese | µg/L | Total | -- | 73 | -- | 16.5 | 87.1 | 57.5 | 8.21 | 9.89 | -- | -- | 5.41 |
| Mercury | µg/L | Dissolved | -- | -- | -- | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | -- | -- | <0.1 |
| Mercury | µg/L | Total | <1 | <0.2 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <1 | <0.2 | <0.1 |
| Molybdenum | µg/L | Dissolved | -- | -- | -- | 11.6 | 13.3 | 12.9 | 11.8 | 13.2 | -- | -- | 12.5 |
| Molybdenum | µg/L | Total | -- | -- | -- | 13.2 | 14.3 | 13.6 | 13.2 | 14 | -- | -- | 13.3 |
| Nickel | µg/L | Dissolved | <5 | <5 | <5 | 1.49 | 6.2 | 3.5 | 3.9 | 3.8 | 10.6 | -- | 1.61 |
| Nickel | µg/L | Total | 9.49 | 9.6 | 12 | 2.15 | 12 | 6.4 | 4.6 | 4.6 | 23.9 | <5 | 1.72 |
| Selenium | µg/L | Dissolved | -- | -- | -- | <5 | 5.87 | 3.87 | 2.75 | 3.54 | -- | -- | <5 |
| Selenium | µg/L | Total | -- | <10 | -- | <5 | 7.46 | 3.19 | 2.56 | 3.95 | -- | -- | <5 |
| Silver | µg/L | Dissolved | -- | -- | -- | <1 | <1 | <1 | <1 | <1 | -- | -- | <1 |
| Silver | µg/L | Total | -- | <0.5 | -- | <1 | <1 | <1 | 4.03 | <1 | -- | -- | <1 |
| Strontium | µg/L | Dissolved | -- | -- | -- | 555 | 728 | 711 | 623 | 813 | -- | -- | 447 |
| Strontium | µg/L | Total | -- | -- | -- | 633 | 779 | 727 | 652 | 845 | -- | -- | 503 |
| Thallium | µg/L | Dissolved | -- | -- | -- | <1 | <1 | <1 | <1 | <1 | -- | -- | <1 |

# TABLE C-8

## GROUNDWATER ANALYTICAL RESULTS – IMAX

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | I-MW-01 | | | | | | | | | | |
| | | | 11/09/01 | 01/03/02 | 03/20/02 | 10/07/02 | 10/06/03 | 06/07/04 | 10/13/04 | 02/23/05 | 10/31/01 | 03/25/02 | 10/07/02 |
| Thallium | µg/L | Total | -- | <1 | -- | <1 | <1 | <1 | <1 | <1 | -- | -- | <1 |
| Tin | µg/L | Dissolved | -- | -- | -- | <1 | <1 | <1 | <1 | <1 | -- | -- | <1 |
| Tin | µg/L | Total | -- | -- | -- | <1 | <1 | <1 | <1 | <1 | -- | -- | <1 |
| Titanium | µg/L | Dissolved | -- | -- | -- | <1 | 1.65 | 3.4 | 2.25 | 3.25 | -- | -- | <1 |
| Titanium | µg/L | Total | -- | -- | -- | 9.51 | 181 | 84.4 | 16.3 | 22.8 | -- | -- | 1.38 |
| Vanadium | µg/L | Dissolved | -- | -- | -- | 2.4 | 3.23 | 1.64 | 1.4 | 1.31 | -- | -- | 2.69 |
| Vanadium | µg/L | Total | -- | -- | -- | 3.54 | 17 | 7.58 | 1.95 | 2.47 | -- | -- | 3.26 |
| Zinc | µg/L | Dissolved | -- | 27 | 38 | 75.3 | 26.7 | <5 | <5 | <5 | 400 | 16 | 33.3 |
| Zinc | µg/L | Total | <50 | 20 | 73 | 80.1 | 45.9 | 11.2 | 5.83 | 18.6 | 400 | 15 | 38.1 |
| **Other Constituents** | | | | | | | | | | | | | |
| Oil and Grease | mg/L | N/A | <1 | <3 | <3 | <1 | <1 | <1 | 1 | <1 | <1 | <3 | <1 |
| Perchlorate | µg/L | N/A | <4 | 4.4 | <4 | 4.1 | 3.4 | 6.9 | <2 | 8.2 | 9.9 | 8.2 | 15 |
| N-Nitrosodimethylamine (NDMA) | ng/L | N/A | <3,000 | <2 | 3.7 | <2 | <10 | <10 | -- | -- | <3,000 | 24 | <2 |
| Glyphosate | µg/L | N/A | -- | -- | -- | <6 | -- | -- | -- | -- | -- | -- | <6 |
| 1,4-Dioxane | µg/L | N/A | -- | -- | -- | 11 | -- | -- | -- | -- | -- | -- | 33 |
| 1,2-Dibromo-3-chloropropane (DBCP) | µg/L | N/A | <0.01 | <0.01 | <0.01 | <0.01 | <0.5 | <0.5 | <0.5 | <0.5 | <0.01 | <0.01 | <0.01 |
| **Volatile Organic Compounds** | | | | | | | | | | | | | |
| Methyl Bromide | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| Methyl-t-Butyl Ether (MTBE) | µg/L | N/A | -- | -- | -- | <1 | <0.5 | <1 | <1 | <1 | -- | -- | 1.3 |
| Benzene | µg/L | N/A | -- | -- | -- | 2.4 | 3.1 | <0.5 | <0.5 | <0.5 | -- | -- | 1.1 |
| Toluene | µg/L | N/A | <0.5 | 2.4 | <0.5 | 7.5 | 1 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 4.6 |
| Ethylbenzene | µg/L | N/A | -- | -- | -- | 1.4 | 2.1 | <0.5 | <0.5 | <0.5 | -- | -- | 1.2 |
| o-Xylene | µg/L | N/A | -- | -- | -- | 10 | 5.6 | <0.5 | <0.5 | <0.5 | -- | -- | 6.9 |
| p/m-Xylene | µg/L | N/A | -- | -- | -- | 7.6 | 6.7 | <0.5 | <0.5 | <0.5 | -- | -- | 6.5 |
| Trichloroethylene (TCE) | µg/L | N/A | 2.2 | 3.9 | <0.5 | 6.5 | 3.4 | 5.4 | 4.3 | 16 | <0.5 | 47 | 39 |
| Tetrachloroethylene (PCE) | µg/L | N/A | <0.5 | <0.5 | <0.5 | 54 | 0.73 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 38 |
| 1,1,1,2-Tetrachloroethane | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| 1,1,1-Trichloroethane | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| 1,1,2,2-Tetrachloroethane | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| 1,1,2-Trichloroethane | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| 1,1-Dichloroethane | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| 1,1-Dichloroethylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloropropene | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| 1,2,3-Trichlorobenzene | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |

# TABLE C-8

## GROUNDWATER ANALYTICAL RESULTS – IMAX

| | | | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | I-MW-01 | | | | | | | | | | |
| Constituent | Units[1] | Fraction | 11/09/01 | 01/03/02 | 03/20/02 | 10/07/02 | 10/06/03 | 06/07/04 | 10/13/04 | 02/23/05 | 10/31/01 | 03/25/02 | 10/07/02 |
| 1,2,3-Trichloropropane (1,2,3-TCP) | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| 1,2,4-Trichlorobenzene | µg/L | N/A | -- | -- | -- | <10 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <10 |
| 1,2,4-Trimethylbenzene | µg/L | N/A | -- | -- | -- | 1.4 | 1.9 | <0.5 | <0.5 | <0.5 | -- | -- | 1.3 |
| 1,2-Dibromoethane | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| 1,2-Dichlorobenzene | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| 1,2-Dichloroethane | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| 1,2-Dichloropropane | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| 1,2-Trans-Dichloroethylene | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| 1,3,5-Trimethylbenzene | µg/L | N/A | -- | -- | -- | 1.3 | 0.81 | <0.5 | <0.5 | <0.5 | -- | -- | 1.1 |
| 1,3-Dichlorobenzene | µg/L | N/A | -- | -- | -- | <10 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <10 |
| 1,3-Dichloropropane | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| 1,4-Dichlorobenzene | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <10 |
| 2,2-Dichloropropane | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| 2-Butanone (Methylethyl ketone) | µg/L | N/A | -- | -- | -- | <1 | <2 | <1 | <1 | <1 | -- | -- | <1 |
| 2-Chlorotoluene | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| 2-Hexanone | µg/L | N/A | -- | -- | -- | <0.5 | <5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| 4-Chlorotoluene | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| 4-Methyl-2-pentanone (MIBK) | µg/L | N/A | -- | -- | -- | <2 | <5 | <2 | <2 | <2 | -- | -- | <2 |
| Acetone | µg/L | N/A | -- | -- | -- | <2 | <10 | <2 | <2 | 2.7 | -- | -- | <2 |
| Acrylonitrile | µg/L | N/A | -- | -- | -- | <2 | <2 | <2 | <2 | <2 | -- | -- | <2 |
| Allyl Chloride | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| Bromobenzene | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| Bromochloromethane | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| Bromoform | µg/L | N/A | 1 | <0.5 | 0.7 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Carbon disulfide | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| Carbon Tetrachloride | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| Chlorobenzene | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| Chloroethane | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| Chloroform | µg/L | N/A | 0.6 | <0.5 | 6.2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 1.2 | <0.5 |
| cis-1,2-Dichloroethene | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| cis-1,3-Dichloropropene | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| Dibromochloromethane | µg/L | N/A | 1.5 | <0.5 | 4.4 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dibromomethane | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| Dichlorobromomethane | µg/L | N/A | <0.5 | <0.5 | 6.4 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dichlorodifluoromethane | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| Diethyl Ether | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |

## TABLE C-8

## GROUNDWATER ANALYTICAL RESULTS – IMAX

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | I-MW-01 | | | | | | | | | | |
| | | | 11/09/01 | 01/03/02 | 03/20/02 | 10/07/02 | 10/06/03 | 06/07/04 | 10/13/04 | 02/23/05 | 10/31/01 | 03/25/02 | 10/07/02 |
| Diisopropyl Ether (DIPE) | µg/L | N/A | -- | -- | -- | -- | -- | <2 | <2 | <2 | -- | -- | -- |
| Ethanol | µg/L | N/A | -- | -- | -- | -- | -- | <100 | <100 | <100 | -- | -- | -- |
| Ethyl Methacrylate | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| Ethyl-t-Butyl Ether (ETBE) | µg/L | N/A | -- | -- | -- | -- | -- | <2 | <2 | <2 | -- | -- | -- |
| Hexachloro-1,3-Butadiene | µg/L | N/A | -- | -- | -- | <10 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <10 |
| Iodomethane | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| Isopropylbenzene | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| Methyl Chloride | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| Methyl Methacrylate | µg/L | N/A | -- | -- | -- | <0.5 | <5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| Methylene Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Naphthalene | µg/L | N/A | -- | -- | -- | <10 | 2.1 | <0.5 | <0.5 | <0.5 | -- | -- | <10 |
| n-Butylbenzene | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| n-Propylbenzene | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| p-Isopropyltoluene | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| sec-Butylbenzene | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| Styrene | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| t-1,4-Dichloro-2-Butene | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| Tert-Amyl-Methyl Ether (TAME) | µg/L | N/A | -- | -- | -- | -- | -- | <2 | <2 | <2 | -- | -- | -- |
| Tert-Butyl Alcohol (TBA) | µg/L | N/A | -- | -- | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- |
| tert-Butylbenzene | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| Tetrahydrofuran | µg/L | N/A | -- | -- | -- | <1 | <5 | <1 | <1 | <1 | -- | -- | <1 |
| trans-1,3-Dichloropropene | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| Trichlorofluoromethane | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| Vinyl Chloride | µg/L | N/A | -- | -- | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | -- | <0.5 |
| **Semi-Volatile Organic Compounds** | | | | | | | | | | | | | |
| 1-Methylnaphthalene | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| 2,4,5-Trichlorophenol | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| 2,4,6-Trichlorophenol | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| 2,4-Dichlorophenol | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| 2,4-Dimethylphenol | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| 2,4-Dinitrophenol | µg/L | N/A | -- | -- | -- | <50 | <50 | <50 | -- | -- | -- | -- | <50 |
| 2,4-Dinitrotoluene | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| 2,6-Dinitrotoluene | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| 2-Chloronaphthalene | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| 2-Chlorophenol | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| 2-Methylnaphthalene | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |

# TABLE C-8

## GROUNDWATER ANALYTICAL RESULTS – IMAX

| Constituent | Units$^1$ | Fraction | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | I-MW-01 | | | | | | | | | | |
| | | | 11/09/01 | 01/03/02 | 03/20/02 | 10/07/02 | 10/06/03 | 06/07/04 | 10/13/04 | 02/23/05 | 10/31/01 | 03/25/02 | 10/07/02 |
| 2-Methylphenol (o-Cresol) | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| 2-Nitroaniline | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| 2-Nitrophenol | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| 3,3'-Dichlorobenzidine | µg/L | N/A | -- | -- | -- | <25 | <25 | <25 | -- | -- | -- | -- | <25 |
| 3-Nitroaniline | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| 4,6-Dinitro-2-Methylphenol | µg/L | N/A | -- | -- | -- | <50 | <50 | <50 | -- | -- | -- | -- | <50 |
| 4-Bromophenyl-Phenyl Ether | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| 4-Chloro-3-Methylphenol | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| 4-Chloroaniline | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| 4-Chlorophenyl-Phenyl Ether | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| 4-Methylphenol (p-Cresol) | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| 4-Nitroaniline | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| 4-Nitrophenol | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| Acenaphthene | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| Acenaphthylene | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| Aniline | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| Anthracene | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| Azobenzene | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| Benzidine | µg/L | N/A | -- | -- | -- | <50 | <50 | <50 | -- | -- | -- | -- | <50 |
| Benzo (a) Anthracene | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| Benzo (a) Pyrene | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| Benzo (b) Fluoranthene | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| Benzo (g,h,i) Perylene | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| Benzo (k) Fluoranthene | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| Benzoic acid | µg/L | N/A | -- | -- | -- | <50 | <50 | <50 | -- | -- | -- | -- | <50 |
| Benzyl alcohol | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| Bis(2-Chloroethoxy) Methane | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| Bis(2-Chloroethyl) Ether | µg/L | N/A | -- | -- | -- | <25 | <25 | <25 | -- | -- | -- | -- | <25 |
| Bis(2-Chloroisopropyl) Ether | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| Bis(2-Ethylhexyl) Phthalate | µg/L | N/A | <3 | <4 | -- | <10 | 13 | <10 | -- | -- | 202.3 | -- | <10 |
| Butyl Benzyl Phthalate | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| Chrysene | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| Dibenz (a,h) Anthracene | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| Dibenzofuran | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| Diethyl Phthalate | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| Dimethyl Phthalate | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |

## TABLE C-8

## GROUNDWATER ANALYTICAL RESULTS – IMAX

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | I-MW-01 | | | | | | | | | | |
| | | | 11/09/01 | 01/03/02 | 03/20/02 | 10/07/02 | 10/06/03 | 06/07/04 | 10/13/04 | 02/23/05 | 10/31/01 | 03/25/02 | 10/07/02 |
| Di-n-Butyl Phthalate | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| Di-n-Octyl Phthalate | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| Fluoranthene | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| Fluorene | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| Hexachlorobenzene | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| Hexachlorocyclopentadiene | µg/L | N/A | -- | -- | -- | <25 | <25 | <25 | -- | -- | -- | -- | <25 |
| Hexachloroethane | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| Indeno (1,2,3-c,d) Pyrene | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| Isophorone | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| Nitrobenzene | µg/L | N/A | -- | -- | -- | <25 | <25 | <25 | -- | -- | -- | -- | <25 |
| N-Nitroso-di-n-propylamine | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| N-Nitrosodiphenylamino | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| Pentachlorophenol | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| Phenanthrene | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| Phenol | µg/L | N/A | -- | <5 | <5 | <10 | <10 | <10 | -- | -- | -- | 18 | <10 |
| Pyrene | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| Pyridine | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | -- | -- | -- | -- | <10 |
| **Biological Parameters** | | | | | | | | | | | | | |
| Heterotrophic Plate Count | CFU/mL | N/A | >5,700 | 540 | >5,700 | 36,000 | -- | -- | -- | -- | >5,700 | -- | 33,000 |
| Total Coliforms | MPN/100 mL | N/A | 800 | <2 | <2 | <1.1 | -- | -- | -- | -- | 11 | 110 | <1 |
| Fecal Coliform | MPN/100 mL | N/A | -- | -- | -- | <1.1 | -- | -- | -- | -- | -- | -- | <1.1 |
| E. coli | MPN/100 mL | N/A | -- | -- | -- | <1.1 | -- | -- | -- | -- | -- | -- | <1 |
| E. coli + Fecal Coliform | MPN/100 mL | N/A | <2 | <2 | <2 | -- | -- | -- | -- | -- | <2 | <2 | -- |

-- indicates the constituent was not analyzed for. Analytes not detected are indicated with a "<" symbol; the associated numerical value is the detection limit.

1. Units of measure: mg/L = milligrams per liter, µg/L = micrograms per liter, µhmos/cm = microhmos per centimeter, NTU = Nephelometric Turbidity Unit.
2. In cases in which the filtered concentrations exceeded the total, the differences are considered by the laboratory statistically insignificant and can be attributed to the variability inherent with the analytical method.

# TABLE C-8

## GROUNDWATER ANALYTICAL RESULTS – IMAX

| | | | Sample Number / Date Sampled | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | I-MW-02 | | | | | | | | | |
| **Constituent** | **Units$^1$** | **Fraction** | **11/15/02** | **02/19/03** | **10/06/03** | **02/06/04** | **03/01/04** | **06/07/04** | **10/13/04** | **10/22/04** | **12/30/04** | **02/23/05** |
| **General Monitoring Parameters** | | | | | | | | | | | | |
| Alkalinity, Total (as $CaCO_3$) | mg/L | N/A | 340 | 340 | 370 | 360 | 370 | 370 | 370 | 340 | 340 | 320 |
| Bicarbonate (as $CaCO_3$) | mg/L | N/A | 340 | 340 | 370 | 360 | 370 | 370 | 370 | 340 | 340 | 320 |
| Bromide | mg/L | N/A | <0.1 | 0.25 | 0.26 | 0.29 | 0.12 | 0.27 | 0.33 | 0.29 | 0.18 | <0.1 |
| Calcium | mg/L | Total | 94.9 | 96.1 | 103 | 104 | 88.8 | 93.8 | 101 | 94.2 | 90.2 | 63.3 |
| Carbonate (as $CaCO_3$) | mg/L | N/A | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Chloride | mg/L | N/A | 39 | 36 | 48 | 45 | 32 | 43 | 45 | 40 | 38 | 29 |
| Chemical Oxygen Demand | mg/L | N/A | <5 | 15 | <10 | <5 | 15 | 13 | 28 | <5 | 23 | 7.6 |
| Fluoride | mg/L | N/A | 0.68 | 0.79 | 0.68 | 0.65 | 0.6 | 0.56 | 0.6 | 0.64 | 0.66 | 0.62 |
| Hardness (as $CaCO_3$) | mg/L | Total | 420 | 390 | 430 | 420 | 380 | 410 | 460 | 400 | 390 | 290 |
| Hydroxide (as $CaCO_3$) | mg/L | N/A | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Magnesium | mg/L | Total | 43 | 43.7 | 45.8 | 46.2 | 41 | 45.4 | 46.1 | 43.8 | 42.3 | 28.8 |
| MBAS (Surfactants) | mg/L | N/A | <0.1 | <0.1 | 0.11 | 0.15 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Nitrate (as N) | mg/L | N/A | 15 | 11 | 19 | 16 | 9.6 | 16 | 22 | 19 | 15 | 7.2 |
| Nitrite (as N) | mg/L | N/A | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total Kjeldahl Nitrogen | mg/L | Total | -- | -- | <0.1 | 0.42 | <0.5 | <0.1 | <0.5 | <0.5 | <0.5 | <0.5 |
| Carbon, Total Organic | mg/L | N/A | 1.6 | 1.5 | 1.8 | 10 | 1.8 | 2.2 | 3 | 1.7 | 2.1 | 1.6 |
| Carbon, Dissolved Organic | mg/L | N/A | 2.7 | 2.6 | 2.1 | 8.6 | 2.6 | 3.2 | 2.5 | 1.3 | 2.4 | 3.1 |
| Nitrogen, Organic | mg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Ammonia-Nitrogen | mg/L | Total | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| pH | pH units | N/A | 7.03 | 7.3 | 6.95 | 6.97 | 6.83 | 6.94 | 6.6 | 6.88 | 6.69 | 6.86 |
| Phosphorus | mg/L | Dissolved | 0.29 | 0.29 | 0.29 | 0.29 | 0.3 | 0.28 | 0.32 | 0.56 | 0.3 | 0.26 |
| Phosphorus | mg/L | Total | 0.34 | 0.29 | 0.3 | 0.33 | 0.31 | 0.35 | 0.49 | 0.69 | 0.31 | 0.7 |
| Potassium | mg/L | Total | 0.95 | 1.06 | 0.98 | 1.14 | 0.963 | 0.945 | 1.03 | 1.13 | 1.11 | 0.667 |
| Sodium | mg/L | Total | 115 | 120 | 130 | 114 | 109 | 111 | 112 | 102 | 109 | 88.0 |
| Specific Conductance | µmhos/cm | N/A | 1,100 | 1,200 | 1,100 | 1,200 | 1,000 | 1,200 | 1,300 | 1,200 | 1100 | 880 |
| Sulfate | mg/L | N/A | 130 | 130 | 150 | 150 | 110 | 140 | 160 | 140 | 140 | 99 |
| Total Dissolved Solids | mg/L | N/A | 760 | 690 | 770 | 690 | 670 | 730 | 790 | 770 | 710 | 500 |
| Total Suspended Solids | mg/L | N/A | 540 | 2.8 | 1.9 | 14 | 41 | 6 | 1.4 | <1 | 1 | 1.8 |
| Turbidity | NTU | N/A | 640 | 1.5 | 2.2 | 10 | 1.9 | 1.8 | 0.5 | 1.8 | 1.8 | 1.6 |
| **Metals$^2$** | | | | | | | | | | | | |
| Aluminum | µg/L | Dissolved | <50 | <50 | <50 | <50 | <50 | <50 | <25 | <25 | <25 | <25 |
| Aluminum | µg/L | Total | <50 | <50 | 138 | 122 | 495 | <50 | <25 | <25 | <25 | <25 |
| Antimony | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Antimony | µg/L | Total | 1.26 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |

## TABLE C-8

## GROUNDWATER ANALYTICAL RESULTS – IMAX

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | I-MW-02 | | | | | | | | | |
| | | | 11/15/02 | 02/19/03 | 10/06/03 | 02/06/04 | 03/01/04 | 06/07/04 | 10/13/04 | 10/22/04 | 12/30/04 | 02/23/05 |
| Arsenic | µg/L | Dissolved | 1.14 | <1 | 1.19 | <0.5 | 1.67 | <0.5 | 0.961 | 0.828 | 1.33 | 0.601 |
| Arsenic | µg/L | Total | 1.29 | <1 | 0.933 | <0.5 | 1.96 | <0.5 | 1.41 | 0.971 | 1.53 | 0.631 |
| Barium | µg/L | Dissolved | 52.4 | 55.7 | 55.4 | 62.5 | 55.4 | 61.8 | 59.5 | 69.1 | 53.2 | 40.8 |
| Barium | µg/L | Total | 57.2 | 53.6 | 57.9 | 65.9 | 59.8 | 62.6 | 63.8 | 73.2 | 54.3 | 45.5 |
| Beryllium | µg/L | Dissolved | <1 | <5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Beryllium | µg/L | Total | <1 | <5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Boron | µg/L | Dissolved | 147 | 178 | 196 | 168 | 160 | 170 | 155 | 170 | 201 | 158 |
| Boron | µg/L | Total | 163 | 172 | 191 | 172 | 164 | 177 | 186 | 170 | 247 | 154 |
| Cadmium | µg/L | Dissolved | <0.5 | <0.5 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Cadmium | µg/L | Total | <0.5 | <0.5 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Chromium | µg/L | Dissolved | 4.68 | 4.17 | 3.45 | 5.1 | 6.4 | 5.14 | 4.16 | 4.25 | 5.33 | 4.58 |
| Chromium | µg/L | Total | 6.7 | 4.77 | 6.83 | 6.73 | 7.47 | 4.9 | 4.35 | 4.34 | 5.57 | 5.21 |
| Chromium, Hexavalent | µg/L | Dissolved | 4.2 | 3.6 | 0.77 | 3 | 4.6 | 4.4 | 4 | 3.9 | 4.1 | 3.9 |
| Cobalt | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Cobalt | µg/L | Total | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Copper | µg/L | Dissolved | 3.88 | 1.6 | <1 | <1 | <1 | <1 | <1 | <1 | 1.02 | <1 |
| Copper | µg/L | Total | 5.27 | 1.49 | 1.32 | <1 | 2.83 | <1 | 1.78 | <1 | <1 | <1 |
| Iron | µg/L | Dissolved | -- | -- | -- | <100 | 104 | <100 | <100 | <100 | <100 | <100 |
| Iron | µg/L | Total | -- | -- | <100 | 366 | 493 | <100 | <100 | <100 | 108 | <100 |
| Lead | µg/L | Dissolved | <0.5 | <0.5 | <0.5 | <0.5 | 0.816 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Lead | µg/L | Total | 0.98 | <0.5 | <0.5 | <0.5 | 2.01 | 0.596 | <0.5 | <0.5 | <0.5 | <0.5 |
| Manganese | µg/L | Dissolved | 3.19 | 3.22 | 5.9 | 2.72 | 1.8 | 1.56 | 1.64 | 5.38 | 5.38 | <1 |
| Manganese | µg/L | Total | 5.03 | 3.55 | 11.6 | 5.87 | 11.4 | 2.64 | 1.96 | 6.54 | 5.62 | 2.21 |
| Mercury | µg/L | Dissolved | -- | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | 0.154 | <0.1 | <0.1 |
| Mercury | µg/L | Total | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | 0.181 | <0.1 | <0.1 |
| Molybdenum | µg/L | Dissolved | 10.7 | 12.3 | 13.2 | 13.8 | 13.6 | 13 | 11.9 | 12.3 | 13.4 | 15 |
| Molybdenum | µg/L | Total | 13.1 | 12 | 13.4 | 14.2 | 14.2 | 13 | 12.4 | 12.5 | 13.6 | 15.9 |
| Nickel | µg/L | Dissolved | 2.32 | 2.64 | 4.9 | 4.4 | 2.42 | 3.1 | 3.7 | 3.8 | 3.1 | <2 |
| Nickel | µg/L | Total | 2.69 | 2.58 | 5.4 | 5 | 3.01 | 3.2 | 3.7 | 4.1 | 2.8 | 2.2 |
| Selenium | µg/L | Dissolved | <5 | <5 | 2.71 | <1 | 4.57 | <1 | <1 | 1.85 | 2.02 | 1.02 |
| Selenium | µg/L | Total | <5 | <5 | 4 | <1 | 4.32 | <1 | <1 | 2.25 | 2.43 | 1.84 |
| Silver | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 1.06 | <1 | <1 |
| Silver | µg/L | Total | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 1.79 | <1 | <1 |
| Strontium | µg/L | Dissolved | 426 | 417 | 554 | 514 | 473 | 522 | 503 | 516 | 478 | 352 |
| Strontium | µg/L | Total | 492 | 403 | 554 | 527 | 498 | 510 | 539 | 534 | 487 | 381 |
| Thallium | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |

# TABLE C-8

## GROUNDWATER ANALYTICAL RESULTS – IMAX

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | I-MW-02 | | | | | | | | | |
| | | | 11/15/02 | 02/19/03 | 10/06/03 | 02/06/04 | 03/01/04 | 06/07/04 | 10/13/04 | 10/22/04 | 12/30/04 | 02/23/05 |
| Thallium | µg/L | Total | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Tin | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Tin | µg/L | Total | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Titanium | µg/L | Dissolved | <1 | 1.3 | 1.88 | 3.45 | 3.72 | 3.43 | 2.2 | 2.73 | 3.19 | 3 |
| Titanium | µg/L | Total | 2.42 | 2.29 | 7.54 | 9.58 | 34.7 | 4.6 | 2.94 | 4.57 | 4.32 | 5.32 |
| Vanadium | µg/L | Dissolved | 2.9 | 3.04 | 3.94 | 2.98 | 3.21 | 2.47 | 2.48 | 2.41 | 2.75 | 1.65 |
| Vanadium | µg/L | Total | 3.51 | 2.89 | 3.35 | 3.12 | 4.36 | 2.53 | 2.63 | 2.64 | 3.19 | 2.41 |
| Zinc | µg/L | Dissolved | 27.9 | 12.5 | 19.5 | 9.17 | <5 | <5 | <5 | <5 | 11 | 15 |
| Zinc | µg/L | Total | 26.4 | 12.9 | 18.2 | 8.42 | <5 | <5 | <5 | <5 | 11.6 | 22.5 |
| **Other Constituents** | | | | | | | | | | | | |
| Oil and Grease | mg/L | N/A | <1 | 1.7 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Perchlorate | µg/L | N/A | <2 | -- | 11 | <2 | 7.5 | 10 | 5.1 | 9.9 | 8.3 | <2 |
| N-Nitrosodimethylamine (NDMA) | ng/L | N/A | <2 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| Glyphosate | µg/L | N/A | -- | <6 | -- | -- | -- | -- | -- | -- | -- | -- |
| 1,4-Dioxane | µg/L | N/A | 72 | 61 | -- | -- | -- | -- | -- | -- | -- | -- |
| 1,2-Dibromo-3-chloropropane (DBCP) | µg/L | N/A | <0.02 | <0.02 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| **Volatile Organic Compounds** | | | | | | | | | | | | |
| Methyl Bromide | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| Methyl-t-Butyl Ether (MTBE) | µg/L | N/A | 1.1 | 0.73 | 1.1 | <1 | <1 | <1 | <4 | <1 | <1 | <1 |
| Benzene | µg/L | N/A | <0.5 | 2.6 | 1.1 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| Toluene | µg/L | N/A | <0.5 | 16 | 0.55 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| Ethylbenzene | µg/L | N/A | <0.5 | 9.3 | 1.3 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| o-Xylene | µg/L | N/A | <0.5 | 19 | 3.3 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| p/m-Xylene | µg/L | N/A | <0.5 | 33 | 4.1 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| Trichloroethylene (TCE) | µg/L | N/A | 44 | 42 | 39 | 69 | 53 | 56 | 79 | 71 | 88 | 27 |
| Tetrachloroethylene (PCE) | µg/L | N/A | <0.5 | 3.2 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| 1,1,1,2-Tetrachloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| 1,1,1-Trichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| 1,1,2,2-Tetrachloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| 1,1,2-Trichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloroethylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| 1,2,3-Trichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |

## TABLE C-8

## GROUNDWATER ANALYTICAL RESULTS – IMAX

| | | | Sample Number / Date Sampled | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | I-MW-02 | | | | | | | | | |
| **Constituent** | **Units[1]** | **Fraction** | **11/15/02** | **02/19/03** | **10/06/03** | **02/06/04** | **03/01/04** | **06/07/04** | **10/13/04** | **10/22/04** | **12/30/04** | **02/23/05** |
| 1,2,3-Trichloropropane (1,2,3-TCP) | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| 1,2,4-Trichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| 1,2,4-Trimethylbenzene | µg/L | N/A | <0.5 | 6.9 | 1.3 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| 1,2-Dibromoethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| 1,2-Trans-Dichloroethylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| 1,3,5-Trimethylbenzene | µg/L | N/A | <0.5 | 3 | 0.56 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| 1,3-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| 1,3-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| 1,4-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| 2,2-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| 2-Butanone (Methylethyl ketone) | µg/L | N/A | <1 | <1 | <2 | <1 | <1 | <1 | <4 | <1 | <1 | <1 |
| 2-Chlorotoluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| 2-Hexanone | µg/L | N/A | <0.5 | <0.5 | <5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| 4-Chlorotoluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| 4-Methyl-2-pentanone (MIBK) | µg/L | N/A | <2 | <2 | <5 | <2 | <2 | <2 | <8 | <2 | <2 | <2 |
| Acetone | µg/L | N/A | 2.5 | <2 | <10 | <2 | <2 | <2 | <8 | <2 | <2 | 3.1 |
| Acrylonitrile | µg/L | N/A | <2 | <2 | <2 | <2 | <2 | <2 | <8 | <2 | <2 | <2 |
| Allyl Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| Bromobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| Bromochloromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| Bromoform | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| Carbon disulfide | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| Carbon Tetrachloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| Chlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| Chloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| Chloroform | µg/L | N/A | 0.56 | 0.59 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | 0.65 | <0.5 |
| cis-1,2-Dichloroethene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| cis-1,3-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| Dibromochloromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| Dibromomethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| Dichlorobromomethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| Dichlorodifluoromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| Diethyl Ether | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |

# TABLE C-8

## GROUNDWATER ANALYTICAL RESULTS – IMAX

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | I-MW-02 | | | | | | | | | |
| | | | 11/15/02 | 02/19/03 | 10/06/03 | 02/06/04 | 03/01/04 | 06/07/04 | 10/13/04 | 10/22/04 | 12/30/04 | 02/23/05 |
| Diisopropyl Ether (DIPE) | µg/L | N/A | -- | -- | -- | <2 | <2 | <2 | <8 | <2 | <2 | <2 |
| Ethanol | µg/L | N/A | -- | -- | -- | <100 | <100 | <100 | <400 | <100 | <100 | <100 |
| Ethyl Methacrylate | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| Ethyl-t-Butyl Ether (ETBE) | µg/L | N/A | -- | -- | -- | <2 | <2 | <2 | <8 | <2 | <2 | <2 |
| Hexachloro-1,3-Butadiene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| Iodomethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| Isopropylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| Methyl Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| Methyl Methacrylate | µg/L | N/A | <0.5 | <0.5 | <5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| Methylene Chloride | µg/L | N/A | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 | 2.9 | <0.5 | <0.5 | <0.5 |
| Naphthalene | µg/L | N/A | <0.5 | <10 | 1.6 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| n-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| n-Propylbenzene | µg/L | N/A | <0.5 | 0.75 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| p-Isopropyltoluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| sec-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| Styrene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| t-1,4-Dichloro-2-Butene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| Tert-Amyl-Methyl Ether (TAME) | µg/L | N/A | -- | -- | -- | <2 | <2 | <2 | <8 | <2 | <2 | <2 |
| Tert-Butyl Alcohol (TBA) | µg/L | N/A | -- | -- | -- | <10 | <10 | <10 | <40 | <10 | <10 | <10 |
| tert-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| Tetrahydrofuran | µg/L | N/A | <1 | <1 | <5 | <1 | <1 | <1 | <4 | <1 | <1 | <1 |
| trans-1,3-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| Trichlorofluoromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| Vinyl Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <0.5 | <0.5 | <0.5 |
| **Semi-Volatile Organic Compounds** | | | | | | | | | | | | |
| 1-Methylnaphthalene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| 2,4,5-Trichlorophenol | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| 2,4,6-Trichlorophenol | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| 2,4-Dichlorophenol | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| 2,4-Dimethylphenol | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| 2,4-Dinitrophenol | µg/L | N/A | <50 | <50 | <50 | <50 | <50 | <50 | -- | -- | -- | -- |
| 2,4-Dinitrotoluene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| 2,6-Dinitrotoluene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| 2-Chloronaphthalene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| 2-Chlorophenol | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| 2-Methylnaphthalene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |

## TABLE C-8

## GROUNDWATER ANALYTICAL RESULTS – IMAX

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | I-MW-02 | | | | | | | | | |
| | | | 11/15/02 | 02/19/03 | 10/06/03 | 02/06/04 | 03/01/04 | 06/07/04 | 10/13/04 | 10/22/04 | 12/30/04 | 02/23/05 |
| 2-Methylphenol (o-Cresol) | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| 2-Nitroaniline | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| 2-Nitrophenol | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| 3,3'-Dichlorobenzidine | µg/L | N/A | <25 | <25 | <25 | <25 | <25 | <25 | -- | -- | -- | -- |
| 3-Nitroaniline | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| 4,6-Dinitro-2-Methylphenol | µg/L | N/A | <50 | <50 | <50 | <50 | <50 | <50 | -- | -- | -- | -- |
| 4-Bromophenyl-Phenyl Ether | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| 4-Chloro-3-Methylphenol | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| 4-Chloroaniline | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| 4-Chlorophenyl-Phenyl Ether | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| 4-Methylphenol (p-Cresol) | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| 4-Nitroaniline | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| 4-Nitrophenol | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| Acenaphthene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| Acenaphthylene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| Aniline | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| Anthracene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| Azobenzene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| Benzidine | µg/L | N/A | <50 | <50 | <50 | <50 | <50 | <50 | -- | -- | -- | -- |
| Benzo (a) Anthracene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| Benzo (a) Pyrene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| Benzo (b) Fluoranthene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| Benzo (g,h,i) Perylene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| Benzo (k) Fluoranthene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| Benzoic acid | µg/L | N/A | <50 | <50 | <50 | <50 | <50 | <50 | -- | -- | -- | -- |
| Benzyl alcohol | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| Bis(2-Chloroethoxy) Methane | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| Bis(2-Chloroethyl) Ether | µg/L | N/A | <25 | <25 | <25 | <25 | <25 | <25 | -- | -- | -- | -- |
| Bis(2-Chloroisopropyl) Ether | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| Bis(2-Ethylhexyl) Phthalate | µg/L | N/A | <10 | <10 | 10 | <10 | <10 | <10 | -- | -- | -- | -- |
| Butyl Benzyl Phthalate | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| Chrysene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| Dibenz (a,h) Anthracene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| Dibenzofuran | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| Diethyl Phthalate | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| Dimethyl Phthalate | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |

# TABLE C-8

## GROUNDWATER ANALYTICAL RESULTS – IMAX

| | | | Sample Number / Date Sampled | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | I-MW-02 | | | | | | | | | |
| **Constituent** | **Units[1]** | **Fraction** | **11/15/02** | **02/19/03** | **10/06/03** | **02/06/04** | **03/01/04** | **06/07/04** | **10/13/04** | **10/22/04** | **12/30/04** | **02/23/05** |
| Di-n-Butyl Phthalate | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| Di-n-Octyl Phthalate | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| Fluoranthene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| Fluorene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| Hexachlorobenzene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| Hexachlorocyclopentadiene | µg/L | N/A | <25 | <25 | <25 | <25 | <25 | <25 | -- | -- | -- | -- |
| Hexachloroethane | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| Indeno (1,2,3-c,d) Pyrene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| Isophorone | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| Nitrobenzene | µg/L | N/A | <25 | <25 | <25 | <25 | <25 | <25 | -- | -- | -- | -- |
| N-Nitroso-di-n-propylamine | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| N-Nitrosodiphenylamino | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| Pentachlorophenol | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| Phenanthrene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| Phenol | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| Pyrene | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| Pyridine | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | -- | -- | -- | -- |
| **Biological Parameters** | | | | | | | | | | | | |
| Heterotrophic Plate Count | CFU/mL | N/A | 72,000 | 2,200 | -- | -- | -- | -- | -- | -- | -- | -- |
| Total Coliforms | MPN/100 mL | N/A | <1.1 | <1.1 | -- | -- | -- | -- | -- | -- | -- | -- |
| Fecal Coliform | MPN/100 mL | N/A | <1.1 | <1.1 | -- | -- | -- | -- | -- | -- | -- | -- |
| E. coli | MPN/100 mL | N/A | <1.1 | <1.1 | -- | -- | -- | -- | -- | -- | -- | -- |
| E. coli + Fecal Coliform | MPN/100 mL | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

-- indicates the constituent was not analyzed for.  Analytes not detected are indicate

1.  Units of measure:  mg/L = milligrams per liter, µg/L = micrograms per liter, µhr

2.  In cases in which the filtered concentrations exceeded the total, the differences a

# TABLE C-9

## STORM WATER ANALYTICAL RESULTS – METAL RECYCLER

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | M-SW-01 | | | | | M-SW-02 | | | | |
| | | | 02/02/04 | 02/18/04 | 10/26/04 | 12/28/04 | 02/11/05 | 02/02/04 | 02/18/04 | 10/26/04 | 12/27/04 | 02/11/05 |
| **General Monitoring Parameters** | | | | | | | | | | | | |
| Alkalinity, Total (as $CaCO_3$) | mg/L | N/A | 73 | 230 | 60 | 76 | 210 | 10 | 99 | 56 | 76 | 530 |
| Bicarbonate (as $CaCO_3$) | mg/L | N/A | 73 | 110 | 40 | 76 | <1 | 10 | 99 | 56 | 76 | <1 |
| Bromide | mg/L | N/A | 0.2 | 0.23 | 0.24 | 0.3 | 0.66 | 0.22 | 0.45 | 0.51 | 0.35 | 1.7 |
| Calcium | mg/L | Total | 72 | 85.5 | 235 | 112 | 229 | 88.7 | 174 | 175 | 129 | 190 |
| Carbonate (as $CaCO_3$) | mg/L | N/A | <1 | 120 | 20 | <1 | 100 | <1 | <1 | <1 | <1 | 100 |
| Chloride | mg/L | N/A | 50 | 35 | 46 | 66 | 100 | 50 | 70 | 55 | 72 | 65 |
| Chemical Oxygen Demand | mg/L | N/A | 570 | 650 | 570 | 1,700 | 3,400 | 420 | 780 | 470 | 1,500 | 2,100 |
| Fluoride | mg/L | N/A | 0.47 | 0.5 | 0.17 | 0.37 | 0.27 | 0.44 | 0.54 | 0.28 | 0.37 | 0.38 |
| Hardness (as $CaCO_3$) | mg/L | Total | 200 | 330 | 620 | 310 | 540 | 320 | 520 | 500 | 380 | 640 |
| Hydroxide (as $CaCO_3$) | mg/L | N/A | <1 | <1 | <1 | <1 | 110 | <1 | <1 | <1 | <1 | 430 |
| Magnesium | mg/L | Total | 4.37 | 7 | 6.09 | 3.2 | 0.938 | 5.26 | 17 | 6.45 | 4.93 | 0.268 |
| MBAS (Surfactants) | mg/L | N/A | 1.3 | 1.3 | 0.48 | 1.2 | 1.7 | 1.4 | 1.7 | 0.86 | 1.4 | 1.5 |
| Nitrate (as N) | mg/L | N/A | 2.7 | 2.7 | 1.6 | 4.1 | 4.2 | 3.6 | 3.7 | 3.2 | 4.2 | 3.4 |
| Nitrite (as N) | mg/L | N/A | 0.12 | 2.3 | 0.24 | 0.22 | <0.1 | 0.17 | 2.8 | 0.32 | 0.24 | 0.22 |
| Total Kjeldahl Nitrogen | mg/L | Total | 7.3 | 6.4 | 6.6 | 8 | 11 | 9.1 | 8.3 | 9.5 | 9.5 | 9.4 |
| Carbon, Total Organic | mg/L | N/A | 120 | 110 | 140 | 470 | 140 | 110 | 200 | 120 | 390 | 470 |
| Carbon, Dissolved Organic | mg/L | N/A | 110 | 96 | 130 | 550 | 130 | 97 | 180 | 99 | 410 | 440 |
| Nitrogen, Organic | mg/L | N/A | 6.5 | 5.1 | 5.4 | 6.7 | 9.1 | 8.2 | 7.2 | 7 | 7.8 | 7.6 |
| Ammonia-Nitrogen | mg/L | Total | 0.84 | 1.3 | 1.2 | 1.3 | 1.9 | 0.91 | 1.1 | 2.5 | 1.7 | 1.8 |
| pH | pH units | N/A | 8.01 | 8.8 | 8.93 | 8.87 | 11.15 | 5.63 | 7.14 | 7.68 | 8.99 | 11.6 |
| Phosphorus | mg/L | Dissolved | 0.15 | 0.13 | 0.55 | 0.63 | 0.25 | 0.056 | 0.23 | 0.53 | 0.62 | 0.3 |
| Phosphorus | mg/L | Total | 0.46 | 0.4 | 0.8 | 0.67 | 1.8 | 0.22 | 0.28 | 0.72 | 0.65 | 1.9 |
| Potassium | mg/L | Total | 25.9 | 25.3 | 19.9 | 25.2 | 24.2 | 22.8 | 33.6 | 21.3 | 27 | 19.5 |
| Sodium | mg/L | Total | 72.2 | 88.1 | 52.3 | 73.2 | 165 | 60.2 | 137 | 65.2 | 78.1 | 301 |
| Specific Conductance | µmhos/cm | N/A | 760 | 930 | 1,300 | 1,000 | 2,000 | 950 | 1,500 | 1,100 | 1,100 | 3,200 |
| Sulfate | mg/L | N/A | 200 | 310 | 520 | 240 | 500 | 360 | 570 | 430 | 290 | 430 |
| Total Dissolved Solids | mg/L | N/A | 520 | 700 | 1,100 | 720 | 1,400 | 670 | 1,200 | 920 | 890 | 1,400 |
| Total Suspended Solids | mg/L | N/A | 61 | 440 | 320 | 210 | 1,200 | 170 | 240 | 100 | 120 | 1,200 |
| Turbidity | NTU | N/A | 77 | 430 | 110 | 200 | 440 | 190 | 390 | 85 | 150 | 450 |
| **Metals[2]** | | | | | | | | | | | | |
| Aluminum | µg/L | Dissolved | <50 | <50 | 76.5 | 116 | 248 | <50 | <50 | <25 | 113 | 379 |
| Aluminum | µg/L | Total | 434 | 8,360 | 2,380 | 1,830 | 5,930 | 868 | 3,410 | 956 | 1,520 | 5,620 |
| Antimony | µg/L | Dissolved | 12.8 | 16.7 | 12.2 | 14.7 | 29.2 | 7.26 | 16.4 | 17.2 | 15.3 | 20.9 |

## TABLE C-9

## STORM WATER ANALYTICAL RESULTS – METAL RECYCLER

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | M-SW-01 | | | | | M-SW-02 | | | | |
| | | | 02/02/04 | 02/18/04 | 10/26/04 | 12/28/04 | 02/11/05 | 02/02/04 | 02/18/04 | 10/26/04 | 12/27/04 | 02/11/05 |
| Antimony | µg/L | Total | 16 | 42.2 | 26.2 | 19.1 | 42.5 | 18.5 | 34.4 | 24.9 | 17.7 | 39 |
| Arsenic | µg/L | Dissolved | <0.5 | 1.22 | 2.96 | 1.77 | 2.03 | <0.5 | <0.5 | 2.66 | 1.52 | 2.94 |
| Arsenic | µg/L | Total | 1.72 | 11.9 | 6.9 | 4.41 | 9.35 | 5.4 | 6.18 | 5.5 | 4.16 | 10.3 |
| Barium | µg/L | Dissolved | 23 | 57.1 | 29.1 | 24.6 | 41.4 | 40.1 | 79.3 | 54.1 | 28.6 | 37.6 |
| Barium | µg/L | Total | 46.2 | 324 | 122 | 125 | 353 | 78.6 | 199 | 83.3 | 109 | 391 |
| Beryllium | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Beryllium | µg/L | Total | <1 | <1 | <5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Boron | µg/L | Dissolved | 1,630 | 986 | 465 | 913 | 807 | 1,640 | 911 | 861 | 965 | 687 |
| Boron | µg/L | Total | 1,660 | 1,070 | 590 | 877 | 888 | 1,760 | 884 | 786 | 922 | 778 |
| Cadmium | µg/L | Dissolved | 2.48 | 0.737 | 3.26 | 3.36 | 0.627 | 14.1 | 5.17 | 11.8 | 3.39 | 0.285 |
| Cadmium | µg/L | Total | 9.1 | 17.5 | 15.1 | 10 | 24.1 | 19.1 | 12.5 | 24.1 | 11 | 46.4 |
| Chromium | µg/L | Dissolved | 16.7 | 12.7 | 8.95 | 15.6 | 75.5 | 3.53 | 2.99 | 4.19 | 14.3 | 48.3 |
| Chromium | µg/L | Total | 56.9 | 76.1 | 22.7 | 28.2 | 144 | 59.8 | 36.7 | 21.5 | 25.2 | 111 |
| Chromium, Hexavalent | µg/L | Dissolved | 12 | 11 | 6.3 | 11 | 74 | 0.32 | <0.2 | 0.72 | 8.9 | 52 |
| Cobalt | µg/L | Dissolved | 2.68 | 1.33 | 2.7 | 12.6 | 4.8 | 11.2 | 8.29 | 6.64 | 11.9 | 2.87 |
| Cobalt | µg/L | Total | 4.23 | 11.7 | 5.97 | 18.2 | 14.7 | 14.4 | 11.6 | 8.7 | 16.1 | 11.5 |
| Copper | µg/L | Dissolved | 116 | 87.2 | 59.7 | 158 | 97.3 | 58.4 | 47 | 58.3 | 153 | 87.4 |
| Copper | µg/L | Total | 192 | 792 | 148 | 238 | 293 | 223 | 330 | 124 | 219 | 303 |
| Iron | µg/L | Dissolved | 357 | 351 | 261 | 626 | 190 | 27,400 | 142 | 263 | 646 | 238 |
| Iron | µg/L | Total | 6,560 | 34,500 | 4,960 | 8,960 | 18,000 | 70,900 | 31,500 | 6,410 | 7,620 | 20,900 |
| Lead | µg/L | Dissolved | 11.8 | 27.9 | 47.1 | 25.5 | 120 | 6.16 | 3.69 | 16.6 | 26.7 | 185 |
| Lead | µg/L | Total | 292 | 3,020 | 834 | 511 | 1,430 | 486 | 1,560 | 526 | 460 | 1,500 |
| Manganese | µg/L | Dissolved | 140 | 54.8 | 72.7 | 32.3 | 20.3 | 1,010 | 711 | 285 | 76 | 17.3 |
| Manganese | µg/L | Total | 189 | 593 | 172 | 151 | 296 | 1,180 | 827 | 325 | 179 | 289 |
| Mercury | µg/L | Dissolved | 0.219 | 0.235 | 0.175 | <0.1 | <0.1 | 0.18 | 0.279 | 0.237 | <0.1 | <0.1 |
| Mercury | µg/L | Total | 1.48 | 8.19 | 1.97 | 0.994 | 6.81 | 3.48 | 3.92 | 1.79 | 1 | 3.9 |
| Molybdenum | µg/L | Dissolved | 53.7 | 101 | 50.6 | 58.2 | 84.3 | 3.16 | 116 | 432 | 55.8 | 73.7 |
| Molybdenum | µg/L | Total | 56.6 | 110 | 52.3 | 57.3 | 78.5 | 41.6 | 130 | 398 | 54.9 | 70.2 |
| Nickel | µg/L | Dissolved | 420 | 47 | 38 | 47 | 32 | 230 | 68 | 51 | 54 | 21 |
| Nickel | µg/L | Total | 500 | 120 | 61 | 65 | 94 | 270 | 90 | 63 | 66 | 85 |
| Selenium | µg/L | Dissolved | <1 | 10.8 | 5.14 | 5.77 | 7.36 | 2.76 | 15.7 | 6.87 | 6.18 | 7.02 |
| Selenium | µg/L | Total | <1 | 13.7 | 6.52 | 5.15 | 7.12 | 6.95 | 14.2 | 6.33 | 5.39 | 7.31 |
| Silver | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Silver | µg/L | Total | <1 | 1.66 | <5 | 2.87 | 5.43 | <1 | 1.2 | 2.28 | 1.08 | 6.14 |
| Strontium | µg/L | Dissolved | 307 | 284 | 528 | 587 | 1,240 | 383 | 556 | 531 | 627 | 879 |

## TABLE C-9

## STORM WATER ANALYTICAL RESULTS – METAL RECYCLER

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | M-SW-01 | | | | | M-SW-02 | | | | |
| | | | 02/02/04 | 02/18/04 | 10/26/04 | 12/28/04 | 02/11/05 | 02/02/04 | 02/18/04 | 10/26/04 | 12/27/04 | 02/11/05 |
| Strontium | µg/L | Total | 327 | 484 | 589 | 613 | 1,430 | 419 | 556 | 507 | 644 | 1,050 |
| Thallium | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Thallium | µg/L | Total | <1 | <1 | <5 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Tin | µg/L | Dissolved | <1 | <1 | 1.42 | 1.54 | 3.54 | <1 | <1 | <1 | 1.29 | 2.29 |
| Tin | µg/L | Total | 4.44 | 30 | 16.2 | 13.5 | 20.5 | 4.9 | 23.5 | 8.09 | 10.5 | 21 |
| Titanium | µg/L | Dissolved | 2.5 | 3.44 | 4.4 | 7.69 | 6.17 | 2.13 | 4.06 | 1.76 | 8.05 | 3.7 |
| Titanium | µg/L | Total | 32.7 | 492 | 135 | 108 | 345 | 57.3 | 223 | 52.8 | 92.7 | 352 |
| Vanadium | µg/L | Dissolved | <1 | 1.86 | 2.5 | 2.62 | 7.67 | <1 | <1 | <1 | 3.03 | 7.52 |
| Vanadium | µg/L | Total | 4.42 | 35.6 | 8.75 | 8.79 | 28.3 | 4.65 | 16.8 | 3.94 | 7.83 | 26.7 |
| Zinc | µg/L | Dissolved | 244 | 33 | 230 | 69.3 | 16.9 | 1,550 | 696 | 991 | 145 | 26.6 |
| Zinc | µg/L | Total | 1,090 | 2,110 | 2,110 | 957 | 3,220 | 2,790 | 1,410 | 2,240 | 1,170 | 2,690 |
| **Other Constituents** | | | | | | | | | | | | |
| Oil and Grease | mg/L | N/A | 49 | 84 | 49 | 29 | 390 | 27 | 59 | 28 | 17 | 170 |
| Perchlorate | µg/L | N/A | <2 | 25 | 15 | 50 | 120 | <2 | 32 | 29 | 170 | 170 |
| N-Nitrosodimethylamine (NDMA) | ng/L | N/A | <2 | -- | -- | -- | -- | <2 | -- | -- | -- | -- |
| Glyphosate | µg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 1,4-Dioxane | µg/L | N/A | <2 | -- | -- | -- | -- | <2 | -- | -- | -- | -- |
| 1,2-Dibromo-3-chloropropane (DBCP) | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Volatile Organic Compounds** | | | | | | | | | | | | |
| Methyl Bromide | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl-t-Butyl Ether (MTBE) | µg/L | N/A | <1 | <1 | 1.3 | <1 | <1 | <1 | <1 | <1 | <1 | 1.7 |
| Benzene | µg/L | N/A | <0.5 | <0.5 | 0.53 | 0.83 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 2.3 |
| Toluene | µg/L | N/A | <0.5 | <0.5 | 5.8 | 3.9 | 1.2 | <0.5 | 0.98 | 2.1 | 1.6 | 25 |
| Ethylbenzene | µg/L | N/A | <0.5 | <0.5 | 2 | <0.5 | <0.5 | <0.5 | <0.5 | 0.97 | <0.5 | 7.1 |
| o-Xylene | µg/L | N/A | <0.5 | <0.5 | 3.8 | 0.59 | <0.5 | <0.5 | <0.5 | 1.9 | <0.5 | 11 |
| p/m-Xylene | µg/L | N/A | <0.5 | <0.5 | 8.6 | 1.3 | 0.71 | 0.6 | <0.5 | 4.2 | 0.84 | 28 |
| Trichloroethylene (TCE) | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Tetrachloroethylene (PCE) | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,1,2-Tetrachloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,1-Trichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2,2-Tetrachloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2-Trichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

## TABLE C-9

## STORM WATER ANALYTICAL RESULTS – METAL RECYCLER

| | | | Sample Number / Date Sampled | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | M-SW-01 | | | | | M-SW-02 | | | | |
| **Constituent** | **Units[1]** | **Fraction** | **02/02/04** | **02/18/04** | **10/26/04** | **12/28/04** | **02/11/05** | **02/02/04** | **02/18/04** | **10/26/04** | **12/27/04** | **02/11/05** |
| 1,1-Dichloroethylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,3-Trichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,3-Trichloropropane (1,2,3-TCP) | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,4-Trichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,4-Trimethylbenzene | µg/L | N/A | <0.5 | <0.5 | 4.3 | 0.51 | <0.5 | <0.5 | 0.56 | 2.6 | <0.5 | 10 |
| 1,2-Dibromoethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <10 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Trans-Dichloroethylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3,5-Trimethylbenzene | µg/L | N/A | <0.5 | <0.5 | 1.1 | <0.5 | <0.5 | <0.5 | <0.5 | 0.67 | <0.5 | 2.8 |
| 1,3-Dichlorobenzene | µg/L | N/A | <10 | <50 | <0.5 | <0.5 | <0.5 | <10 | <10 | <0.5 | <0.5 | <0.5 |
| 1,3-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,4-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <10 | <10 | <0.5 | <0.5 | <0.5 |
| 2,2-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Butanone (Methylethyl ketone) | µg/L | N/A | 5.7 | 5.2 | 6.3 | 6.7 | 14 | 7.2 | 12 | 5.4 | 6.3 | 32 |
| 2-Chlorotoluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Hexanone | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 1.1 |
| 4-Chlorotoluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 4-Methyl-2-pentanone (MIBK) | µg/L | N/A | 4 | <2 | <2 | <2 | <2 | 2.3 | 2.4 | <2 | <2 | 21 |
| Acetone | µg/L | N/A | 28 | 32 | 20 | 50 | 79 | 37 | 97 | 19 | 31 | 190 |
| Acrylonitrile | µg/L | N/A | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Allyl Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromochloromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromoform | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Carbon disulfide | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Carbon Tetrachloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chloroform | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| cis-1,2-Dichloroethene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| cis-1,3-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dibromochloromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

# TABLE C-9

## STORM WATER ANALYTICAL RESULTS – METAL RECYCLER

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | M-SW-01 | | | | | M-SW-02 | | | | |
| | | | 02/02/04 | 02/18/04 | 10/26/04 | 12/28/04 | 02/11/05 | 02/02/04 | 02/18/04 | 10/26/04 | 12/27/04 | 02/11/05 |
| Dibromomethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dichlorobromomethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dichlorodifluoromethane | µg/L | N/A | <0.5 | <0.5 | 0.55 | 4.1 | <0.5 | <0.5 | <0.5 | <0.5 | 2.2 | 3.8 |
| Diethyl Ether | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 1.1 | <0.5 |
| Diisopropyl Ether (DIPE) | µg/L | N/A | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Ethanol | µg/L | N/A | 160 | 190 | 200 | 780 | 1,200 | 170 | 22,000 | 120 | 590 | 2,500 |
| Ethyl Methacrylate | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <2 | <2 | <2 | <2 | <0.5 |
| Ethyl-t-Butyl Ether (ETBE) | µg/L | N/A | <2 | <2 | <2 | <2 | <2 | <0.5 | <10 | <0.5 | <0.5 | <2 |
| Hexachloro-1,3-Butadiene | µg/L | N/A | <10 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Iodomethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Isopropylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl Methacrylate | µg/L | N/A | <0.5 | <0.5 | <0.5 | 3.9 | <0.5 | <0.5 | <0.5 | <0.5 | 2.3 | <0.5 |
| Methylene Chloride | µg/L | N/A | <0.5 | <0.5 | 0.52 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.55 |
| Naphthalene | µg/L | N/A | 0.76 | 0.79 | 1.7 | 0.66 | <0.5 | 0.79 | 1.2 | 1.9 | 0.51 | 8.6 |
| n-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| n-Propylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 1.1 |
| p-Isopropyltoluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| sec-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Styrene | µg/L | N/A | <0.5 | <0.5 | <0.5 | 1.3 | <0.5 | <0.5 | <0.5 | <0.5 | 0.95 | 1.5 |
| t-1,4-Dichloro-2-Butene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Tert-Amyl-Methyl Ether (TAME) | µg/L | N/A | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Tert-Butyl Alcohol (TBA) | µg/L | N/A | <10 | <10 | <10 | <10 | 15 | <10 | <10 | <10 | <10 | 22 |
| tert-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Tetrahydrofuran | µg/L | N/A | <1 | <1 | <1 | <1 | <1 | <1 | 3.6 | 1.9 | <1 | 11 |
| trans-1,3-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Trichlorofluoromethane | µg/L | N/A | 1.6 | <0.5 | 3.4 | 2 | 4.2 | <0.5 | <0.5 | 1.9 | 1.3 | 28 |
| Vinyl Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Semi-Volatile Organic Compounds** | | | | | | | | | | | | |
| 1-Methylnaphthalene | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| 2,4,5-Trichlorophenol | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| 2,4,6-Trichlorophenol | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| 2,4-Dichlorophenol | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| 2,4-Dimethylphenol | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |

## TABLE C-9

## STORM WATER ANALYTICAL RESULTS – METAL RECYCLER

| Constituent | Units$^1$ | Fraction | Sample Number / Date Sampled | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | M-SW-01 | | | | | M-SW-02 | | | | |
| | | | 02/02/04 | 02/18/04 | 10/26/04 | 12/28/04 | 02/11/05 | 02/02/04 | 02/18/04 | 10/26/04 | 12/27/04 | 02/11/05 |
| 2,4-Dinitrophenol | µg/L | N/A | <50 | <250 | -- | -- | -- | <50 | <50 | -- | -- | -- |
| 2,4-Dinitrotoluene | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| 2,6-Dinitrotoluene | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| 2-Chloronaphthalene | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| 2-Chlorophenol | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| 2-Methylnaphthalene | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| 2-Methylphenol (o-Cresol) | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| 2-Nitroaniline | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| 2-Nitrophenol | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| 3,3'-Dichlorobenzidine | µg/L | N/A | <25 | <130 | -- | -- | -- | <25 | <25 | -- | -- | -- |
| 3-Nitroaniline | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| 4,6-Dinitro-2-Methylphenol | µg/L | N/A | <50 | <250 | -- | -- | -- | <50 | <50 | -- | -- | -- |
| 4-Bromophenyl-Phenyl Ether | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| 4-Chloro-3-Methylphenol | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| 4-Chloroaniline | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| 4-Chlorophenyl-Phenyl Ether | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| 4-Methylphenol (p-Cresol) | µg/L | N/A | 11 | <50 | -- | -- | -- | 24 | <10 | -- | -- | -- |
| 4-Nitroaniline | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| 4-Nitrophenol | µg/L | N/A | 11 | <50 | -- | -- | -- | 19 | <10 | -- | -- | -- |
| Acenaphthene | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Acenaphthylene | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Aniline | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Anthracene | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Azobenzene | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Benzidine | µg/L | N/A | <50 | <250 | -- | -- | -- | <50 | <50 | -- | -- | -- |
| Benzo (a) Anthracene | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Benzo (a) Pyrene | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Benzo (b) Fluoranthene | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Benzo (g,h,i) Perylene | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Benzo (k) Fluoranthene | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Benzoic acid | µg/L | N/A | <50 | 770 | -- | -- | -- | 560 | <50 | -- | -- | -- |
| Benzyl alcohol | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | 40 | -- | -- | -- |
| Bis(2-Chloroethoxy) Methane | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Bis(2-Chloroethyl) Ether | µg/L | N/A | <25 | <130 | -- | -- | -- | <25 | <25 | -- | -- | -- |
| Bis(2-Chloroisopropyl) Ether | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |

# TABLE C-9

## STORM WATER ANALYTICAL RESULTS – METAL RECYCLER

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | M-SW-01 | | | | | M-SW-02 | | | | |
| | | | 02/02/04 | 02/18/04 | 10/26/04 | 12/28/04 | 02/11/05 | 02/02/04 | 02/18/04 | 10/26/04 | 12/27/04 | 02/11/05 |
| Bis(2-Ethylhexyl) Phthalate | µg/L | N/A | 72 | <50 | -- | -- | -- | 26 | 23 | -- | -- | -- |
| Butyl Benzyl Phthalate | µg/L | N/A | 15 | <50 | -- | -- | -- | <10 | 11 | -- | -- | -- |
| Chrysene | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Dibenz (a,h) Anthracene | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Dibenzofuran | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Diethyl Phthalate | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Dimethyl Phthalate | µg/L | N/A | 11 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Di-n-Butyl Phthalate | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Di-n-Octyl Phthalate | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Fluoranthene | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Fluorene | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Hexachlorobenzene | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Hexachlorocyclopentadiene | µg/L | N/A | <25 | <130 | -- | -- | -- | <25 | <25 | -- | -- | -- |
| Hexachloroethane | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Indeno (1,2,3-c,d) Pyrene | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Isophorone | µg/L | N/A | 31 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Nitrobenzene | µg/L | N/A | <25 | <130 | -- | -- | -- | <25 | <25 | -- | -- | -- |
| N-Nitroso-di-n-propylamine | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| N-Nitrosodiphenylamino | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Pentachlorophenol | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Phenanthrene | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Phenol | µg/L | N/A | 19 | <50 | -- | -- | -- | 62 | <10 | -- | -- | -- |
| Pyrene | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Pyridine | µg/L | N/A | <10 | <50 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| **Biological Parameters** | | | | | | | | | | | | |
| Heterotrophic Plate Count | CFU/mL | N/A | >3,000 | -- | -- | -- | -- | >3,000 | -- | -- | -- | -- |
| Total Coliforms | MPN/100 mL | N/A | 2,400 | -- | -- | -- | -- | 270 | -- | -- | -- | -- |
| Fecal Coliform | MPN/100 mL | N/A | 230 | -- | -- | -- | -- | 40 | -- | -- | -- | -- |
| E. coli | MPN/100 mL | N/A | 310 | -- | -- | -- | -- | 10 | -- | -- | -- | -- |

-- indicates the constituent was not analyzed for. Analytes not detected are indicated with a "<" symbol; the associated numerical value is the detection limit.

1. Units of measure: mg/L = milligrams per liter, µg/L = micrograms per liter, µhmos/cm = microhmos per centimeter, NTU = Nephelometric Turbidity Unit.
2. In cases in which the filtered concentrations exceeded the total, the differences are considered by the laboratory statistically insignificant and can be attributed to the variability inherent with the analytical method

## TABLE C-10

## LYSIMETER ANALYTICAL RESULTS – METAL RECYCLER

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | M-LS-01 | | | | | | | M-LS-02 | | | | | |
| | | | 02/04/04 | 02/20/04 | 04/03/04 | 10/27/04 | 12/08/04 | 12/28/04 | 02/14/05 | 02/04/04 | 02/20/04 | 04/03/04 | 10/27/04 | 12/08/04 | 12/28/04 |
| **General Monitoring Parameters** | | | | | | | | | | | | | | | |
| Alkalinity, Total (as $CaCO_3$) | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Bicarbonate (as $CaCO_3$) | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Bromide | mg/L | N/A | 3.6 | 2.9 | -- | 0.34 | 0.62 | 0.74 | 6.9 | 0.35 | 0.43 | -- | 0.25 | 0.8 | 0.53 |
| Calcium | mg/L | Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Carbonate (as $CaCO_3$) | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Chloride | mg/L | N/A | 110 | 110 | -- | 28 | 68 | 110 | 41 | 57 | 65 | -- | 35 | 90 | 76 |
| Chemical Oxygen Demand | mg/L | N/A | 18 | 28 | -- | 18 | 13 | 54 | 20 | 21 | 26 | -- | 18 | 46 | 33 |
| Fluoride | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Hardness (as $CaCO_3$) | mg/L | Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Hydroxide (as $CaCO_3$) | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Magnesium | mg/L | Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MBAS (Surfactants) | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Nitrate (as N) | mg/L | N/A | 11 | 16 | -- | 2.8 | 5.4 | 1.9 | 2.9 | 2.8 | 2.7 | -- | 5 | 1 | 5.6 |
| Nitrite (as N) | mg/L | N/A | 1.5 | <0.1 | -- | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | -- | <0.1 | <0.1 | <0.1 |
| Total Kjeldahl Nitrogen | mg/L | Total | 2.7 | 1.4 | -- | 0.7 | 0.56 | 1.1 | <0.5 | 1.1 | 0.98 | -- | <0.5 | 1.4 | 0.84 |
| Carbon, Total Organic | mg/L | N/A | 17 | 9.6 | -- | 4.7 | 6.2 | 14 | 5.2 | 17 | 11 | -- | 4.9 | 14 | 7.3 |
| Carbon, Dissolved Organic | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Nitrogen, Organic | mg/L | N/A | 0.6 | 0.98 | -- | 0.7 | 0.56 | 1.1 | <0.5 | 0.82 | 0.7 | -- | <0.5 | 1.4 | 0.84 |
| Ammonia-Nitrogen | mg/L | Total | 2.1 | 0.42 | -- | <0.1 | <0.1 | <0.2 | <0.1 | 0.28 | 0.28 | -- | <0.1 | <0.1 | <0.2 |
| pH | pH units | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Phosphorus | mg/L | Dissolved | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Phosphorus | mg/L | Total | 12 | 14 | -- | 0.081 | 0.068 | 0.08 | 0.41 | 14 | 16 | -- | 0.091 | 0.1 | 0.79 |
| Potassium | mg/L | Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Sodium | mg/L | Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Specific Conductance | µmhos/cm | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Sulfate | mg/L | N/A | 750 | 780 | -- | 220 | 310 | 610 | 230 | 280 | 350 | -- | 190 | 500 | 370 |
| Total Dissolved Solids | mg/L | N/A | 570 | 1,700 | -- | 780 | 920 | 1,300 | 660 | 950 | 930 | -- | 630 | 1,300 | 1,000 |
| Total Suspended Solids | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Turbidity | NTU | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **Metals[2]** | | | | | | | | | | | | | | | |
| Aluminum | µg/L | Dissolved | <50 | <50 | -- | <25 | <25 | <25 | <25 | <50 | <50 | -- | <25 | <25 | <25 |
| Aluminum | µg/L | Total | <50 | <50 | -- | <25 | <25 | <25 | <25 | <50 | <50 | -- | <25 | <25 | <25 |
| Antimony | µg/L | Dissolved | 1.09 | 1.03 | -- | <1 | <1 | <1 | <1 | 2.78 | 2.41 | -- | 1.16 | 1.32 | <1 |
| Antimony | µg/L | Total | <1 | 1.21 | -- | <1 | <1 | <1 | 1.05 | 2.86 | 2.32 | -- | 1.15 | 1.65 | <1 |

# TABLE C-10

## LYSIMETER ANALYTICAL RESULTS – METAL RECYCLER

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | M-LS-01 | | | | | | | M-LS-02 | | | | | |
| | | | 02/04/04 | 02/20/04 | 04/03/04 | 10/27/04 | 12/08/04 | 12/28/04 | 02/14/05 | 02/04/04 | 02/20/04 | 04/03/04 | 10/27/04 | 12/08/04 | 12/28/04 |
| Arsenic | µg/L | Dissolved | 5.14 | 1.39 | -- | 2.15 | 1.38 | <0.5 | 2.31 | 3.1 | 2.59 | -- | 1.14 | 1.2 | <0.5 |
| Arsenic | µg/L | Total | 4.02 | 1.75 | -- | 2.17 | 1.38 | <0.5 | 2.31 | 2.77 | 2.98 | -- | 0.992 | 1.76 | 1.09 |
| Barium | µg/L | Dissolved | 86.4 | 54.8 | -- | 101 | 78.1 | 83.7 | 79.9 | 56.3 | 70.8 | -- | 70.7 | 88.8 | 69.7 |
| Barium | µg/L | Total | 93.2 | 55.2 | -- | 105 | 82.9 | 78.3 | 81.5 | 63.2 | 72.3 | -- | 71.4 | 98.4 | 71.3 |
| Beryllium | µg/L | Dissolved | <1 | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 | -- | <1 | <1 | <1 |
| Beryllium | µg/L | Total | <1 | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 | -- | <1 | <1 | <1 |
| Boron | µg/L | Dissolved | 8,170 | 8,210 | -- | 2,330 | 1,550 | 1,610 | 1,030 | 1,220 | 1,410 | -- | 1,080 | 1,440 | 1,740 |
| Boron | µg/L | Total | 8,180 | 8,310 | -- | 2,340 | 1,610 | 1,720 | 1,030 | 1,240 | 1,370 | -- | 1,010 | 1,520 | 1,920 |
| Cadmium | µg/L | Dissolved | 0.386 | 0.354 | -- | 0.294 | 0.457 | 0.761 | 0.36 | <0.2 | <0.2 | -- | 0.526 | 0.637 | 0.579 |
| Cadmium | µg/L | Total | 0.429 | 0.369 | -- | 0.327 | 0.779 | 0.797 | 0.378 | 0.204 | <0.2 | -- | 0.554 | 0.732 | 0.588 |
| Chromium | µg/L | Dissolved | 1.15 | 1.76 | 1.85 | <1 | 1.58 | 1.85 | 1.53 | 1.34 | 1.31 | 2.04 | 7.88 | <1 | 4.04 |
| Chromium | µg/L | Total | 1.97 | 1.89 | -- | 1.3 | 2.14 | 2.74 | 1.82 | 2.27 | 1.03 | -- | 48.7 | 5.68 | 4.41 |
| Chromium, Hexavalent | µg/L | Dissolved | -- | -- | <0.2 | 1.5 | 1.9 | 0.21 | 0.75 | -- | -- | <0.2 | 4.2 | <0.2 | 2.8 |
| Cobalt | µg/L | Dissolved | 58.5 | 88.4 | -- | 74.9 | 130 | 3.1 | 222 | <1 | <1 | -- | 4.12 | 3.12 | 220 |
| Cobalt | µg/L | Total | 64.5 | 92.6 | -- | 75.1 | 136 | 3.29 | 222 | <1 | <1 | -- | 4.03 | 3.34 | 258 |
| Copper | µg/L | Dissolved | 10.2 | 7.01 | -- | 3.01 | 4.49 | 17.4 | 5.36 | 4.14 | 4.54 | -- | 6.93 | 4.88 | 6.99 |
| Copper | µg/L | Total | 9.98 | 7.2 | -- | 3.58 | 5.57 | 27.2 | 5.89 | 4.17 | 8.24 | -- | 13.1 | 6.42 | 9.15 |
| Iron | µg/L | Dissolved | <100 | <100 | -- | <100 | <100 | 391 | <100 | <100 | <100 | -- | <100 | 101 | 219 |
| Iron | µg/L | Total | 159 | 141 | -- | <100 | 142 | 405 | <100 | 110 | <100 | -- | 678 | 2,420 | 313 |
| Lead | µg/L | Dissolved | <0.5 | 6.82 | -- | 1.15 | <0.5 | 0.679 | <0.5 | <0.5 | 0.632 | -- | <0.5 | <0.5 | <0.5 |
| Lead | µg/L | Total | 1.77 | 6.9 | -- | 3.92 | 4.2 | 1.76 | 1.33 | 0.872 | 2.45 | -- | 3.9 | 2.97 | 2.37 |
| Manganese | µg/L | Dissolved | 4,360 | 2,810 | -- | 60.9 | 45.9 | 2,940 | 50.1 | 446 | 772 | -- | 929 | 1,370 | 81.9 |
| Manganese | µg/L | Total | 4,300 | 2,880 | -- | 63.4 | 52 | 3,200 | 50.7 | 476 | 639 | -- | 900 | 1,480 | 96 |
| Mercury | µg/L | Dissolved | -- | <0.25 | -- | -- | -- | -- | <0.1 | -- | <0.25 | -- | -- | -- | -- |
| Mercury | µg/L | Total | -- | <0.25 | -- | -- | -- | -- | <0.1 | -- | <0.25 | -- | -- | -- | -- |
| Molybdenum | µg/L | Dissolved | 93.5 | 65.4 | -- | 21.2 | 13 | 112 | 8.05 | 24.9 | 21.9 | -- | 171 | 163 | 12.4 |
| Molybdenum | µg/L | Total | 96.3 | 68.6 | -- | 21.3 | 13.2 | 111 | 7.99 | 27.1 | 20.8 | -- | 167 | 168 | 12.9 |
| Nickel | µg/L | Dissolved | 110 | 65 | -- | 42 | 37 | 140 | 54 | 16 | 27 | -- | 1,700 | 150 | 57 |
| Nickel | µg/L | Total | 110 | 97 | -- | 40 | 39 | 150 | 49 | 17 | 45 | -- | 1,600 | 160 | 66 |
| Selenium | µg/L | Dissolved | 2.66 | 5.09 | -- | 1.7 | 1.7 | <1 | 1.77 | 4.49 | 5.11 | -- | 3.4 | 1.43 | <1 |
| Selenium | µg/L | Total | 2.3 | 6.18 | -- | <1 | 1.77 | 2.21 | 1.98 | 4.45 | 5.21 | -- | 2.82 | 1.78 | 2.08 |
| Silver | µg/L | Dissolved | <1 | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 | -- | 1.44 | <1 | <1 |
| Silver | µg/L | Total | <1 | <1 | -- | <1 | 1.2 | 3.77 | <1 | <1 | <1 | -- | 8.31 | 1.31 | 1.76 |
| Strontium | µg/L | Dissolved | 1,580 | 1,490 | -- | 586 | 796 | 1,290 | 669 | 404 | 448 | -- | 439 | 1,220 | 857 |
| Strontium | µg/L | Total | 1,570 | 1,550 | -- | 585 | 811 | 1,250 | 672 | 438 | 435 | -- | 425 | 1,260 | 886 |
| Thallium | µg/L | Dissolved | <1 | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 | -- | <1 | <1 | <1 |

# TABLE C-10

## LYSIMETER ANALYTICAL RESULTS – METAL RECYCLER

| | | | Sample Number / Date Sampled | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | M-LS-01 | | | | | | | M-LS-02 | | | | | |
| **Constituent** | **Units[1]** | **Fraction** | **02/04/04** | **02/20/04** | **04/03/04** | **10/27/04** | **12/08/04** | **12/28/04** | **02/14/05** | **02/04/04** | **02/20/04** | **04/03/04** | **10/27/04** | **12/08/04** | **12/28/04** |
| Thallium | µg/L | Total | <1 | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 | -- | <1 | <1 | <1 |
| Tin | µg/L | Dissolved | <1 | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 | -- | <1 | <1 | <1 |
| Tin | µg/L | Total | 1.47 | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 | -- | <1 | <1 | <1 |
| Titanium | µg/L | Dissolved | 5.79 | 12.7 | -- | 3.52 | 3.49 | 5.05 | 7.23 | 5.09 | 6.51 | -- | 3.05 | 3.66 | 5.15 |
| Titanium | µg/L | Total | 8.5 | 13 | -- | 4.24 | 4.66 | 6.63 | 8.09 | 6.98 | 7.6 | -- | 4.4 | 4.35 | 8.83 |
| Vanadium | µg/L | Dissolved | 8.41 | 4.97 | -- | 2.56 | 1.49 | <1 | 1.7 | 6.42 | 6.41 | -- | <1 | <1 | 2.02 |
| Vanadium | µg/L | Total | 8.83 | 5.09 | -- | 2.53 | 1.54 | <1 | 1.85 | 6.71 | 6.39 | -- | <1 | <1 | 2.23 |
| Zinc | µg/L | Dissolved | 35.7 | 76.8 | -- | 83.6 | 101 | 91.9 | 88.1 | 24.9 | 22.9 | -- | 59.9 | 20.6 | 165 |
| Zinc | µg/L | Total | 64 | 78.2 | -- | 83.2 | 141 | 110 | 95.3 | 18.5 | 28.1 | -- | 80.2 | 27.9 | 195 |
| **Other Constituents** | | | | | | | | | | | | | | | |
| Oil and Grease | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Perchlorate | µg/L | N/A | -- | -- | 19 | 13 | 61 | 21 | 140 | -- | -- | 16 | 20 | 15 | 54 |
| N-Nitrosodimethylamine (NDMA) | ng/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Glyphosate | µg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 1,4-Dioxane | µg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 1,2-Dibromo-3-chloropropane (DBCP) | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | |
| Methyl Bromide | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| Methyl-t-Butyl Ether (MTBE) | µg/L | N/A | <1 | <1 | -- | 22 | 23 | 33 | 30 | <1 | <1 | -- | 9.8 | 25 | 26 |
| Benzene | µg/L | N/A | <0.5 | <0.5 | -- | 0.64 | 0.65 | 0.57 | <0.5 | <0.5 | <0.5 | -- | 1.1 | 0.65 | 2.3 |
| Toluene | µg/L | N/A | <0.5 | <0.5 | -- | 13 | 6.2 | 4.4 | 2.6 | <0.5 | <0.5 | -- | 5.7 | 4.7 | 5.8 |
| Ethylbenzene | µg/L | N/A | <0.5 | <0.5 | -- | 4.3 | 1.3 | <0.5 | <0.5 | <0.5 | <0.5 | -- | 0.7 | <0.5 | <1 |
| o-Xylene | µg/L | N/A | <0.5 | <0.5 | -- | 8.1 | 3.4 | 0.82 | <0.5 | <0.5 | <0.5 | -- | 1.5 | 0.9 | <1 |
| p/m-Xylene | µg/L | N/A | <0.5 | <0.5 | -- | 19 | 3.5 | 0.95 | 0.57 | <0.5 | <0.5 | -- | 2.7 | 1.3 | 1.2 |
| Trichloroethylene (TCE) | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| Tetrachloroethylene (PCE) | µg/L | N/A | <0.5 | 0.9 | -- | 0.92 | 0.76 | 0.7 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| 1,1,1,2-Tetrachloroethane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| 1,1,1-Trichloroethane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| 1,1,2,2-Tetrachloroethane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | 0.55 | <0.5 | -- | <0.5 | <0.5 | <1 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| 1,1,2-Trichloroethane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| 1,1-Dichloroethane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| 1,1-Dichloroethylene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| 1,1-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| 1,2,3-Trichlorobenzene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |

## TABLE C-10

## LYSIMETER ANALYTICAL RESULTS – METAL RECYCLER

| | | | Sample Number / Date Sampled | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | M-LS-01 | | | | | | | M-LS-02 | | | | | |
| **Constituent** | **Units[1]** | **Fraction** | **02/04/04** | **02/20/04** | **04/03/04** | **10/27/04** | **12/08/04** | **12/28/04** | **02/14/05** | **02/04/04** | **02/20/04** | **04/03/04** | **10/27/04** | **12/08/04** | **12/28/04** |
| 1,2,3-Trichloropropane (1,2,3-TCP) | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| 1,2,4-Trichlorobenzene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| 1,2,4-Trimethylbenzene | µg/L | N/A | <0.5 | <0.5 | -- | 4 | 0.76 | <0.5 | <0.5 | <0.5 | <0.5 | -- | 1.5 | <0.5 | <1 |
| 1,2-Dibromoethane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| 1,2-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| 1,2-Dichloroethane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| 1,2-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| 1,2-Trans-Dichloroethylene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| 1,3,5-Trimethylbenzene | µg/L | N/A | <0.5 | <0.5 | -- | 1.3 | 0.54 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| 1,3-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| 1,3-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| 1,4-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| 2,2-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| 2-Butanone (Methylethyl ketone) | µg/L | N/A | <1 | <1 | -- | <1 | <1 | <1 | <1 | 1.6 | 3.9 | -- | <1 | <1 | 11 |
| 2-Chlorotoluene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| 2-Hexanone | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| 4-Chlorotoluene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| 4-Methyl-2-pentanone (MIBK) | µg/L | N/A | <2 | <2 | -- | <2 | <2 | <2 | <2 | <2 | <2 | -- | <2 | <2 | <4 |
| Acetone | µg/L | N/A | 4.4 | <2 | -- | 2.7 | <2 | 2.5 | <2 | 14 | <2 | -- | 3.7 | 4 | 34 |
| Acrylonitrile | µg/L | N/A | <2 | <2 | -- | <2 | <2 | <2 | <2 | <2 | <2 | -- | <2 | <2 | <4 |
| Allyl Chloride | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| Bromobenzene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| Bromochloromethane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| Bromoform | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| Carbon disulfide | µg/L | N/A | 0.68 | 6.9 | -- | 6 | 3.3 | <0.5 | 5.1 | 2.1 | 1.1 | -- | 1.2 | <0.5 | 3.5 |
| Carbon Tetrachloride | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| Chlorobenzene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| Chloroethane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| Chloroform | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| cis-1,2-Dichloroethene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| cis-1,3-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| Dibromochloromethane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| Dibromomethane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| Dichlorobromomethane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| Dichlorodifluoromethane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| Diethyl Ether | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | 0.62 | 1.5 | 1.7 |

## TABLE C-10

## LYSIMETER ANALYTICAL RESULTS – METAL RECYCLER

| | | | Sample Number / Date Sampled | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | M-LS-01 | | | | | | | M-LS-02 | | | | | |
| **Constituent** | **Units[1]** | **Fraction** | **02/04/04** | **02/20/04** | **04/03/04** | **10/27/04** | **12/08/04** | **12/28/04** | **02/14/05** | **02/04/04** | **02/20/04** | **04/03/04** | **10/27/04** | **12/08/04** | **12/28/04** |
| Diisopropyl Ether (DIPE) | µg/L | N/A | <2 | <2 | -- | <2 | <2 | <2 | <2 | <2 | <2 | -- | <2 | <2 | <4 |
| Ethanol | µg/L | N/A | <100 | <100 | -- | <100 | <100 | <100 | <100 | <100 | <100 | -- | <100 | <100 | 3,200 |
| Ethyl Methacrylate | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| Ethyl-t-Butyl Ether (ETBE) | µg/L | N/A | <2 | <2 | -- | <2 | <2 | <2 | <2 | <2 | <2 | -- | <2 | <2 | <4 |
| Hexachloro-1,3-Butadiene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| Iodomethane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| Isopropylbenzene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| Methyl Chloride | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| Methyl Methacrylate | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| Methylene Chloride | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | 1.1 |
| Naphthalene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| n-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| n-Propylbenzene | µg/L | N/A | <0.5 | <0.5 | -- | 0.69 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| p-Isopropyltoluene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| sec-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| Styrene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| t-1,4-Dichloro-2-Butene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| Tert-Amyl-Methyl Ether (TAME) | µg/L | N/A | <2 | <2 | -- | <2 | <2 | <2 | <2 | <2 | <2 | -- | <2 | <2 | <4 |
| Tert-Butyl Alcohol (TBA) | µg/L | N/A | <10 | <10 | -- | <10 | <10 | 11 | <10 | <10 | <10 | -- | 12 | 17 | <20 |
| tert-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| Tetrahydrofuran | µg/L | N/A | <1 | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 | -- | <1 | <1 | <2 |
| trans-1,3-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| Trichlorofluoromethane | µg/L | N/A | <0.5 | <0.5 | -- | 0.67 | <0.5 | 0.69 | 1 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| Vinyl Chloride | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <1 |
| **Semi-Volatile Organic Compounds** | | | | | | | | | | | | | | | |
| NOT SAMPLED | µg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **Biological Parameters** | | | | | | | | | | | | | | | |
| Heterotrophic Plate Count | CFU/mL | N/A | 140,000 | -- | -- | -- | -- | -- | -- | 7,600 | -- | -- | -- | -- | -- |
| Total Coliforms | MPN/100 mL | N/A | 20 | -- | -- | -- | -- | -- | -- | <20 | -- | -- | -- | -- | -- |
| Fecal Coliform | MPN/100 mL | N/A | <20 | -- | -- | -- | -- | -- | -- | <20 | -- | -- | -- | -- | -- |
| E. coli | MPN/100 mL | N/A | <20 | -- | -- | -- | -- | -- | -- | <20 | -- | -- | -- | -- | -- |

-- indicates the constituent was not analyzed for. Analytes not detected are indicated with a "<" symbol; the associated numerical value is the detection limit.

1. Units of measure: mg/L = milligrams per liter, µg/L = micrograms per liter, µhmos/cm = microhmos per centimeter, NTU = Nephelometric Turbidity Unit.
2. In cases in which the filtered concentrations exceeded the total, the differences are considered by the laboratory statistically insignificant and can be attributed to the variability inherent with the analytical method.

## TABLE C-10

## LYSIMETER ANALYTICAL RESULTS – METAL RECYCLER

| Constituent | Units[1] | Fraction | | M-LS-03 | | | | M-LS-04 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 02/14/05 | 02/04/04 | 02/20/04 | 04/03/04 | 02/15/05 | 02/04/04 | 02/20/04 | 04/03/04 | 02/16/05 |
| **General Monitoring Parameters** | | | | | | | | | | | |
| Alkalinity, Total (as $CaCO_3$) | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Bicarbonate (as $CaCO_3$) | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Bromide | mg/L | N/A | 3.3 | 1.4 | 0.94 | -- | 14 | 0.45 | 0.61 | -- | 2.9 |
| Calcium | mg/L | Total | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Carbonate (as $CaCO_3$) | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Chloride | mg/L | N/A | 99 | 110 | 60 | -- | 76 | 79 | 53 | -- | 36 |
| Chemical Oxygen Demand | mg/L | N/A | 28 | 33 | -- | -- | 79 | 240 | -- | -- | 84 |
| Fluoride | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Hardness (as $CaCO_3$) | mg/L | Total | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Hydroxide (as $CaCO_3$) | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Magnesium | mg/L | Total | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MBAS (Surfactants) | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Nitrate (as N) | mg/L | N/A | 2.3 | 3.8 | 3.8 | -- | <0.1 | 12 | 5.7 | -- | 12 |
| Nitrite (as N) | mg/L | N/A | <0.1 | <0.1 | <0.1 | -- | <0.1 | <0.1 | <0.1 | -- | 0.79 |
| Total Kjeldahl Nitrogen | mg/L | Total | 0.84 | 1.3 | 1.1 | -- | 0.98 | 2.5 | 2.1 | -- | 2.1 |
| Carbon, Total Organic | mg/L | N/A | 5.7 | 23 | 14 | -- | 18 | -- | 84 | -- | 20 |
| Carbon, Dissolved Organic | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Nitrogen, Organic | mg/L | N/A | 0.84 | 1.3 | 1.1 | -- | 0.98 | 2.5 | 2.1 | -- | 1.4 |
| Ammonia-Nitrogen | mg/L | Total | <0.1 | <0.2 | <0.4 | -- | <0.1 | <0.2 | <0.2 | -- | 0.7 |
| pH | pH units | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Phosphorus | mg/L | Dissolved | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Phosphorus | mg/L | Total | 0.59 | 15 | -- | -- | 0.53 | 17 | -- | -- | 0.59 |
| Potassium | mg/L | Total | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Sodium | mg/L | Total | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Specific Conductance | µmhos/cm | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Sulfate | mg/L | N/A | 530 | 340 | 340 | -- | 400 | 220 | 350 | -- | 260 |
| Total Dissolved Solids | mg/L | N/A | 1,100 | 1,200 | 1,200 | -- | 1,100 | -- | 1,100 | -- | 820 |
| Total Suspended Solids | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Turbidity | NTU | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **Metals[2]** | | | | | | | | | | | |
| Aluminum | µg/L | Dissolved | <25 | <50 | <50 | -- | <25 | <50 | <50 | -- | <25 |
| Aluminum | µg/L | Total | <25 | <50 | <50 | -- | <25 | <50 | <50 | -- | <25 |
| Antimony | µg/L | Dissolved | 2.07 | 2.7 | 2.27 | -- | 3.78 | 2.75 | 2.99 | -- | 2.88 |
| Antimony | µg/L | Total | 1.69 | 3.08 | 2.22 | -- | 4.74 | 2.67 | 2.98 | -- | 2.81 |

# TABLE C-10

## LYSIMETER ANALYTICAL RESULTS – METAL RECYCLER

| Constituent | Units[1] | Fraction |  | M-LS-03 |  |  |  | M-LS-04 |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|
|  |  |  | 02/14/05 | 02/04/04 | 02/20/04 | 04/03/04 | 02/15/05 | 02/04/04 | 02/20/04 | 04/03/04 | 02/16/05 |
| Arsenic | µg/L | Dissolved | 1.76 | 13.9 | 13.2 | -- | 3.32 | 4.22 | 5.67 | -- | 2.88 |
| Arsenic | µg/L | Total | 1.19 | 13.5 | 12.7 | -- | 8.52 | 3.93 | 5.44 | -- | 2.77 |
| Barium | µg/L | Dissolved | 38.6 | 72 | 75.5 | -- | 92.6 | 113 | 120 | -- | 126 |
| Barium | µg/L | Total | 67.2 | 76.2 | 76.7 | -- | 117 | 117 | 121 | -- | 124 |
| Beryllium | µg/L | Dissolved | <1 | <1 | <1 | -- | <1 | <1 | <1 | -- | <1 |
| Beryllium | µg/L | Total | <1 | <1 | <1 | -- | <1 | <1 | <1 | -- | <1 |
| Boron | µg/L | Dissolved | 1,040 | 4,490 | 5,480 | -- | 1,500 | 2,160 | 2,310 | -- | 894 |
| Boron | µg/L | Total | 1,140 | 4,970 | 5,320 | -- | 1,540 | 2,470 | 2,260 | -- | 831 |
| Cadmium | µg/L | Dissolved | <0.2 | <0.2 | <0.2 | -- | <0.2 | <0.2 | <0.2 | -- | 0.271 |
| Cadmium | µg/L | Total | 0.487 | <0.2 | <0.2 | -- | <0.2 | <0.2 | 0.21 | -- | 0.269 |
| Chromium | µg/L | Dissolved | 1.73 | 1.35 | <1 | 2.67 | 2.35 | 3.45 | 11 | 17 | 8.29 |
| Chromium | µg/L | Total | 5.88 | 2.7 | <1 | -- | 3.54 | 4.36 | 11.7 | -- | 38.9 |
| Chromium, Hexavalent | µg/L | Dissolved | <0.2 | -- | -- | 0.6 | <0.2 | -- | -- | 14 | 6 |
| Cobalt | µg/L | Dissolved | 1.36 | <1 | <1 | -- | 7.32 | 1.05 | <1 | -- | 2.46 |
| Cobalt | µg/L | Total | 3.11 | <1 | <1 | -- | 7.82 | 1.01 | 1.03 | -- | 2.5 |
| Copper | µg/L | Dissolved | 3.33 | 2.93 | 6.54 | -- | 4.32 | 12.3 | 16.5 | -- | 7.36 |
| Copper | µg/L | Total | 14.6 | 3.08 | 6.69 | -- | 4.94 | 12.6 | 17.3 | -- | 8.74 |
| Iron | µg/L | Dissolved | <100 | 241 | <100 | -- | 194 | <100 | <100 | -- | <100 |
| Iron | µg/L | Total | 205 | 273 | 102 | -- | 11,800 | 154 | 100 | -- | 153 |
| Lead | µg/L | Dissolved | <0.5 | 1.62 | <0.5 | -- | <0.5 | 0.95 | <0.5 | -- | <0.5 |
| Lead | µg/L | Total | 4.23 | 0.785 | <0.5 | -- | 0.534 | 0.529 | 0.61 | -- | <0.5 |
| Manganese | µg/L | Dissolved | 125 | 255 | 178 | -- | 6,520 | 127 | 238 | -- | 1,330 |
| Manganese | µg/L | Total | 985 | 265 | 185 | -- | 6,840 | 117 | 257 | -- | 1,330 |
| Mercury | µg/L | Dissolved | <0.1 | -- | <0.25 | -- | <0.25 | -- | <0.25 | -- | <0.1 |
| Mercury | µg/L | Total | <0.1 | -- | <0.25 | -- | <0.25 | -- | <0.25 | -- | <0.1 |
| Molybdenum | µg/L | Dissolved | 20 | 47.8 | 36.9 | -- | 73.1 | 50 | 47 | -- | 55 |
| Molybdenum | µg/L | Total | 58.5 | 49.2 | 36.3 | -- | 75.3 | 50.6 | 49.7 | -- | 55.6 |
| Nickel | µg/L | Dissolved | 96 | 18 | 20 | -- | 160 | 64 | 62 | -- | 290 |
| Nickel | µg/L | Total | 190 | 21 | 19 | -- | 170 | 65 | 65 | -- | 290 |
| Selenium | µg/L | Dissolved | <1 | 6.71 | 7.79 | -- | <1 | 6.17 | 12.3 | -- | 5.01 |
| Selenium | µg/L | Total | 2.68 | 6.56 | 8.51 | -- | <1 | 6.41 | 11.8 | -- | 5.03 |
| Silver | µg/L | Dissolved | <1 | <1 | <1 | -- | 1.29 | <1 | <1 | -- | 3.91 |
| Silver | µg/L | Total | 4.07 | <1 | <1 | -- | 10.2 | 1.35 | <1 | -- | 7.73 |
| Strontium | µg/L | Dissolved | 582 | 594 | 585 | -- | 1,170 | 731 | 748 | -- | 588 |
| Strontium | µg/L | Total | 1,190 | 565 | 590 | -- | 1,220 | 689 | 784 | -- | 575 |
| Thallium | µg/L | Dissolved | <1 | <1 | <1 | -- | <1 | <1 | <1 | -- | <1 |

# TABLE C-10

## LYSIMETER ANALYTICAL RESULTS – METAL RECYCLER

| | | | | M-LS-03 | | | | M-LS-04 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Constituent** | **Units[1]** | **Fraction** | **02/14/05** | **02/04/04** | **02/20/04** | **04/03/04** | **02/15/05** | **02/04/04** | **02/20/04** | **04/03/04** | **02/16/05** |
| Thallium | µg/L | Total | <1 | <1 | <1 | -- | <1 | <1 | <1 | -- | <1 |
| Tin | µg/L | Dissolved | <1 | <1 | <1 | -- | <1 | <1 | <1 | -- | <1 |
| Tin | µg/L | Total | <1 | <1 | <1 | -- | <1 | <1 | <1 | -- | <1 |
| Titanium | µg/L | Dissolved | 6.67 | 6.31 | 7.6 | -- | 11 | 6.45 | 14.1 | -- | 11.8 |
| Titanium | µg/L | Total | 9.03 | 8.75 | 7.38 | -- | 11.1 | 7.67 | 15.4 | -- | 11.6 |
| Vanadium | µg/L | Dissolved | 1.45 | 11.8 | 7.51 | -- | <1 | 8.27 | 8.24 | -- | 3.29 |
| Vanadium | µg/L | Total | 1.17 | 12.6 | 7.41 | -- | <1 | 8.62 | 8.47 | -- | 2.77 |
| Zinc | µg/L | Dissolved | 34.4 | 19.5 | 20 | -- | 26.3 | 27.2 | 21.2 | -- | 24.6 |
| Zinc | µg/L | Total | 119 | 12.2 | 12.4 | -- | 27.2 | 11.4 | 45 | -- | 26.2 |
| **Other Constituents** | | | | | | | | | | | |
| Oil and Grease | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Perchlorate | µg/L | N/A | 48 | -- | -- | 33 | <2 | -- | -- | 18 | 10 |
| N-Nitrosodimethylamine (NDMA) | ng/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Glyphosate | µg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 1,4-Dioxane | µg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 1,2-Dibromo-3-chloropropane (DBCP) | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| **Volatile Organic Compounds** | | | | | | | | | | | |
| Methyl Bromide | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Methyl-t-Butyl Ether (MTBE) | µg/L | N/A | 7.9 | <1 | <1 | -- | 10 | <1 | <1 | -- | 2.9 |
| Benzene | µg/L | N/A | 0.53 | <0.5 | <0.5 | -- | 0.7 | <0.5 | <0.5 | -- | <0.5 |
| Toluene | µg/L | N/A | 4.3 | <0.5 | <0.5 | -- | 3 | <0.5 | <0.5 | -- | <0.5 |
| Ethylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | 0.93 | <0.5 | <0.5 | -- | <0.5 |
| o-Xylene | µg/L | N/A | 0.66 | <0.5 | <0.5 | -- | 2.9 | <0.5 | <0.5 | -- | <0.5 |
| p/m-Xylene | µg/L | N/A | 1.4 | <0.5 | <0.5 | -- | 3.7 | <0.5 | <0.5 | -- | <0.5 |
| Trichloroethylene (TCE) | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Tetrachloroethylene (PCE) | µg/L | N/A | <0.5 | 0.84 | 1.1 | -- | 0.51 | <0.5 | <0.5 | -- | <0.5 |
| 1,1,1,2-Tetrachloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 1,1,1-Trichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 1,1,2,2-Tetrachloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 1,1,2-Trichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 1,1-Dichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 1,1-Dichloroethylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 1,1-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 1,2,3-Trichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |

# TABLE C-10

## LYSIMETER ANALYTICAL RESULTS – METAL RECYCLER

| Constituent | Units[1] | Fraction | | M-LS-03 | | | | M-LS-04 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 02/14/05 | 02/04/04 | 02/20/04 | 04/03/04 | 02/15/05 | 02/04/04 | 02/20/04 | 04/03/04 | 02/16/05 |
| 1,2,3-Trichloropropane (1,2,3-TCP) | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 1,2,4-Trichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 1,2,4-Trimethylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | 0.83 | <0.5 | <0.5 | -- | <0.5 |
| 1,2-Dibromoethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 1,2-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 1,2-Dichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 1,2-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 1,2-Trans-Dichloroethylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 1,3,5-Trimethylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 1,3-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 1,3-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 1,4-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 2,2-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 2-Butanone (Methylethyl ketone) | µg/L | N/A | <1 | <1 | <1 | -- | 1.3 | <1 | <1 | -- | <1 |
| 2-Chlorotoluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 2-Hexanone | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 4-Chlorotoluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| 4-Methyl-2-pentanone (MIBK) | µg/L | N/A | <2 | <2 | <2 | -- | 10 | <2 | <2 | -- | <2 |
| Acetone | µg/L | N/A | 3.4 | 37 | <2 | -- | 14 | 16 | <2 | -- | 5.1 |
| Acrylonitrile | µg/L | N/A | <2 | <2 | <2 | -- | <2 | <2 | <2 | -- | <2 |
| Allyl Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Bromobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Bromochloromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Bromoform | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Carbon disulfide | µg/L | N/A | 0.69 | <0.5 | 2 | -- | 0.56 | <0.5 | 0.57 | -- | <0.5 |
| Carbon Tetrachloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Chlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Chloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Chloroform | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| cis-1,2-Dichloroethene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| cis-1,3-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Dibromochloromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Dibromomethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Dichlorobromomethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Dichlorodifluoromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Diethyl Ether | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |

## TABLE C-10

## LYSIMETER ANALYTICAL RESULTS – METAL RECYCLER

| Constituent | Units[1] | Fraction |  | M-LS-03 |  |  |  | M-LS-04 |  |  |  |
|---|---|---|---|---|---|---|---|---|---|---|---|
|  |  |  | 02/14/05 | 02/04/04 | 02/20/04 | 04/03/04 | 02/15/05 | 02/04/04 | 02/20/04 | 04/03/04 | 02/16/05 |
| Diisopropyl Ether (DIPE) | µg/L | N/A | <2 | <2 | <2 | -- | <2 | <2 | <2 | -- | <2 |
| Ethanol | µg/L | N/A | <100 | <100 | <100 | -- | <100 | <100 | <100 | -- | <100 |
| Ethyl Methacrylate | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Ethyl-t-Butyl Ether (ETBE) | µg/L | N/A | <2 | <2 | <2 | -- | <2 | <2 | <2 | -- | <2 |
| Hexachloro-1,3-Butadiene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Iodomethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Isopropylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Methyl Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Methyl Methacrylate | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Methylene Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | 0.54 | <0.5 | <0.5 | -- | 1.3 |
| Naphthalene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| n-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| n-Propylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| p-Isopropyltoluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| sec-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Styrene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| t-1,4-Dichloro-2-Butene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Tert-Amyl-Methyl Ether (TAME) | µg/L | N/A | <2 | <2 | <2 | -- | <2 | <2 | <2 | -- | <2 |
| Tert-Butyl Alcohol (TBA) | µg/L | N/A | <10 | <10 | 24 | -- | <10 | <10 | <10 | -- | <10 |
| tert-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Tetrahydrofuran | µg/L | N/A | <1 | <1 | <1 | -- | 3.6 | <1 | <1 | -- | <1 |
| trans-1,3-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| Trichlorofluoromethane | µg/L | N/A | 1.8 | <0.5 | <0.5 | -- | 1.4 | <0.5 | <0.5 | -- | 0.7 |
| Vinyl Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | -- | <0.5 |
| **Semi-Volatile Organic Compounds** |  |  |  |  |  |  |  |  |  |  |  |
| NOT SAMPLED | µg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **Biological Parameters** |  |  |  |  |  |  |  |  |  |  |  |
| Heterotrophic Plate Count | CFU/mL | N/A | -- | 120,000 | -- | -- | -- | 9,600 | -- | -- | -- |
| Total Coliforms | MPN/100 mL | N/A | -- | <20 | -- | -- | -- | <20 | -- | -- | -- |
| Fecal Coliform | MPN/100 mL | N/A | -- | <20 | -- | -- | -- | <20 | -- | -- | -- |
| E. coli | MPN/100 mL | N/A | -- | <20 | -- | -- | -- | <20 | -- | -- | -- |

-- indicates the constituent was not analyzed for.  Analytes not detected are indicate

1. Units of measure:  mg/L = milligrams per liter, µg/L = micrograms per liter, µhr

2. In cases in which the filtered concentrations exceeded the total, the differences a

# TABLE C-11

## GROUNDWATER ANALYTICAL RESULTS – METAL RECYCLER

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | M-MW-01 | | | | | | | |
| | | | 11/06/03 | 12/04/03 | 02/13/04 | 06/08/04 | 10/14/04 | 12/15/04 | 01/04/05 | 03/05/05 |
| **General Monitoring Parameters** | | | | | | | | | | |
| Alkalinity, Total (as $CaCO_3$) | mg/L | N/A | 58 | -- | 290 | 290 | 280 | 290 | 290 | 290 |
| Bicarbonate (as $CaCO_3$) | mg/L | N/A | 58 | -- | 290 | 290 | 280 | 290 | 290 | 290 |
| Bromide | mg/L | N/A | 0.42 | -- | 0.29 | 0.33 | 0.33 | 0.31 | 0.26 | 0.72 |
| Calcium | mg/L | Total | -- | 176 | 156 | 165 | 179 | 179 | 174 | 175 |
| Carbonate (as $CaCO_3$) | mg/L | N/A | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 |
| Chloride | mg/L | N/A | 70 | -- | 72 | 80 | 74 | 82 | 79 | 86 |
| Chemical Oxygen Demand | mg/L | N/A | 57 | -- | <5 | 7.7 | <10 | <5 | 20 | 7.6 |
| Fluoride | mg/L | N/A | 0.61 | -- | 0.31 | 0.29 | 0.34 | 0.39 | 0.31 | 0.39 |
| Hardness (as $CaCO_3$) | mg/L | Total | 660 | -- | 540 | 570 | 620 | 610 | 610 | 600 |
| Hydroxide (as $CaCO_3$) | mg/L | N/A | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 |
| Magnesium | mg/L | Total | -- | 48.9 | 40.8 | 42.9 | 41.8 | 43.3 | 42.6 | 44.3 |
| MBAS (Surfactants) | mg/L | N/A | <0.1 | -- | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Nitrate (as N) | mg/L | N/A | 0.12 | -- | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Nitrite (as N) | mg/L | N/A | <0.1 | -- | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total Kjeldahl Nitrogen | mg/L | Total | 1.1 | -- | 0.35 | <0.1 | <0.5 | <0.5 | <0.5 | <0.5 |
| Carbon, Total Organic | mg/L | N/A | 2 | -- | 5.8 | 1.3 | 2.6 | 1.4 | 1.3 | 1.4 |
| Carbon, Dissolved Organic | mg/L | N/A | 1.9 | -- | 7.2 | 3.4 | 2.5 | 3.6 | 2.3 | 3.3 |
| Nitrogen, Organic | mg/L | N/A | 1.1 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Ammonia-Nitrogen | mg/L | Total | <0.1 | -- | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| pH | pH units | N/A | 7.58 | -- | 7.04 | 6.81 | 7.32 | 6.88 | 6.79 | 6.97 |
| Phosphorus | mg/L | Dissolved | <0.03 | -- | 0.037 | 0.041 | 0.078 | 0.44 | 0.12 | 0.045 |
| Phosphorus | mg/L | Total | 17 | -- | 0.037 | 0.075 | 0.37 | 0.45 | 0.43 | 0.57 |
| Potassium | mg/L | Total | -- | 7.53 | 6.36 | 6.12 | 6.28 | 6.33 | 6.63 | 6.51 |
| Sodium | mg/L | Total | -- | 92.1 | 88 | 87.6 | 93.7 | 96.3 | 96 | 96.8 |
| Specific Conductance | µmhos/cm | N/A | 1,500 | -- | 1,200 | 1,400 | 1,500 | 1,400 | 1,300 | 1,300 |
| Sulfate | mg/L | N/A | 430 | -- | 270 | 340 | 410 | 370 | 350 | 400 |
| Total Dissolved Solids | mg/L | N/A | 1,000 | -- | 840 | 910 | 1,100 | 910 | 940 | 950 |
| Total Suspended Solids | mg/L | N/A | -- | <1 | 10 | 20 | <1 | 17 | 15 | 2.5 |
| Turbidity | NTU | N/A | -- | 2.3 | 2.2 | 11 | 8.6 | 16 | 8.8 | 1.1 |
| **Metals[2]** | | | | | | | | | | |
| Aluminum | µg/L | Dissolved | -- | <50 | <50 | <50 | <25 | <25 | <25 | <25 |
| Aluminum | µg/L | Total | -- | <50 | 92.4 | 238 | <25 | 330 | 77.1 | <25 |

# TABLE C-11

## GROUNDWATER ANALYTICAL RESULTS – METAL RECYCLER

| | | | Sample Number / Date Sampled | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | M-MW-01 | | | | | | | |
| **Constituent** | **Units[1]** | **Fraction** | **11/06/03** | **12/04/03** | **02/13/04** | **06/08/04** | **10/14/04** | **12/15/04** | **01/04/05** | **03/05/05** |
| Antimony | µg/L | Dissolved | -- | 1.19 | <1 | <1 | <1 | <1 | <1 | <1 |
| Antimony | µg/L | Total | -- | 1.6 | <1 | <1 | <1 | <1 | <1 | <1 |
| Arsenic | µg/L | Dissolved | -- | 5.14 | 0.765 | 5.65 | 5.65 | 1.36 | 1.5 | 1.81 |
| Arsenic | µg/L | Total | -- | 8.39 | 1.83 | 6.47 | 7.02 | 2.34 | 2.47 | 2.06 |
| Barium | µg/L | Dissolved | -- | 64.2 | 95.6 | 116 | 82.1 | 68.9 | 67.7 | 72.1 |
| Barium | µg/L | Total | -- | 70.2 | 100 | 128 | 86 | 78.5 | 73.5 | 77.5 |
| Beryllium | µg/L | Dissolved | -- | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Beryllium | µg/L | Total | -- | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Boron | µg/L | Dissolved | -- | 250 | 221 | 250 | 298 | 291 | 248 | 219 |
| Boron | µg/L | Total | -- | 277 | 214 | 255 | 326 | 310 | 272 | 228 |
| Cadmium | µg/L | Dissolved | -- | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Cadmium | µg/L | Total | -- | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Chromium | µg/L | Dissolved | -- | 2.41 | <1 | 2.78 | <1 | 1.35 | <1 | <1 |
| Chromium | µg/L | Total | -- | 1.82 | 4.09 | 3.7 | <1 | 11.8 | <1 | <1 |
| Chromium, Hexavalent | µg/L | Dissolved | <0.2 | -- | 0.23 | 0.22 | <0.2 | <0.2 | <0.2 | <0.2 |
| Cobalt | µg/L | Dissolved | -- | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Cobalt | µg/L | Total | -- | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Copper | µg/L | Dissolved | -- | <1 | 1.01 | 1.41 | <1 | <1 | 1.11 | <1 |
| Copper | µg/L | Total | -- | 1.12 | 1.49 | 2.28 | 1.05 | 3.46 | 1.51 | <1 |
| Iron | µg/L | Dissolved | -- | <100 | 112 | <100 | <100 | 564 | 547 | 215 |
| Iron | µg/L | Total | -- | 244 | 435 | 870 | 593 | 1,660 | 1,140 | 979 |
| Lead | µg/L | Dissolved | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Lead | µg/L | Total | -- | <0.5 | <0.5 | <0.5 | <0.5 | 1.16 | <0.5 | <0.5 |
| Manganese | µg/L | Dissolved | -- | 96.8 | 65.7 | 46.6 | 32.8 | 31.2 | 29.7 | 30 |
| Manganese | µg/L | Total | -- | 108 | 69.8 | 54.5 | 35.2 | 36.8 | 32.3 | 32.4 |
| Mercury | µg/L | Dissolved | <0.1 | -- | 0.131 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Mercury | µg/L | Total | -- | <0.1 | 0.103 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Molybdenum | µg/L | Dissolved | -- | 10.8 | 7.15 | 8.04 | 5.78 | 6.18 | 5.97 | 5.98 |
| Molybdenum | µg/L | Total | -- | 11.7 | 7.45 | 8.28 | 5.93 | 7.37 | 6.67 | 6.49 |
| Nickel | µg/L | Dissolved | -- | 4.5 | 7.5 | 6.8 | 5.1 | 4.9 | 4 | 3.8 |
| Nickel | µg/L | Total | -- | 5.4 | 7.4 | 6.9 | 4.8 | 14 | 4.9 | 4.1 |
| Selenium | µg/L | Dissolved | -- | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Selenium | µg/L | Total | -- | <1 | 1.04 | <1 | 3.08 | <1 | <1 | <1 |
| Silver | µg/L | Dissolved | -- | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Silver | µg/L | Total | -- | <1 | <1 | <1 | 1.5 | <1 | <1 | <1 |

# TABLE C-11

## GROUNDWATER ANALYTICAL RESULTS – METAL RECYCLER

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | M-MW-01 | | | | | | | |
| | | | 11/06/03 | 12/04/03 | 02/13/04 | 06/08/04 | 10/14/04 | 12/15/04 | 01/04/05 | 03/05/05 |
| Strontium | µg/L | Dissolved | -- | 1,150 | 1,150 | 1,140 | 1,120 | 1,090 | 1,070 | 1,200 |
| Strontium | µg/L | Total | -- | 1,190 | 1,190 | 1,200 | 1,150 | 1,140 | 1,140 | 1,260 |
| Thallium | µg/L | Dissolved | -- | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Thallium | µg/L | Total | -- | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Tin | µg/L | Dissolved | -- | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Tin | µg/L | Total | -- | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Titanium | µg/L | Dissolved | -- | 1.73 | 2.41 | 2.38 | 1.83 | 3.29 | 2.06 | 2.39 |
| Titanium | µg/L | Total | -- | 2.75 | 6.73 | 31.2 | 3.36 | 32.3 | 8.05 | 4.23 |
| Vanadium | µg/L | Dissolved | -- | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Vanadium | µg/L | Total | -- | <1 | <1 | <1 | <1 | <1 | 1.51 | 1.08 |
| Zinc | µg/L | Dissolved | -- | <5 | 14 | 6.72 | <5 | 6.77 | <5 | 5.25 |
| Zinc | µg/L | Total | -- | <5 | 17.3 | 14.9 | 6.55 | 14.8 | <5 | 10.9 |
| **Other Constituents** | | | | | | | | | | |
| Oil and Grease | mg/L | N/A | 2.4 | -- | <1 | <1 | <1 | <1 | <1 | <1 |
| Perchlorate | µg/L | N/A | <2 | -- | <2 | <2 | <2 | <2 | <2 | <2 |
| N-Nitrosodimethylamine (NDMA) | ng/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- |
| Glyphosate | µg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- |
| 1,4-Dioxane | µg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- |
| 1,2-Dibromo-3-chloropropane (DBCP) | µg/L | N/A | <0.02 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Volatile Organic Compounds** | | | | | | | | | | |
| Methyl Bromide | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl-t-Butyl Ether (MTBE) | µg/L | N/A | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 |
| Benzene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Toluene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethylbenzene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| o-Xylene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| p/m-Xylene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Trichloroethylene (TCE) | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Tetrachloroethylene (PCE) | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,1,2-Tetrachloroethane | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,1-Trichloroethane | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2,2-Tetrachloroethane | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2-Trichloroethane | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

# TABLE C-11

## GROUNDWATER ANALYTICAL RESULTS – METAL RECYCLER

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | M-MW-01 | | | | | | | |
| | | | 11/06/03 | 12/04/03 | 02/13/04 | 06/08/04 | 10/14/04 | 12/15/04 | 01/04/05 | 03/05/05 |
| 1,1-Dichloroethane | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloroethylene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloropropene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,3-Trichlorobenzene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,3-Trichloropropane (1,2,3-TCP) | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,4-Trichlorobenzene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,4-Trimethylbenzene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dibromoethane | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichlorobenzene | µg/L | N/A | <10 | -- | <0.5 | <10 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichloroethane | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichloropropane | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Trans-Dichloroethylene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3,5-Trimethylbenzene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3-Dichlorobenzene | µg/L | N/A | <10 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3-Dichloropropane | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,4-Dichlorobenzene | µg/L | N/A | <10 | -- | <0.5 | <10 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2,2-Dichloropropane | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Butanone (Methylethyl ketone) | µg/L | N/A | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 |
| 2-Chlorotoluene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Hexanone | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 4-Chlorotoluene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 4-Methyl-2-pentanone (MIBK) | µg/L | N/A | <2 | -- | <2 | <2 | <2 | <2 | <2 | <2 |
| Acetone | µg/L | N/A | <2 | -- | <2 | <2 | <2 | <2 | <2 | <2 |
| Acrylonitrile | µg/L | N/A | <2 | -- | <2 | <2 | <2 | <2 | <2 | <2 |
| Allyl Chloride | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromobenzene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromochloromethane | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromoform | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Carbon disulfide | µg/L | N/A | 1.7 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Carbon Tetrachloride | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chlorobenzene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chloroethane | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chloroform | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| cis-1,2-Dichloroethene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| cis-1,3-Dichloropropene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

## TABLE C-11

## GROUNDWATER ANALYTICAL RESULTS – METAL RECYCLER

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | M-MW-01 | | | | | | | |
| | | | 11/06/03 | 12/04/03 | 02/13/04 | 06/08/04 | 10/14/04 | 12/15/04 | 01/04/05 | 03/05/05 |
| Dibromochloromethane | μg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dibromomethane | μg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dichlorobromomethane | μg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dichlorodifluoromethane | μg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Diethyl Ether | μg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Diisopropyl Ether (DIPE) | μg/L | N/A | <2 | -- | <2 | <2 | <2 | <2 | <2 | <2 |
| Ethanol | μg/L | N/A | <100 | -- | <100 | <100 | <100 | <100 | <100 | <100 |
| Ethyl Methacrylate | μg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethyl-t-Butyl Ether (ETBE) | μg/L | N/A | <2 | -- | <2 | <2 | <2 | <2 | <2 | <2 |
| Hexachloro-1,3-Butadiene | μg/L | N/A | <0.5 | -- | <0.5 | <10 | <10 | <0.5 | <0.5 | <0.5 |
| Iodomethane | μg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Isopropylbenzene | μg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl Chloride | μg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | 0.62 | <0.5 |
| Methyl Methacrylate | μg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methylene Chloride | μg/L | N/A | <0.5 | -- | <0.5 | <0.5 | 0.67 | 0.64 | 0.54 | <0.5 |
| Naphthalene | μg/L | N/A | <10 | -- | <10 | <10 | <0.5 | <0.5 | <0.5 | <0.5 |
| n-Butylbenzene | μg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| n-Propylbenzene | μg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| p-Isopropyltoluene | μg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| sec-Butylbenzene | μg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Styrene | μg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| t-1,4-Dichloro-2-Butene | μg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Tert-Amyl-Methyl Ether (TAME) | μg/L | N/A | <2 | -- | <2 | <2 | <2 | <2 | <2 | <2 |
| Tert-Butyl Alcohol (TBA) | μg/L | N/A | <10 | -- | <10 | <10 | <10 | <10 | <10 | <10 |
| tert-Butylbenzene | μg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Tetrahydrofuran | μg/L | N/A | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 |
| trans-1,3-Dichloropropene | μg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Trichlorofluoromethane | μg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Vinyl Chloride | μg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Semi-Volatile Organic Compounds** | | | | | | | | | | |
| 1-Methylnaphthalene | μg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| 2,4,5-Trichlorophenol | μg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| 2,4,6-Trichlorophenol | μg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| 2,4-Dichlorophenol | μg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |

## TABLE C-11

## GROUNDWATER ANALYTICAL RESULTS – METAL RECYCLER

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | M-MW-01 | | | | | | | |
| | | | 11/06/03 | 12/04/03 | 02/13/04 | 06/08/04 | 10/14/04 | 12/15/04 | 01/04/05 | 03/05/05 |
| 2,4-Dimethylphenol | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| 2,4-Dinitrophenol | µg/L | N/A | <50 | -- | <50 | <50 | <50 | -- | -- | -- |
| 2,4-Dinitrotoluene | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| 2,6-Dinitrotoluene | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| 2-Chloronaphthalene | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| 2-Chlorophenol | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| 2-Methylnaphthalene | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| 2-Methylphenol (o-Cresol) | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| 2-Nitroaniline | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| 2-Nitrophenol | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| 3,3'-Dichlorobenzidine | µg/L | N/A | <25 | -- | <25 | <25 | <25 | -- | -- | -- |
| 3-Nitroaniline | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| 4,6-Dinitro-2-Methylphenol | µg/L | N/A | <50 | -- | <50 | <50 | <50 | -- | -- | -- |
| 4-Bromophenyl-Phenyl Ether | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| 4-Chloro-3-Methylphenol | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| 4-Chloroaniline | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| 4-Chlorophenyl-Phenyl Ether | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| 4-Methylphenol (p-Cresol) | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| 4-Nitroaniline | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| 4-Nitrophenol | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| Acenaphthene | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| Acenaphthylene | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| Aniline | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| Anthracene | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| Azobenzene | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| Benzidine | µg/L | N/A | <50 | -- | <50 | <50 | <50 | -- | -- | -- |
| Benzo (a) Anthracene | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| Benzo (a) Pyrene | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| Benzo (b) Fluoranthene | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| Benzo (g,h,i) Perylene | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| Benzo (k) Fluoranthene | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| Benzoic acid | µg/L | N/A | <50 | -- | <50 | <50 | <50 | -- | -- | -- |
| Benzyl alcohol | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| Bis(2-Chloroethoxy) Methane | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| Bis(2-Chloroethyl) Ether | µg/L | N/A | <25 | -- | <25 | <25 | <25 | -- | -- | -- |

# TABLE C-11

## GROUNDWATER ANALYTICAL RESULTS – METAL RECYCLER

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | M-MW-01 | | | | | | | |
| | | | 11/06/03 | 12/04/03 | 02/13/04 | 06/08/04 | 10/14/04 | 12/15/04 | 01/04/05 | 03/05/05 |
| Bis(2-Chloroisopropyl) Ether | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| Bis(2-Ethylhexyl) Phthalate | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| Butyl Benzyl Phthalate | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| Chrysene | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| Dibenz (a,h) Anthracene | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| Dibenzofuran | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| Diethyl Phthalate | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| Dimethyl Phthalate | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| Di-n-Butyl Phthalate | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| Di-n-Octyl Phthalate | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| Fluoranthene | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| Fluorene | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| Hexachlorobenzene | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| Hexachlorocyclopentadiene | µg/L | N/A | <25 | -- | <25 | <25 | <25 | -- | -- | -- |
| Hexachloroethane | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| Indeno (1,2,3-c,d) Pyrene | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| Isophorone | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| Nitrobenzene | µg/L | N/A | <25 | -- | <25 | <25 | <25 | -- | -- | -- |
| N-Nitroso-di-n-propylamine | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| N-Nitrosodiphenylamino | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| Pentachlorophenol | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| Phenanthrene | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| Phenol | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| Pyrene | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| Pyridine | µg/L | N/A | <10 | -- | <10 | <10 | <10 | -- | -- | -- |
| **Biological Parameters** | | | | | | | | | | |
| Heterotrophic Plate Count | CFU/mL | N/A | 170,000 | -- | -- | -- | -- | -- | -- | -- |
| Total Coliforms | MPN/100 mL | N/A | <2 | -- | -- | -- | -- | -- | -- | -- |
| Fecal Coliform | MPN/100 mL | N/A | <2 | -- | -- | -- | -- | -- | -- | -- |
| E. coli | MPN/100 mL | N/A | <2 | -- | -- | -- | -- | -- | -- | -- |

-- indicates the constituent was not analyzed for. Analytes not detected are indicated with a "<" symbol; the associated numerical value is the detection limit.

1. Units of measure: mg/L = milligrams per liter, µg/L = micrograms per liter, µhmos/cm = microhmos per centimeter, NTU = Nephelometric Turbidity Unit.
2. In cases in which the filtered concentrations exceeded the total, the differences are considered by the laboratory statistically insignificant and can be attributed to the variabi

## TABLE C-12

## STORM WATER ANALYTICAL RESULTS – SUN VALLEY

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | S-SW-01 | | | | | S-SW-02 | | | | | |
| | | | 02/02/04 | 02/18/04 | 10/19/04 | 12/27/04 | 02/11/05 | 02/02/04 | 02/18/04 | 10/19/04 | 12/27/04 | 02/11/05 | 02/02/04 |
| **General Monitoring Parameters** | | | | | | | | | | | | | |
| Alkalinity, Total (as $CaCO_3$) | mg/L | N/A | 34 | 30 | 24 | 42 | 22 | 36 | 41 | 52 | 36 | 28 | 44 |
| Bicarbonate (as $CaCO_3$) | mg/L | N/A | 34 | 30 | 24 | 42 | 22 | 36 | 41 | 52 | 36 | 28 | 44 |
| Bromide | mg/L | N/A | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Calcium | mg/L | Total | 16.4 | 11.2 | 9.41 | 18.7 | 9.29 | 34.2 | 27.1 | 59.4 | 39 | 10.6 | 52.4 |
| Carbonate (as $CaCO_3$) | mg/L | N/A | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Chloride | mg/L | N/A | <1 | <1 | <1 | 2.7 | <1 | 11 | 11 | 21 | 18 | <1 | 14 |
| Chemical Oxygen Demand | mg/L | N/A | 170 | 77 | 51 | 71 | 13 | 270 | 320 | 730 | 320 | 48 | 340 |
| Fluoride | mg/L | N/A | 0.11 | <0.1 | <0.1 | 0.14 | <0.1 | 0.13 | <0.1 | 0.22 | 0.12 | <0.1 | 0.14 |
| Hardness (as $CaCO_3$) | mg/L | Total | 46 | 36 | 50 | 68 | 38 | 90 | 84 | 300 | 130 | 44 | 130 |
| Hydroxide (as $CaCO_3$) | mg/L | N/A | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Magnesium | mg/L | Total | 1.81 | 0.572 | 0.464 | 1.23 | 0.338 | 1.56 | 1.31 | 3.43 | 2.22 | 0.358 | 2.22 |
| MBAS (Surfactants) | mg/L | N/A | 0.31 | 0.42 | 0.25 | 0.36 | 0.24 | 4.1 | 4 | 2.4 | 1.5 | 0.32 | 3.9 |
| Nitrate (as N) | mg/L | N/A | 0.23 | 0.27 | 0.16 | 0.62 | <0.1 | 0.54 | 0.57 | 0.18 | 0.63 | <0.1 | 0.67 |
| Nitrite (as N) | mg/L | N/A | 0.12 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total Kjeldahl Nitrogen | mg/L | Total | 3.6 | 2.4 | 1.1 | 1.5 | 0.7 | 4.1 | 5.3 | 11 | 6 | 1.4 | 6.4 |
| Carbon, Total Organic | mg/L | N/A | 13 | 11 | 5.9 | 11 | 5.5 | 90 | 82 | 98 | 92 | 7 | 130 |
| Carbon, Dissolved Organic | mg/L | N/A | 11 | 9.3 | 6 | 10 | 5.8 | 90 | 85 | 100 | 67 | 7 | 100 |
| Nitrogen, Organic | mg/L | N/A | 3.5 | 1.7 | 1.1 | 1.2 | 0.5 | 3.9 | 4.5 | 9.5 | 4.8 | 1.1 | 5.8 |
| Ammonia-Nitrogen | mg/L | Total | 0.14 | 0.7 | <0.1 | 0.35 | 0.21 | 0.21 | 0.84 | 1.8 | 1.2 | 0.28 | 0.56 |
| pH | pH units | N/A | 7.85 | 7.23 | 5.9 | 6.91 | 6.6 | 8.31 | 7.82 | 6.34 | 6.26 | 6.89 | 8.36 |
| Phosphorus | mg/L | Dissolved | 0.21 | 0.077 | 0.45 | 0.41 | 0.089 | 0.61 | 0.35 | 0.68 | 0.55 | 0.12 | 0.43 |
| Phosphorus | mg/L | Total | 0.27 | 0.25 | 0.56 | 0.58 | 0.14 | 0.65 | 0.68 | 0.8 | 0.73 | 0.41 | 0.56 |
| Potassium | mg/L | Total | 1.88 | 1.07 | 0.69 | 1.38 | <0.5 | 6.5 | 5.23 | 12 | 9.26 | <0.5 | 9.82 |
| Sodium | mg/L | Total | 1.44 | 0.636 | 0.946 | 2.96 | 0.658 | 12 | 10.8 | 25.6 | 20.9 | 0.571 | 18.3 |
| Specific Conductance | µmhos/cm | N/A | 69 | 77 | 63 | 130 | 57 | 370 | 250 | 480 | 340 | 58 | 430 |
| Sulfate | mg/L | N/A | 5.6 | 5.5 | 5 | 9.9 | 2.3 | 110 | 47 | 94 | 66 | 2.9 | 140 |
| Total Dissolved Solids | mg/L | N/A | 44 | 52 | 62 | 94 | 52 | 310 | 210 | 420 | 260 | 48 | 340 |
| Total Suspended Solids | mg/L | N/A | 290 | 98 | 30 | 95 | 9.5 | 41 | 120 | 930 | 80 | 250 | 68 |
| Turbidity | NTU | N/A | 50 | 37 | 35 | 20 | 5.7 | 43 | 130 | 210 | 62 | 53 | 31 |
| **Metals[2]** | | | | | | | | | | | | | |
| Aluminum | µg/L | Dissolved | <50 | <50 | <25 | <25 | <25 | 51.1 | 93 | 97.3 | 65.2 | <25 | <50 |
| Aluminum | µg/L | Total | 2,530 | 1,390 | 885 | 911 | 84.5 | 514 | 1,510 | 3,660 | 845 | 744 | 406 |
| Antimony | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | 1.06 | 2.1 | <1 | <1 | 1.12 |
| Antimony | µg/L | Total | 1.59 | <1 | 1.68 | <1 | <1 | 1.48 | 3.71 | 3.51 | <1 | 1.18 | 1.5 |

# TABLE C-12

## STORM WATER ANALYTICAL RESULTS – SUN VALLEY

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | S-SW-01 | | | | | S-SW-02 | | | | | |
| | | | 02/02/04 | 02/18/04 | 10/19/04 | 12/27/04 | 02/11/05 | 02/02/04 | 02/18/04 | 10/19/04 | 12/27/04 | 02/11/05 | 02/02/04 |
| Arsenic | µg/L | Dissolved | <0.5 | <0.5 | <0.5 | 1.05 | <0.5 | 1.08 | 11.6 | 3.87 | 4.81 | <0.5 | 1.1 |
| Arsenic | µg/L | Total | 1.65 | <0.5 | <0.5 | 1.45 | <0.5 | 1.65 | 13.9 | 4.88 | 5.33 | 0.809 | 2.49 |
| Barium | µg/L | Dissolved | 8.7 | 11.4 | 5.47 | 14.1 | 10.6 | 8.57 | 12.1 | 21.3 | 9.13 | 10.8 | 9.91 |
| Barium | µg/L | Total | 99.1 | 48.6 | 33.2 | 40.3 | 13.4 | 27.1 | 46.7 | 141 | 30.8 | 41.6 | 21.9 |
| Beryllium | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Beryllium | µg/L | Total | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Boron | µg/L | Dissolved | 52.2 | <50 | <50 | 121 | 128 | 104 | 88.4 | 229 | 246 | 169 | 139 |
| Boron | µg/L | Total | 64.7 | <50 | <50 | 128 | 154 | 147 | 90.2 | 224 | 243 | 195 | 161 |
| Cadmium | µg/L | Dissolved | <0.2 | 0.244 | <0.2 | <0.2 | <0.2 | 0.764 | <0.2 | 0.493 | 0.245 | <0.2 | 0.372 |
| Cadmium | µg/L | Total | 1.41 | 0.973 | 0.425 | 0.463 | <0.2 | 0.515 | 0.626 | 1.93 | 0.474 | 0.517 | 0.623 |
| Chromium | µg/L | Dissolved | 1.17 | 1.04 | 1.19 | 1.46 | <1 | 2.78 | 2.84 | 4.3 | 3.33 | <1 | 3.72 |
| Chromium | µg/L | Total | 7.21 | 4.12 | 3.37 | 3.87 | <1 | 5.42 | 6.15 | 12.2 | 5.61 | 2.82 | 4.73 |
| Chromium, Hexavalent | µg/L | Dissolved | 0.47 | 0.29 | 0.26 | 0.48 | <0.2 | 0.98 | 0.67 | <0.2 | 0.63 | 0.24 | 1.3 |
| Cobalt | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | 1.06 | 2.12 | 1.02 | <1 | 1.25 |
| Cobalt | µg/L | Total | 2.51 | 1.2 | <1 | 1.03 | <1 | 1.63 | 2.02 | 4.49 | 1.54 | <1 | 1.64 |
| Copper | µg/L | Dissolved | 11.5 | 10.7 | 6.82 | 13.5 | 6.54 | 15.6 | 18.2 | 43.7 | 23.8 | 7.35 | 23.3 |
| Copper | µg/L | Total | 42.2 | 22.5 | 14.8 | 23.6 | 8.63 | 28 | 28.3 | 83.5 | 32.7 | 19.3 | 35.9 |
| Iron | µg/L | Dissolved | 137 | 106 | <100 | <100 | <100 | 249 | 216 | 298 | 219 | <100 | 249 |
| Iron | µg/L | Total | 4,000 | 1,840 | 1,140 | 1,350 | 103 | 1,200 | 2,090 | 5,500 | 1,510 | 1,150 | 706 |
| Lead | µg/L | Dissolved | 0.574 | 0.603 | 0.561 | <0.5 | <0.5 | 6.09 | 5.14 | 5.36 | 3.12 | <0.5 | 6.2 |
| Lead | µg/L | Total | 63.6 | 32 | 21.2 | 17.5 | 3.66 | 33.3 | 47.3 | 108 | 19.4 | 25.6 | 23 |
| Manganese | µg/L | Dissolved | 8.56 | 11.3 | 1.33 | 5.73 | 4.25 | 18.1 | 24.8 | 73.2 | 26.7 | 5.36 | 17 |
| Manganese | µg/L | Total | 106 | 48.8 | 30.2 | 41.2 | 8.77 | 41.6 | 62.3 | 176 | 51.1 | 40.8 | 32.8 |
| Mercury | µg/L | Dissolved | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | 0.168 | <0.1 | <0.1 | <0.1 | <0.1 |
| Mercury | µg/L | Total | 0.177 | 0.181 | <0.1 | <0.1 | <0.1 | 0.19 | 0.422 | 0.929 | 0.126 | <0.1 | 0.185 |
| Molybdenum | µg/L | Dissolved | <1 | <1 | <1 | 1.15 | <1 | 4.1 | 4.94 | 5.59 | 4.51 | <1 | 5.91 |
| Molybdenum | µg/L | Total | <1 | <1 | <1 | 1.41 | <1 | 6.13 | 6.07 | 5.37 | 4.85 | <1 | 6.26 |
| Nickel | µg/L | Dissolved | 2.3 | <2 | <2 | <2 | <2 | 6.4 | 5.5 | 10 | 4.9 | <2 | 8.2 |
| Nickel | µg/L | Total | 8.7 | 4.6 | 3.1 | 3.5 | <2 | 9.8 | 8.2 | 17 | 6 | 3.9 | 9.3 |
| Selenium | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 1.44 | <1 | <1 |
| Selenium | µg/L | Total | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | 1.76 | <1 | <1 |
| Silver | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Silver | µg/L | Total | <1 | <1 | 1.25 | <1 | <1 | <1 | <1 | 1.09 | <1 | <1 | <1 |
| Strontium | µg/L | Dissolved | 39 | 41.4 | 33.2 | 62.8 | 34.5 | 77.4 | 82 | 149 | 83.3 | 38 | 107 |
| Strontium | µg/L | Total | 68.2 | 53.3 | 40.5 | 75.2 | 35.9 | 133 | 98.9 | 160 | 91 | 49.6 | 118 |
| Thallium | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |

## TABLE C-12

## STORM WATER ANALYTICAL RESULTS – SUN VALLEY

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | S-SW-01 | | | | | S-SW-02 | | | | | |
| | | | 02/02/04 | 02/18/04 | 10/19/04 | 12/27/04 | 02/11/05 | 02/02/04 | 02/18/04 | 10/19/04 | 12/27/04 | 02/11/05 | 02/02/04 |
| Thallium | µg/L | Total | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Tin | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Tin | µg/L | Total | 1.33 | 1.3 | 1.32 | 1.19 | <1 | 2.13 | 3.26 | 3.44 | 2.22 | 1.1 | 1.26 |
| Titanium | µg/L | Dissolved | 1.94 | 1.79 | 1.79 | 2.43 | <1 | 3.84 | 6.86 | 11.3 | 5.46 | <1 | 5.03 |
| Titanium | µg/L | Total | 174 | 107 | 64.6 | 70.6 | 5.45 | 43.3 | 139 | 276 | 71.9 | 46.5 | 31.9 |
| Vanadium | µg/L | Dissolved | 3.95 | 3.72 | 2.46 | 4.62 | 1.17 | 3.93 | 4.44 | 4.63 | 4.56 | 1.45 | 5.42 |
| Vanadium | µg/L | Total | 10.5 | 7.09 | 4.53 | 7.05 | 1.37 | 7.65 | 8.91 | 13.8 | 7.15 | 3.58 | 7.04 |
| Zinc | µg/L | Dissolved | 23.4 | 31.2 | 28.2 | 39 | 74 | 63.8 | 79.2 | 174 | 64.2 | 38.5 | 108 |
| Zinc | µg/L | Total | 284 | 110 | 123 | 118 | 98.4 | 99 | 157 | 387 | 102 | 166 | 103 |
| **Other Constituents** | | | | | | | | | | | | | |
| Oil and Grease | mg/L | N/A | 5.7 | 2.4 | 1.9 | 1.8 | <1 | 8.7 | 26 | 48 | 9 | 2.2 | 17 |
| Perchlorate | µg/L | N/A | <2 | <2 | <2 | <2 | <2 | <2 | 6.1 | <2 | <2 | <2 | <2 |
| N-Nitrosodimethylamine (NDMA) | ng/L | N/A | <2 | -- | -- | -- | -- | <2 | -- | -- | -- | -- | <2 |
| Glyphosate | µg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 1,4-Dioxane | µg/L | N/A | <2 | -- | -- | -- | -- | <2 | -- | -- | -- | -- | <2 |
| 1,2-Dibromo-3-chloropropane (DBCP) | µg/L | N/A | <0.02 | <0.5 | <0.5 | <0.5 | <0.5 | <0.02 | <1 | <0.5 | <0.5 | <0.5 | <0.02 |
| **Volatile Organic Compounds** | | | | | | | | | | | | | |
| Methyl Bromide | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl-t-Butyl Ether (MTBE) | µg/L | N/A | <1 | <1 | <1 | <1 | <1 | <1 | <2 | <1 | <1 | <1 | <1 |
| Benzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| Toluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | 0.59 | <0.5 |
| Ethylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| o-Xylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| p/m-Xylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| Trichloroethylene (TCE) | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| Tetrachloroethylene (PCE) | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,1,2-Tetrachloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,1-Trichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2,2-Tetrachloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2-Trichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloroethylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,3-Trichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,3-Trichloropropane (1,2,3-TCP) | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |

# TABLE C-12

## STORM WATER ANALYTICAL RESULTS – SUN VALLEY

| | | | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | S-SW-01 | | | | | S-SW-02 | | | | | |
| Constituent | Units[1] | Fraction | 02/02/04 | 02/18/04 | 10/19/04 | 12/27/04 | 02/11/05 | 02/02/04 | 02/18/04 | 10/19/04 | 12/27/04 | 02/11/05 | 02/02/04 |
| 1,2,4-Trichlorobenzene | µg/L | N/A | <0.5 | <10 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | <0.5 | <0.5 | <10 |
| 1,2,4-Trimethylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dibromoethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichlorobenzene | µg/L | N/A | <0.5 | <10 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Trans-Dichloroethylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3,5-Trimethylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,4-Dichlorobenzene | µg/L | N/A | <0.5 | <10 | <0.5 | <0.5 | <0.5 | <0.5 | <50 | 4.7 | <0.5 | <0.5 | <0.5 |
| 2,2-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Butanone (Methylethyl ketone) | µg/L | N/A | <1 | 3.7 | <1 | 1.5 | 1.6 | 1.7 | 6.1 | 3.5 | 3.2 | 2.5 | 2 |
| 2-Chlorotoluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Hexanone | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| 4-Chlorotoluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| 4-Methyl-2-pentanone (MIBK) | µg/L | N/A | <2 | <2 | <2 | <2 | <2 | <2 | 7.2 | <2 | <2 | <2 | <2 |
| Acetone | µg/L | N/A | 4 | 40 | 13 | 16 | 21 | 16 | 70 | 29 | 25 | 36 | 12 |
| Acrylonitrile | µg/L | N/A | <2 | <2 | <2 | <2 | <2 | <2 | <4 | <2 | <2 | <2 | <2 |
| Allyl Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromochloromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromoform | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| Carbon disulfide | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| Carbon Tetrachloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chloroform | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| cis-1,2-Dichloroethene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| cis-1,3-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dibromochloromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dibromomethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dichlorobromomethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dichlorodifluoromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| Diethyl Ether | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | 0.94 | <0.5 | <0.5 |
| Diisopropyl Ether (DIPE) | µg/L | N/A | <2 | <2 | <2 | <2 | <2 | <2 | <4 | <2 | <2 | <2 | <2 |

## TABLE C-12

## STORM WATER ANALYTICAL RESULTS – SUN VALLEY

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | S-SW-01 | | | | | S-SW-02 | | | | | |
| | | | 02/02/04 | 02/18/04 | 10/19/04 | 12/27/04 | 02/11/05 | 02/02/04 | 02/18/04 | 10/19/04 | 12/27/04 | 02/11/05 | 02/02/04 |
| Ethanol | µg/L | N/A | <100 | 290 | <100 | 170 | 130 | 130 | 390 | 1,900 | 420 | 310 | 250 |
| Ethyl Methacrylate | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethyl-t-Butyl Ether (ETBE) | µg/L | N/A | <2 | <2 | <2 | <2 | <2 | <2 | <4 | <2 | <2 | <2 | <2 |
| Hexachloro-1,3-Butadiene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <10 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| Iodomethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| Isopropylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | 0.56 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl Methacrylate | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methylene Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 1.3 | <0.5 | <0.5 | <0.5 | <0.5 |
| Naphthalene | µg/L | N/A | <10 | <10 | <0.5 | <0.5 | <0.5 | <10 | <50 | <0.5 | <0.5 | <0.5 | <0.5 |
| n-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| n-Propylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| p-Isopropyltoluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| sec-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| Styrene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| t-1,4-Dichloro-2-Butene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| Tert-Amyl-Methyl Ether (TAME) | µg/L | N/A | <2 | <2 | <2 | <2 | <2 | <2 | <4 | <2 | <2 | <2 | <2 |
| Tert-Butyl Alcohol (TBA) | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | <20 | <10 | <10 | <10 | <10 |
| tert-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| Tetrahydrofuran | µg/L | N/A | <1 | <1 | <1 | <1 | <1 | <1 | <2 | <1 | <1 | <1 | <1 |
| trans-1,3-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| Trichlorofluoromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| Vinyl Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <1 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Semi-Volatile Organic Compounds** | | | | | | | | | | | | | |
| 1-Methylnaphthalene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| 2,4,5-Trichlorophenol | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| 2,4,6-Trichlorophenol | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| 2,4-Dichlorophenol | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| 2,4-Dimethylphenol | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| 2,4-Dinitrophenol | µg/L | N/A | <50 | <50 | -- | -- | -- | <50 | <250 | -- | -- | -- | <50 |
| 2,4-Dinitrotoluene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| 2,6-Dinitrotoluene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| 2-Chloronaphthalene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| 2-Chlorophenol | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| 2-Methylnaphthalene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| 2-Methylphenol (o-Cresol) | µg/L | N/A | <10 | <10 | -- | -- | -- | 12 | <50 | -- | -- | -- | 19 |

# TABLE C-12

## STORM WATER ANALYTICAL RESULTS – SUN VALLEY

| | | | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | S-SW-01 | | | | | S-SW-02 | | | | | |
| Constituent | Units[1] | Fraction | 02/02/04 | 02/18/04 | 10/19/04 | 12/27/04 | 02/11/05 | 02/02/04 | 02/18/04 | 10/19/04 | 12/27/04 | 02/11/05 | 02/02/04 |
| 2-Nitroaniline | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| 2-Nitrophenol | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| 3,3'-Dichlorobenzidine | µg/L | N/A | <25 | <25 | -- | -- | -- | <25 | <130 | -- | -- | -- | <25 |
| 3-Nitroaniline | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| 4,6-Dinitro-2-Methylphenol | µg/L | N/A | <50 | <50 | -- | -- | -- | <50 | <250 | -- | -- | -- | <50 |
| 4-Bromophenyl-Phenyl Ether | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| 4-Chloro-3-Methylphenol | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| 4-Chloroaniline | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| 4-Chlorophenyl-Phenyl Ether | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| 4-Methylphenol (p-Cresol) | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| 4-Nitroaniline | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| 4-Nitrophenol | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| Acenaphthene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| Acenaphthylene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| Aniline | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| Anthracene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| Azobenzene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| Benzidine | µg/L | N/A | <50 | <50 | -- | -- | -- | <50 | <250 | -- | -- | -- | <50 |
| Benzo (a) Anthracene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| Benzo (a) Pyrene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| Benzo (b) Fluoranthene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| Benzo (g,h,i) Perylene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| Benzo (k) Fluoranthene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| Benzoic acid | µg/L | N/A | <50 | <50 | -- | -- | -- | <50 | <250 | -- | -- | -- | 280 |
| Benzyl alcohol | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| Bis(2-Chloroethoxy) Methane | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| Bis(2-Chloroethyl) Ether | µg/L | N/A | <25 | <25 | -- | -- | -- | <25 | <130 | -- | -- | -- | <25 |
| Bis(2-Chloroisopropyl) Ether | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| Bis(2-Ethylhexyl) Phthalate | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | 13 |
| Butyl Benzyl Phthalate | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| Chrysene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| Dibenz (a,h) Anthracene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| Dibenzofuran | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| Diethyl Phthalate | µg/L | N/A | <10 | <10 | -- | -- | -- | 12 | <50 | -- | -- | -- | 21 |
| Dimethyl Phthalate | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| Di-n-Butyl Phthalate | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |

## TABLE C-12

## STORM WATER ANALYTICAL RESULTS – SUN VALLEY

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | S-SW-01 | | | | | S-SW-02 | | | | | |
| | | | 02/02/04 | 02/18/04 | 10/19/04 | 12/27/04 | 02/11/05 | 02/02/04 | 02/18/04 | 10/19/04 | 12/27/04 | 02/11/05 | 02/02/04 |
| Di-n-Octyl Phthalate | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| Fluoranthene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| Fluorene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| Hexachlorobenzene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| Hexachlorocyclopentadiene | µg/L | N/A | <25 | <25 | -- | -- | -- | <25 | <130 | -- | -- | -- | <25 |
| Hexachloroethane | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| Indeno (1,2,3-c,d) Pyrene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| Isophorone | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| Nitrobenzene | µg/L | N/A | <25 | <25 | -- | -- | -- | <25 | <130 | -- | -- | -- | <25 |
| N-Nitroso-di-n-propylamine | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| N-Nitrosodiphenylamino | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| Pentachlorophenol | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| Phenanthrene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| Phenol | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| Pyrene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| Pyridine | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <50 | -- | -- | -- | <10 |
| **Biological Parameters** | | | | | | | | | | | | | |
| Heterotrophic Plate Count | CFU/mL | N/A | >3,000 | -- | -- | -- | -- | >3,000 | -- | -- | -- | -- | >3,000 |
| Total Coliforms | MPN/100 mL | N/A | 2,300 | -- | -- | -- | -- | >160,000 | -- | -- | -- | -- | >160,000 |
| Fecal Coliform | MPN/100 mL | N/A | 2,300 | -- | -- | -- | -- | 90,000 | -- | -- | -- | -- | 160,000 |
| E. coli | MPN/100 mL | N/A | 5,040 | -- | -- | -- | -- | 73,800 | -- | -- | -- | -- | 18,500 |

-- indicates the constituent was not analyzed for. Analytes not detected are indicated with a "<" symbol; the associated numerical value is the detection limit.

1. Units of measure: mg/L = milligrams per liter, µg/L = micrograms per liter, µhmos/cm = microhmos per centimeter, NTU = Nephelometric Turbidity Unit.
2. In cases in which the filtered concentrations exceeded the total, the differences are considered by the laboratory statistically insignificant and can be attributed to the variability inherent with the analytical method.

# TABLE C-12

## STORM WATER ANALYTICAL RESULTS – SUN VALLEY

| Constituent | Units[1] | Fraction | S-SW-03 | | | |
|---|---|---|---|---|---|---|
| | | | 02/18/04 | 10/19/04 | 12/27/04 | 02/11/05 |
| **General Monitoring Parameters** | | | | | | |
| Alkalinity, Total (as $CaCO_3$) | mg/L | N/A | 55 | 34 | 40 | 78 |
| Bicarbonate (as $CaCO_3$) | mg/L | N/A | 55 | 34 | 40 | 78 |
| Bromide | mg/L | N/A | <0.1 | <0.1 | <0.1 | <0.1 |
| Calcium | mg/L | Total | 38.2 | 20 | 19 | 76.2 |
| Carbonate (as $CaCO_3$) | mg/L | N/A | <1 | <1 | <1 | <1 |
| Chloride | mg/L | N/A | 11 | 8 | 3.5 | 18 |
| Chemical Oxygen Demand | mg/L | N/A | 350 | 270 | 71 | 900 |
| Fluoride | mg/L | N/A | <0.1 | <0.1 | 0.11 | <0.1 |
| Hardness (as $CaCO_3$) | mg/L | Total | 130 | 80 | 62 | 290 |
| Hydroxide (as $CaCO_3$) | mg/L | N/A | <1 | <1 | <1 | <1 |
| Magnesium | mg/L | Total | 1.65 | 1.09 | 1.22 | 3.61 |
| MBAS (Surfactants) | mg/L | N/A | 3.3 | 1.4 | 0.32 | 2.5 |
| Nitrate (as N) | mg/L | N/A | 1.8 | 0.15 | 0.68 | <0.1 |
| Nitrite (as N) | mg/L | N/A | <0.1 | <0.1 | <0.1 | <0.1 |
| Total Kjeldahl Nitrogen | mg/L | Total | 6.7 | 4.1 | 1.5 | 13 |
| Carbon, Total Organic | mg/L | N/A | 96 | 21 | 14 | 150 |
| Carbon, Dissolved Organic | mg/L | N/A | 92 | 16 | 13 | 130 |
| Nitrogen, Organic | mg/L | N/A | 5.9 | 3.8 | 1.2 | 12 |
| Ammonia-Nitrogen | mg/L | Total | 0.84 | 0.28 | 0.35 | 1.2 |
| pH | pH units | N/A | 7.81 | 6.37 | 6.65 | 6.76 |
| Phosphorus | mg/L | Dissolved | 0.32 | 0.3 | 0.24 | 0.33 |
| Phosphorus | mg/L | Total | 0.54 | 0.47 | 0.3 | 0.75 |
| Potassium | mg/L | Total | 6.5 | 4.29 | 1.65 | 10.7 |
| Sodium | mg/L | Total | 12.6 | 8.34 | 3.69 | 21.3 |
| Specific Conductance | µmhos/cm | N/A | 330 | 180 | 130 | 470 |
| Sulfate | mg/L | N/A | 69 | 28 | 11 | 120 |
| Total Dissolved Solids | mg/L | N/A | 270 | 140 | 76 | 460 |
| Total Suspended Solids | mg/L | N/A | 270 | 180 | 31 | 780 |
| Turbidity | NTU | N/A | 220 | 68 | 24 | 380 |
| **Metals[2]** | | | | | | |
| Aluminum | µg/L | Dissolved | 109 | 61.7 | <25 | 198 |
| Aluminum | µg/L | Total | 3,460 | 1,340 | 535 | 6,570 |
| Antimony | µg/L | Dissolved | 1.84 | 1.14 | <1 | 15.4 |
| Antimony | µg/L | Total | 4.49 | 1.55 | <1 | 17.8 |

# TABLE C-12

## STORM WATER ANALYTICAL RESULTS – SUN VALLEY

| Constituent | Units[1] | Fraction | S-SW-03 | | | |
|---|---|---|---|---|---|---|
| | | | 02/18/04 | 10/19/04 | 12/27/04 | 02/11/05 |
| Arsenic | µg/L | Dissolved | 9.93 | 1.31 | 1.1 | 3.69 |
| Arsenic | µg/L | Total | 13 | 1.71 | 1.44 | 5.91 |
| Barium | µg/L | Dissolved | 17.2 | 8.26 | 13.1 | 36 |
| Barium | µg/L | Total | 119 | 46.2 | 27.8 | 225 |
| Beryllium | µg/L | Dissolved | <1 | <1 | <1 | <1 |
| Beryllium | µg/L | Total | <1 | <1 | <1 | <1 |
| Boron | µg/L | Dissolved | 104 | 71.1 | 124 | 233 |
| Boron | µg/L | Total | 111 | 84.9 | 125 | 1,760 |
| Cadmium | µg/L | Dissolved | 0.233 | 0.215 | <0.2 | 0.614 |
| Cadmium | µg/L | Total | 1.37 | 0.664 | 0.238 | 2.74 |
| Chromium | µg/L | Dissolved | 3.16 | 2.47 | 1.54 | 3.88 |
| Chromium | µg/L | Total | 11.6 | 4.83 | 2.64 | 21.2 |
| Chromium, Hexavalent | µg/L | Dissolved | 0.8 | 0.37 | 0.43 | 0.7 |
| Cobalt | µg/L | Dissolved | 1.28 | <1 | <1 | 2.65 |
| Cobalt | µg/L | Total | 3.65 | 1.59 | <1 | 7.09 |
| Copper | µg/L | Dissolved | 19.6 | 21.7 | 13.5 | 11.3 |
| Copper | µg/L | Total | 49.5 | 34.5 | 19.2 | 86.2 |
| Iron | µg/L | Dissolved | 222 | 147 | <100 | 1,200 |
| Iron | µg/L | Total | 5,070 | 2,010 | 831 | 10,100 |
| Lead | µg/L | Dissolved | 7.85 | 2.54 | <0.5 | 58.2 |
| Lead | µg/L | Total | 154 | 38.4 | 10.6 | 956 |
| Manganese | µg/L | Dissolved | 36 | 26.8 | 8.17 | 131 |
| Manganese | µg/L | Total | 142 | 61.3 | 26.6 | 329 |
| Mercury | µg/L | Dissolved | 0.192 | <0.1 | <0.1 | <0.1 |
| Mercury | µg/L | Total | 1.08 | 0.244 | <0.1 | 1.27 |
| Molybdenum | µg/L | Dissolved | 5.49 | 1.87 | 1.2 | 5.71 |
| Molybdenum | µg/L | Total | 6.88 | 1.91 | 1.39 | 7.5 |
| Nickel | µg/L | Dissolved | 6.6 | 3.7 | <2 | 10 |
| Nickel | µg/L | Total | 14 | 5.7 | 2.6 | 24 |
| Selenium | µg/L | Dissolved | <1 | <1 | 1.12 | <1 |
| Selenium | µg/L | Total | <1 | <1 | 1.01 | <1 |
| Silver | µg/L | Dissolved | <1 | <1 | <1 | <1 |
| Silver | µg/L | Total | 1.17 | <1 | <1 | 1.48 |
| Strontium | µg/L | Dissolved | 117 | 56.9 | 61.4 | 210 |
| Strontium | µg/L | Total | 143 | 64.6 | 67.5 | 257 |
| Thallium | µg/L | Dissolved | <1 | <1 | <1 | <1 |

# TABLE C-12

## STORM WATER ANALYTICAL RESULTS – SUN VALLEY

| Constituent | Units$^1$ | Fraction | S-SW-03 | | | |
|---|---|---|---|---|---|---|
| | | | 02/18/04 | 10/19/04 | 12/27/04 | 02/11/05 |
| Thallium | µg/L | Total | <1 | <1 | 1 | <1 |
| Tin | µg/L | Dissolved | <1 | <1 | <1 | <1 |
| Tin | µg/L | Total | 4.62 | 1.9 | <1 | 3.89 |
| Titanium | µg/L | Dissolved | 12.9 | 4.94 | 2.18 | 15.8 |
| Titanium | µg/L | Total | 271 | 107 | 40.7 | 414 |
| Vanadium | µg/L | Dissolved | 5.3 | 2 | 4.57 | 3.4 |
| Vanadium | µg/L | Total | 15.3 | 5.04 | 6.23 | 23 |
| Zinc | µg/L | Dissolved | 102 | 75.2 | 43.6 | 350 |
| Zinc | µg/L | Total | 301 | 149 | 83.2 | 669 |
| **Other Constituents** | | | | | | |
| Oil and Grease | mg/L | N/A | 49 | 18 | 2 | 54 |
| Perchlorate | µg/L | N/A | 6.5 | <2 | <2 | <2 |
| N-Nitrosodimethylamine (NDMA) | ng/L | N/A | -- | -- | -- | -- |
| Glyphosate | µg/L | N/A | -- | -- | -- | -- |
| 1,4-Dioxane | µg/L | N/A | -- | -- | -- | -- |
| 1,2-Dibromo-3-chloropropane (DBCP) | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| **Volatile Organic Compounds** | | | | | | |
| Methyl Bromide | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl-t-Butyl Ether (MTBE) | µg/L | N/A | <1 | <1 | <1 | <1 |
| Benzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| Toluene | µg/L | N/A | 11 | <0.5 | <0.5 | <0.5 |
| Ethylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| o-Xylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| p/m-Xylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| Trichloroethylene (TCE) | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| Tetrachloroethylene (PCE) | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,1,2-Tetrachloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,1-Trichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2,2-Tetrachloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2-Trichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloroethylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,3-Trichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,3-Trichloropropane (1,2,3-TCP) | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |

## TABLE C-12

## STORM WATER ANALYTICAL RESULTS – SUN VALLEY

| Constituent | Units[1] | Fraction | S-SW-03 | | | |
|---|---|---|---|---|---|---|
| | | | 02/18/04 | 10/19/04 | 12/27/04 | 02/11/05 |
| 1,2,4-Trichlorobenzene | µg/L | N/A | <10 | <0.5 | <0.5 | <0.5 |
| 1,2,4-Trimethylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dibromoethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichlorobenzene | µg/L | N/A | <10 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Trans-Dichloroethylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3,5-Trimethylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,4-Dichlorobenzene | µg/L | N/A | <0.5 | 1.3 | <0.5 | <0.5 |
| 2,2-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Butanone (Methylethyl ketone) | µg/L | N/A | 12 | 1 | 1.4 | 3 |
| 2-Chlorotoluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Hexanone | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| 4-Chlorotoluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| 4-Methyl-2-pentanone (MIBK) | µg/L | N/A | 64 | <2 | <2 | <2 |
| Acetone | µg/L | N/A | 130 | 15 | 12 | 42 |
| Acrylonitrile | µg/L | N/A | <2 | <2 | <2 | <2 |
| Allyl Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromochloromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromoform | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| Carbon disulfide | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| Carbon Tetrachloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| Chlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| Chloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| Chloroform | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| cis-1,2-Dichloroethene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| cis-1,3-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| Dibromochloromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| Dibromomethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| Dichlorobromomethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| Dichlorodifluoromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| Diethyl Ether | µg/L | N/A | <0.5 | <0.5 | 0.78 | <0.5 |
| Diisopropyl Ether (DIPE) | µg/L | N/A | <2 | <2 | <2 | <2 |

## TABLE C-12

## STORM WATER ANALYTICAL RESULTS – SUN VALLEY

| Constituent | Units$^1$ | Fraction | S-SW-03<br>02/18/04 | 10/19/04 | 12/27/04 | 02/11/05 |
|---|---|---|---|---|---|---|
| Ethanol | µg/L | N/A | 840 | 570 | <100 | 550 |
| Ethyl Methacrylate | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethyl-t-Butyl Ether (ETBE) | µg/L | N/A | <2 | <2 | <2 | <2 |
| Hexachloro-1,3-Butadiene | µg/L | N/A | <10 | <0.5 | <0.5 | <0.5 |
| Iodomethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| Isopropylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl Methacrylate | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| Methylene Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| Naphthalene | µg/L | N/A | <10 | <0.5 | <0.5 | <0.5 |
| n-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| n-Propylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| p-Isopropyltoluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| sec-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| Styrene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| t-1,4-Dichloro-2-Butene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| Tert-Amyl-Methyl Ether (TAME) | µg/L | N/A | <2 | <2 | <2 | <2 |
| Tert-Butyl Alcohol (TBA) | µg/L | N/A | <10 | <10 | <10 | <10 |
| tert-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| Tetrahydrofuran | µg/L | N/A | <1 | <1 | <1 | <1 |
| trans-1,3-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| Trichlorofluoromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| Vinyl Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 |
| **Semi-Volatile Organic Compounds** | | | | | | |
| 1-Methylnaphthalene | µg/L | N/A | <10 | -- | -- | -- |
| 2,4,5-Trichlorophenol | µg/L | N/A | <10 | -- | -- | -- |
| 2,4,6-Trichlorophenol | µg/L | N/A | <10 | -- | -- | -- |
| 2,4-Dichlorophenol | µg/L | N/A | <10 | -- | -- | -- |
| 2,4-Dimethylphenol | µg/L | N/A | <10 | -- | -- | -- |
| 2,4-Dinitrophenol | µg/L | N/A | <50 | -- | -- | -- |
| 2,4-Dinitrotoluene | µg/L | N/A | <10 | -- | -- | -- |
| 2,6-Dinitrotoluene | µg/L | N/A | <10 | -- | -- | -- |
| 2-Chloronaphthalene | µg/L | N/A | <10 | -- | -- | -- |
| 2-Chlorophenol | µg/L | N/A | <10 | -- | -- | -- |
| 2-Methylnaphthalene | µg/L | N/A | <10 | -- | -- | -- |
| 2-Methylphenol (o-Cresol) | µg/L | N/A | <10 | -- | -- | -- |

# TABLE C-12

## STORM WATER ANALYTICAL RESULTS – SUN VALLEY

| Constituent | Units[1] | Fraction | S-SW-03 | | | |
|---|---|---|---|---|---|---|
| | | | 02/18/04 | 10/19/04 | 12/27/04 | 02/11/05 |
| 2-Nitroaniline | µg/L | N/A | <10 | -- | -- | -- |
| 2-Nitrophenol | µg/L | N/A | <10 | -- | -- | -- |
| 3,3'-Dichlorobenzidine | µg/L | N/A | <25 | -- | -- | -- |
| 3-Nitroaniline | µg/L | N/A | <10 | -- | -- | -- |
| 4,6-Dinitro-2-Methylphenol | µg/L | N/A | <50 | -- | -- | -- |
| 4-Bromophenyl-Phenyl Ether | µg/L | N/A | <10 | -- | -- | -- |
| 4-Chloro-3-Methylphenol | µg/L | N/A | <10 | -- | -- | -- |
| 4-Chloroaniline | µg/L | N/A | <10 | -- | -- | -- |
| 4-Chlorophenyl-Phenyl Ether | µg/L | N/A | <10 | -- | -- | -- |
| 4-Methylphenol (p-Cresol) | µg/L | N/A | <10 | -- | -- | -- |
| 4-Nitroaniline | µg/L | N/A | <10 | -- | -- | -- |
| 4-Nitrophenol | µg/L | N/A | <10 | -- | -- | -- |
| Acenaphthene | µg/L | N/A | <10 | -- | -- | -- |
| Acenaphthylene | µg/L | N/A | <10 | -- | -- | -- |
| Aniline | µg/L | N/A | <10 | -- | -- | -- |
| Anthracene | µg/L | N/A | <10 | -- | -- | -- |
| Azobenzene | µg/L | N/A | <10 | -- | -- | -- |
| Benzidine | µg/L | N/A | <50 | -- | -- | -- |
| Benzo (a) Anthracene | µg/L | N/A | <10 | -- | -- | -- |
| Benzo (a) Pyrene | µg/L | N/A | <10 | -- | -- | -- |
| Benzo (b) Fluoranthene | µg/L | N/A | <10 | -- | -- | -- |
| Benzo (g,h,i) Perylene | µg/L | N/A | <10 | -- | -- | -- |
| Benzo (k) Fluoranthene | µg/L | N/A | <10 | -- | -- | -- |
| Benzoic acid | µg/L | N/A | 150 | -- | -- | -- |
| Benzyl alcohol | µg/L | N/A | 12 | -- | -- | -- |
| Bis(2-Chloroethoxy) Methane | µg/L | N/A | <10 | -- | -- | -- |
| Bis(2-Chloroethyl) Ether | µg/L | N/A | <25 | -- | -- | -- |
| Bis(2-Chloroisopropyl) Ether | µg/L | N/A | <10 | -- | -- | -- |
| Bis(2-Ethylhexyl) Phthalate | µg/L | N/A | 32 | -- | -- | -- |
| Butyl Benzyl Phthalate | µg/L | N/A | 10 | -- | -- | -- |
| Chrysene | µg/L | N/A | <10 | -- | -- | -- |
| Dibenz (a,h) Anthracene | µg/L | N/A | <10 | -- | -- | -- |
| Dibenzofuran | µg/L | N/A | <10 | -- | -- | -- |
| Diethyl Phthalate | µg/L | N/A | 18 | -- | -- | -- |
| Dimethyl Phthalate | µg/L | N/A | <10 | -- | -- | -- |
| Di-n-Butyl Phthalate | µg/L | N/A | 16 | -- | -- | -- |

## TABLE C-12

## STORM WATER ANALYTICAL RESULTS – SUN VALLEY

| | | | S-SW-03 | | | |
|---|---|---|---|---|---|---|
| **Constituent** | **Units[1]** | **Fraction** | **02/18/04** | **10/19/04** | **12/27/04** | **02/11/05** |
| Di-n-Octyl Phthalate | µg/L | N/A | <10 | -- | -- | -- |
| Fluoranthene | µg/L | N/A | <10 | -- | -- | -- |
| Fluorene | µg/L | N/A | <10 | -- | -- | -- |
| Hexachlorobenzene | µg/L | N/A | <10 | -- | -- | -- |
| Hexachlorocyclopentadiene | µg/L | N/A | <25 | -- | -- | -- |
| Hexachloroethane | µg/L | N/A | <10 | -- | -- | -- |
| Indeno (1,2,3-c,d) Pyrene | µg/L | N/A | <10 | -- | -- | -- |
| Isophorone | µg/L | N/A | <10 | -- | -- | -- |
| Nitrobenzene | µg/L | N/A | <25 | -- | -- | -- |
| N-Nitroso-di-n-propylamine | µg/L | N/A | <10 | -- | -- | -- |
| N-Nitrosodiphenylamino | µg/L | N/A | <10 | -- | -- | -- |
| Pentachlorophenol | µg/L | N/A | <10 | -- | -- | -- |
| Phenanthrene | µg/L | N/A | <10 | -- | -- | -- |
| Phenol | µg/L | N/A | <10 | -- | -- | -- |
| Pyrene | µg/L | N/A | <10 | -- | -- | -- |
| Pyridine | µg/L | N/A | <10 | -- | -- | -- |
| **Biological Parameters** | | | | | | |
| Heterotrophic Plate Count | CFU/mL | N/A | -- | -- | -- | -- |
| Total Coliforms | MPN/100 mL | N/A | -- | -- | -- | -- |
| Fecal Coliform | MPN/100 mL | N/A | -- | -- | -- | -- |
| E. coli | MPN/100 mL | N/A | -- | -- | -- | -- |

-- indicates the constituent was not analyzed for. Analytes not detected are indicate

1. Units of measure: mg/L = milligrams per liter, µg/L = micrograms per liter, µhı

2. In cases in which the filtered concentrations exceeded the total, the differences ;

# TABLE C-13

## LYSIMETER ANALYTICAL RESULTS – SUN VALLEY

| Constituent | Units$^1$ | Fraction | S-LS-01 | | | | | | | S-LS-02 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 02/04/04 | 02/19/04 | 04/03/04 | 10/20/04 | 12/08/04 | 12/29/04 | 02/12/05 | 02/04/04 | 02/19/04 | 04/03/04 | 10/19/04 | 12/08/04 | 12/29/04 |
| **General Monitoring Parameters** | | | | | | | | | | | | | | | |
| Alkalinity, Total (as $CaCO_3$) | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Bicarbonate (as $CaCO_3$) | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Bromide | mg/L | N/A | 0.14 | 0.11 | -- | <0.1 | <0.1 | <0.1 | <0.1 | 0.19 | 0.12 | -- | 0.13 | 0.14 | <0.1 |
| Calcium | mg/L | Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Carbonate (as $CaCO_3$) | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Chloride | mg/L | N/A | 28 | 26 | -- | 13 | 11 | 10 | 14 | 38 | 29 | -- | 17 | 16 | 16 |
| Chemical Oxygen Demand | mg/L | N/A | 13 | 21 | -- | 53 | <5 | 10 | <5 | <5 | -- | -- | 20 | <5 | 13 |
| Fluoride | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Hardness (as $CaCO_3$) | mg/L | Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Hydroxide (as $CaCO_3$) | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Magnesium | mg/L | Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MBAS (Surfactants) | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Nitrate (as N) | mg/L | N/A | 15 | 11 | -- | 3.1 | 2.8 | 3.1 | 2.2 | 1 | 3.3 | -- | 17 | 11 | 10 |
| Nitrite (as N) | mg/L | N/A | <0.1 | <0.1 | -- | <0.1 | 0.24 | <0.1 | <0.1 | <0.1 | <0.1 | -- | <0.1 | <0.1 | <0.1 |
| Total Kjeldahl Nitrogen | mg/L | Total | 0.7 | 1.4 | -- | 1.1 | 0.7 | <0.5 | <0.5 | 0.28 | 0.84 | -- | <1 | <0.5 | <0.5 |
| Carbon, Total Organic | mg/L | N/A | 15 | 3.2 | -- | 9.4 | 5 | 3.7 | 3.8 | 14 | -- | -- | 3.1 | 2.1 | 2 |
| Carbon, Dissolved Organic | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Nitrogen, Organic | mg/L | N/A | <0.5 | 1.4 | -- | 1.1 | 0.7 | <0.5 | <0.5 | <0.5 | 0.84 | -- | <1 | <0.5 | <0.5 |
| Ammonia-Nitrogen | mg/L | Total | 0.56 | <0.2 | -- | <0.1 | <0.1 | <0.2 | <0.1 | <0.2 | <0.2 | -- | <0.1 | <0.1 | <0.2 |
| pH | pH units | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Phosphorus | mg/L | Dissolved | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Phosphorus | mg/L | Total | 14 | 13 | -- | <0.03 | 0.6 | 1.4 | 0.78 | 11 | -- | -- | 0.43 | 0.2 | 0.6 |
| Potassium | mg/L | Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Sodium | mg/L | Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Specific Conductance | µmhos/cm | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Sulfate | mg/L | N/A | 280 | 230 | -- | 150 | 91 | 83 | 130 | 280 | 350 | -- | 180 | 160 | 160 |
| Total Dissolved Solids | mg/L | N/A | 920 | 850 | -- | 690 | 510 | 500 | 340 | 1,000 | 1,100 | -- | 930 | 730 | 720 |
| Total Suspended Solids | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Turbidity | NTU | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **Metals$^2$** | | | | | | | | | | | | | | | |
| Aluminum | µg/L | Dissolved | <50 | <50 | -- | <25 | <25 | <25 | <25 | <50 | <50 | -- | <25 | <25 | <25 |
| Aluminum | µg/L | Total | <50 | <50 | -- | <25 | <25 | <25 | <25 | <50 | 50.3 | -- | <25 | <25 | <25 |
| Antimony | µg/L | Dissolved | 2.66 | 1.53 | -- | 2.87 | 2.43 | <1 | 1.59 | <1 | <1 | -- | 3.61 | 2.41 | <1 |
| Antimony | µg/L | Total | 1.68 | 2.02 | -- | 2.69 | 2.01 | <1 | 1.87 | <1 | 1.04 | -- | 3.47 | 2.76 | <1 |
| Arsenic | µg/L | Dissolved | 15.7 | 8.08 | -- | 8.17 | 5.11 | 4.63 | 5.05 | 9.35 | 11.4 | -- | 10.5 | 4.82 | 4.85 |
| Arsenic | µg/L | Total | 13.3 | 8.75 | -- | 7.88 | 4.38 | 4.46 | 4.47 | 7.95 | 13.4 | -- | 10.1 | 4.58 | 5.14 |

# TABLE C-13

## LYSIMETER ANALYTICAL RESULTS – SUN VALLEY

| Constituent | Units$^1$ | Fraction | S-LS-01 | | | | | | | S-LS-02 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 02/04/04 | 02/19/04 | 04/03/04 | 10/20/04 | 12/08/04 | 12/29/04 | 02/12/05 | 02/04/04 | 02/19/04 | 04/03/04 | 10/19/04 | 12/08/04 | 12/29/04 |
| Barium | µg/L | Dissolved | 120 | 145 | -- | 95.8 | 67.7 | 59.9 | 76.4 | 246 | 224 | -- | 117 | 125 | 128 |
| Barium | µg/L | Total | 159 | 147 | -- | 97.5 | 66.6 | 60.1 | 72.1 | 236 | 210 | -- | 112 | 133 | 130 |
| Beryllium | µg/L | Dissolved | <1 | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 | -- | <1 | <1 | <1 |
| Beryllium | µg/L | Total | <1 | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 | -- | <1 | <1 | <1 |
| Boron | µg/L | Dissolved | 119 | 74.5 | -- | 70.1 | 85.5 | 93.5 | 62.2 | 96.9 | 99.5 | -- | <50 | 51 | 62.3 |
| Boron | µg/L | Total | 72 | 91.8 | -- | 68.2 | 77.8 | 92.4 | 56.3 | 77.8 | 125 | -- | <50 | 52.9 | 60.5 |
| Cadmium | µg/L | Dissolved | 0.272 | 0.267 | -- | <0.2 | <0.2 | <0.2 | <0.2 | 0.303 | 0.501 | -- | <0.2 | <0.2 | <0.2 |
| Cadmium | µg/L | Total | 0.208 | 0.365 | -- | <0.2 | <0.2 | <0.2 | <0.2 | 0.296 | 0.318 | -- | <0.2 | <0.2 | <0.2 |
| Chromium | µg/L | Dissolved | 1.37 | 1.35 | 2.48 | 1.91 | 1.29 | 1.18 | 7.18 | 1.31 | 1 | 1.73 | 20.9 | 12.1 | 14.6 |
| Chromium | µg/L | Total | 2.14 | 1.98 | -- | 2.95 | 1.41 | 1.38 | 7.79 | 2.03 | 3.77 | -- | 18.3 | 12.8 | 14.7 |
| Chromium, Hexavalent | µg/L | Dissolved | -- | -- | 0.47 | 0.63 | 1 | 0.43 | 6.2 | -- | -- | <0.2 | 31 | 20 | 11 |
| Cobalt | µg/L | Dissolved | <1 | 1.04 | -- | 1.39 | <1 | <1 | <1 | <1 | <1 | -- | <1 | <1 | <1 |
| Cobalt | µg/L | Total | <1 | 1.22 | -- | 1.39 | <1 | <1 | <1 | <1 | <1 | -- | <1 | <1 | <1 |
| Copper | µg/L | Dissolved | 1.78 | 2.9 | -- | 7.06 | 3.64 | 6.6 | 8.76 | 3.16 | 2.6 | -- | <1 | 1.44 | 4.95 |
| Copper | µg/L | Total | 2.52 | 3.92 | -- | 7.68 | 3.86 | 6.61 | 9.04 | 3.39 | 3.96 | -- | 1.03 | 1.55 | 5.52 |
| Iron | µg/L | Dissolved | 137 | 121 | -- | <100 | <100 | <100 | <100 | 128 | 111 | -- | <100 | <100 | 153 |
| Iron | µg/L | Total | 130 | 166 | -- | 269 | <100 | 120 | <100 | 119 | 290 | -- | <100 | <100 | 185 |
| Lead | µg/L | Dissolved | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | 0.592 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Lead | µg/L | Total | 5.46 | <0.5 | -- | 1.36 | 0.551 | 0.623 | 1.08 | <0.5 | 0.847 | -- | <0.5 | 0.506 | <0.5 |
| Manganese | µg/L | Dissolved | 225 | 475 | -- | 518 | 70.4 | 60.7 | 62.7 | 401 | 136 | -- | 5.01 | 5.53 | 22.2 |
| Manganese | µg/L | Total | 29.3 | 578 | -- | 506 | 74.7 | 60.4 | 61.4 | 377 | 119 | -- | 4.89 | 6.21 | 22.9 |
| Mercury | µg/L | Dissolved | -- | <0.1 | -- | -- | -- | -- | -- | -- | <0.1 | -- | -- | -- | -- |
| Mercury | µg/L | Total | -- | <0.1 | -- | -- | -- | -- | -- | -- | <0.1 | -- | -- | -- | -- |
| Molybdenum | µg/L | Dissolved | 116 | 92.9 | -- | 58.4 | 28.7 | 24.1 | 22.4 | 111 | 143 | -- | 27 | 14.4 | 14.3 |
| Molybdenum | µg/L | Total | 79.9 | 96.3 | -- | 55.8 | 28.6 | 23.9 | 21.6 | 107 | 137 | -- | 25.7 | 15.3 | 14.3 |
| Nickel | µg/L | Dissolved | 13 | 38 | -- | 44 | 49 | 64 | 66 | 24 | 20 | -- | 11 | 5.6 | 39 |
| Nickel | µg/L | Total | 7.5 | 45 | -- | 44 | 53 | 64 | 64 | 22 | 16 | -- | 11 | 5.9 | 41 |
| Selenium | µg/L | Dissolved | 6.49 | 5.32 | -- | 2.62 | 1.41 | <1 | 1.15 | 1.13 | 4.67 | -- | 3.79 | 3.52 | 2.76 |
| Selenium | µg/L | Total | 3.11 | 6.89 | -- | 2.26 | 1.27 | <1 | 1.14 | <1 | 10.4 | -- | 3.6 | 3.48 | 2.67 |
| Silver | µg/L | Dissolved | <1 | <1 | -- | 19.7 | 1.91 | 5.65 | 6.77 | <1 | <1 | -- | <1 | <1 | 7.14 |
| Silver | µg/L | Total | <1 | <1 | -- | 90.7 | 3.15 | 7.92 | 12.1 | <1 | <1 | -- | 2.29 | 1.64 | 10.6 |
| Strontium | µg/L | Dissolved | 457 | 489 | -- | 232 | 184 | 160 | 190 | 1,050 | 1,100 | -- | 371 | 411 | 417 |
| Strontium | µg/L | Total | 555 | 539 | -- | 225 | 176 | 156 | 183 | 1,000 | 1,010 | -- | 362 | 430 | 424 |
| Thallium | µg/L | Dissolved | <1 | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 | -- | <1 | <1 | <1 |
| Thallium | µg/L | Total | <1 | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 | -- | <1 | <1 | <1 |
| Tin | µg/L | Dissolved | <1 | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 | -- | <1 | <1 | <1 |
| Tin | µg/L | Total | <1 | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 | -- | <1 | <1 | <1 |
| Titanium | µg/L | Dissolved | 11.8 | 6.84 | -- | 5.49 | 5.56 | 9.31 | 9.94 | 8.99 | 8.36 | -- | 4.57 | 5.2 | 9.33 |

## TABLE C-13

## LYSIMETER ANALYTICAL RESULTS – SUN VALLEY

| Constituent | Units[1] | Fraction | S-LS-01 | | | | | | | S-LS-02 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 02/04/04 | 02/19/04 | 04/03/04 | 10/20/04 | 12/08/04 | 12/29/04 | 02/12/05 | 02/04/04 | 02/19/04 | 04/03/04 | 10/19/04 | 12/08/04 | 12/29/04 |
| Titanium | µg/L | Total | 13.4 | 9.56 | -- | 6.39 | 5.44 | 10.4 | 12.5 | 9.86 | 10.7 | -- | 4.88 | 6.06 | 10.9 |
| Vanadium | µg/L | Dissolved | 6.34 | 6.08 | -- | 5.6 | 5.31 | 9.12 | 9.57 | 5.55 | 6.02 | -- | 6.58 | 3.42 | 7.01 |
| Vanadium | µg/L | Total | 7.69 | 6.54 | -- | 5.6 | 4.67 | 9.29 | 8.62 | 4.85 | 4.94 | -- | 5.62 | 3.41 | 7.49 |
| Zinc | µg/L | Dissolved | 12.2 | 17.7 | -- | <5 | 5.02 | 9.09 | 13 | 18.5 | 24.9 | -- | 9.4 | 27.6 | 31.3 |
| Zinc | µg/L | Total | 14.1 | 19.8 | -- | <5 | <5 | 9.29 | 12.1 | 21.8 | 61.3 | -- | 12 | 23.7 | 31.8 |
| **Other Constituents** | | | | | | | | | | | | | | | |
| Oil and Grease | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Perchlorate | µg/L | N/A | -- | -- | <2 | <2 | <2 | <2 | <2 | -- | -- | <2 | <2 | <2 | <2 |
| N-Nitrosodimethylamine (NDMA) | ng/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Glyphosate | µg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 1,4-Dioxane | µg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 1,2-Dibromo-3-chloropropane (DBCP) | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | |
| Methyl Bromide | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Methyl-t-Butyl Ether (MTBE) | µg/L | N/A | <1 | <1 | -- | <1 | <1 | <1 | <1 | 7.3 | 6.4 | -- | <1 | <1 | <1 |
| Benzene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Toluene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Ethylbenzene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| o-Xylene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| p/m-Xylene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Trichloroethylene (TCE) | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Tetrachloroethylene (PCE) | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 1,1,1,2-Tetrachloroethane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 1,1,1-Trichloroethane | µg/L | N/A | 8.8 | 8.4 | -- | 18 | 9.1 | 15 | 5.4 | 11 | 17 | -- | 13 | 3.3 | 17 |
| 1,1,2,2-Tetrachloroethane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 1,1,2-Trichloroethane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloroethane | µg/L | N/A | 1.4 | 1 | -- | 1.6 | 0.56 | 0.84 | 0.57 | 2.1 | 2 | -- | 1.8 | 0.56 | 1.8 |
| 1,1-Dichloroethylene | µg/L | N/A | 2.4 | 2.5 | -- | 3.7 | 1.8 | 2.5 | 0.97 | 2.4 | 4.4 | -- | 2.5 | 0.76 | 4.2 |
| 1,1-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 1,2,3-Trichlorobenzene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 1,2,3-Trichloropropane (1,2,3-TCP) | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 1,2,4-Trichlorobenzene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 1,2,4-Trimethylbenzene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 1,2-Dibromoethane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 1,2-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 1,2-Dichloroethane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 1,2-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |

# TABLE C-13

## LYSIMETER ANALYTICAL RESULTS – SUN VALLEY

| Constituent | Units[1] | Fraction | S-LS-01 | | | | | | | S-LS-02 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 02/04/04 | 02/19/04 | 04/03/04 | 10/20/04 | 12/08/04 | 12/29/04 | 02/12/05 | 02/04/04 | 02/19/04 | 04/03/04 | 10/19/04 | 12/08/04 | 12/29/04 |
| 1,2-Trans-Dichloroethylene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 1,3,5-Trimethylbenzene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 1,3-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 1,3-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 1,4-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 2,2-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 2-Butanone (Methylethyl ketone) | µg/L | N/A | <1 | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 | -- | <1 | <1 | 1.2 |
| 2-Chlorotoluene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 2-Hexanone | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 4-Chlorotoluene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| 4-Methyl-2-pentanone (MIBK) | µg/L | N/A | <2 | <2 | -- | <2 | <2 | <2 | <2 | <2 | <2 | -- | <2 | <2 | <2 |
| Acetone | µg/L | N/A | <2 | <2 | -- | 7.3 | <2 | <2 | 3.1 | 29 | 30 | -- | 13 | 12 | 20 |
| Acrylonitrile | µg/L | N/A | <2 | <2 | -- | <2 | <2 | <2 | <2 | <2 | <2 | -- | <2 | <2 | <2 |
| Allyl Chloride | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Bromobenzene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Bromochloromethane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Bromoform | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Carbon disulfide | µg/L | N/A | 54 | 12 | -- | <0.5 | 2.3 | 2.8 | 3.3 | 2.3 | 10 | -- | 3.4 | 7.1 | 6.4 |
| Carbon Tetrachloride | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Chlorobenzene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Chloroethane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Chloroform | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| cis-1,2-Dichloroethene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| cis-1,3-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Dibromochloromethane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Dibromomethane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Dichlorobromomethane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Dichlorodifluoromethane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Diethyl Ether | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Diisopropyl Ether (DIPE) | µg/L | N/A | <2 | <2 | -- | <2 | <2 | <2 | <2 | <2 | <2 | -- | <2 | <2 | <2 |
| Ethanol | µg/L | N/A | <100 | <100 | -- | <100 | <100 | <100 | <100 | <100 | <100 | -- | <100 | <100 | <100 |
| Ethyl Methacrylate | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Ethyl-t-Butyl Ether (ETBE) | µg/L | N/A | <2 | <2 | -- | <2 | <2 | <2 | <2 | <2 | <2 | -- | <2 | <2 | <2 |
| Hexachloro-1,3-Butadiene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Iodomethane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Isopropylbenzene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Methyl Chloride | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Methyl Methacrylate | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |

# TABLE C-13

## LYSIMETER ANALYTICAL RESULTS – SUN VALLEY

| Constituent | Units[1] | Fraction | S-LS-01 | | | | | | | S-LS-02 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 02/04/04 | 02/19/04 | 04/03/04 | 10/20/04 | 12/08/04 | 12/29/04 | 02/12/05 | 02/04/04 | 02/19/04 | 04/03/04 | 10/19/04 | 12/08/04 | 12/29/04 |
| Methylene Chloride | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Naphthalene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| n-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| n-Propylbenzene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| p-Isopropyltoluene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| sec-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Styrene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| t-1,4-Dichloro-2-Butene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Tert-Amyl-Methyl Ether (TAME) | µg/L | N/A | <2 | <2 | -- | <2 | <2 | <2 | <2 | <2 | <2 | -- | <2 | <2 | <2 |
| Tert-Butyl Alcohol (TBA) | µg/L | N/A | <10 | <10 | -- | 24 | <10 | 21 | 15 | <10 | <10 | -- | <10 | <10 | 23 |
| tert-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Tetrahydrofuran | µg/L | N/A | <1 | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 | -- | <1 | <1 | <1 |
| trans-1,3-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Trichlorofluoromethane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| Vinyl Chloride | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 |
| **Semi-Volatile Organic Compounds** | | | | | | | | | | | | | | | |
| NOT SAMPLED | µg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **Biological Parameters** | | | | | | | | | | | | | | | |
| Heterotrophic Plate Count | CFU/mL | N/A | 34,000 | -- | -- | -- | -- | -- | -- | 120,000 | -- | -- | -- | -- | -- |
| Total Coliforms | MPN/100 mL | N/A | <20 | -- | -- | -- | -- | -- | -- | <20 | -- | -- | -- | -- | -- |
| Fecal Coliform | MPN/100 mL | N/A | <20 | -- | -- | -- | -- | -- | -- | <20 | -- | -- | -- | -- | -- |
| E. coli | MPN/100 mL | N/A | <20 | -- | -- | -- | -- | -- | -- | <20 | -- | -- | -- | -- | -- |

-- indicates the constituent was not analyzed for. Analytes not detected are indicated with a "<" symbol; the associated numerical value is the detection limit.

1. Units of measure: mg/L = milligrams per liter, µg/L = micrograms per liter, µhmos/cm = microhmos per centimeter, NTU = Nephelometric Turbidity Unit.
2. In cases in which the filtered concentrations exceeded the total, the differences are considered by the laboratory statistically insignificant and can be attributed to the variability inherent with the analytical method.

## TABLE C-13

## LYSIMETER ANALYTICAL RESULTS – SUN VALLEY

| | | | Sample Number / Date Sampled | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | S-LS-03 | | | | | | | S-LS-04 | | | | |
| **Constituent** | **Units[1]** | **Fraction** | **02/12/05** | **02/04/04** | **02/19/04** | **04/03/04** | **10/20/04** | **12/08/04** | **12/28/04** | **02/12/05** | **02/04/04** | **02/19/04** | **04/03/04** | **10/20/04** | **12/08/04** |
| **General Monitoring Parameters** | | | | | | | | | | | | | | | |
| Alkalinity, Total (as $CaCO_3$) | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Bicarbonate (as $CaCO_3$) | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Bromide | mg/L | N/A | <0.1 | 0.15 | <0.1 | -- | 0.14 | <0.1 | <0.1 | <0.1 | 0.32 | 0.23 | -- | <0.1 | <0.1 |
| Calcium | mg/L | Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Carbonate (as $CaCO_3$) | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Chloride | mg/L | N/A | 13 | 28 | 23 | -- | 30 | 14 | 13 | 12 | 35 | 21 | -- | 8.1 | 9.6 |
| Chemical Oxygen Demand | mg/L | N/A | <5 | <250 | <5 | -- | 35 | <5 | 13 | <5 | -- | <5 | -- | 15 | <5 |
| Fluoride | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Hardness (as $CaCO_3$) | mg/L | Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Hydroxide (as $CaCO_3$) | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Magnesium | mg/L | Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MBAS (Surfactants) | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Nitrate (as N) | mg/L | N/A | 1.7 | 15 | 17 | -- | 12 | 2.3 | 2.3 | 1.9 | 11 | 36 | -- | 5.3 | 0.69 |
| Nitrite (as N) | mg/L | N/A | <0.1 | <0.1 | <0.1 | -- | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | -- | <0.1 | <0.1 |
| Total Kjeldahl Nitrogen | mg/L | Total | <0.5 | 0.42 | 0.7 | -- | 1.1 | <0.5 | <0.5 | <0.5 | -- | 0.56 | -- | <1 | <0.5 |
| Carbon, Total Organic | mg/L | N/A | 2.5 | 7.6 | 3 | -- | 3 | 1.9 | 1.7 | 1.6 | -- | 3.2 | -- | 1.3 | 1.9 |
| Carbon, Dissolved Organic | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Nitrogen, Organic | mg/L | N/A | <0.5 | <0.5 | 0.7 | -- | 1.1 | <0.5 | <0.5 | <0.5 | -- | <0.5 | -- | <1 | <0.5 |
| Ammonia-Nitrogen | mg/L | Total | <0.1 | <0.2 | <0.2 | -- | <0.1 | <0.1 | <0.2 | <0.1 | -- | 0.28 | -- | <0.1 | <0.1 |
| pH | pH units | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Phosphorus | mg/L | Dissolved | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Phosphorus | mg/L | Total | 0.67 | 0.49 | 14 | -- | <0.03 | 0.14 | 0.69 | 0.46 | -- | 14 | -- | <0.03 | 0.065 |
| Potassium | mg/L | Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Sodium | mg/L | Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Specific Conductance | µmhos/cm | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Sulfate | mg/L | N/A | 59 | 230 | 290 | -- | 190 | 79 | 75 | 48 | 160 | 390 | -- | 120 | 52 |
| Total Dissolved Solids | mg/L | N/A | 2,200 | 940 | 1,000 | -- | 700 | 420 | 440 | 350 | 740 | 1,300 | -- | 410 | 410 |
| Total Suspended Solids | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Turbidity | NTU | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **Metals[2]** | | | | | | | | | | | | | | | |
| Aluminum | µg/L | Dissolved | <25 | <50 | <50 | -- | <25 | <25 | <25 | <25 | <50 | <50 | -- | <25 | <25 |
| Aluminum | µg/L | Total | <25 | <50 | <50 | -- | <25 | <25 | <25 | <25 | <50 | <50 | -- | <25 | <25 |
| Antimony | µg/L | Dissolved | 4.39 | 1.08 | <1 | -- | 1.15 | <1 | <1 | <1 | 1.21 | 1.12 | -- | 1.21 | <1 |
| Antimony | µg/L | Total | 4.31 | 2.31 | 1.21 | -- | 1.27 | 1.3 | <1 | <1 | 1.12 | 1.6 | -- | 1.33 | <1 |
| Arsenic | µg/L | Dissolved | 11.2 | 4.71 | 5.16 | -- | <0.5 | <0.5 | <0.5 | 0.701 | 6.97 | 5.64 | -- | 2.51 | 2.36 |
| Arsenic | µg/L | Total | 11.3 | 5.56 | 6.65 | -- | <0.5 | <0.5 | 0.798 | 0.563 | 6.33 | 7.79 | -- | 2.18 | 1.84 |

# TABLE C-13

## LYSIMETER ANALYTICAL RESULTS – SUN VALLEY

| | | | Sample Number / Date Sampled | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | S-LS-03 | | | | | | | S-LS-04 | | | | |
| Constituent | Units[1] | Fraction | 02/12/05 | 02/04/04 | 02/19/04 | 04/03/04 | 10/20/04 | 12/08/04 | 12/28/04 | 02/12/05 | 02/04/04 | 02/19/04 | 04/03/04 | 10/20/04 | 12/08/04 |
| Barium | µg/L | Dissolved | 88.6 | 196 | 207 | -- | 190 | 117 | 113 | 113 | 216 | 250 | -- | 206 | 142 |
| Barium | µg/L | Total | 88 | 207 | 228 | -- | 194 | 126 | 112 | 106 | 218 | 284 | -- | 195 | 150 |
| Beryllium | µg/L | Dissolved | <1 | <1 | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 | -- | <1 | <1 |
| Beryllium | µg/L | Total | <1 | <1 | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 | -- | <1 | <1 |
| Boron | µg/L | Dissolved | <50 | 131 | 113 | -- | 112 | 104 | 120 | 64.1 | 92.8 | 86 | -- | 122 | 118 |
| Boron | µg/L | Total | <50 | 126 | 155 | -- | 113 | 109 | 117 | 73.6 | 84.9 | 118 | -- | 120 | 122 |
| Cadmium | µg/L | Dissolved | <0.2 | <0.2 | <0.2 | -- | <0.2 | <0.2 | <0.2 | <0.2 | 0.23 | 0.215 | -- | <0.2 | <0.2 |
| Cadmium | µg/L | Total | <0.2 | <0.2 | 0.218 | -- | <0.2 | <0.2 | <0.2 | <0.2 | 0.215 | 0.293 | -- | <0.2 | <0.2 |
| Chromium | µg/L | Dissolved | 25.1 | 1.39 | 1.38 | 13.4 | 18.9 | 11 | 18.6 | 21.3 | 1.6 | 2.52 | 4.45 | 3.73 | 3.48 |
| Chromium | µg/L | Total | 27 | 2.17 | 1.56 | -- | 19.2 | 12.3 | 18.9 | 21.1 | 1.58 | 3.53 | -- | 3.73 | 4.33 |
| Chromium, Hexavalent | µg/L | Dissolved | 20 | -- | -- | 12 | 26 | 15 | 17 | 20 | -- | -- | 3 | 4.6 | 4.7 |
| Cobalt | µg/L | Dissolved | <1 | <1 | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 | -- | <1 | <1 |
| Cobalt | µg/L | Total | <1 | <1 | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 | -- | <1 | <1 |
| Copper | µg/L | Dissolved | 7.77 | 1.14 | 1.71 | -- | 3.87 | 4.02 | 6.54 | 7.07 | 41.5 | 3.67 | -- | 3.07 | 2.74 |
| Copper | µg/L | Total | 8.23 | 2.35 | 2.92 | -- | 4.18 | 3.9 | 6.73 | 6.58 | 33.7 | 6.83 | -- | 3.36 | 3.22 |
| Iron | µg/L | Dissolved | <100 | <100 | <100 | -- | <100 | <100 | <100 | <100 | <100 | 106 | -- | <100 | <100 |
| Iron | µg/L | Total | <100 | 150 | 226 | -- | <100 | <100 | 165 | <100 | <100 | 160 | -- | <100 | <100 |
| Lead | µg/L | Dissolved | <0.5 | 0.608 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | 1.68 | <0.5 | -- | <0.5 | <0.5 |
| Lead | µg/L | Total | <0.5 | 1.51 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | 1.48 | <0.5 | -- | <0.5 | <0.5 |
| Manganese | µg/L | Dissolved | 48.6 | 104 | 84.6 | -- | 6.32 | 8.24 | 17.2 | 33 | 496 | 97.9 | -- | 2.59 | 48.4 |
| Manganese | µg/L | Total | 50.1 | 75.4 | 85.8 | -- | 7.35 | 8.76 | 17.6 | 32.1 | 519 | 145 | -- | 3.04 | 50.9 |
| Mercury | µg/L | Dissolved | -- | -- | <0.1 | -- | -- | -- | -- | -- | -- | <0.1 | -- | -- | -- |
| Mercury | µg/L | Total | -- | -- | <0.1 | -- | -- | -- | -- | -- | -- | <0.1 | -- | -- | -- |
| Molybdenum | µg/L | Dissolved | 20.7 | 50.8 | 60.6 | -- | 32.9 | 14.7 | 15.2 | 10.4 | 20.7 | 71.8 | -- | 35.2 | 10.2 |
| Molybdenum | µg/L | Total | 21.3 | 51 | 64.6 | -- | 33.7 | 15.7 | 14.9 | 10.3 | 20.4 | 85.2 | -- | 33.2 | 10.7 |
| Nickel | µg/L | Dissolved | 150 | 11 | 9.1 | -- | 16 | 5.6 | 11 | 23 | 49 | 15 | -- | 37 | 11 |
| Nickel | µg/L | Total | 150 | 11 | 12 | -- | 17 | 5.7 | 11 | 22 | 44 | 20 | -- | 36 | 11 |
| Selenium | µg/L | Dissolved | 2.44 | 3.24 | 6.3 | -- | 2.73 | <1 | <1 | <1 | <1 | 10.8 | -- | 2.99 | 1.04 |
| Selenium | µg/L | Total | 2.53 | 4.74 | 10.1 | -- | 2.85 | 1.39 | 1.04 | <1 | <1 | 18.2 | -- | 2.51 | <1 |
| Silver | µg/L | Dissolved | 5.87 | <1 | <1 | -- | 2.58 | <1 | 9.69 | 6.18 | <1 | <1 | -- | 2.02 | 1.54 |
| Silver | µg/L | Total | 8.94 | <1 | <1 | -- | 5.87 | 3.05 | 11.9 | 7.53 | <1 | <1 | -- | 5.92 | 6.32 |
| Strontium | µg/L | Dissolved | 278 | 964 | 848 | -- | 725 | 475 | 478 | 453 | 949 | 1,120 | -- | 665 | 417 |
| Strontium | µg/L | Total | 285 | 965 | 999 | -- | 745 | 511 | 471 | 431 | 944 | 1,390 | -- | 633 | 436 |
| Thallium | µg/L | Dissolved | <1 | <1 | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 | -- | <1 | <1 |
| Thallium | µg/L | Total | <1 | <1 | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 | -- | <1 | <1 |
| Tin | µg/L | Dissolved | <1 | <1 | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 | -- | <1 | <1 |
| Tin | µg/L | Total | <1 | <1 | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 | -- | <1 | <1 |
| Titanium | µg/L | Dissolved | 11 | 8.91 | 5.48 | -- | 3.65 | 3.69 | 6.23 | 6.14 | 9.91 | 5.31 | -- | 4.19 | 4.42 |

## TABLE C-13

## LYSIMETER ANALYTICAL RESULTS – SUN VALLEY

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | S-LS-03 | | | | | | | S-LS-04 | | | | |
| | | | 02/12/05 | 02/04/04 | 02/19/04 | 04/03/04 | 10/20/04 | 12/08/04 | 12/28/04 | 02/12/05 | 02/04/04 | 02/19/04 | 04/03/04 | 10/20/04 | 12/08/04 |
| Titanium | µg/L | Total | 10.7 | 7.25 | 11.7 | -- | 4.02 | 4.15 | 7.6 | 6 | 10.4 | 10.5 | -- | 4.23 | 4.53 |
| Vanadium | µg/L | Dissolved | 11 | 11.9 | 12.5 | -- | 1.71 | 1.95 | 3.17 | 2.6 | 6.63 | 9.89 | -- | 2.35 | 1.46 |
| Vanadium | µg/L | Total | 11.1 | 11.9 | 14.8 | -- | 1.68 | <1 | 2.85 | 2.4 | 6.37 | 11.6 | -- | 2.23 | 1.13 |
| Zinc | µg/L | Dissolved | 25.3 | 18.6 | 17 | -- | <5 | 7.63 | 14.9 | 12.5 | 49.7 | 27.3 | -- | 18.7 | 21.2 |
| Zinc | µg/L | Total | 24.3 | 18.8 | 59.8 | -- | 14.2 | 8.37 | 27 | 8.58 | 52.5 | 38.8 | -- | 17.7 | 20.2 |
| **Other Constituents** | | | | | | | | | | | | | | | |
| Oil and Grease | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Perchlorate | µg/L | N/A | <2 | -- | -- | 5.3 | 7.2 | <2 | <2 | <2 | -- | -- | 2.4 | <2 | <2 |
| N-Nitrosodimethylamine (NDMA) | ng/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Glyphosate | µg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 1,4-Dioxane | µg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 1,2-Dibromo-3-chloropropane (DBCP) | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | | |
| Methyl Bromide | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| Methyl-t-Butyl Ether (MTBE) | µg/L | N/A | <1 | <1 | <1 | -- | <1 | <1 | <1 | <1 | 1.3 | 1.2 | -- | <1 | <1 |
| Benzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| Toluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| Ethylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| o-Xylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| p/m-Xylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| Trichloroethylene (TCE) | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| Tetrachloroethylene (PCE) | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| 1,1,1,2-Tetrachloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| 1,1,1-Trichloroethane | µg/L | N/A | 8.5 | 5.2 | 12 | -- | 18 | 6.7 | 9.7 | 8 | 10 | 17 | -- | 14 | 8.3 |
| 1,1,2,2-Tetrachloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| 1,1,2-Trichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| 1,1-Dichloroethane | µg/L | N/A | 1.8 | 0.74 | 1.1 | -- | 1.4 | <0.5 | 0.73 | <0.5 | 1.2 | 1.3 | -- | 1 | <0.5 |
| 1,1-Dichloroethylene | µg/L | N/A | 2.2 | 1.3 | 3.5 | -- | 4.1 | 2.1 | 2.7 | 2.5 | 2.3 | 4.4 | -- | 3.3 | 2.6 |
| 1,1-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| 1,2,3-Trichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| 1,2,3-Trichloropropane (1,2,3-TCP) | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| 1,2,4-Trichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| 1,2,4-Trimethylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| 1,2-Dibromoethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| 1,2-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| 1,2-Dichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| 1,2-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |

# TABLE C-13

## LYSIMETER ANALYTICAL RESULTS – SUN VALLEY

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | S-LS-03 | | | | | | | S-LS-04 | | | |
| | | | 02/12/05 | 02/04/04 | 02/19/04 | 04/03/04 | 10/20/04 | 12/08/04 | 12/28/04 | 02/12/05 | 02/04/04 | 02/19/04 | 04/03/04 | 10/20/04 | 12/08/04 |
| 1,2-Trans-Dichloroethylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| 1,3,5-Trimethylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| 1,3-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| 1,3-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| 1,4-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| 2,2-Dichloropropane | µg/L | N/A | <0.5 | 0.97 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| 2-Butanone (Methylethyl ketone) | µg/L | N/A | <1 | <1 | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 | -- | <1 | <1 |
| 2-Chlorotoluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| 2-Hexanone | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| 4-Chlorotoluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| 4-Methyl-2-pentanone (MIBK) | µg/L | N/A | <2 | <2 | <2 | -- | <2 | <2 | <2 | <2 | <2 | <2 | -- | <2 | <2 |
| Acetone | µg/L | N/A | 6.4 | <2 | <2 | -- | <2 | 2 | 4.4 | <2 | 5.5 | <2 | -- | 2.6 | 2.6 |
| Acrylonitrile | µg/L | N/A | <2 | <2 | <2 | -- | <2 | <2 | <2 | <2 | <2 | <2 | -- | <2 | <2 |
| Allyl Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| Bromobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| Bromochloromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| Bromoform | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| Carbon disulfide | µg/L | N/A | 1.6 | 76 | 5.6 | -- | <0.5 | 0.89 | 0.78 | 0.8 | 0.99 | 0.95 | -- | 0.61 | 1.1 |
| Carbon Tetrachloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| Chlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| Chloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| Chloroform | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| cis-1,2-Dichloroethene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| cis-1,3-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| Dibromochloromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| Dibromomethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| Dichlorobromomethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| Dichlorodifluoromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| Diethyl Ether | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| Diisopropyl Ether (DIPE) | µg/L | N/A | <2 | <2 | <2 | -- | <2 | <2 | <2 | <2 | <2 | <2 | -- | <2 | <2 |
| Ethanol | µg/L | N/A | <100 | <100 | <100 | -- | <100 | <100 | <100 | <100 | <100 | <100 | -- | <100 | <100 |
| Ethyl Methacrylate | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| Ethyl-t-Butyl Ether (ETBE) | µg/L | N/A | <2 | <2 | <2 | -- | <2 | <2 | <2 | <2 | <2 | <2 | -- | <2 | <2 |
| Hexachloro-1,3-Butadiene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| Iodomethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| Isopropylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| Methyl Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| Methyl Methacrylate | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |

# TABLE C-13

## LYSIMETER ANALYTICAL RESULTS – SUN VALLEY

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | S-LS-03 | | | | | | | S-LS-04 | | | | |
| | | | 02/12/05 | 02/04/04 | 02/19/04 | 04/03/04 | 10/20/04 | 12/08/04 | 12/28/04 | 02/12/05 | 02/04/04 | 02/19/04 | 04/03/04 | 10/20/04 | 12/08/04 |
| Methylene Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| Naphthalene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| n-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| n-Propylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| p-Isopropyltoluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| sec-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| Styrene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| t-1,4-Dichloro-2-Butene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| Tert-Amyl-Methyl Ether (TAME) | µg/L | N/A | <2 | <2 | <2 | -- | <2 | <2 | <2 | <2 | <2 | <2 | -- | <2 | <2 |
| Tert-Butyl Alcohol (TBA) | µg/L | N/A | 11 | <10 | <10 | -- | <10 | <10 | <10 | <10 | <10 | <10 | -- | <10 | 54 |
| tert-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| Tetrahydrofuran | µg/L | N/A | <1 | <1 | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 | -- | <1 | <1 |
| trans-1,3-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| Trichlorofluoromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| Vinyl Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 |
| **Semi-Volatile Organic Compounds** | | | | | | | | | | | | | | | |
| NOT SAMPLED | µg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **Biological Parameters** | | | | | | | | | | | | | | | |
| Heterotrophic Plate Count | CFU/mL | N/A | -- | 28,000 | -- | -- | -- | -- | -- | -- | 42,000 | -- | -- | -- | -- |
| Total Coliforms | MPN/100 mL | N/A | -- | <20 | -- | -- | -- | -- | -- | -- | <20 | -- | -- | -- | -- |
| Fecal Coliform | MPN/100 mL | N/A | -- | <20 | -- | -- | -- | -- | -- | -- | <20 | -- | -- | -- | -- |
| E. coli | MPN/100 mL | N/A | -- | <20 | -- | -- | -- | -- | -- | -- | <20 | -- | -- | -- | -- |

-- indicates the constituent was not analyzed for.  Analytes not detected are indicate

1. Units of measure:  mg/L = milligrams per liter, µg/L = micrograms per liter, µh

2. In cases in which the filtered concentrations exceeded the total, the differences

## TABLE C-13

## LYSIMETER ANALYTICAL RESULTS – SUN VALLEY

| | | | | | S-LS-05 | | |
|---|---|---|---|---|---|---|---|
| **Constituent** | **Units[1]** | **Fraction** | **12/28/04** | **02/12/05** | **12/08/04** | **12/28/04** | **02/12/05** |
| **General Monitoring Parameters** | | | | | | | |
| Alkalinity, Total (as $CaCO_3$) | mg/L | N/A | -- | -- | -- | -- | -- |
| Bicarbonate (as $CaCO_3$) | mg/L | N/A | -- | -- | -- | -- | -- |
| Bromide | mg/L | N/A | <0.1 | <0.1 | 0.29 | <0.2 | <0.1 |
| Calcium | mg/L | Total | -- | -- | -- | -- | -- |
| Carbonate (as $CaCO_3$) | mg/L | N/A | -- | -- | -- | -- | -- |
| Chloride | mg/L | N/A | 10 | 16 | 66 | 34 | 81 |
| Chemical Oxygen Demand | mg/L | N/A | 15 | <5 | 13 | 51 | 15 |
| Fluoride | mg/L | N/A | -- | -- | -- | -- | -- |
| Hardness (as $CaCO_3$) | mg/L | Total | -- | -- | -- | -- | -- |
| Hydroxide (as $CaCO_3$) | mg/L | N/A | -- | -- | -- | -- | -- |
| Magnesium | mg/L | Total | -- | -- | -- | -- | -- |
| MBAS (Surfactants) | mg/L | N/A | -- | -- | -- | -- | -- |
| Nitrate (as N) | mg/L | N/A | 0.43 | 1.4 | <0.2 | 0.77 | 0.72 |
| Nitrite (as N) | mg/L | N/A | <0.1 | <0.1 | <0.2 | <0.2 | 0.19 |
| Total Kjeldahl Nitrogen | mg/L | Total | <0.5 | <0.5 | 1.3 | 6.7 | 0.98 |
| Carbon, Total Organic | mg/L | N/A | 2 | 1.9 | 9.3 | 3.3 | 4.5 |
| Carbon, Dissolved Organic | mg/L | N/A | -- | -- | -- | -- | -- |
| Nitrogen, Organic | mg/L | N/A | <0.5 | <0.5 | 0.98 | 6.7 | 0.98 |
| Ammonia-Nitrogen | mg/L | Total | <0.2 | <0.1 | 0.28 | <0.2 | <0.1 |
| pH | pH units | N/A | -- | -- | -- | -- | -- |
| Phosphorus | mg/L | Dissolved | -- | -- | -- | -- | -- |
| Phosphorus | mg/L | Total | 0.21 | 0.7 | 0.46 | 1.1 | 0.55 |
| Potassium | mg/L | Total | -- | -- | -- | -- | -- |
| Sodium | mg/L | Total | -- | -- | -- | -- | -- |
| Specific Conductance | µmhos/cm | N/A | -- | -- | -- | -- | -- |
| Sulfate | mg/L | N/A | 60 | 50 | 3,000 | 1,800 | 270 |
| Total Dissolved Solids | mg/L | N/A | 430 | 310 | 4,500 | 2,900 | 810 |
| Total Suspended Solids | mg/L | N/A | -- | -- | -- | -- | -- |
| Turbidity | NTU | N/A | -- | -- | -- | -- | -- |
| **Metals[2]** | | | | | | | |
| Aluminum | µg/L | Dissolved | <25 | <25 | <25 | <25 | <25 |
| Aluminum | µg/L | Total | <25 | <25 | <25 | <25 | <25 |
| Antimony | µg/L | Dissolved | <1 | <1 | 1.22 | <1 | 3.3 |
| Antimony | µg/L | Total | <1 | <1 | 1.27 | <1 | 3.36 |
| Arsenic | µg/L | Dissolved | 2.92 | 2.16 | 3.17 | 20.8 | 31.2 |
| Arsenic | µg/L | Total | 2.88 | 1.96 | 3.12 | 21 | 30.6 |

# TABLE C-13

## LYSIMETER ANALYTICAL RESULTS – SUN VALLEY

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | S-LS-05 | | |
| **Constituent** | **Units[1]** | **Fraction** | **12/28/04** | **02/12/05** | **12/08/04** | **12/28/04** | **02/12/05** |
| Barium | µg/L | Dissolved | 146 | 131 | 114 | 77.6 | 37.4 |
| Barium | µg/L | Total | 155 | 132 | 125 | 82.6 | 39.3 |
| Beryllium | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 |
| Beryllium | µg/L | Total | <1 | <1 | <1 | <1 | <1 |
| Boron | µg/L | Dissolved | 139 | 70 | 88.7 | 90.5 | 65.4 |
| Boron | µg/L | Total | 150 | 76.6 | 91.2 | 94.9 | 68.3 |
| Cadmium | µg/L | Dissolved | <0.2 | <0.2 | 0.586 | 0.428 | 0.2 |
| Cadmium | µg/L | Total | <0.2 | <0.2 | 0.672 | 0.508 | 0.22 |
| Chromium | µg/L | Dissolved | 6.81 | 1.62 | <1 | 1.94 | 2.17 |
| Chromium | µg/L | Total | 7.43 | 2.36 | 2.86 | 3.67 | 4.01 |
| Chromium, Hexavalent | µg/L | Dissolved | 5.5 | 1.3 | <0.2 | 1 | 0.8 |
| Cobalt | µg/L | Dissolved | <1 | <1 | 1.08 | <1 | <1 |
| Cobalt | µg/L | Total | <1 | <1 | 1.14 | <1 | <1 |
| Copper | µg/L | Dissolved | 4.87 | 6.72 | 2.3 | 3.76 | 5.19 |
| Copper | µg/L | Total | 5.46 | 7.21 | 2.4 | 3.49 | 5.99 |
| Iron | µg/L | Dissolved | 109 | <100 | <100 | 132 | 177 |
| Iron | µg/L | Total | 205 | <100 | 105 | 268 | 399 |
| Lead | µg/L | Dissolved | <0.5 | <0.5 | <0.5 | <0.5 | 0.838 |
| Lead | µg/L | Total | 0.571 | <0.5 | 0.582 | 3.57 | 3.35 |
| Manganese | µg/L | Dissolved | 44.5 | 42.1 | 1,280 | 3 | 8.14 |
| Manganese | µg/L | Total | 46.8 | 43.2 | 1,310 | 179 | 70.7 |
| Mercury | µg/L | Dissolved | -- | -- | -- | -- | <0.1 |
| Mercury | µg/L | Total | -- | -- | -- | -- | <0.1 |
| Molybdenum | µg/L | Dissolved | 11.9 | 5.48 | 291 | 248 | 117 |
| Molybdenum | µg/L | Total | 12.5 | 5.53 | 322 | 256 | 120 |
| Nickel | µg/L | Dissolved | 16 | 26 | 38 | 27 | 21 |
| Nickel | µg/L | Total | 17 | 26 | 39 | 30 | 22 |
| Selenium | µg/L | Dissolved | <1 | <1 | 1.38 | 7.01 | 2.84 |
| Selenium | µg/L | Total | 1.1 | <1 | 1.64 | 7.2 | 2.93 |
| Silver | µg/L | Dissolved | 4.87 | 3.05 | <1 | <1 | 1.74 |
| Silver | µg/L | Total | 7.37 | 5.41 | <1 | <1 | 2.32 |
| Strontium | µg/L | Dissolved | 434 | 386 | 2,110 | 722 | 387 |
| Strontium | µg/L | Total | 459 | 397 | 2,370 | 752 | 394 |
| Thallium | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 |
| Thallium | µg/L | Total | <1 | <1 | <1 | <1 | <1 |
| Tin | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 |
| Tin | µg/L | Total | <1 | <1 | <1 | <1 | <1 |
| Titanium | µg/L | Dissolved | 7.71 | 5.7 | 5.12 | 9.64 | 11.6 |

# TABLE C-13

## LYSIMETER ANALYTICAL RESULTS – SUN VALLEY

| | | | | | S-LS-05 | | |
|---|---|---|---|---|---|---|---|
| **Constituent** | **Units[1]** | **Fraction** | **12/28/04** | **02/12/05** | **12/08/04** | **12/28/04** | **02/12/05** |
| Titanium | µg/L | Total | 10.8 | 6.05 | 6.04 | 12.6 | 14 |
| Vanadium | µg/L | Dissolved | 3.29 | 2.98 | 1.6 | 1.9 | 1.13 |
| Vanadium | µg/L | Total | 3.34 | 2.62 | 1.48 | 2.03 | <1 |
| Zinc | µg/L | Dissolved | 28.7 | 21 | 9.65 | 28.6 | 7.37 |
| Zinc | µg/L | Total | 39.6 | 22.5 | 10.2 | 38.2 | 16.2 |
| **Other Constituents** | | | | | | | |
| Oil and Grease | mg/L | N/A | -- | -- | -- | -- | -- |
| Perchlorate | µg/L | N/A | <2 | <2 | <2 | <2 | <2 |
| N-Nitrosodimethylamine (NDMA) | ng/L | N/A | -- | -- | -- | -- | -- |
| Glyphosate | µg/L | N/A | -- | -- | -- | -- | -- |
| 1,4-Dioxane | µg/L | N/A | -- | -- | -- | -- | -- |
| 1,2-Dibromo-3-chloropropane (DBCP) | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| **Volatile Organic Compounds** | | | | | | | |
| Methyl Bromide | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| Methyl-t-Butyl Ether (MTBE) | µg/L | N/A | <0.5 | <1 | <20 | <1 | <20 |
| Benzene | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| Toluene | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| Ethylbenzene | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| o-Xylene | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| p/m-Xylene | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| Trichloroethylene (TCE) | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| Tetrachloroethylene (PCE) | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| 1,1,1,2-Tetrachloroethane | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| 1,1,1-Trichloroethane | µg/L | N/A | 4.9 | 3.7 | <10 | 1.4 | <10 |
| 1,1,2,2-Tetrachloroethane | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| 1,1,2-Trichloroethane | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| 1,1-Dichloroethane | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| 1,1-Dichloroethylene | µg/L | N/A | 1.3 | 1.3 | <10 | <0.5 | <10 |
| 1,1-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| 1,2,3-Trichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| 1,2,3-Trichloropropane (1,2,3-TCP) | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| 1,2,4-Trichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| 1,2,4-Trimethylbenzene | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| 1,2-Dibromoethane | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| 1,2-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| 1,2-Dichloroethane | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| 1,2-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |

## TABLE C-13

## LYSIMETER ANALYTICAL RESULTS – SUN VALLEY

| | | | | | S-LS-05 | | |
|---|---|---|---|---|---|---|---|
| **Constituent** | **Units$^{1}$** | **Fraction** | **12/28/04** | **02/12/05** | **12/08/04** | **12/28/04** | **02/12/05** |
| 1,2-Trans-Dichloroethylene | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| 1,3,5-Trimethylbenzene | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| 1,3-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| 1,3-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| 1,4-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| 2,2-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| 2-Butanone (Methylethyl ketone) | µg/L | N/A | <1 | <1 | <20 | 85 | 670 |
| 2-Chlorotoluene | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| 2-Hexanone | µg/L | N/A | <0.5 | <0.5 | <10 | 6.5 | <10 |
| 4-Chlorotoluene | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| 4-Methyl-2-pentanone (MIBK) | µg/L | N/A | <2 | <2 | <40 | <2 | <40 |
| Acetone | µg/L | N/A | 4.5 | <2 | 56 | 290 | 2,200 |
| Acrylonitrile | µg/L | N/A | <2 | <2 | <40 | <2 | <40 |
| Allyl Chloride | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| Bromobenzene | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| Bromochloromethane | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| Bromoform | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| Carbon disulfide | µg/L | N/A | 0.57 | 2.2 | <10 | 1.8 | <10 |
| Carbon Tetrachloride | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| Chlorobenzene | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| Chloroethane | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| Chloroform | µg/L | N/A | <0.5 | <0.5 | <10 | 2.1 | <10 |
| cis-1,2-Dichloroethene | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| cis-1,3-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| Dibromochloromethane | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| Dibromomethane | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| Dichlorobromomethane | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| Dichlorodifluoromethane | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| Diethyl Ether | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| Diisopropyl Ether (DIPE) | µg/L | N/A | <2 | <2 | <40 | <2 | <40 |
| Ethanol | µg/L | N/A | <100 | <100 | <2,000 | <100 | <2,000 |
| Ethyl Methacrylate | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| Ethyl-t-Butyl Ether (ETBE) | µg/L | N/A | <2 | <2 | <40 | <2 | <40 |
| Hexachloro-1,3-Butadiene | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| Iodomethane | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| Isopropylbenzene | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| Methyl Chloride | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| Methyl Methacrylate | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |

# TABLE C-13

## LYSIMETER ANALYTICAL RESULTS – SUN VALLEY

| | | | | | S-LS-05 | | |
|---|---|---|---|---|---|---|---|
| **Constituent** | **Units$^1$** | **Fraction** | **12/28/04** | **02/12/05** | **12/08/04** | **12/28/04** | **02/12/05** |
| Methylene Chloride | µg/L | N/A | <0.5 | <0.5 | 47 | <0.5 | 22 |
| Naphthalene | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| n-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| n-Propylbenzene | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| p-Isopropyltoluene | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| sec-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| Styrene | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| t-1,4-Dichloro-2-Butene | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| Tert-Amyl-Methyl Ether (TAME) | µg/L | N/A | <2 | <2 | <40 | <2 | <40 |
| Tert-Butyl Alcohol (TBA) | µg/L | N/A | 39 | 12 | <200 | 10 | <200 |
| tert-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| Tetrahydrofuran | µg/L | N/A | <1 | <1 | <20 | <1 | <20 |
| trans-1,3-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| Trichlorofluoromethane | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| Vinyl Chloride | µg/L | N/A | <0.5 | <0.5 | <10 | <0.5 | <10 |
| **Semi-Volatile Organic Compounds** | | | | | | | |
| NOT SAMPLED | µg/L | N/A | -- | -- | -- | -- | -- |
| **Biological Parameters** | | | | | | | |
| Heterotrophic Plate Count | CFU/mL | N/A | -- | -- | -- | -- | -- |
| Total Coliforms | MPN/100 mL | N/A | -- | -- | -- | -- | -- |
| Fecal Coliform | MPN/100 mL | N/A | -- | -- | -- | -- | -- |
| E. coli | MPN/100 mL | N/A | -- | -- | -- | -- | -- |

-- indicates the constituent was not analyzed for. Analytes not detected are indicate

1. Units of measure: mg/L = milligrams per liter, µg/L = micrograms per liter, µhı

2. In cases in which the filtered concentrations exceeded the total, the differences a

# TABLE C-14

## GROUNDWATER ANALYTICAL RESULTS – SUN VALLEY

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | |
|---|---|---|---|---|
| | | | EV-10 | |
| | | | 05/25/04 | 03/15/05 |
| **General Monitoring Parameters** | | | | |
| Alkalinity, Total (as $CaCO_3$) | mg/L | N/A | 290 | 280 |
| Bicarbonate (as $CaCO_3$) | mg/L | N/A | 290 | 280 |
| Bromide | mg/L | N/A | 0.12 | 0.12 |
| Calcium | mg/L | Total | 82.3 | 93.4 |
| Carbonate (as $CaCO_3$) | mg/L | N/A | <1 | <1 |
| Chloride | mg/L | N/A | 25 | 26 |
| Chemical Oxygen Demand | mg/L | N/A | 5 | 5.1 |
| Fluoride | mg/L | N/A | 0.41 | 0.7 |
| Hardness (as $CaCO_3$) | mg/L | Total | 310 | 320 |
| Hydroxide (as $CaCO_3$) | mg/L | N/A | <1 | <1 |
| Magnesium | mg/L | Total | 22.8 | 23.1 |
| MBAS (Surfactants) | mg/L | N/A | < 0.1 | <0.1 |
| Nitrate (as N) | mg/L | N/A | 2.1 | 1.7 |
| Nitrite (as N) | mg/L | N/A | <0.1 | <0.1 |
| Total Kjeldahl Nitrogen | mg/L | Total | 0.14 | <0.5 |
| Carbon, Total Organic | mg/L | N/A | 1.2 | 1.3 |
| Carbon, Dissolved Organic | mg/L | N/A | 3.4 | 3.4 |
| Nitrogen, Organic | mg/L | N/A | <0.5 | <0.5 |
| Ammonia-Nitrogen | mg/L | Total | <0.1 | <0.1 |
| pH | pH units | N/A | 7.21 | 7.09 |
| Phosphorus | mg/L | Dissolved | 0.051 | 0.045 |
| Phosphorus | mg/L | Total | 0.11 | 0.44 |
| Potassium | mg/L | Total | 4.86 | 4.88 |
| Sodium | mg/L | Total | 34.9 | 33.2 |
| Specific Conductance | µmhos/cm | N/A | 710 | 670 |
| Sulfate | mg/L | N/A | 190 | 60 |
| Total Dissolved Solids | mg/L | N/A | 430 | 420 |
| Total Suspended Solids | mg/L | N/A | 14 | 1.5 |
| Turbidity | NTU | N/A | 63 | 23 |
| **Metals[2]** | | | | |
| Aluminum | µg/L | Dissolved | <50 | <25 |
| Aluminum | µg/L | Total | <50 | <25 |
| Antimony | µg/L | Dissolved | <1 | <1 |
| Antimony | µg/L | Total | <1 | <1 |

## TABLE C-14

## GROUNDWATER ANALYTICAL RESULTS – SUN VALLEY

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | |
|---|---|---|---|---|
| | | | EV-10 | |
| | | | 05/25/04 | 03/15/05 |
| Arsenic | µg/L | Dissolved | <0.5 | 0.879 |
| Arsenic | µg/L | Total | <0.5 | 0.849 |
| Barium | µg/L | Dissolved | 91 | 88.6 |
| Barium | µg/L | Total | 105 | 96.9 |
| Beryllium | µg/L | Dissolved | <1 | <1 |
| Beryllium | µg/L | Total | <1 | <1 |
| Boron | µg/L | Dissolved | 178 | 134 |
| Boron | µg/L | Total | 188 | 131 |
| Cadmium | µg/L | Dissolved | <0.2 | <0.2 |
| Cadmium | µg/L | Total | <0.2 | <0.2 |
| Chromium | µg/L | Dissolved | 1.17 | <1 |
| Chromium | µg/L | Total | 1.78 | <1 |
| Chromium, Hexavalent | µg/L | Dissolved | 0.23 | 0.26 |
| Cobalt | µg/L | Dissolved | <1 | <1 |
| Cobalt | µg/L | Total | <1 | <1 |
| Copper | µg/L | Dissolved | 1.03 | 1.13 |
| Copper | µg/L | Total | 5.25 | 4 |
| Iron | µg/L | Dissolved | <100 | <100 |
| Iron | µg/L | Total | 3,990 | 2,180 |
| Lead | µg/L | Dissolved | <0.5 | <0.5 |
| Lead | µg/L | Total | 1.07 | 0.652 |
| Manganese | µg/L | Dissolved | 10.5 | 5.47 |
| Manganese | µg/L | Total | 14.9 | 9.17 |
| Mercury | µg/L | Dissolved | <0.1 | <0.1 |
| Mercury | µg/L | Total | <0.1 | <0.1 |
| Molybdenum | µg/L | Dissolved | 5.77 | 6.12 |
| Molybdenum | µg/L | Total | 6.07 | 6.29 |
| Nickel | µg/L | Dissolved | 3.7 | <2 |
| Nickel | µg/L | Total | 3.2 | <2 |
| Selenium | µg/L | Dissolved | <1 | <1 |
| Selenium | µg/L | Total | <1 | <1 |
| Silver | µg/L | Dissolved | <1 | <1 |
| Silver | µg/L | Total | <1 | <1 |
| Strontium | µg/L | Dissolved | 772 | 742 |
| Strontium | µg/L | Total | 806 | 761 |
| Thallium | µg/L | Dissolved | <1 | <1 |

## TABLE C-14

## GROUNDWATER ANALYTICAL RESULTS – SUN VALLEY

| | | | Sample Number / Date Sampled | |
|---|---|---|---|---|
| | | | EV-10 | |
| Constituent | Units$^1$ | Fraction | 05/25/04 | 03/15/05 |
| Thallium | µg/L | Total | <1 | <1 |
| Tin | µg/L | Dissolved | <1 | <1 |
| Tin | µg/L | Total | <1 | <1 |
| Titanium | µg/L | Dissolved | 2.56 | 2.09 |
| Titanium | µg/L | Total | 3.01 | 2.35 |
| Vanadium | µg/L | Dissolved | <1 | 3.19 |
| Vanadium | µg/L | Total | 2.54 | 3.87 |
| Zinc | µg/L | Dissolved | 14.2 | 61.6 |
| Zinc | µg/L | Total | 40.8 | 42.7 |
| **Other Constituents** | | | | |
| Oil and Grease | mg/L | N/A | < 1 | <1 |
| Perchlorate | µg/L | N/A | < 2 | <2 |
| N-Nitrosodimethylamine (NDMA) | ng/L | N/A | <0.01 | -- |
| Glyphosate | µg/L | N/A | -- | -- |
| 1,4-Dioxane | µg/L | N/A | -- | -- |
| 1,2-Dibromo-3-chloropropane (DBCP) | µg/L | N/A | <0.5 | <0.5 |
| **Volatile Organic Compounds** | | | | |
| Methyl Bromide | µg/L | N/A | <0.5 | <0.5 |
| Methyl-t-Butyl Ether (MTBE) | µg/L | N/A | <1 | <1 |
| Benzene | µg/L | N/A | <0.5 | <0.5 |
| Toluene | µg/L | N/A | <0.5 | <0.5 |
| Ethylbenzene | µg/L | N/A | <0.5 | <0.5 |
| o-Xylene | µg/L | N/A | <0.5 | <0.5 |
| p/m-Xylene | µg/L | N/A | <0.5 | <0.5 |
| Trichloroethylene (TCE) | µg/L | N/A | 1.2 | 1.2 |
| Tetrachloroethylene (PCE) | µg/L | N/A | 4.1 | 4.9 |
| 1,1,1,2-Tetrachloroethane | µg/L | N/A | <0.5 | <0.5 |
| 1,1,1-Trichloroethane | µg/L | N/A | <0.5 | <0.5 |
| 1,1,2,2-Tetrachloroethane | µg/L | N/A | <0.5 | <0.5 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | µg/L | N/A | <0.5 | <0.5 |
| 1,1,2-Trichloroethane | µg/L | N/A | <0.5 | <0.5 |
| 1,1-Dichloroethane | µg/L | N/A | 3.5 | 3.6 |
| 1,1-Dichloroethylene | µg/L | N/A | <0.5 | <0.5 |
| 1,1-Dichloropropene | µg/L | N/A | <0.5 | <0.5 |
| 1,2,3-Trichlorobenzene | µg/L | N/A | <0.5 | <0.5 |
| 1,2,3-Trichloropropane (1,2,3-TCP) | µg/L | N/A | <0.5 | <0.5 |

# TABLE C-14

## GROUNDWATER ANALYTICAL RESULTS – SUN VALLEY

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | |
|---|---|---|---|---|
| | | | EV-10 | |
| | | | 05/25/04 | 03/15/05 |
| 1,2,4-Trichlorobenzene | µg/L | N/A | <0.5 | <0.5 |
| 1,2,4-Trimethylbenzene | µg/L | N/A | <0.5 | <0.5 |
| 1,2-Dibromoethane | µg/L | N/A | <0.5 | <0.5 |
| 1,2-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 |
| 1,2-Dichloroethane | µg/L | N/A | <0.5 | 0.64 |
| 1,2-Dichloropropane | µg/L | N/A | <0.5 | <0.5 |
| 1,2-Trans-Dichloroethylene | µg/L | N/A | <0.5 | <0.5 |
| 1,3,5-Trimethylbenzene | µg/L | N/A | <0.5 | <0.5 |
| 1,3-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 |
| 1,3-Dichloropropane | µg/L | N/A | <0.5 | <0.5 |
| 1,4-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 |
| 2,2-Dichloropropane | µg/L | N/A | <0.5 | <0.5 |
| 2-Butanone (Methylethyl ketone) | µg/L | N/A | <1 | <1 |
| 2-Chlorotoluene | µg/L | N/A | <0.5 | <0.5 |
| 2-Hexanone | µg/L | N/A | <0.5 | <0.5 |
| 4-Chlorotoluene | µg/L | N/A | <0.5 | <0.5 |
| 4-Methyl-2-pentanone (MIBK) | µg/L | N/A | <2 | <2 |
| Acetone | µg/L | N/A | <2 | 2.5 |
| Acrylonitrile | µg/L | N/A | <2 | <2 |
| Allyl Chloride | µg/L | N/A | <0.5 | <0.5 |
| Bromobenzene | µg/L | N/A | <0.5 | <0.5 |
| Bromochloromethane | µg/L | N/A | <0.5 | <0.5 |
| Bromoform | µg/L | N/A | <0.5 | <0.5 |
| Carbon disulfide | µg/L | N/A | <0.5 | <0.5 |
| Carbon Tetrachloride | µg/L | N/A | <0.5 | <0.5 |
| Chlorobenzene | µg/L | N/A | <0.5 | <0.5 |
| Chloroethane | µg/L | N/A | <0.5 | <0.5 |
| Chloroform | µg/L | N/A | <0.5 | <0.5 |
| cis-1,2-Dichloroethene | µg/L | N/A | <0.5 | <0.5 |
| cis-1,3-Dichloropropene | µg/L | N/A | <0.5 | <0.5 |
| Dibromochloromethane | µg/L | N/A | <0.5 | <0.5 |
| Dibromomethane | µg/L | N/A | <0.5 | <0.5 |
| Dichlorobromomethane | µg/L | N/A | <0.5 | <0.5 |
| Dichlorodifluoromethane | µg/L | N/A | 5.1 | 5.8 |
| Diethyl Ether | µg/L | N/A | <0.5 | <0.5 |
| Diisopropyl Ether (DIPE) | µg/L | N/A | <2 | <2 |

# TABLE C-14

## GROUNDWATER ANALYTICAL RESULTS – SUN VALLEY

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | |
|---|---|---|---|---|
| | | | EV-10 | |
| | | | 05/25/04 | 03/15/05 |
| Ethanol | µg/L | N/A | <100 | <100 |
| Ethyl Methacrylate | µg/L | N/A | <0.5 | <0.5 |
| Ethyl-t-Butyl Ether (ETBE) | µg/L | N/A | <2 | <2 |
| Hexachloro-1,3-Butadiene | µg/L | N/A | <0.5 | <0.5 |
| Iodomethane | µg/L | N/A | <0.5 | <0.5 |
| Isopropylbenzene | µg/L | N/A | <0.5 | <0.5 |
| Methyl Chloride | µg/L | N/A | <0.5 | <0.5 |
| Methyl Methacrylate | µg/L | N/A | <0.5 | <0.5 |
| Methylene Chloride | µg/L | N/A | 0.81 | 0.73 |
| Naphthalene | µg/L | N/A | <0.5 | <0.5 |
| n-Butylbenzene | µg/L | N/A | <0.5 | <0.5 |
| n-Propylbenzene | µg/L | N/A | <0.5 | <0.5 |
| p-Isopropyltoluene | µg/L | N/A | <0.5 | <0.5 |
| sec-Butylbenzene | µg/L | N/A | <0.5 | <0.5 |
| Styrene | µg/L | N/A | <0.5 | <0.5 |
| t-1,4-Dichloro-2-Butene | µg/L | N/A | <0.5 | <0.5 |
| Tert-Amyl-Methyl Ether (TAME) | µg/L | N/A | <2 | <2 |
| Tert-Butyl Alcohol (TBA) | µg/L | N/A | <10 | <10 |
| tert-Butylbenzene | µg/L | N/A | <0.5 | <0.5 |
| Tetrahydrofuran | µg/L | N/A | <1 | <1 |
| trans-1,3-Dichloropropene | µg/L | N/A | <0.5 | <0.5 |
| Trichlorofluoromethane | µg/L | N/A | 1.1 | 1.1 |
| Vinyl Chloride | µg/L | N/A | <0.5 | <0.5 |
| **Semi-Volatile Organic Compounds** | | | | |
| 1-Methylnaphthalene | µg/L | N/A | <10 | -- |
| 2,4,5-Trichlorophenol | µg/L | N/A | <10 | -- |
| 2,4,6-Trichlorophenol | µg/L | N/A | <10 | -- |
| 2,4-Dichlorophenol | µg/L | N/A | <10 | -- |
| 2,4-Dimethylphenol | µg/L | N/A | <10 | -- |
| 2,4-Dinitrophenol | µg/L | N/A | <50 | -- |
| 2,4-Dinitrotoluene | µg/L | N/A | <10 | -- |
| 2,6-Dinitrotoluene | µg/L | N/A | <10 | -- |
| 2-Chloronaphthalene | µg/L | N/A | <10 | -- |
| 2-Chlorophenol | µg/L | N/A | <10 | -- |
| 2-Methylnaphthalene | µg/L | N/A | <10 | -- |
| 2-Methylphenol (o-Cresol) | µg/L | N/A | <10 | -- |

## TABLE C-14

## GROUNDWATER ANALYTICAL RESULTS – SUN VALLEY

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled<br>EV-10<br>05/25/04 | <br><br>03/15/05 |
|---|---|---|---|---|
| 2-Nitroaniline | µg/L | N/A | <10 | -- |
| 2-Nitrophenol | µg/L | N/A | <10 | -- |
| 3,3'-Dichlorobenzidine | µg/L | N/A | <25 | -- |
| 3-Nitroaniline | µg/L | N/A | <10 | -- |
| 4,6-Dinitro-2-Methylphenol | µg/L | N/A | <50 | -- |
| 4-Bromophenyl-Phenyl Ether | µg/L | N/A | <10 | -- |
| 4-Chloro-3-Methylphenol | µg/L | N/A | <10 | -- |
| 4-Chloroaniline | µg/L | N/A | <10 | -- |
| 4-Chlorophenyl-Phenyl Ether | µg/L | N/A | <10 | -- |
| 4-Methylphenol (p-Cresol) | µg/L | N/A | <10 | -- |
| 4-Nitroaniline | µg/L | N/A | <10 | -- |
| 4-Nitrophenol | µg/L | N/A | <10 | -- |
| Acenaphthene | µg/L | N/A | <10 | -- |
| Acenaphthylene | µg/L | N/A | <10 | -- |
| Aniline | µg/L | N/A | <10 | -- |
| Anthracene | µg/L | N/A | <10 | -- |
| Azobenzene | µg/L | N/A | <10 | -- |
| Benzidine | µg/L | N/A | <50 | -- |
| Benzo (a) Anthracene | µg/L | N/A | <10 | -- |
| Benzo (a) Pyrene | µg/L | N/A | <10 | -- |
| Benzo (b) Fluoranthene | µg/L | N/A | <10 | -- |
| Benzo (g,h,i) Perylene | µg/L | N/A | <10 | -- |
| Benzo (k) Fluoranthene | µg/L | N/A | <10 | -- |
| Benzoic acid | µg/L | N/A | <50 | -- |
| Benzyl alcohol | µg/L | N/A | <10 | -- |
| Bis(2-Chloroethoxy) Methane | µg/L | N/A | <10 | -- |
| Bis(2-Chloroethyl) Ether | µg/L | N/A | <25 | -- |
| Bis(2-Chloroisopropyl) Ether | µg/L | N/A | <10 | -- |
| Bis(2-Ethylhexyl) Phthalate | µg/L | N/A | <10 | -- |
| Butyl Benzyl Phthalate | µg/L | N/A | <10 | -- |
| Chrysene | µg/L | N/A | <10 | -- |
| Dibenz (a,h) Anthracene | µg/L | N/A | <10 | -- |
| Dibenzofuran | µg/L | N/A | <10 | -- |
| Diethyl Phthalate | µg/L | N/A | <10 | -- |
| Dimethyl Phthalate | µg/L | N/A | <10 | -- |
| Di-n-Butyl Phthalate | µg/L | N/A | <10 | -- |

## TABLE C-14

## GROUNDWATER ANALYTICAL RESULTS – SUN VALLEY

| Constituent | Units$^1$ | Fraction | Sample Number / Date Sampled | |
|---|---|---|---|---|
| | | | EV-10 | |
| | | | 05/25/04 | 03/15/05 |
| Di-n-Octyl Phthalate | µg/L | N/A | <10 | -- |
| Fluoranthene | µg/L | N/A | <10 | -- |
| Fluorene | µg/L | N/A | <10 | -- |
| Hexachlorobenzene | µg/L | N/A | <10 | -- |
| Hexachlorocyclopentadiene | µg/L | N/A | <25 | -- |
| Hexachloroethane | µg/L | N/A | <10 | -- |
| Indeno (1,2,3-c,d) Pyrene | µg/L | N/A | <10 | -- |
| Isophorone | µg/L | N/A | <10 | -- |
| Nitrobenzene | µg/L | N/A | <25 | -- |
| N-Nitroso-di-n-propylamine | µg/L | N/A | <10 | -- |
| N-Nitrosodiphenylamino | µg/L | N/A | <10 | -- |
| Pentachlorophenol | µg/L | N/A | <10 | -- |
| Phenanthrene | µg/L | N/A | <10 | -- |
| Phenol | µg/L | N/A | <10 | -- |
| Pyrene | µg/L | N/A | <10 | -- |
| Pyridine | µg/L | N/A | <10 | -- |
| **Biological Parameters** | | | | |
| Heterotrophic Plate Count | CFU/mL | N/A | -- | -- |
| Total Coliforms | MPN/100 mL | N/A | -- | -- |
| Fecal Coliform | MPN/100 mL | N/A | -- | -- |
| E. coli | MPN/100 mL | N/A | -- | -- |

-- indicates the constituent was not analyzed for. Analytes not detected are indicated with a "<" symbol; the associated numerica

1. Units of measure: mg/L = milligrams per liter, µg/L = micrograms per liter, µhmos/cm = microhmos per centimeter, NTU =

2. In cases in which the filtered concentrations exceeded the total, the differences are considered by the laboratory statistically ir

# TABLE C-15

## STORM WATER ANALYTICAL RESULTS – VETERANS PARK

| | | | Sample Number / Date Sampled | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | V-SW-01 | | | | | V-SW-02 | | | | |
| **Constituent** | **Units[1]** | **Fraction** | **02/02/04** | **02/18/04** | **10/20/04** | **12/28/04** | **02/11/05** | **02/02/04** | **02/18/04** | **10/20/04** | **12/28/04** | **02/11/05** |
| **General Monitoring Parameters** | | | | | | | | | | | | |
| Alkalinity, Total (as $CaCO_3$) | mg/L | N/A | 12 | 11 | 12 | 26 | 24 | 45 | 33 | 30 | 34 | 40 |
| Bicarbonate (as $CaCO_3$) | mg/L | N/A | 12 | 11 | 12 | 26 | 24 | 45 | 33 | 30 | 34 | 40 |
| Bromide | mg/L | N/A | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Calcium | mg/L | Total | 2.38 | 3.49 | 2.99 | 12.6 | 5.21 | 5.58 | 6.05 | 11.1 | 19.2 | 7.78 |
| Carbonate (as $CaCO_3$) | mg/L | N/A | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Chloride | mg/L | N/A | 1.6 | 3.4 | 5.4 | 26 | 7.3 | 9.4 | 8.5 | 22 | 31 | 5.2 |
| Chemical Oxygen Demand | mg/L | N/A | 62 | 140 | 53 | 530 | 250 | 410 | 420 | 150 | 690 | 270 |
| Fluoride | mg/L | N/A | <0.1 | <0.1 | <0.1 | 0.17 | <0.1 | 0.16 | 0.24 | 0.32 | 0.46 | <0.1 |
| Hardness (as $CaCO_3$) | mg/L | Total | 10 | 14 | 30 | 64 | 38 | 22 | 72 | 80 | 96 | 58 |
| Hydroxide (as $CaCO_3$) | mg/L | N/A | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Magnesium | mg/L | Total | 0.534 | 0.737 | 0.89 | 5.99 | 1.3 | 2.79 | 2 | 4.31 | 7.8 | 2.33 |
| MBAS (Surfactants) | mg/L | N/A | 0.24 | 0.77 | 0.3 | 1.1 | 0.55 | 0.11 | 0.69 | 0.28 | 0.77 | 0.37 |
| Nitrate (as N) | mg/L | N/A | 0.22 | 0.34 | 0.26 | 0.95 | 0.11 | 0.41 | 0.89 | 0.91 | 1.9 | <0.1 |
| Nitrite (as N) | mg/L | N/A | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total Kjeldahl Nitrogen | mg/L | Total | 2.5 | 2.9 | 2.8 | 7.1 | 10 | 4.6 | 6 | 4.2 | 6.6 | 6.2 |
| Carbon, Total Organic | mg/L | N/A | 14 | 26 | 10 | 180 | 47 | 160 | 150 | 16 | 180 | 65 |
| Carbon, Dissolved Organic | mg/L | N/A | 12 | 26 | 13 | 160 | 43 | 150 | 150 | 17 | 160 | 50 |
| Nitrogen, Organic | mg/L | N/A | 1.9 | 1.4 | 2.2 | 5.5 | 9.1 | 4 | 4.9 | 3.3 | 4.8 | 6 |
| Ammonia-Nitrogen | mg/L | Total | 0.6 | 1.5 | 0.63 | 1.6 | 0.91 | 0.63 | 1.1 | 0.91 | 1.8 | 0.21 |
| pH | pH units | N/A | 6.77 | 7.01 | 5.92 | 6.33 | 6.04 | 6.68 | 6.61 | 6.3 | 6.62 | 6.3 |
| Phosphorus | mg/L | Dissolved | 0.26 | 0.22 | 0.39 | 1.4 | 0.69 | 0.5 | 0.47 | 0.72 | 1.2 | 0.71 |
| Phosphorus | mg/L | Total | 0.29 | 0.52 | 0.64 | 1.9 | 0.73 | 0.51 | 5.9 | 0.75 | 2.1 | 1.3 |
| Potassium | mg/L | Total | 2.96 | 3.77 | 5.67 | 21.2 | 8.8 | 31.3 | 24.1 | 6.34 | 27.4 | 12.6 |
| Sodium | mg/L | Total | 1.26 | 2.88 | 3.74 | 14.5 | 3.59 | 7.9 | 5.91 | 21 | 26.8 | 5.27 |
| Specific Conductance | µmhos/cm | N/A | 40 | 68 | 64 | 260 | 82 | 190 | 180 | 220 | 390 | 110 |
| Sulfate | mg/L | N/A | 2.6 | 4.1 | 4.2 | 15 | 2.3 | 13 | 9.3 | 25 | 34 | 2.9 |
| Total Dissolved Solids | mg/L | N/A | 20 | 68 | 93 | 290 | 94 | 170 | 290 | 130 | 470 | 140 |
| Total Suspended Solids | mg/L | N/A | 22 | 72 | 20 | 180 | 390 | 42 | 89 | 210 | 130 | 210 |
| Turbidity | NTU | N/A | 13 | 31 | 18 | 55 | 51 | 28 | 54 | 52 | 84 | 74 |
| **Metals[2]** | | | | | | | | | | | | |
| Aluminum | µg/L | Dissolved | <50 | <50 | <25 | 67.7 | <25 | <50 | 86.4 | 80.3 | 120 | 53.2 |
| Aluminum | µg/L | Total | 318 | 707 | 302 | 2,140 | 1,310 | 491 | 948 | 2,050 | 2,740 | 626 |
| Antimony | µg/L | Dissolved | <1 | 1.24 | <1 | <1 | 1.16 | <1 | 1.57 | 1.51 | <1 | <1 |

# TABLE C-15

## STORM WATER ANALYTICAL RESULTS – VETERANS PARK

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | V-SW-01 | | | | | V-SW-02 | | | | |
| | | | 02/02/04 | 02/18/04 | 10/20/04 | 12/28/04 | 02/11/05 | 02/02/04 | 02/18/04 | 10/20/04 | 12/28/04 | 02/11/05 |
| Antimony | µg/L | Total | <1 | 1.79 | 1.04 | <1 | 2.22 | <1 | 2.34 | 1.46 | <1 | 1.47 |
| Arsenic | µg/L | Dissolved | <0.5 | <0.5 | <0.5 | 1.03 | <0.5 | <0.5 | <0.5 | <0.5 | 1.94 | 1.01 |
| Arsenic | µg/L | Total | 0.55 | <0.5 | <0.5 | 1.79 | 0.809 | 0.935 | 0.584 | 1.17 | 2.54 | 1.15 |
| Barium | µg/L | Dissolved | 3.94 | 8.1 | 4.23 | 23.4 | 11.9 | 11 | 125 | 18 | 35.3 | 14.3 |
| Barium | µg/L | Total | 15.1 | 30.6 | 13 | 64.3 | 46.4 | 20.6 | 41 | 72.7 | 73.3 | 28.9 |
| Beryllium | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Beryllium | µg/L | Total | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Boron | µg/L | Dissolved | 55.3 | <50 | <50 | 80.3 | 58.2 | 138 | 135 | 70 | 120 | 92 |
| Boron | µg/L | Total | <50 | <50 | <50 | 81.3 | <50 | 142 | 119 | 67.8 | 178 | 120 |
| Cadmium | µg/L | Dissolved | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | 0.316 | <0.2 |
| Cadmium | µg/L | Total | <0.2 | 0.214 | <0.2 | 0.513 | 0.413 | <0.2 | 0.291 | 0.51 | 0.608 | 0.221 |
| Chromium | µg/L | Dissolved | <1 | <1 | 1.45 | 3.12 | <1 | 2.01 | 2.35 | 2.2 | 4.66 | 1.3 |
| Chromium | µg/L | Total | 1.24 | 3.71 | 2.16 | 8.7 | 6.84 | 3.24 | 5.85 | 7.49 | 12.1 | 3 |
| Chromium, Hexavalent | µg/L | Dissolved | 0.45 | <0.2 | 0.56 | 0.67 | 0.43 | 1.4 | 0.34 | 1.3 | 0.72 | 0.29 |
| Cobalt | µg/L | Dissolved | <1 | <1 | <1 | 1.11 | <1 | <1 | <1 | <1 | 1.72 | <1 |
| Cobalt | µg/L | Total | <1 | <1 | <1 | 2.87 | 1.27 | <1 | 1.23 | 2 | 3.62 | <1 |
| Copper | µg/L | Dissolved | 7.37 | 12.4 | 9.87 | 19.6 | 24.1 | 33.8 | 32.5 | 8.77 | 20.6 | 19.4 |
| Copper | µg/L | Total | 12.3 | 20.3 | 11.4 | 45.9 | 32.3 | 40.2 | 43 | 23 | 52.3 | 24.1 |
| Iron | µg/L | Dissolved | 190 | 174 | <100 | 406 | 294 | 227 | 301 | 132 | 406 | 222 |
| Iron | µg/L | Total | 588 | 1,220 | 544 | 3,630 | 2,600 | 815 | 1,440 | 3,310 | 4,220 | 1,110 |
| Lead | µg/L | Dissolved | <0.5 | 0.613 | 0.578 | 3.41 | 1.42 | 0.954 | 1.66 | 2.89 | 3.3 | 1.85 |
| Lead | µg/L | Total | 3.96 | 7.87 | 4.63 | 27.8 | 22.9 | 4.59 | 10.7 | 22.6 | 16.7 | 8.46 |
| Manganese | µg/L | Dissolved | 4.92 | 3.46 | 13.5 | 99.2 | 24.9 | 22.6 | 33.5 | 4.8 | 101 | 14.5 |
| Manganese | µg/L | Total | 26.8 | 42.7 | 28.2 | 170 | 67.5 | 40.1 | 58.6 | 84.4 | 166 | 33.6 |
| Mercury | µg/L | Dissolved | <0.1 | 0.111 | <0.1 | <0.1 | <0.1 | <0.1 | 0.117 | <0.1 | <0.1 | <0.1 |
| Mercury | µg/L | Total | <0.1 | 0.138 | <0.1 | <0.1 | <0.1 | <0.1 | 0.161 | <0.1 | <0.1 | <0.1 |
| Molybdenum | µg/L | Dissolved | <1 | 1.62 | 1.27 | 1.47 | 1.71 | <1 | 2.06 | 1.83 | 2.41 | 2.83 |
| Molybdenum | µg/L | Total | <1 | 1.79 | 1.24 | 2.19 | 2.4 | <1 | 2.46 | 1.97 | 3.45 | 3.11 |
| Nickel | µg/L | Dissolved | <2 | 3.5 | 2.2 | 5.1 | 3.6 | 2.9 | 4.5 | 2.4 | 6.3 | 2.6 |
| Nickel | µg/L | Total | 2.6 | 5.3 | 2.5 | 8.8 | 6.9 | 3.7 | 6.5 | 6.6 | 9.9 | 3.4 |
| Selenium | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Selenium | µg/L | Total | 1.12 | <1 | <1 | <1 | 1.28 | <1 | <1 | <1 | <1 | <1 |
| Silver | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Silver | µg/L | Total | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Strontium | µg/L | Dissolved | 15.9 | 22.7 | 22 | 95.2 | 32.5 | 42 | 40.6 | 105 | 157 | 56.4 |

# TABLE C-15

## STORM WATER ANALYTICAL RESULTS – VETERANS PARK

| | | | Sample Number / Date Sampled | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | V-SW-01 | | | | | V-SW-02 | | | | |
| Constituent | Units[1] | Fraction | 02/02/04 | 02/18/04 | 10/20/04 | 12/28/04 | 02/11/05 | 02/02/04 | 02/18/04 | 10/20/04 | 12/28/04 | 02/11/05 |
| Strontium | µg/L | Total | 20.1 | 27.9 | 22.7 | 115 | 39.2 | 47.4 | 50.9 | 124 | 175 | 61.3 |
| Thallium | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Thallium | µg/L | Total | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Tin | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Tin | µg/L | Total | <1 | <1 | <1 | 3.5 | <1 | <1 | <1 | <1 | <1 | <1 |
| Titanium | µg/L | Dissolved | 2.15 | 3.32 | 2.77 | 4.97 | 3.73 | 9.25 | 7.31 | 5.86 | 5.98 | 5.47 |
| Titanium | µg/L | Total | 20.4 | 49.6 | 23.1 | 160 | 78.9 | 39 | 67.7 | 172 | 209 | 41.5 |
| Vanadium | µg/L | Dissolved | 2.47 | 3.45 | 3.23 | 3.11 | 1.15 | 2.23 | 4.08 | 3.85 | 5.23 | 1.83 |
| Vanadium | µg/L | Total | 3.46 | 6.21 | 3.97 | 10.6 | 4.62 | 3.74 | 7.76 | 12.5 | 15 | 3.68 |
| Zinc | µg/L | Dissolved | 38.2 | 45.1 | 52.8 | 114 | 56.4 | 54.1 | 207 | 34.5 | 104 | 46.1 |
| Zinc | µg/L | Total | 70.1 | 73.6 | 59.4 | 221 | 117 | 86.3 | 115 | 139 | 157 | 73.5 |
| **Other Constituents** | | | | | | | | | | | | |
| Oil and Grease | mg/L | N/A | 2 | 15 | 1.5 | 5 | 5.1 | 2.1 | 5.7 | 3.2 | 2.2 | 6.1 |
| Perchlorate | µg/L | N/A | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| N-Nitrosodimethylamine (NDMA) | ng/L | N/A | <2 | -- | -- | -- | -- | <2 | -- | -- | -- | -- |
| Glyphosate | µg/L | N/A | -- | 16.2 | <2.2 | <1.2 | -- | -- | <6 | <1.2 | <1.2 | -- |
| 1,4-Dioxane | µg/L | N/A | <2 | -- | -- | -- | -- | <2 | -- | -- | -- | -- |
| 1,2-Dibromo-3-chloropropane (DBCP) | µg/L | N/A | <0.02 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Volatile Organic Compounds** | | | | | | | | | | | | |
| Methyl Bromide | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl-t-Butyl Ether (MTBE) | µg/L | N/A | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Benzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Toluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| o-Xylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| p/m-Xylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Trichloroethylene (TCE) | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Tetrachloroethylene (PCE) | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,1,2-Tetrachloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,1-Trichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2,2-Tetrachloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2-Trichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloroethylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

# TABLE C-15

## STORM WATER ANALYTICAL RESULTS – VETERANS PARK

| | | | Sample Number / Date Sampled | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | V-SW-01 | | | | | V-SW-02 | | | | |
| Constituent | Units[1] | Fraction | 02/02/04 | 02/18/04 | 10/20/04 | 12/28/04 | 02/11/05 | 02/02/04 | 02/18/04 | 10/20/04 | 12/28/04 | 02/11/05 |
| 1,1-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,3-Trichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,3-Trichloropropane (1,2,3-TCP) | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,4-Trichlorobenzene | µg/L | N/A | <0.5 | <10 | <0.5 | <0.5 | <0.5 | <10 | <10 | <0.5 | <0.5 | <0.5 |
| 1,2,4-Trimethylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dibromoethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichlorobenzene | µg/L | N/A | <0.5 | <10 | <0.5 | <0.5 | <0.5 | <0.5 | <10 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Trans-Dichloroethylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3,5-Trimethylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <10 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,4-Dichlorobenzene | µg/L | N/A | <0.5 | <10 | <0.5 | <0.5 | <0.5 | <10 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2,2-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Butanone (Methylethyl ketone) | µg/L | N/A | <1 | <1 | <1 | 2.9 | 1.5 | <1 | <1 | <1 | 4.3 | <1 |
| 2-Chlorotoluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Hexanone | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 4-Chlorotoluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 4-Methyl-2-pentanone (MIBK) | µg/L | N/A | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Acetone | µg/L | N/A | 14 | 11 | 5.8 | 19 | 10 | 4.6 | 13 | 2.6 | 18 | 7.5 |
| Acrylonitrile | µg/L | N/A | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Allyl Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromochloromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromoform | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Carbon disulfide | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Carbon Tetrachloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chloroform | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| cis-1,2-Dichloroethene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| cis-1,3-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dibromochloromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.69 | <0.5 | <0.5 |
| Dibromomethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

## TABLE C-15

## STORM WATER ANALYTICAL RESULTS – VETERANS PARK

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | V-SW-01 | | | | | V-SW-02 | | | | |
| | | | 02/02/04 | 02/18/04 | 10/20/04 | 12/28/04 | 02/11/05 | 02/02/04 | 02/18/04 | 10/20/04 | 12/28/04 | 02/11/05 |
| Dichlorobromomethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.51 | <0.5 | <0.5 |
| Dichlorodifluoromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Diethyl Ether | µg/L | N/A | <0.5 | <0.5 | <0.5 | 0.97 | <0.5 | <0.5 | <0.5 | <0.5 | 0.71 | <0.5 |
| Diisopropyl Ether (DIPE) | µg/L | N/A | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Ethanol | µg/L | N/A | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | 250 | 150 |
| Ethyl Methacrylate | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethyl-t-Butyl Ether (ETBE) | µg/L | N/A | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Hexachloro-1,3-Butadiene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Iodomethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Isopropylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl Methacrylate | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methylene Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Naphthalene | µg/L | N/A | <10 | <0.5 | <0.5 | <0.5 | <0.5 | <10 | <0.5 | <0.5 | <0.5 | <0.5 |
| n-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| n-Propylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| p-Isopropyltoluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| sec-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Styrene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| t-1,4-Dichloro-2-Butene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Tert-Amyl-Methyl Ether (TAME) | µg/L | N/A | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Tert-Butyl Alcohol (TBA) | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| tert-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Tetrahydrofuran | µg/L | N/A | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| trans-1,3-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Trichlorofluoromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Vinyl Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Semi-Volatile Organic Compounds** | | | | | | | | | | | | |
| 1-Methylnaphthalene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| 2,4,5-Trichlorophenol | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| 2,4,6-Trichlorophenol | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| 2,4-Dichlorophenol | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| 2,4-Dimethylphenol | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| 2,4-Dinitrophenol | µg/L | N/A | <50 | <50 | -- | -- | -- | <50 | <50 | -- | -- | -- |
| 2,4-Dinitrotoluene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |

# TABLE C-15

## STORM WATER ANALYTICAL RESULTS – VETERANS PARK

| | | | Sample Number / Date Sampled | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | V-SW-01 | | | | | V-SW-02 | | | | |
| **Constituent** | **Units[1]** | **Fraction** | **02/02/04** | **02/18/04** | **10/20/04** | **12/28/04** | **02/11/05** | **02/02/04** | **02/18/04** | **10/20/04** | **12/28/04** | **02/11/05** |
| 2,6-Dinitrotoluene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| 2-Chloronaphthalene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| 2-Chlorophenol | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| 2-Methylnaphthalene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| 2-Methylphenol (o-Cresol) | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| 2-Nitroaniline | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| 2-Nitrophenol | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| 3,3'-Dichlorobenzidine | µg/L | N/A | <25 | <25 | -- | -- | -- | <25 | <25 | -- | -- | -- |
| 3-Nitroaniline | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| 4,6-Dinitro-2-Methylphenol | µg/L | N/A | <50 | <50 | -- | -- | -- | <50 | <50 | -- | -- | -- |
| 4-Bromophenyl-Phenyl Ether | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| 4-Chloro-3-Methylphenol | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| 4-Chloroaniline | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| 4-Chlorophenyl-Phenyl Ether | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| 4-Methylphenol (p-Cresol) | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| 4-Nitroaniline | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| 4-Nitrophenol | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Acenaphthene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Acenaphthylene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Aniline | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Anthracene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Azobenzene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Benzidine | µg/L | N/A | <50 | <50 | -- | -- | -- | <50 | <50 | -- | -- | -- |
| Benzo (a) Anthracene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Benzo (a) Pyrene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Benzo (b) Fluoranthene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Benzo (g,h,i) Perylene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Benzo (k) Fluoranthene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Benzoic acid | µg/L | N/A | <50 | <50 | -- | -- | -- | <50 | <50 | -- | -- | -- |
| Benzyl alcohol | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Bis(2-Chloroethoxy) Methane | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Bis(2-Chloroethyl) Ether | µg/L | N/A | <25 | <25 | -- | -- | -- | <25 | <25 | -- | -- | -- |
| Bis(2-Chloroisopropyl) Ether | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Bis(2-Ethylhexyl) Phthalate | µg/L | N/A | <10 | 18 | -- | -- | -- | <10 | 20 | -- | -- | -- |
| Butyl Benzyl Phthalate | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |

# TABLE C-15

## STORM WATER ANALYTICAL RESULTS – VETERANS PARK

| | | | Sample Number / Date Sampled | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | V-SW-01 | | | | | V-SW-02 | | | | |
| **Constituent** | **Units[1]** | **Fraction** | **02/02/04** | **02/18/04** | **10/20/04** | **12/28/04** | **02/11/05** | **02/02/04** | **02/18/04** | **10/20/04** | **12/28/04** | **02/11/05** |
| Chrysene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Dibenz (a,h) Anthracene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Dibenzofuran | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Diethyl Phthalate | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Dimethyl Phthalate | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Di-n-Butyl Phthalate | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Di-n-Octyl Phthalate | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Fluoranthene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Fluorene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Hexachlorobenzene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Hexachlorocyclopentadiene | µg/L | N/A | <25 | <25 | -- | -- | -- | <25 | <25 | -- | -- | -- |
| Hexachloroethane | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Indeno (1,2,3-c,d) Pyrene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Isophorone | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Nitrobenzene | µg/L | N/A | <25 | <25 | -- | -- | -- | <25 | <25 | -- | -- | -- |
| N-Nitroso-di-n-propylamine | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| N-Nitrosodiphenylamino | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Pentachlorophenol | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Phenanthrene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Phenol | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Pyrene | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| Pyridine | µg/L | N/A | <10 | <10 | -- | -- | -- | <10 | <10 | -- | -- | -- |
| **Biological Parameters** | | | | | | | | | | | | |
| Heterotrophic Plate Count | CFU/mL | N/A | >3,000 | -- | -- | -- | -- | >3,000 | -- | -- | -- | -- |
| Total Coliforms | MPN/100 mL | N/A | 30,000 | -- | -- | -- | -- | 30,000 | -- | -- | -- | -- |
| Fecal Coliform | MPN/100 mL | N/A | <200 | -- | -- | -- | -- | 700 | -- | -- | -- | -- |
| E. coli | MPN/100 mL | N/A | 200 | -- | -- | -- | -- | 100 | -- | -- | -- | -- |

-- indicates the constituent was not analyzed for.  Analytes not detected are indicated with a "<" symbol; the associated numerical value is the detection limit.

1. Units of measure:  mg/L = milligrams per liter, µg/L = micrograms per liter, µhmos/cm = microhmos per centimeter, NTU = Nephelometric Turbidity Unit.
2. In cases in which the filtered concentrations exceeded the total, the differences are considered by the laboratory statistically insignificant and can be attributed to the variability inherent with the analytical method.

# TABLE C-16

## LYSIMETER ANALYTICAL RESULTS – VETERANS PARK

| | | | Sample Number / Date Sampled | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | V-LS-01 | | | | | | V-LS-02 | | | | | |
| **Constituent** | **Units[1]** | **Fraction** | **02/04/04** | **02/19/04** | **10/20/04** | **12/08/04** | **12/28/04** | **02/12/05** | **02/04/04** | **02/19/04** | **10/20/04** | **12/08/04** | **12/28/04** | **02/12/05** |
| **General Monitoring Parameters** | | | | | | | | | | | | | | |
| Alkalinity, Total (as $CaCO_3$) | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Bicarbonate (as $CaCO_3$) | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Bromide | mg/L | N/A | 0.98 | 1.4 | 0.27 | 0.19 | 0.19 | 0.13 | 1.6 | 2.2 | 1 | 0.86 | 0.66 | 0.66 |
| Calcium | mg/L | Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Carbonate (as $CaCO_3$) | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Chloride | mg/L | N/A | 240 | 240 | 130 | 120 | 99 | 12 | 430 | 440 | 230 | 210 | 200 | 180 |
| Chemical Oxygen Demand | mg/L | N/A | <5 | 13 | 20 | 13 | 23 | 13 | 69 | 72 | 250 | 94 | 56 | 41 |
| Fluoride | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Hardness (as $CaCO_3$) | mg/L | Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Hydroxide (as $CaCO_3$) | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Magnesium | mg/L | Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MBAS (Surfactants) | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Nitrate (as N) | mg/L | N/A | 2 | 1.7 | 4.4 | 3.8 | 2.4 | 1.6 | 8.7 | 8.9 | 3.9 | 2.4 | 1.4 | 0.91 |
| Nitrite (as N) | mg/L | N/A | <0.2 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.2 | <0.1 | <0.2 | <0.2 | <0.1 |
| Total Kjeldahl Nitrogen | mg/L | Total | 1.1 | 0.84 | 1.4 | 0.56 | 0.7 | 0.7 | 2.5 | 3.4 | 1.4 | 1.1 | 2 | 0.98 |
| Carbon, Total Organic | mg/L | N/A | 30 | 8.9 | 3.6 | 8.4 | 7.4 | 7.2 | 53 | 30 | 22 | 19 | 25 | 19 |
| Carbon, Dissolved Organic | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Nitrogen, Organic | mg/L | N/A | 0.54 | 0.84 | 1.4 | 0.56 | 0.7 | 0.7 | 1.9 | 3.4 | 1.4 | 1.1 | 2 | 0.98 |
| Ammonia-Nitrogen | mg/L | Total | 0.56 | <0.2 | <0.1 | <0.1 | <0.2 | <0.1 | 0.56 | <0.2 | <0.1 | <0.1 | <0.2 | <0.1 |
| pH | pH units | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Phosphorus | mg/L | Dissolved | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Phosphorus | mg/L | Total | 9 | 9.4 | <0.03 | 0.2 | 0.73 | 0.74 | 9.2 | 10 | <0.03 | 0.8 | 0.36 | 0.69 |
| Potassium | mg/L | Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Sodium | mg/L | Total | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Specific Conductance | µmhos/cm | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Sulfate | mg/L | N/A | 790 | 740 | 480 | 340 | 300 | 79 | 1,500 | 1,600 | 950 | 730 | 750 | 680 |
| Total Dissolved Solids | mg/L | N/A | 2,700 | 2,600 | 610 | 1,600 | 1,500 | 1,300 | 4,000 | 3,900 | 2,800 | 2,700 | 2,600 | 2,200 |
| Total Suspended Solids | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Turbidity | NTU | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **Metals[2]** | | | | | | | | | | | | | | |
| Aluminum | µg/L | Dissolved | <50 | <50 | <25 | <25 | <25 | <25 | <50 | <50 | <25 | <25 | <25 | <25 |
| Aluminum | µg/L | Total | <50 | <50 | <25 | <25 | <25 | <25 | <50 | <50 | <25 | <25 | <25 | <25 |
| Antimony | µg/L | Dissolved | 5.91 | 5.4 | 4.33 | 5.24 | 1.26 | 3.85 | 2.49 | 2.75 | 3.04 | 3.3 | <1 | 2.57 |
| Antimony | µg/L | Total | 5.89 | 6.36 | 4.59 | 5.09 | 1.47 | 3.99 | 2.82 | 3.06 | 3.14 | 2.96 | <1 | 2.63 |

# TABLE C-16

## LYSIMETER ANALYTICAL RESULTS – VETERANS PARK

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | V-LS-01 | | | | | | V-LS-02 | | | | | |
| | | | 02/04/04 | 02/19/04 | 10/20/04 | 12/08/04 | 12/28/04 | 02/12/05 | 02/04/04 | 02/19/04 | 10/20/04 | 12/08/04 | 12/28/04 | 02/12/05 |
| Arsenic | µg/L | Dissolved | 29 | 24.7 | 16.1 | 17.5 | 16.6 | 17.3 | 7.56 | 8.16 | 5.76 | 5.34 | 6.41 | 6.37 |
| Arsenic | µg/L | Total | 28.7 | 29.3 | 16 | 17.2 | 16.7 | 18.7 | 6.09 | 9.28 | 6.78 | 5.22 | 6.63 | 6.45 |
| Barium | µg/L | Dissolved | 34.3 | 33.2 | 24.3 | 22.6 | 18.8 | 21.4 | 51.4 | 49.3 | 49 | 51.4 | 51.4 | 60 |
| Barium | µg/L | Total | 32.7 | 39.4 | 24.8 | 24 | 19.9 | 22.5 | 51.5 | 53.5 | 49.3 | 49.4 | 53.1 | 60.2 |
| Beryllium | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Beryllium | µg/L | Total | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Boron | µg/L | Dissolved | 547 | 673 | 476 | 443 | 435 | 389 | 650 | 976 | 1,180 | 867 | 1,000 | 1,150 |
| Boron | µg/L | Total | 547 | 772 | 488 | 436 | 538 | 354 | 694 | 1,060 | 1,190 | 831 | 1,110 | 1,140 |
| Cadmium | µg/L | Dissolved | 0.401 | 0.355 | 0.25 | 0.248 | 0.23 | 0.24 | 0.277 | 0.306 | <0.2 | <0.2 | <0.2 | <0.2 |
| Cadmium | µg/L | Total | 0.352 | 0.435 | 0.259 | 0.253 | 0.247 | 0.248 | 0.29 | 0.364 | <0.2 | <0.2 | <0.2 | <0.2 |
| Chromium | µg/L | Dissolved | 2.77 | 2.41 | 2.03 | 1.91 | 1.71 | 1.93 | 1.25 | 1.18 | <1 | <1 | <1 | 1.15 |
| Chromium | µg/L | Total | 1.92 | 2.91 | 2.01 | 2.24 | 2.34 | 1.98 | <1 | 1.27 | <1 | 1.07 | 1.4 | 1.13 |
| Chromium, Hexavalent | µg/L | Dissolved | -- | 1.3 | 0.88 | 0.89 | 1 | 0.98 | -- | -- | <0.2 | <0.2 | <0.2 | <0.2 |
| Cobalt | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | 1.17 | 1.05 | <1 | <1 | <1 | <1 |
| Cobalt | µg/L | Total | <1 | <1 | <1 | <1 | <1 | <1 | 1.18 | 1.19 | <1 | <1 | <1 | <1 |
| Copper | µg/L | Dissolved | 6.49 | 6.4 | 3.26 | 3.99 | 4.68 | 5.25 | 17.4 | 20.7 | 9.03 | 10.3 | 14.6 | 16.6 |
| Copper | µg/L | Total | 6.71 | 7.76 | 3.18 | 4.1 | 4.89 | 5.05 | 17.9 | 23.6 | 9.41 | 10.5 | 15.2 | 16.4 |
| Iron | µg/L | Dissolved | 389 | 353 | 118 | 130 | 202 | 281 | 150 | 122 | <100 | <100 | 149 | 145 |
| Iron | µg/L | Total | 321 | 426 | 127 | 164 | 208 | 298 | 181 | 150 | <100 | <100 | 163 | 231 |
| Lead | µg/L | Dissolved | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Lead | µg/L | Total | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Manganese | µg/L | Dissolved | 30.1 | 34.4 | 21.4 | 14.3 | 9.08 | 20.9 | 112 | 142 | 96.6 | 129 | 179 | 128 |
| Manganese | µg/L | Total | 30.7 | 40.9 | 21 | 15.8 | 11.2 | 21.2 | 115 | 165 | 104 | 132 | 186 | 128 |
| Mercury | µg/L | Dissolved | -- | -- | -- | -- | -- | <0.1 | -- | -- | -- | -- | -- | <0.1 |
| Mercury | µg/L | Total | -- | -- | -- | -- | -- | <0.1 | -- | -- | -- | -- | -- | <0.1 |
| Molybdenum | µg/L | Dissolved | 137 | 107 | 109 | 115 | 112 | 133 | 56.5 | 48.1 | 38.4 | 36.3 | 38.6 | 39.6 |
| Molybdenum | µg/L | Total | 131 | 126 | 111 | 118 | 115 | 137 | 54.6 | 55.4 | 40.4 | 35.1 | 39.7 | 40.5 |
| Nickel | µg/L | Dissolved | 3.8 | 3.1 | <2 | <2 | <2 | 4.3 | 31 | 26 | 7.1 | 6.6 | 7.4 | 8.1 |
| Nickel | µg/L | Total | 3.6 | 3.7 | <2 | <2 | <2 | 4.6 | 31 | 30 | 7.6 | 5.9 | 7.6 | 8 |
| Selenium | µg/L | Dissolved | 17.6 | 21.3 | 7.93 | 5.13 | 3.8 | 2.84 | 54.5 | 62.7 | 16.7 | 15.7 | 14.3 | 12.1 |
| Selenium | µg/L | Total | 18.8 | 26.2 | 7.8 | 5.13 | 4.26 | 2.99 | 47.2 | 71.8 | 19.2 | 14.4 | 15.1 | 12.8 |
| Silver | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Silver | µg/L | Total | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Strontium | µg/L | Dissolved | 906 | 975 | 554 | 502 | 404 | 368 | 2,850 | 3,210 | 1,670 | 1,590 | 1,560 | 1,530 |
| Strontium | µg/L | Total | 888 | 1,190 | 546 | 520 | 419 | 376 | 2,790 | 3,610 | 1,770 | 1,520 | 1,630 | 1,540 |
| Thallium | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |

# TABLE C-16

## LYSIMETER ANALYTICAL RESULTS – VETERANS PARK

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | V-LS-01 | | | | | | V-LS-02 | | | | | |
| | | | 02/04/04 | 02/19/04 | 10/20/04 | 12/08/04 | 12/28/04 | 02/12/05 | 02/04/04 | 02/19/04 | 10/20/04 | 12/08/04 | 12/28/04 | 02/12/05 |
| Thallium | µg/L | Total | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Tin | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Tin | µg/L | Total | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Titanium | µg/L | Dissolved | 6.26 | 6.29 | 4.67 | 5.17 | 5.48 | 7.21 | 6.78 | 6.18 | 6.24 | 6.38 | 9 | 11.9 |
| Titanium | µg/L | Total | 5.28 | 7.32 | 4.69 | 4.88 | 6.31 | 7.05 | 6.62 | 6.7 | 6.33 | 6.01 | 9.84 | 11.3 |
| Vanadium | µg/L | Dissolved | 10.6 | 12 | 8.35 | 7.54 | 11.2 | 12.9 | 18.6 | 23.6 | 12 | 10.9 | 17.2 | 19.8 |
| Vanadium | µg/L | Total | 9.7 | 14.7 | 8.24 | 8.27 | 11.1 | 13.6 | 17.6 | 28 | 12.6 | 11.4 | 17.4 | 19.7 |
| Zinc | µg/L | Dissolved | 14.1 | 6.26 | <5 | 19.1 | 6.56 | 11.4 | 15.7 | 25.8 | <5 | 18.9 | 11.7 | 14.4 |
| Zinc | µg/L | Total | 9.34 | 6.52 | <5 | 27.3 | 11.6 | 15.1 | 26.2 | 18.6 | 15.5 | 18.7 | 13.2 | 13.2 |
| **Other Constituents** | | | | | | | | | | | | | | |
| Oil and Grease | mg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Perchlorate | µg/L | N/A | -- | -- | <2 | -- | <2 | -- | -- | -- | <2 | -- | <2 | -- |
| N-Nitrosodimethylamine (NDMA) | ng/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Glyphosate | µg/L | N/A | -- | <1.2 | <1.2 | -- | -- | -- | -- | -- | <1.2 | -- | -- | -- |
| 1,4-Dioxane | µg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 1,2-Dibromo-3-chloropropane (DBCP) | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Volatile Organic Compounds** | | | | | | | | | | | | | | |
| Methyl Bromide | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl-t-Butyl Ether (MTBE) | µg/L | N/A | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Benzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Toluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| o-Xylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| p/m-Xylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Trichloroethylene (TCE) | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Tetrachloroethylene (PCE) | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,1,2-Tetrachloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,1-Trichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2,2-Tetrachloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2-Trichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloroethylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,3-Trichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,3-Trichloropropane (1,2,3-TCP) | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

## TABLE C-16

## LYSIMETER ANALYTICAL RESULTS – VETERANS PARK

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | V-LS-01 | | | | | | V-LS-02 | | | | | |
| | | | 02/04/04 | 02/19/04 | 10/20/04 | 12/08/04 | 12/28/04 | 02/12/05 | 02/04/04 | 02/19/04 | 10/20/04 | 12/08/04 | 12/28/04 | 02/12/05 |
| 1,2,4-Trichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,4-Trimethylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dibromoethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Trans-Dichloroethylene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3,5-Trimethylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,4-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2,2-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Butanone (Methylethyl ketone) | µg/L | N/A | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| 2-Chlorotoluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Hexanone | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 4-Chlorotoluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 4-Methyl-2-pentanone (MIBK) | µg/L | N/A | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Acetone | µg/L | N/A | <2 | <2 | <2 | <2 | <2 | 2.5 | <2 | <2 | <2 | <2 | <2 | <2 |
| Acrylonitrile | µg/L | N/A | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Allyl Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromochloromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromoform | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Carbon disulfide | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Carbon Tetrachloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chlorobenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chloroethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chloroform | µg/L | N/A | <0.5 | <0.5 | 0.6 | 0.75 | 1.7 | 1.2 | <0.5 | <0.5 | <0.5 | <0.5 | 0.72 | 0.95 |
| cis-1,2-Dichloroethene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| cis-1,3-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dibromochloromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dibromomethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dichlorobromomethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dichlorodifluoromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Diethyl Ether | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Diisopropyl Ether (DIPE) | µg/L | N/A | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |

## TABLE C-16

## LYSIMETER ANALYTICAL RESULTS – VETERANS PARK

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | V-LS-01 | | | | | | V-LS-02 | | | | | |
| | | | 02/04/04 | 02/19/04 | 10/20/04 | 12/08/04 | 12/28/04 | 02/12/05 | 02/04/04 | 02/19/04 | 10/20/04 | 12/08/04 | 12/28/04 | 02/12/05 |
| Ethanol | µg/L | N/A | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 |
| Ethyl Methacrylate | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethyl-t-Butyl Ether (ETBE) | µg/L | N/A | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Hexachloro-1,3-Butadiene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Iodomethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Isopropylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | 0.6 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.72 | <0.5 |
| Methyl Methacrylate | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methylene Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Naphthalene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| n-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| n-Propylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| p-Isopropyltoluene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| sec-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Styrene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| t-1,4-Dichloro-2-Butene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Tert-Amyl-Methyl Ether (TAME) | µg/L | N/A | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Tert-Butyl Alcohol (TBA) | µg/L | N/A | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| tert-Butylbenzene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Tetrahydrofuran | µg/L | N/A | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| trans-1,3-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Trichlorofluoromethane | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Vinyl Chloride | µg/L | N/A | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Semi-Volatile Organic Compounds** | | | | | | | | | | | | | | |
| NOT SAMPLED | µg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| **Biological Parameters** | | | | | | | | | | | | | | |
| Heterotrophic Plate Count | CFU/mL | N/A | 2,800 | -- | -- | -- | -- | -- | 6,500 | -- | -- | -- | -- | -- |
| Total Coliforms | MPN/100 mL | N/A | <20 | -- | -- | -- | -- | -- | <20 | -- | -- | -- | -- | -- |
| Fecal Coliform | MPN/100 mL | N/A | <20 | -- | -- | -- | -- | -- | <20 | -- | -- | -- | -- | -- |
| E. coli | MPN/100 mL | N/A | <20 | -- | -- | -- | -- | -- | <20 | -- | -- | -- | -- | -- |

-- indicates the constituent was not analyzed for.  Analytes not detected are indicated with a "<" symbol; the associated numerical value is the detection limit.

1. Units of measure:  mg/L = milligrams per liter, µg/L = micrograms per liter, µhmos/cm = microhmos per centimeter, NTU = Nephelometric Turbidity Unit.
2. In cases in which the filtered concentrations exceeded the total, the differences are considered by the laboratory statistically insignificant and can be attributed to the variability inherent with the analytical method.

# TABLE C-17

## GROUNDWATER ANALYTICAL RESULTS – VETERANS PARK

| Constituent | Units[1] | Fraction | V-MW-01 | | | | | V-MW-02 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 11/06/03 | 12/05/03 | 06/09/04 | 10/11/04 | 02/15/05 | 11/06/03 | 12/08/03 | 02/06/04 | 02/24/04 | 06/09/04 | 10/11/04 |
| **General Monitoring Parameters** | | | | | | | | | | | | | |
| Alkalinity, Total (as $CaCO_3$) | mg/L | N/A | 300 | -- | 1,400 | 1,400 | 1,300 | 300 | -- | 1,300 | 1,400 | 1,300 | 1,200 |
| Bicarbonate (as $CaCO_3$) | mg/L | N/A | 300 | -- | 1,400 | 1,400 | 1,300 | 300 | -- | 1,300 | 1,400 | 1,300 | 1,200 |
| Bromide | mg/L | N/A | 5.8 | -- | 7.5 | 8.2 | 6.4 | 1.5 | -- | 1.1 | 3.8 | 1.1 | 0.75 |
| Calcium | mg/L | Total | -- | 170 | 184 | 195 | 187 | -- | 22.8 | 27.9 | 27.3 | 28.8 | 34.9 |
| Carbonate (as $CaCO_3$) | mg/L | N/A | <1 | -- | <1 | <1 | <1 | <1 | -- | <1 | <1 | <1 | <1 |
| Chloride | mg/L | N/A | 1,100 | -- | 1,100 | 1,400 | 1,000 | 280 | -- | 270 | 290 | 240 | 190 |
| Chemical Oxygen Demand | mg/L | N/A | 90 | -- | 84 | 86 | 61 | 75 | -- | 15 | 36 | 33 | 25 |
| Fluoride | mg/L | N/A | 0.61 | -- | 0.36 | 0.56 | 0.25 | 0.93 | -- | 0.7 | 0.51 | 0.68 | 0.87 |
| Hardness (as $CaCO_3$) | mg/L | Total | 620 | -- | 770 | 740 | 730 | 160 | -- | 120 | 130 | 130 | 160 |
| Hydroxide (as $CaCO_3$) | mg/L | N/A | <1 | -- | <1 | <1 | <1 | <1 | -- | <1 | <1 | <1 | <1 |
| Magnesium | mg/L | Total | -- | 60.9 | 73.9 | 66.9 | 76.6 | -- | 12.1 | 13.1 | 13.4 | 12.6 | 16.8 |
| MBAS (Surfactants) | mg/L | N/A | 0.17 | -- | 0.21 | <0.1 | 0.13 | 0.13 | -- | 0.13 | 0.12 | 0.1 | <0.1 |
| Nitrate (as N) | mg/L | N/A | 3.2 | -- | 2.6 | 2.3 | 4.7 | 0.56 | -- | 0.76 | 1.3 | 1.4 | 1.4 |
| Nitrite (as N) | mg/L | N/A | <0.2 | -- | <0.1 | <0.1 | <0.2 | <0.2 | -- | <0.2 | <0.1 | <0.1 | <0.1 |
| Total Kjeldahl Nitrogen | mg/L | Total | 0.7 | -- | 0.84 | 0.42 | 0.7 | 0.98 | -- | 0.7 | 0.7 | 0.7 | <0.5 |
| Carbon, Total Organic | mg/L | N/A | 14 | -- | 10 | 3.7 | 10 | 14 | -- | 32 | 14 | 15 | 7 |
| Carbon, Dissolved Organic | mg/L | N/A | 12 | -- | 8.9 | 8.4 | 17 | 13 | -- | 30 | 11 | 11 | 10 |
| Nitrogen, Organic | mg/L | N/A | 0.7 | -- | 0.84 | <0.5 | 0.7 | 0.98 | -- | 0.7 | 0.7 | 0.7 | <0.5 |
| Ammonia-Nitrogen | mg/L | Total | <0.1 | -- | <0.1 | <0.1 | <0.1 | <0.1 | -- | <0.1 | <0.1 | <0.1 | <0.1 |
| pH | pH units | N/A | 7.1 | -- | 6.96 | 6.91 | 6.9 | 7.35 | -- | 7.18 | 7.18 | 7.11 | 7.07 |
| Phosphorus | mg/L | Dissolved | 0.2 | -- | 0.069 | 0.16 | 0.22 | 0.35 | -- | 0.25 | 0.25 | 0.083 | 0.2 |
| Phosphorus | mg/L | Total | 0.46 | -- | 0.17 | 7.2 | 0.8 | 0.44 | -- | 0.25 | 0.31 | 0.28 | 6.8 |
| Potassium | mg/L | Total | -- | <5 | 4.48 | 4.15 | 3.27 | -- | <5 | 3.57 | 3.51 | 3.09 | 3.12 |
| Sodium | mg/L | Total | -- | 2,320 | 1,870 | 2,040 | 1,410 | -- | 1,120 | 1,130 | 1,260 | 1,050 | 847 |
| Specific Conductance | µmhos/cm | N/A | 7,900 | -- | 8,000 | 9,000 | 6,100 | 4,600 | -- | 4,300 | 3,800 | 4,200 | 3,500 |
| Sulfate | mg/L | N/A | 1,400 | -- | 1,500 | 1,600 | 1,200 | 660 | -- | 640 | 720 | 690 | 430 |
| Total Dissolved Solids | mg/L | N/A | 5,500 | -- | 6,000 | 6,000 | 4,200 | 2,900 | -- | 2,800 | 2,900 | 2,600 | 2,200 |
| Total Suspended Solids | mg/L | N/A | -- | 4.9 | 43 | 5 | 4.1 | -- | 9.1 | 12 | 28 | 3.8 | <1 |
| Turbidity | NTU | N/A | -- | 8.1 | 12 | 9.5 | 4 | -- | 8.2 | 6.3 | 16 | 3.6 | 3.1 |
| **Metals[2]** | | | | | | | | | | | | | |
| Aluminum | µg/L | Dissolved | -- | <50 | 65.3 | <25 | <25 | -- | <50 | <50 | <50 | <50 | <25 |
| Aluminum | µg/L | Total | -- | 340 | 612 | 147 | 108 | -- | 487 | 420 | 805 | 152 | 51.4 |
| Antimony | µg/L | Dissolved | -- | 1.11 | 1 | <1 | <1 | -- | 1.19 | <1 | 1.15 | <1 | <1 |

# TABLE C-17

## GROUNDWATER ANALYTICAL RESULTS – VETERANS PARK

| Constituent | Units[1] | Fraction | V-MW-01 | | | | | V-MW-02 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 11/06/03 | 12/05/03 | 06/09/04 | 10/11/04 | 02/15/05 | 11/06/03 | 12/08/03 | 02/06/04 | 02/24/04 | 06/09/04 | 10/11/04 |
| Antimony | µg/L | Total | -- | 1.31 | <1 | <1 | <1 | -- | 1.2 | <1 | <1 | 1.08 | <1 |
| Arsenic | µg/L | Dissolved | -- | 2.41 | 3.99 | 19.6 | 8.63 | -- | 10.6 | 10.1 | 7.94 | 9.69 | 8.47 |
| Arsenic | µg/L | Total | -- | 4.85 | 4.92 | 19.6 | 8.65 | -- | 12.1 | 11.4 | 9.14 | 10.1 | 7.94 |
| Barium | µg/L | Dissolved | -- | 46.8 | 51 | 62.7 | 56.1 | -- | 15.5 | 23.6 | 18.5 | 22 | 25.2 |
| Barium | µg/L | Total | -- | 48.5 | 54.3 | 63.8 | 56.9 | -- | 19.6 | 28.7 | 22.9 | 20.5 | 24.5 |
| Beryllium | µg/L | Dissolved | -- | <1 | <1 | <1 | <1 | -- | <1 | <1 | <1 | <1 | <1 |
| Beryllium | µg/L | Total | -- | <1 | <1 | <1 | <1 | -- | <1 | <1 | <1 | <1 | <1 |
| Boron | µg/L | Dissolved | -- | 4,100 | 4,410 | 3,960 | 3,380 | -- | 2,860 | 2,470 | 2,990 | 2,300 | 1,840 |
| Boron | µg/L | Total | -- | 4,650 | 4,660 | 3,930 | 3,440 | -- | 3,130 | 2,210 | 2,980 | 2,330 | 1,780 |
| Cadmium | µg/L | Dissolved | -- | <0.2 | 0.285 | 0.235 | 0.2 | -- | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Cadmium | µg/L | Total | -- | <0.2 | 0.277 | 0.206 | <0.2 | -- | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Chromium | µg/L | Dissolved | -- | 3.09 | 2.18 | 1.28 | 1.03 | -- | 5.95 | 3.77 | 3.57 | 1.9 | 1.44 |
| Chromium | µg/L | Total | -- | 2.34 | 3.66 | <1 | 1.48 | -- | 5.58 | 5.45 | 4.7 | 2.12 | <1 |
| Chromium, Hexavalent | µg/L | Dissolved | 0.27 | -- | <0.2 | <0.2 | <0.2 | 2.9 | -- | 1.9 | 1.3 | 0.78 | 0.54 |
| Cobalt | µg/L | Dissolved | -- | <1 | <1 | <1 | <1 | -- | <1 | <1 | <1 | <1 | <1 |
| Cobalt | µg/L | Total | -- | <1 | <1 | <1 | <1 | -- | <1 | <1 | <1 | <1 | <1 |
| Copper | µg/L | Dissolved | -- | 3.58 | 5.04 | 2.93 | 3.54 | -- | 6.74 | 4.45 | 4.82 | 4.27 | 2.84 |
| Copper | µg/L | Total | -- | 4.89 | 6.2 | 2.72 | 3.03 | -- | 7.94 | 6.32 | 7.23 | 4.91 | 2.57 |
| Iron | µg/L | Dissolved | -- | <100 | <100 | <100 | <100 | -- | <100 | <100 | 112 | <100 | <100 |
| Iron | µg/L | Total | -- | 467 | 405 | 161 | 179 | -- | 851 | 728 | 1,290 | 144 | <100 |
| Lead | µg/L | Dissolved | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Lead | µg/L | Total | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | 0.668 | 0.61 | 0.712 | <0.5 | <0.5 |
| Manganese | µg/L | Dissolved | -- | 202 | 267 | 223 | 329 | -- | 19.9 | 47.5 | 23.4 | 17 | 6.25 |
| Manganese | µg/L | Total | -- | 229 | 277 | 225 | 354 | -- | 43.3 | 75.7 | 41.6 | 28.1 | 7.97 |
| Mercury | µg/L | Dissolved | <0.1 | -- | <0.1 | <0.1 | <0.1 | <0.1 | -- | 0.105 | <0.1 | <0.1 | <0.1 |
| Mercury | µg/L | Total | -- | <0.1 | <0.1 | <0.1 | <0.1 | -- | <0.1 | 0.118 | <0.1 | <0.1 | <0.1 |
| Molybdenum | µg/L | Dissolved | -- | 13.2 | 11.6 | 10.9 | 8.74 | -- | 35.3 | 26.7 | 22.2 | 20.1 | 14.5 |
| Molybdenum | µg/L | Total | -- | 13.6 | 11.6 | 10.7 | 8.38 | -- | 35.5 | 25.8 | 22.2 | 21.4 | 13.9 |
| Nickel | µg/L | Dissolved | -- | 5.1 | 6.5 | 6.9 | 3.6 | -- | 2.2 | <2 | <2 | <2 | <2 |
| Nickel | µg/L | Total | -- | 4.7 | 7.3 | 6.8 | 3.5 | -- | 2.6 | 2.6 | 2.6 | <2 | <2 |
| Selenium | µg/L | Dissolved | -- | 251 | 113 | 157 | 86 | -- | 17.2 | 25.1 | 33.2 | 13.6 | 12.1 |
| Selenium | µg/L | Total | -- | 236 | 159 | 154 | 82.3 | -- | 18 | 30.6 | 35.8 | 16.4 | 11.5 |
| Silver | µg/L | Dissolved | -- | <1 | <1 | <1 | <1 | -- | <1 | <1 | <1 | <1 | <1 |
| Silver | µg/L | Total | -- | <1 | <1 | <1 | <1 | -- | <1 | <1 | <1 | <1 | <1 |
| Strontium | µg/L | Dissolved | -- | 1,770 | 2,040 | 1,880 | 1,880 | -- | 472 | 490 | 468 | 503 | 621 |

## TABLE C-17

## GROUNDWATER ANALYTICAL RESULTS – VETERANS PARK

| | | | V-MW-01 | | | | | V-MW-02 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Constituent** | **Units[1]** | **Fraction** | **11/06/03** | **12/05/03** | **06/09/04** | **10/11/04** | **02/15/05** | **11/06/03** | **12/08/03** | **02/06/04** | **02/24/04** | **06/09/04** | **10/11/04** |
| Strontium | µg/L | Total | -- | 1,710 | 2,170 | 1,890 | 1,850 | -- | 466 | 512 | 476 | 590 | 598 |
| Thallium | µg/L | Dissolved | -- | <1 | <1 | <1 | <1 | -- | <1 | <1 | <1 | <1 | <1 |
| Thallium | µg/L | Total | -- | <1 | <1 | <1 | <1 | -- | <1 | <1 | <1 | <1 | <1 |
| Tin | µg/L | Dissolved | -- | <1 | <1 | <1 | <1 | -- | <1 | <1 | <1 | <1 | <1 |
| Tin | µg/L | Total | -- | <1 | <1 | <1 | <1 | -- | <1 | <1 | <1 | <1 | <1 |
| Titanium | µg/L | Dissolved | -- | 3.77 | 6.66 | 3.46 | 4.67 | -- | 3.82 | 3.99 | 4.01 | 5.08 | 2.67 |
| Titanium | µg/L | Total | -- | 29.7 | 31.4 | 11.5 | 15.1 | -- | 42.8 | 38.2 | 64.2 | 12 | 4.75 |
| Vanadium | µg/L | Dissolved | -- | 9.93 | 14.7 | 11.1 | 14.7 | -- | 59.2 | 61.1 | 44.5 | 47.8 | 35.3 |
| Vanadium | µg/L | Total | -- | 12 | 16.8 | 11.1 | 15.2 | -- | 64.5 | 64.5 | 46.8 | 48.5 | 34 |
| Zinc | µg/L | Dissolved | -- | <5 | <5 | <5 | <5 | -- | 9.64 | 9.9 | <5 | <5 | <5 |
| Zinc | µg/L | Total | -- | <5 | <5 | <5 | <5 | -- | 10.9 | 11.7 | <5 | <5 | <5 |
| **Other Constituents** | | | | | | | | | | | | | |
| Oil and Grease | mg/L | N/A | 1.2 | -- | <1 | 1.1 | <1 | <1 | -- | <1 | 3.5 | <1 | <1 |
| Perchlorate | µg/L | N/A | <4 | -- | <2 | <2 | 9 | <4 | -- | <4 | <2 | <2 | <2 |
| N-Nitrosodimethylamine (NDMA) | ng/L | N/A | <2 | -- | -- | -- | -- | <2 | -- | -- | -- | -- | -- |
| Glyphosate | µg/L | N/A | <6 | -- | <25 | -- | -- | <6 | -- | -- | -- | <25 | <1.2 |
| 1,4-Dioxane | µg/L | N/A | <2 | -- | -- | -- | -- | <2.4 | -- | -- | -- | -- | -- |
| 1,2-Dibromo-3-chloropropane (DBCP) | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.02 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| **Volatile Organic Compounds** | | | | | | | | | | | | | |
| Methyl Bromide | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.05 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl-t-Butyl Ether (MTBE) | µg/L | N/A | <1 | -- | <1 | <1 | <1 | <1 | -- | <1 | <1 | <1 | <1 |
| Benzene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Toluene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethylbenzene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| o-Xylene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| p/m-Xylene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Trichloroethylene (TCE) | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Tetrachloroethylene (PCE) | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,1,2-Tetrachloroethane | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,1-Trichloroethane | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2,2-Tetrachloroethane | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2-Trichloroethane | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloroethane | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloroethylene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |

# TABLE C-17

## GROUNDWATER ANALYTICAL RESULTS – VETERANS PARK

| Constituent | Units[1] | Fraction | V-MW-01 | | | | | V-MW-02 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 11/06/03 | 12/05/03 | 06/09/04 | 10/11/04 | 02/15/05 | 11/06/03 | 12/08/03 | 02/06/04 | 02/24/04 | 06/09/04 | 10/11/04 |
| 1,1-Dichloropropene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,3-Trichlorobenzene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,3-Trichloropropane (1,2,3-TCP) | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,4-Trichlorobenzene | µg/L | N/A | <10 | -- | <10 | <10 | <0.5 | <10 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,4-Trimethylbenzene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dibromoethane | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichlorobenzene | µg/L | N/A | <0.5 | -- | <0.5 | <10 | <0.5 | <10 | -- | <0.5 | <10 | <0.5 | <0.5 |
| 1,2-Dichloroethane | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichloropropane | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Trans-Dichloroethylene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3,5-Trimethylbenzene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3-Dichlorobenzene | µg/L | N/A | <0.5 | -- | <0.5 | <10 | <0.5 | <10 | -- | <0.5 | <10 | <0.5 | <10 |
| 1,3-Dichloropropane | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,4-Dichlorobenzene | µg/L | N/A | <10 | -- | <0.5 | <10 | <0.5 | <0.5 | -- | <0.5 | <10 | <10 | <10 |
| 2,2-Dichloropropane | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Butanone (Methylethyl ketone) | µg/L | N/A | <1 | -- | <1 | <1 | <1 | <1 | -- | <1 | <1 | <1 | <1 |
| 2-Chlorotoluene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Hexanone | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 4-Chlorotoluene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| 4-Methyl-2-pentanone (MIBK) | µg/L | N/A | <2 | -- | <2 | <2 | <2 | <2 | -- | <2 | <2 | <2 | <2 |
| Acetone | µg/L | N/A | <2 | -- | <2 | <2 | <2 | <2 | -- | 2.7 | <2 | <2 | <2 |
| Acrylonitrile | µg/L | N/A | <2 | -- | <2 | <2 | <2 | <2 | -- | <2 | <2 | <2 | <2 |
| Allyl Chloride | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromobenzene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromochloromethane | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromoform | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Carbon disulfide | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Carbon Tetrachloride | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Chlorobenzene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Chloroethane | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Chloroform | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| cis-1,2-Dichloroethene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| cis-1,3-Dichloropropene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Dibromochloromethane | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Dibromomethane | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |

## TABLE C-17

## GROUNDWATER ANALYTICAL RESULTS – VETERANS PARK

| Constituent | Units[1] | Fraction | V-MW-01 | | | | | V-MW-02 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 11/06/03 | 12/05/03 | 06/09/04 | 10/11/04 | 02/15/05 | 11/06/03 | 12/08/03 | 02/06/04 | 02/24/04 | 06/09/04 | 10/11/04 |
| Dichlorobromomethane | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Dichlorodifluoromethane | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Diethyl Ether | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Diisopropyl Ether (DIPE) | µg/L | N/A | <2 | -- | <2 | <2 | <2 | <2 | -- | <2 | <2 | <2 | <2 |
| Ethanol | µg/L | N/A | <100 | -- | <100 | <100 | <100 | <100 | -- | <100 | <100 | <100 | <100 |
| Ethyl Methacrylate | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethyl-t-Butyl Ether (ETBE) | µg/L | N/A | <2 | -- | <2 | <2 | <2 | <2 | -- | <2 | <2 | <2 | <2 |
| Hexachloro-1,3-Butadiene | µg/L | N/A | <0.5 | -- | <10 | <10 | <0.5 | <0.5 | -- | <10 | <0.5 | <10 | <0.5 |
| Iodomethane | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Isopropylbenzene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl Chloride | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl Methacrylate | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Methylene Chloride | µg/L | N/A | <0.5 | -- | <0.5 | 0.64 | 0.61 | <0.5 | -- | <0.5 | <0.5 | <0.5 | 0.66 |
| Naphthalene | µg/L | N/A | <10 | -- | <10 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <10 | <10 | <10 |
| n-Butylbenzene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| n-Propylbenzene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| p-Isopropyltoluene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| sec-Butylbenzene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Styrene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| t-1,4-Dichloro-2-Butene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Tert-Amyl-Methyl Ether (TAME) | µg/L | N/A | <2 | -- | <2 | <2 | <2 | <2 | -- | <2 | <2 | <2 | <2 |
| Tert-Butyl Alcohol (TBA) | µg/L | N/A | <10 | -- | <10 | <10 | <10 | <10 | -- | <10 | <10 | <10 | <10 |
| tert-Butylbenzene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Tetrahydrofuran | µg/L | N/A | <1 | -- | <1 | <1 | <1 | <1 | -- | <1 | <1 | <1 | <1 |
| trans-1,3-Dichloropropene | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Trichlorofluoromethane | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| Vinyl Chloride | µg/L | N/A | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 |
| **Semi-Volatile Organic Compounds** | | | | | | | | | | | | | |
| 1-Methylnaphthalene | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| 2,4,5-Trichlorophenol | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| 2,4,6-Trichlorophenol | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| 2,4-Dichlorophenol | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| 2,4-Dimethylphenol | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| 2,4-Dinitrophenol | µg/L | N/A | <50 | -- | <50 | <50 | -- | <50 | -- | <50 | <50 | <50 | <50 |
| 2,4-Dinitrotoluene | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |

# TABLE C-17

## GROUNDWATER ANALYTICAL RESULTS – VETERANS PARK

| Constituent | Units[1] | Fraction | V-MW-01 | | | | | V-MW-02 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | **11/06/03** | **12/05/03** | **06/09/04** | **10/11/04** | **02/15/05** | **11/06/03** | **12/08/03** | **02/06/04** | **02/24/04** | **06/09/04** | **10/11/04** |
| 2,6-Dinitrotoluene | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| 2-Chloronaphthalene | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| 2-Chlorophenol | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| 2-Methylnaphthalene | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| 2-Methylphenol (o-Cresol) | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| 2-Nitroaniline | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| 2-Nitrophenol | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| 3,3'-Dichlorobenzidine | µg/L | N/A | <25 | -- | <25 | <25 | -- | <25 | -- | <25 | <25 | <25 | <25 |
| 3-Nitroaniline | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| 4,6-Dinitro-2-Methylphenol | µg/L | N/A | <50 | -- | <50 | <50 | -- | <50 | -- | <50 | <50 | <50 | <50 |
| 4-Bromophenyl-Phenyl Ether | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| 4-Chloro-3-Methylphenol | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| 4-Chloroaniline | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| 4-Chlorophenyl-Phenyl Ether | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| 4-Methylphenol (p-Cresol) | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| 4-Nitroaniline | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| 4-Nitrophenol | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| Acenaphthene | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| Acenaphthylene | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| Aniline | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| Anthracene | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| Azobenzene | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| Benzidine | µg/L | N/A | <50 | -- | <50 | <50 | -- | <50 | -- | <50 | <50 | <50 | <50 |
| Benzo (a) Anthracene | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| Benzo (a) Pyrene | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| Benzo (b) Fluoranthene | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| Benzo (g,h,i) Perylene | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| Benzo (k) Fluoranthene | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| Benzoic acid | µg/L | N/A | <50 | -- | <50 | <50 | -- | <50 | -- | <50 | <50 | <50 | <50 |
| Benzyl alcohol | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| Bis(2-Chloroethoxy) Methane | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| Bis(2-Chloroethyl) Ether | µg/L | N/A | <25 | -- | <25 | <25 | -- | <25 | -- | <25 | <25 | <25 | <25 |
| Bis(2-Chloroisopropyl) Ether | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| Bis(2-Ethylhexyl) Phthalate | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| Butyl Benzyl Phthalate | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |

## TABLE C-17

## GROUNDWATER ANALYTICAL RESULTS – VETERANS PARK

| Constituent | Units[1] | Fraction | V-MW-01 | | | | | V-MW-02 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 11/06/03 | 12/05/03 | 06/09/04 | 10/11/04 | 02/15/05 | 11/06/03 | 12/08/03 | 02/06/04 | 02/24/04 | 06/09/04 | 10/11/04 |
| Chrysene | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| Dibenz (a,h) Anthracene | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| Dibenzofuran | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| Diethyl Phthalate | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| Dimethyl Phthalate | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| Di-n-Butyl Phthalate | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| Di-n-Octyl Phthalate | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| Fluoranthene | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| Fluorene | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| Hexachlorobenzene | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| Hexachlorocyclopentadiene | µg/L | N/A | <25 | -- | <25 | <25 | -- | <25 | -- | <25 | <25 | <25 | <25 |
| Hexachloroethane | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| Indeno (1,2,3-c,d) Pyrene | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| Isophorone | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| Nitrobenzene | µg/L | N/A | <25 | -- | <25 | <25 | -- | <25 | -- | <25 | <25 | <25 | <25 |
| N-Nitroso-di-n-propylamine | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| N-Nitrosodiphenylamino | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| Pentachlorophenol | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| Phenanthrene | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| Phenol | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| Pyrene | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| Pyridine | µg/L | N/A | <10 | -- | <10 | <10 | -- | <10 | -- | <10 | <10 | <10 | <10 |
| **Biological Parameters** | | | | | | | | | | | | | |
| Heterotrophic Plate Count | CFU/mL | N/A | -- | 690 | -- | -- | -- | -- | 36,000 | -- | -- | -- | -- |
| Total Coliforms | MPN/100 mL | N/A | -- | <20 | -- | -- | -- | -- | <20 | -- | -- | -- | -- |
| Fecal Coliform | MPN/100 mL | N/A | -- | <20 | -- | -- | -- | -- | <20 | -- | -- | -- | -- |
| E. coli | MPN/100 mL | N/A | -- | <20 | -- | -- | -- | -- | <20 | -- | -- | -- | -- |

-- indicates the constituent was not analyzed for. Analytes not detected are indicated with a "<" symbol; the associated numerical value is the detection limit.

1. Units of measure: mg/L = milligrams per liter, µg/L = micrograms per liter, µhmos/cm = microhmos per centimeter, NTU = Nephelometric Turbidity Unit.
2. In cases in which the filtered concentrations exceeded the total, the differences are considered by the laboratory statistically insignificant and can be attributed to the variability inherent with the analytical method.

## TABLE C-17

## GROUNDWATER ANALYTICAL RESULTS – VETERANS PARK

| | | | **Sample Number / Date Sampled** | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | **V-MW-03** | | | | | | | | | |
| **Constituent** | **Units[1]** | **Fraction** | **02/15/05** | **11/06/03** | **12/05/03** | **02/06/04** | **02/24/04** | **06/09/04** | **10/11/04** | **10/22/04** | **12/10/04** | **12/30/04** | **02/15/05** |
| **General Monitoring Parameters** | | | | | | | | | | | | | |
| Alkalinity, Total (as $CaCO_3$) | mg/L | N/A | 1,000 | 220 | -- | 1,100 | 1,100 | 970 | 980 | 1,000 | 950 | 960 | 980 |
| Bicarbonate (as $CaCO_3$) | mg/L | N/A | 1,000 | 220 | -- | 1,100 | 1,100 | 970 | 980 | 1,000 | 950 | 960 | 980 |
| Bromide | mg/L | N/A | 0.26 | 1.1 | -- | 1.2 | 2.7 | 0.86 | 0.79 | 0.81 | 0.59 | 0.53 | 0.59 |
| Calcium | mg/L | Total | 23.5 | -- | 29.8 | 42 | 43.4 | 59.9 | 79.3 | 68 | 75.4 | 65.7 | 69.7 |
| Carbonate (as $CaCO_3$) | mg/L | N/A | <1 | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Chloride | mg/L | N/A | 110 | 130 | -- | 170 | 180 | 180 | 150 | 150 | 180 | 160 | 150 |
| Chemical Oxygen Demand | mg/L | N/A | 13 | 52 | -- | <5 | 15 | 13 | 13 | 20 | 13 | 94 | 18 |
| Fluoride | mg/L | N/A | 0.75 | 1.2 | -- | 1.2 | 1.1 | 1.3 | 1.6 | 1.5 | 1.7 | 1.5 | 1.6 |
| Hardness (as $CaCO_3$) | mg/L | Total | 120 | 300 | -- | 190 | 210 | 310 | 390 | 350 | 420 | 370 | 330 |
| Hydroxide (as $CaCO_3$) | mg/L | N/A | <1 | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Magnesium | mg/L | Total | 11.9 | -- | 15.2 | 23.5 | 24.2 | 41.4 | 54.2 | 46.1 | 53.5 | 46.2 | 47.7 |
| MBAS (Surfactants) | mg/L | N/A | <0.1 | <0.1 | -- | 0.11 | 0.11 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Nitrate (as N) | mg/L | N/A | 3.7 | 5.6 | -- | 6 | 5.9 | 3.8 | 3 | 4.9 | 2.1 | 3.3 | 2.8 |
| Nitrite (as N) | mg/L | N/A | <0.1 | <0.1 | -- | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| Total Kjeldahl Nitrogen | mg/L | Total | <0.5 | 0.56 | -- | 0.56 | <0.5 | <0.1 | <0.5 | 0.98 | 0.56 | <0.5 | 0.56 |
| Carbon, Total Organic | mg/L | N/A | 6.2 | 6.1 | -- | 27 | 8.3 | 9.7 | 4.4 | 4.4 | 7.8 | 5.9 | 5.3 |
| Carbon, Dissolved Organic | mg/L | N/A | 9.2 | 5.1 | -- | 23 | 8 | 6.1 | 8.1 | 5.2 | 6.3 | 6.8 | 7.3 |
| Nitrogen, Organic | mg/L | N/A | <0.5 | 0.56 | -- | 0.56 | <0.5 | <0.5 | <0.5 | 0.98 | 0.56 | <0.5 | 0.56 |
| Ammonia-Nitrogen | mg/L | Total | <0.1 | <0.1 | -- | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| pH | pH units | N/A | 7.22 | 7.35 | -- | 7.33 | 7.27 | 7.35 | 6.98 | 7.05 | 7.12 | 6.81 | 7.13 |
| Phosphorus | mg/L | Dissolved | 0.22 | 0.2 | -- | 0.16 | 0.19 | 0.055 | 0.057 | 0.082 | 0.075 | 0.19 | 0.12 |
| Phosphorus | mg/L | Total | 0.79 | 29 | -- | 0.17 | 0.25 | 0.17 | 0.7 | 0.52 | 0.36 | 1.4 | 0.78 |
| Potassium | mg/L | Total | 2.88 | -- | 2.57 | 2.68 | 2.66 | 1.81 | 3.22 | 1.8 | 2.12 | 1.77 | 2.01 |
| Sodium | mg/L | Total | 573 | -- | 605 | 736 | 812 | 569 | 538 | 659 | 546 | 556 | 506 |
| Specific Conductance | µmhos/cm | N/A | 2,400 | 2,800 | -- | 3,100 | 2,700 | 2,800 | 2,800 | 2,800 | 2,900 | 2,700 | 2,400 |
| Sulfate | mg/L | N/A | 250 | 190 | -- | 320 | 360 | 420 | 310 | 330 | 350 | 320 | 290 |
| Total Dissolved Solids | mg/L | N/A | 1,500 | 1,300 | -- | 2,100 | 2,000 | 1,700 | 1,700 | 1,900 | 1,600 | 1,600 | 1,500 |
| Total Suspended Solids | mg/L | N/A | 3 | -- | 2 | 10 | 110 | 19 | 100 | <1 | 19 | 11 | 4.4 |
| Turbidity | NTU | N/A | 7.1 | -- | 3 | 3.1 | 98 | 6.3 | 55 | 1.7 | 10 | 16 | 5.8 |
| **Metals[2]** | | | | | | | | | | | | | |
| Aluminum | µg/L | Dissolved | <25 | -- | <50 | <50 | 56.9 | <50 | 141 | <25 | <25 | <25 | <25 |
| Aluminum | µg/L | Total | 134 | -- | 97 | 1,120 | 1,440 | 584 | 343 | <25 | 216 | 390 | 121 |
| Antimony | µg/L | Dissolved | <1 | -- | 1.02 | <1 | <1 | 1.12 | <1 | <1 | <1 | <1 | <1 |

# TABLE C-17

## GROUNDWATER ANALYTICAL RESULTS – VETERANS PARK

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | V-MW-03 | | | | | | | | | |
| | | | 02/15/05 | 11/06/03 | 12/05/03 | 02/06/04 | 02/24/04 | 06/09/04 | 10/11/04 | 10/22/04 | 12/10/04 | 12/30/04 | 02/15/05 |
| Antimony | µg/L | Total | <1 | -- | 1.05 | <1 | <1 | 1.36 | <1 | <1 | <1 | <1 | <1 |
| Arsenic | µg/L | Dissolved | 5.32 | -- | 5.83 | 5.32 | 4.67 | 1.9 | 2.9 | 3.5 | 2.4 | 1.93 | 2.09 |
| Arsenic | µg/L | Total | 6.03 | -- | 6.02 | 6.03 | 5.25 | 2.03 | 3.22 | 3.61 | 2.51 | 1.96 | 2.32 |
| Barium | µg/L | Dissolved | 19.6 | -- | 43.7 | 58.6 | 62.5 | 83.9 | 92.5 | 95.1 | 97.3 | 83.7 | 74.3 |
| Barium | µg/L | Total | 20.5 | -- | 44.6 | 69.7 | 79.4 | 90.1 | 94.7 | 104 | 99.5 | 92.6 | 77.9 |
| Beryllium | µg/L | Dissolved | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Beryllium | µg/L | Total | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Boron | µg/L | Dissolved | 1,250 | -- | 1,870 | 1,900 | 2,320 | 1,180 | 1,220 | 1,470 | 1,210 | 1,410 | 916 |
| Boron | µg/L | Total | 1,240 | -- | 2,040 | 1,880 | 2,390 | 1,280 | 1,210 | 1,420 | 1,160 | 1,300 | 899 |
| Cadmium | µg/L | Dissolved | <0.2 | -- | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Cadmium | µg/L | Total | <0.2 | -- | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Chromium | µg/L | Dissolved | 1.97 | -- | 2.53 | 2.34 | 2.58 | 3.24 | 3.62 | 3.86 | 2.44 | 2.39 | 2.57 |
| Chromium | µg/L | Total | 2.46 | -- | 1.28 | 4.57 | 5.3 | 3.95 | 3.35 | 3.62 | 2.83 | 3.13 | 2.98 |
| Chromium, Hexavalent | µg/L | Dissolved | 0.51 | <0.2 | -- | 0.44 | 0.46 | 1.9 | 2.7 | 2.3 | 2.1 | 1.3 | 1.6 |
| Cobalt | µg/L | Dissolved | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Cobalt | µg/L | Total | <1 | -- | <1 | 1.32 | 1.47 | <1 | <1 | <1 | <1 | <1 | <1 |
| Copper | µg/L | Dissolved | 2.27 | -- | 2.23 | 2.83 | 3.06 | 2.51 | 2.14 | 2.25 | 2.22 | 3.15 | 3.57 |
| Copper | µg/L | Total | 2.37 | -- | 2.23 | 4.73 | 5.39 | 5.21 | 2.37 | 2.13 | 2.37 | 2.68 | 3.54 |
| Iron | µg/L | Dissolved | <100 | -- | <100 | <100 | 161 | <100 | 163 | <100 | <100 | <100 | <100 |
| Iron | µg/L | Total | 248 | -- | 213 | 1,740 | 2,580 | 696 | 484 | <100 | 315 | 554 | 217 |
| Lead | µg/L | Dissolved | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Lead | µg/L | Total | <0.5 | -- | <0.5 | 1.89 | 1.87 | 1.53 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Manganese | µg/L | Dissolved | 19.7 | -- | 63.8 | 54.7 | 52.6 | 4.54 | 14.9 | 11.2 | 3.3 | 8.01 | 8.02 |
| Manganese | µg/L | Total | 25.8 | -- | 77.1 | 122 | 100 | 46.6 | 27.1 | 13.5 | 15.2 | 19.7 | 14 |
| Mercury | µg/L | Dissolved | <0.1 | <0.1 | -- | 0.122 | <0.1 | <0.1 | <0.1 | 0.164 | <0.1 | <0.1 | <0.1 |
| Mercury | µg/L | Total | <0.1 | -- | <0.1 | 0.146 | <0.1 | <0.1 | <0.1 | 0.2 | <0.1 | <0.1 | 0.12 |
| Molybdenum | µg/L | Dissolved | 18.4 | -- | 31.5 | 27.8 | 26.9 | 24.4 | 23.2 | 28 | 23.9 | 28.6 | 31.5 |
| Molybdenum | µg/L | Total | 20.7 | -- | 31.2 | 28.3 | 26.8 | 25.4 | 22.9 | 28.6 | 23.6 | 29.3 | 32.8 |
| Nickel | µg/L | Dissolved | <2 | -- | <2 | <2 | <2 | 2.3 | 2.7 | 2.9 | 2 | 2.6 | <2 |
| Nickel | µg/L | Total | <2 | -- | <2 | 3.1 | 3.4 | 2.5 | 3.1 | 2.9 | <2 | 2.4 | <2 |
| Selenium | µg/L | Dissolved | 6.06 | -- | 15.7 | 14.1 | 14.2 | 9 | 12.9 | 11.3 | 7.48 | 6.28 | 8.33 |
| Selenium | µg/L | Total | 6.52 | -- | 12.8 | 14.8 | 15.2 | 10.9 | 9.35 | 11.5 | 8.05 | 5.54 | 8.28 |
| Silver | µg/L | Dissolved | <1 | -- | <1 | <1 | <1 | <1 | <1 | 3.4 | <1 | <1 | <1 |
| Silver | µg/L | Total | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Strontium | µg/L | Dissolved | 443 | -- | 515 | 664 | 641 | 1,140 | 1,320 | 1,220 | 1,320 | 1,240 | 1,200 |

## TABLE C-17

## GROUNDWATER ANALYTICAL RESULTS – VETERANS PARK

| | | | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | V-MW-03 | | | | | | | | | |
| Constituent | Units[1] | Fraction | 02/15/05 | 11/06/03 | 12/05/03 | 02/06/04 | 02/24/04 | 06/09/04 | 10/11/04 | 10/22/04 | 12/10/04 | 12/30/04 | 02/15/05 |
| Strontium | µg/L | Total | 433 | -- | 491 | 714 | 681 | 1,240 | 1,320 | 1,250 | 1,310 | 1,250 | 1,230 |
| Thallium | µg/L | Dissolved | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Thallium | µg/L | Total | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Tin | µg/L | Dissolved | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Tin | µg/L | Total | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Titanium | µg/L | Dissolved | 2.85 | -- | 2.72 | 3.48 | 5.44 | 4 | 10.7 | 2.82 | 1.68 | 2.99 | 3.6 |
| Titanium | µg/L | Total | 13.4 | -- | 8.09 | 80.5 | 111 | 37.1 | 26.8 | 4.84 | 17.5 | 32.8 | 16.3 |
| Vanadium | µg/L | Dissolved | 30.9 | -- | 29.6 | 31.6 | 28.1 | 20 | 17.2 | 21.1 | 15.1 | 19.8 | 20.1 |
| Vanadium | µg/L | Total | 33.8 | -- | 32 | 36.3 | 32.3 | 20.2 | 17.6 | 20.4 | 15.4 | 20.7 | 21.1 |
| Zinc | µg/L | Dissolved | <5 | -- | <5 | 5.51 | <5 | <5 | <5 | <5 | 5.41 | <5 | <5 |
| Zinc | µg/L | Total | <5 | -- | <5 | 22.8 | 7.77 | 7.05 | <5 | <5 | 5.14 | <5 | <5 |
| **Other Constituents** | | | | | | | | | | | | | |
| Oil and Grease | mg/L | N/A | <1 | 1.6 | -- | <1 | 7.4 | <1 | <1 | <1 | <1 | <1 | <1 |
| Perchlorate | µg/L | N/A | <2 | <2 | -- | <2 | <2 | 3.7 | <2 | 4.5 | 2.3 | <2 | <2 |
| N-Nitrosodimethylamine (NDMA) | ng/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Glyphosate | µg/L | N/A | -- | <6 | -- | -- | -- | <25 | -- | -- | -- | <1.2 | -- |
| 1,4-Dioxane | µg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 1,2-Dibromo-3-chloropropane (DBCP) | µg/L | N/A | <0.5 | <0.02 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Volatile Organic Compounds** | | | | | | | | | | | | | |
| Methyl Bromide | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl-t-Butyl Ether (MTBE) | µg/L | N/A | <1 | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Benzene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Toluene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethylbenzene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| o-Xylene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| p/m-Xylene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Trichloroethylene (TCE) | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Tetrachloroethylene (PCE) | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,1,2-Tetrachloroethane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,1-Trichloroethane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2,2-Tetrachloroethane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2-Trichloroethane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloroethane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloroethylene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

# TABLE C-17

## GROUNDWATER ANALYTICAL RESULTS – VETERANS PARK

| | | | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | V-MW-03 | | | | | | | | | |
| Constituent | Units[1] | Fraction | 02/15/05 | 11/06/03 | 12/05/03 | 02/06/04 | 02/24/04 | 06/09/04 | 10/11/04 | 10/22/04 | 12/10/04 | 12/30/04 | 02/15/05 |
| 1,1-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,3-Trichlorobenzene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,3-Trichloropropane (1,2,3-TCP) | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,4-Trichlorobenzene | µg/L | N/A | <0.5 | <0.5 | -- | <10 | <10 | <10 | <10 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,4-Trimethylbenzene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dibromoethane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichlorobenzene | µg/L | N/A | <0.5 | <10 | -- | <10 | <0.5 | <0.5 | <10 | <10 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichloroethane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Trans-Dichloroethylene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3,5-Trimethylbenzene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3-Dichlorobenzene | µg/L | N/A | <0.5 | <10 | -- | <0.5 | <0.5 | <10 | <10 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,4-Dichlorobenzene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <10 | <0.5 | <0.5 | <10 | <0.5 | <0.5 | <0.5 |
| 2,2-Dichloropropane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Butanone (Methylethyl ketone) | µg/L | N/A | <1 | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| 2-Chlorotoluene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Hexanone | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 4-Chlorotoluene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 4-Methyl-2-pentanone (MIBK) | µg/L | N/A | <2 | <2 | -- | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Acetone | µg/L | N/A | <2 | <2 | -- | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Acrylonitrile | µg/L | N/A | <2 | <2 | -- | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Allyl Chloride | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromobenzene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromochloromethane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromoform | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Carbon disulfide | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Carbon Tetrachloride | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chlorobenzene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chloroethane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chloroform | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | 0.61 | <0.5 | <0.5 |
| cis-1,2-Dichloroethene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| cis-1,3-Dichloropropene | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dibromochloromethane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dibromomethane | µg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

# TABLE C-17

## GROUNDWATER ANALYTICAL RESULTS – VETERANS PARK

| Constituent | Units$^1$ | Fraction | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | V-MW-03 | | | | | | | | | |
| | | | 02/15/05 | 11/06/03 | 12/05/03 | 02/06/04 | 02/24/04 | 06/09/04 | 10/11/04 | 10/22/04 | 12/10/04 | 12/30/04 | 02/15/05 |
| Dichlorobromomethane | μg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dichlorodifluoromethane | μg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Diethyl Ether | μg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Diisopropyl Ether (DIPE) | μg/L | N/A | <2 | <2 | -- | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Ethanol | μg/L | N/A | <100 | <100 | -- | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 |
| Ethyl Methacrylate | μg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethyl-t-Butyl Ether (ETBE) | μg/L | N/A | <2 | <2 | -- | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Hexachloro-1,3-Butadiene | μg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <10 | <10 | <0.5 | <0.5 | <0.5 | <0.5 |
| Iodomethane | μg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Isopropylbenzene | μg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl Chloride | μg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl Methacrylate | μg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methylene Chloride | μg/L | N/A | 0.73 | <0.5 | -- | <0.5 | 0.51 | <0.5 | 0.65 | <0.5 | <0.5 | <0.5 | 0.59 |
| Naphthalene | μg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <10 | <0.5 | <0.5 | <0.5 |
| n-Butylbenzene | μg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| n-Propylbenzene | μg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| p-Isopropyltoluene | μg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| sec-Butylbenzene | μg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Styrene | μg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| t-1,4-Dichloro-2-Butene | μg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Tert-Amyl-Methyl Ether (TAME) | μg/L | N/A | <2 | <2 | -- | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Tert-Butyl Alcohol (TBA) | μg/L | N/A | <10 | <10 | -- | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| tert-Butylbenzene | μg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Tetrahydrofuran | μg/L | N/A | <1 | <1 | -- | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| trans-1,3-Dichloropropene | μg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Trichlorofluoromethane | μg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Vinyl Chloride | μg/L | N/A | <0.5 | <0.5 | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Semi-Volatile Organic Compounds** | | | | | | | | | | | | | |
| 1-Methylnaphthalene | μg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| 2,4,5-Trichlorophenol | μg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| 2,4,6-Trichlorophenol | μg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| 2,4-Dichlorophenol | μg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| 2,4-Dimethylphenol | μg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| 2,4-Dinitrophenol | μg/L | N/A | -- | <50 | -- | <50 | <50 | <50 | <50 | <50 | -- | -- | -- |
| 2,4-Dinitrotoluene | μg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |

## TABLE C-17

## GROUNDWATER ANALYTICAL RESULTS – VETERANS PARK

| Constituent | Units[1] | Fraction | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | V-MW-03 | | | | | | | | | |
| | | | 02/15/05 | 11/06/03 | 12/05/03 | 02/06/04 | 02/24/04 | 06/09/04 | 10/11/04 | 10/22/04 | 12/10/04 | 12/30/04 | 02/15/05 |
| 2,6-Dinitrotoluene | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| 2-Chloronaphthalene | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| 2-Chlorophenol | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| 2-Methylnaphthalene | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| 2-Methylphenol (o-Cresol) | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| 2-Nitroaniline | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| 2-Nitrophenol | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| 3,3'-Dichlorobenzidine | µg/L | N/A | -- | <25 | -- | <25 | <25 | <25 | <25 | <25 | -- | -- | -- |
| 3-Nitroaniline | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| 4,6-Dinitro-2-Methylphenol | µg/L | N/A | -- | <50 | -- | <50 | <50 | <50 | <50 | <50 | -- | -- | -- |
| 4-Bromophenyl-Phenyl Ether | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| 4-Chloro-3-Methylphenol | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| 4-Chloroaniline | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| 4-Chlorophenyl-Phenyl Ether | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| 4-Methylphenol (p-Cresol) | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| 4-Nitroaniline | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| 4-Nitrophenol | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| Acenaphthene | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| Acenaphthylene | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| Aniline | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| Anthracene | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| Azobenzene | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| Benzidine | µg/L | N/A | -- | <50 | -- | <50 | <50 | <50 | <50 | <50 | -- | -- | -- |
| Benzo (a) Anthracene | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| Benzo (a) Pyrene | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| Benzo (b) Fluoranthene | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| Benzo (g,h,i) Perylene | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| Benzo (k) Fluoranthene | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| Benzoic acid | µg/L | N/A | -- | <50 | -- | <50 | <50 | <50 | <50 | <50 | -- | -- | -- |
| Benzyl alcohol | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| Bis(2-Chloroethoxy) Methane | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| Bis(2-Chloroethyl) Ether | µg/L | N/A | -- | <25 | -- | <25 | <25 | <25 | <25 | <25 | -- | -- | -- |
| Bis(2-Chloroisopropyl) Ether | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| Bis(2-Ethylhexyl) Phthalate | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| Butyl Benzyl Phthalate | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |

## TABLE C-17

## GROUNDWATER ANALYTICAL RESULTS – VETERANS PARK

| Constituent | Units$^1$ | Fraction | Sample Number / Date Sampled | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | V-MW-03 | | | | | | | | | |
| | | | 02/15/05 | 11/06/03 | 12/05/03 | 02/06/04 | 02/24/04 | 06/09/04 | 10/11/04 | 10/22/04 | 12/10/04 | 12/30/04 | 02/15/05 |
| Chrysene | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| Dibenz (a,h) Anthracene | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| Dibenzofuran | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| Diethyl Phthalate | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| Dimethyl Phthalate | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| Di-n-Butyl Phthalate | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| Di-n-Octyl Phthalate | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| Fluoranthene | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| Fluorene | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| Hexachlorobenzene | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| Hexachlorocyclopentadiene | µg/L | N/A | -- | <25 | -- | <25 | <25 | <25 | <25 | <25 | -- | -- | -- |
| Hexachloroethane | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| Indeno (1,2,3-c,d) Pyrene | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| Isophorone | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| Nitrobenzene | µg/L | N/A | -- | <25 | -- | <25 | <25 | <25 | <25 | <25 | -- | -- | -- |
| N-Nitroso-di-n-propylamine | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| N-Nitrosodiphenylamino | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| Pentachlorophenol | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| Phenanthrene | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| Phenol | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| Pyrene | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| Pyridine | µg/L | N/A | -- | <10 | -- | <10 | <10 | <10 | <10 | <10 | -- | -- | -- |
| **Biological Parameters** | | | | | | | | | | | | | |
| Heterotrophic Plate Count | CFU/mL | N/A | -- | -- | 180 | -- | -- | -- | -- | -- | -- | -- | -- |
| Total Coliforms | MPN/100 mL | N/A | -- | -- | <20 | -- | -- | -- | -- | -- | -- | -- | -- |
| Fecal Coliform | MPN/100 mL | N/A | -- | -- | <20 | -- | -- | -- | -- | -- | -- | -- | -- |
| E. coli | MPN/100 mL | N/A | -- | -- | <20 | -- | -- | -- | -- | -- | -- | -- | -- |

-- indicates the constituent was not analyzed for.  Analytes not detected are indicated

1.  Units of measure:  mg/L = milligrams per liter, µg/L = micrograms per liter, µhm

2.  In cases in which the filtered concentrations exceeded the total, the differences ar

# TABLE C-17

## GROUNDWATER ANALYTICAL RESULTS – VETERANS PARK

| Constituent | Units[1] | Fraction | V-MW-04 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 12/24/03 | 02/06/04 | 02/24/04 | 06/09/04 | 10/11/04 | 10/22/04 | 12/10/04 | 12/30/04 | 02/15/05 |
| **General Monitoring Parameters** | | | | | | | | | | | |
| Alkalinity, Total (as $CaCO_3$) | mg/L | N/A | 1,500 | 1,500 | 1,600 | 1,500 | 1,500 | 1,200 | 1,400 | 1,400 | 1,400 |
| Bicarbonate (as $CaCO_3$) | mg/L | N/A | 1,500 | 1,500 | 1,600 | 1,500 | 1,500 | 1,200 | 1,400 | 1,400 | 1,400 |
| Bromide | mg/L | N/A | 8.9 | 9.4 | 18 | 8.3 | 7.2 | 6.9 | 5.3 | 4.3 | 5.4 |
| Calcium | mg/L | Total | 91.9 | 94.9 | 92.4 | 75 | 78.4 | 64.2 | 55.6 | 55.8 | 58.1 |
| Carbonate (as $CaCO_3$) | mg/L | N/A | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Chloride | mg/L | N/A | 1,400 | 1,200 | 1,200 | 1,100 | 990 | 930 | 820 | 820 | 820 |
| Chemical Oxygen Demand | mg/L | N/A | 98 | 98 | 77 | 97 | 68 | 110 | 46 | 160 | 59 |
| Fluoride | mg/L | N/A | 0.53 | 0.5 | 0.38 | 0.39 | 0.51 | 0.54 | 0.52 | 0.51 | 0.43 |
| Hardness (as $CaCO_3$) | mg/L | Total | 390 | 370 | 350 | 320 | 340 | 280 | 290 | 250 | 250 |
| Hydroxide (as $CaCO_3$) | mg/L | N/A | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Magnesium | mg/L | Total | 36.5 | 39.3 | 38.1 | 34.1 | 34.3 | 28.2 | 25.6 | 25.3 | 27.8 |
| MBAS (Surfactants) | mg/L | N/A | 0.32 | 0.35 | 0.28 | 0.17 | <0.1 | 0.2 | 0.23 | 0.21 | 0.1 |
| Nitrate (as N) | mg/L | N/A | 44 | 41 | 39 | 42 | 24 | 30 | 24 | 23 | 20 |
| Nitrite (as N) | mg/L | N/A | <0.5 | <0.5 | <0.2 | <0.1 | <0.1 | <0.1 | <0.1 | <0.2 | <0.2 |
| Total Kjeldahl Nitrogen | mg/L | Total | 1.5 | 1.7 | 1.3 | 1.1 | 0.98 | 1.5 | 0.98 | 0.98 | 0.98 |
| Carbon, Total Organic | mg/L | N/A | 23 | 42 | 26 | 14 | 6.5 | 11 | 22 | 16 | 13 |
| Carbon, Dissolved Organic | mg/L | N/A | 19 | 31 | 15 | 12 | 12 | 13 | 17 | 20 | 20 |
| Nitrogen, Organic | mg/L | N/A | 1.5 | 1.7 | 1.3 | 1.1 | 0.98 | 1.5 | 0.98 | 0.98 | 0.98 |
| Ammonia-Nitrogen | mg/L | Total | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 | <0.1 |
| pH | pH units | N/A | 7.07 | 7.1 | 7.17 | 6.8 | 6.99 | 7.03 | 7.12 | 6.88 | 7.11 |
| Phosphorus | mg/L | Dissolved | 0.14 | 0.17 | 0.16 | 0.045 | 0.18 | 0.22 | 0.18 | 0.34 | 0.25 |
| Phosphorus | mg/L | Total | 0.15 | 0.19 | 0.16 | 0.2 | 5.1 | 6.7 | 1.2 | 0.63 | 0.34 |
| Potassium | mg/L | Total | 6.42 | 6.21 | 6.02 | 3.11 | 6.68 | 2.57 | 3.13 | 2.69 | 2.86 |
| Sodium | mg/L | Total | 2,320 | 2,460 | 2,570 | 2,050 | 1,990 | 2,020 | 1,750 | 1,900 | 1,600 |
| Specific Conductance | µmhos/cm | N/A | 8,400 | 9,200 | 7,400 | 8,300 | 8,500 | 7,800 | 7,400 | 7,200 | 6,400 |
| Sulfate | mg/L | N/A | 1,800 | 1,700 | 1,700 | 1,800 | 1,600 | 1,500 | 1,300 | 1,300 | 1,300 |
| Total Dissolved Solids | mg/L | N/A | 6,600 | 5,600 | 5,700 | 5,700 | 5,700 | 6,500 | 4,800 | 4,400 | 4,300 |
| Total Suspended Solids | mg/L | N/A | 2.6 | 79 | 23 | 15 | 230 | <1 | 9.5 | 6.2 | 46 |
| Turbidity | NTU | N/A | 0.07 | 36 | 14 | 11 | 77 | 2 | 38 | 9.7 | 45 |
| **Metals[2]** | | | | | | | | | | | |
| Aluminum | µg/L | Dissolved | <50 | <50 | 218 | <50 | <25 | <25 | <25 | <25 | <25 |
| Aluminum | µg/L | Total | 232 | 607 | 794 | 584 | 272 | 55.7 | 1,900 | 271 | 727 |
| Antimony | µg/L | Dissolved | <1 | <1 | 1 | <1 | <1 | <1 | <1 | <1 | <1 |

# TABLE C-17

## GROUNDWATER ANALYTICAL RESULTS – VETERANS PARK

| | | | V-MW-04 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Constituent** | **Units[1]** | **Fraction** | **12/24/03** | **02/06/04** | **02/24/04** | **06/09/04** | **10/11/04** | **10/22/04** | **12/10/04** | **12/30/04** | **02/15/05** |
| Antimony | µg/L | Total | 1.21 | 1.07 | <1 | 1.15 | <1 | <1 | 1.2 | 1.4 | 1.27 |
| Arsenic | µg/L | Dissolved | 6.11 | 5.76 | 6.41 | 5.17 | 17.7 | 15.5 | 9.93 | 6.22 | 10.2 |
| Arsenic | µg/L | Total | 7.17 | 8.88 | 6.98 | 8.37 | 17.5 | 15.8 | 11.1 | 5.79 | 11 |
| Barium | µg/L | Dissolved | 50.7 | 30.8 | 36.9 | 33.1 | 34.4 | 37.8 | 25.9 | 26.3 | 29.1 |
| Barium | µg/L | Total | 53.4 | 36.6 | 43.1 | 39.1 | 38.6 | 39.8 | 52.4 | 30.1 | 37.3 |
| Beryllium | µg/L | Dissolved | <1 | <1 | <1 | <1 | 1.49 | <1 | <1 | <1 | <1 |
| Beryllium | µg/L | Total | <1 | <1 | <1 | <1 | 1.86 | <1 | <1 | <1 | <1 |
| Boron | µg/L | Dissolved | 5,510 | 5,750 | 7,930 | 4,950 | 5,340 | 5,080 | 4,610 | 4,810 | 3,450 |
| Boron | µg/L | Total | 5,830 | 5,580 | 7,830 | 5,400 | 4,900 | 5,260 | 4,770 | 4,680 | 3,270 |
| Cadmium | µg/L | Dissolved | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Cadmium | µg/L | Total | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Chromium | µg/L | Dissolved | 1.32 | 2.91 | 4.2 | 2.67 | 2.3 | 2.08 | <1 | 1.33 | <1 |
| Chromium | µg/L | Total | 2.61 | 4.58 | 5.92 | 4.92 | 2.38 | 2.31 | 4.89 | 1.91 | 2.83 |
| Chromium, Hexavalent | µg/L | Dissolved | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 | <0.2 |
| Cobalt | µg/L | Dissolved | <1 | <1 | <1 | <1 | 1.51 | <1 | <1 | <1 | <1 |
| Cobalt | µg/L | Total | <1 | <1 | <1 | <1 | 1.73 | <1 | 1.91 | <1 | 1.14 |
| Copper | µg/L | Dissolved | 12.9 | 9.74 | 10.1 | 7.31 | 200 | 5.85 | 4.82 | 7.09 | 7.29 |
| Copper | µg/L | Total | 14.4 | 8.93 | 12.8 | 16.2 | 228 | 6.01 | 8.06 | 6.77 | 7.99 |
| Iron | µg/L | Dissolved | -- | <100 | 132 | <100 | <100 | <100 | <100 | <100 | <100 |
| Iron | µg/L | Total | <100 | 1,130 | 1,040 | 604 | 404 | 143 | 3,280 | 507 | 1,300 |
| Lead | µg/L | Dissolved | <0.5 | <0.5 | <0.5 | <0.5 | 0.536 | <0.5 | <0.5 | <0.5 | <0.5 |
| Lead | µg/L | Total | <0.5 | 0.832 | 1.86 | <0.5 | 1.54 | <0.5 | 2.24 | <0.5 | 0.777 |
| Manganese | µg/L | Dissolved | 585 | 269 | 357 | 387 | 514 | 345 | 233 | 162 | 170 |
| Manganese | µg/L | Total | 568 | 250 | 373 | 455 | 506 | 354 | 351 | 157 | 229 |
| Mercury | µg/L | Dissolved | <0.1 | 0.111 | <0.1 | <0.1 | <0.1 | 0.149 | <0.1 | <0.1 | <0.1 |
| Mercury | µg/L | Total | <0.1 | 0.133 | <0.1 | <0.1 | <0.1 | 0.16 | <0.1 | <0.1 | <0.1 |
| Molybdenum | µg/L | Dissolved | 18.5 | 16.9 | 16.9 | 14.4 | 19.5 | 15.4 | 14.6 | 15.2 | 15.7 |
| Molybdenum | µg/L | Total | 18.5 | 17.8 | 17.8 | 15.9 | 18.5 | 15.8 | 14.1 | 14.7 | 15.5 |
| Nickel | µg/L | Dissolved | 4.5 | 3.3 | 2.8 | 3.6 | 4.2 | 3.6 | <2 | 2.7 | <2 |
| Nickel | µg/L | Total | 4 | 4.1 | 3.6 | 3.9 | 3.9 | 3.6 | 4.2 | 2.6 | 2.9 |
| Selenium | µg/L | Dissolved | 88.5 | 114 | 96 | 53.2 | 59.6 | 81 | 50.1 | 44.3 | 47.9 |
| Selenium | µg/L | Total | 94.3 | 117 | 103 | 86.9 | 61 | 80.9 | 49.4 | 44.2 | 45 |
| Silver | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Silver | µg/L | Total | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Strontium | µg/L | Dissolved | 1,800 | 1,530 | 1,420 | 1,400 | 1,300 | 1,150 | 904 | 1,010 | 1,100 |

# TABLE C-17

## GROUNDWATER ANALYTICAL RESULTS – VETERANS PARK

| Constituent | Units[1] | Fraction | V-MW-04 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 12/24/03 | 02/06/04 | 02/24/04 | 06/09/04 | 10/11/04 | 10/22/04 | 12/10/04 | 12/30/04 | 02/15/05 |
| Strontium | µg/L | Total | 1,690 | 1,650 | 1,460 | 1,510 | 1,260 | 1,170 | 930 | 996 | 1,080 |
| Thallium | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Thallium | µg/L | Total | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Tin | µg/L | Dissolved | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Tin | µg/L | Total | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Titanium | µg/L | Dissolved | 1.99 | 6.31 | 4.24 | 5.53 | 3.35 | 3.35 | 2.27 | 3.92 | 4.9 |
| Titanium | µg/L | Total | 2.67 | 61.4 | 47.9 | 38.2 | 24.4 | 8.26 | 174 | 26.9 | 73.7 |
| Vanadium | µg/L | Dissolved | 38.9 | 34.3 | 37.5 | 36.3 | 31.4 | 41 | 34.4 | 41.3 | 40.6 |
| Vanadium | µg/L | Total | 42.7 | 36 | 39.4 | 43.6 | 31.1 | 42.7 | 41.4 | 40.6 | 43.2 |
| Zinc | µg/L | Dissolved | 7.68 | 8.71 | <5 | <5 | 25.3 | <5 | <5 | 8.3 | <5 |
| Zinc | µg/L | Total | 19.9 | 8.95 | 24.9 | <5 | 28.5 | <5 | 16.2 | 9.71 | 7.27 |
| **Other Constituents** | | | | | | | | | | | |
| Oil and Grease | mg/L | N/A | <1 | <1 | 19 | <1 | <1 | <1 | <1 | <1 | <1 |
| Perchlorate | µg/L | N/A | <6 | <6 | <4 | 3.8 | 3.9 | 8.3 | 3.3 | 3.4 | 5.4 |
| N-Nitrosodimethylamine (NDMA) | ng/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Glyphosate | µg/L | N/A | -- | -- | -- | <25 | <1.2 | <1.2 | <1.2 | <1.2 | -- |
| 1,4-Dioxane | µg/L | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 1,2-Dibromo-3-chloropropane (DBCP) | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Volatile Organic Compounds** | | | | | | | | | | | |
| Methyl Bromide | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl-t-Butyl Ether (MTBE) | µg/L | N/A | -- | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| Benzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Toluene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethylbenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| o-Xylene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| p/m-Xylene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Trichloroethylene (TCE) | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Tetrachloroethylene (PCE) | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,1,2-Tetrachloroethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,1-Trichloroethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2,2-Tetrachloroethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1,2-Trichloroethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloroethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,1-Dichloroethylene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

# TABLE C-17

## GROUNDWATER ANALYTICAL RESULTS – VETERANS PARK

| Constituent | Units[1] | Fraction | V-MW-04 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 12/24/03 | 02/06/04 | 02/24/04 | 06/09/04 | 10/11/04 | 10/22/04 | 12/10/04 | 12/30/04 | 02/15/05 |
| 1,1-Dichloropropene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,3-Trichlorobenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,3-Trichloropropane (1,2,3-TCP) | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2,4-Trichlorobenzene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | <0.5 | <0.5 | <0.5 |
| 1,2,4-Trimethylbenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dibromoethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichlorobenzene | µg/L | N/A | -- | <0.5 | <10 | <10 | <10 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichloroethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Dichloropropane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,2-Trans-Dichloroethylene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3,5-Trimethylbenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,3-Dichlorobenzene | µg/L | N/A | -- | <10 | <10 | <10 | <0.5 | <12 | <0.5 | <0.5 | <0.5 |
| 1,3-Dichloropropane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 1,4-Dichlorobenzene | µg/L | N/A | -- | <0.5 | <10 | <0.5 | <10 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2,2-Dichloropropane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Butanone (Methylethyl ketone) | µg/L | N/A | -- | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| 2-Chlorotoluene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 2-Hexanone | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 4-Chlorotoluene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| 4-Methyl-2-pentanone (MIBK) | µg/L | N/A | -- | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Acetone | µg/L | N/A | -- | <2 | <2 | <2 | <2 | <2 | 4.1 | 2.6 | <2 |
| Acrylonitrile | µg/L | N/A | -- | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Allyl Chloride | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromobenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromochloromethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Bromoform | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Carbon disulfide | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Carbon Tetrachloride | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chlorobenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chloroethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chloroform | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| cis-1,2-Dichloroethene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| cis-1,3-Dichloropropene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dibromochloromethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dibromomethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |

## TABLE C-17

## GROUNDWATER ANALYTICAL RESULTS – VETERANS PARK

| Constituent | Units$^1$ | Fraction | V-MW-04 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 12/24/03 | 02/06/04 | 02/24/04 | 06/09/04 | 10/11/04 | 10/22/04 | 12/10/04 | 12/30/04 | 02/15/05 |
| Dichlorobromomethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Dichlorodifluoromethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Diethyl Ether | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Diisopropyl Ether (DIPE) | µg/L | N/A | -- | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Ethanol | µg/L | N/A | -- | <100 | <100 | <100 | <100 | <100 | <100 | <100 | <100 |
| Ethyl Methacrylate | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Ethyl-t-Butyl Ether (ETBE) | µg/L | N/A | -- | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Hexachloro-1,3-Butadiene | µg/L | N/A | -- | <10 | <0.5 | <10 | <10 | <0.5 | <0.5 | <0.5 | <0.5 |
| Iodomethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Isopropylbenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl Chloride | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methyl Methacrylate | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Methylene Chloride | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | 0.63 | <0.5 | <0.5 | <0.5 | 0.52 |
| Naphthalene | µg/L | N/A | -- | <0.5 | <0.5 | <10 | <10 | <12 | <0.5 | <0.5 | <0.5 |
| n-Butylbenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| n-Propylbenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| p-Isopropyltoluene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| sec-Butylbenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Styrene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| t-1,4-Dichloro-2-Butene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Tert-Amyl-Methyl Ether (TAME) | µg/L | N/A | -- | <2 | <2 | <2 | <2 | <2 | <2 | <2 | <2 |
| Tert-Butyl Alcohol (TBA) | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <10 | <10 | <10 | <10 |
| tert-Butylbenzene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Tetrahydrofuran | µg/L | N/A | -- | <1 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| trans-1,3-Dichloropropene | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Trichlorofluoromethane | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Vinyl Chloride | µg/L | N/A | -- | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| **Semi-Volatile Organic Compounds** | | | | | | | | | | | |
| 1-Methylnaphthalene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| 2,4,5-Trichlorophenol | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| 2,4,6-Trichlorophenol | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| 2,4-Dichlorophenol | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| 2,4-Dimethylphenol | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| 2,4-Dinitrophenol | µg/L | N/A | -- | <50 | <50 | <50 | <50 | <60 | -- | -- | -- |
| 2,4-Dinitrotoluene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |

# TABLE C-17

## GROUNDWATER ANALYTICAL RESULTS – VETERANS PARK

| Constituent | Units[1] | Fraction | V-MW-04 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 12/24/03 | 02/06/04 | 02/24/04 | 06/09/04 | 10/11/04 | 10/22/04 | 12/10/04 | 12/30/04 | 02/15/05 |
| 2,6-Dinitrotoluene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| 2-Chloronaphthalene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| 2-Chlorophenol | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| 2-Methylnaphthalene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| 2-Methylphenol (o-Cresol) | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| 2-Nitroaniline | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| 2-Nitrophenol | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| 3,3'-Dichlorobenzidine | µg/L | N/A | -- | <25 | <25 | <25 | <25 | <30 | -- | -- | -- |
| 3-Nitroaniline | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| 4,6-Dinitro-2-Methylphenol | µg/L | N/A | -- | <50 | <50 | <50 | <50 | <60 | -- | -- | -- |
| 4-Bromophenyl-Phenyl Ether | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| 4-Chloro-3-Methylphenol | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| 4-Chloroaniline | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| 4-Chlorophenyl-Phenyl Ether | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| 4-Methylphenol (p-Cresol) | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| 4-Nitroaniline | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| 4-Nitrophenol | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| Acenaphthene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| Acenaphthylene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| Aniline | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| Anthracene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| Azobenzene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| Benzidine | µg/L | N/A | -- | <50 | <50 | <50 | <50 | <60 | -- | -- | -- |
| Benzo (a) Anthracene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| Benzo (a) Pyrene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| Benzo (b) Fluoranthene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| Benzo (g,h,i) Perylene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| Benzo (k) Fluoranthene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| Benzoic acid | µg/L | N/A | -- | <50 | <50 | <50 | <50 | <60 | -- | -- | -- |
| Benzyl alcohol | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| Bis(2-Chloroethoxy) Methane | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| Bis(2-Chloroethyl) Ether | µg/L | N/A | -- | <25 | <25 | <25 | <25 | <30 | -- | -- | -- |
| Bis(2-Chloroisopropyl) Ether | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| Bis(2-Ethylhexyl) Phthalate | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| Butyl Benzyl Phthalate | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |

# TABLE C-17

## GROUNDWATER ANALYTICAL RESULTS – VETERANS PARK

| | | | V-MW-04 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Constituent | Units[1] | Fraction | 12/24/03 | 02/06/04 | 02/24/04 | 06/09/04 | 10/11/04 | 10/22/04 | 12/10/04 | 12/30/04 | 02/15/05 |
| Chrysene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| Dibenz (a,h) Anthracene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| Dibenzofuran | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| Diethyl Phthalate | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| Dimethyl Phthalate | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| Di-n-Butyl Phthalate | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| Di-n-Octyl Phthalate | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| Fluoranthene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| Fluorene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| Hexachlorobenzene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| Hexachlorocyclopentadiene | µg/L | N/A | -- | <25 | <25 | <25 | <25 | <30 | -- | -- | -- |
| Hexachloroethane | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| Indeno (1,2,3-c,d) Pyrene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| Isophorone | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| Nitrobenzene | µg/L | N/A | -- | <25 | <25 | <25 | <25 | <30 | -- | -- | -- |
| N-Nitroso-di-n-propylamine | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| N-Nitrosodiphenylamino | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| Pentachlorophenol | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| Phenanthrene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| Phenol | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| Pyrene | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| Pyridine | µg/L | N/A | -- | <10 | <10 | <10 | <10 | <12 | -- | -- | -- |
| **Biological Parameters** | | | | | | | | | | | |
| Heterotrophic Plate Count | CFU/mL | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Total Coliforms | MPN/100 mL | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Fecal Coliform | MPN/100 mL | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| E. coli | MPN/100 mL | N/A | -- | -- | -- | -- | -- | -- | -- | -- | -- |

-- indicates the constituent was not analyzed for.  Analytes not detected are indicated

1. Units of measure:  mg/L = milligrams per liter, µg/L = micrograms per liter, µhm

2. In cases in which the filtered concentrations exceeded the total, the differences ar

# Table D-1 Summary of 1994-2000 Land Use Results by Site

| | | | | Commercial | | | | | High Density Single Family Residential | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Data Included Since[a] | DL | Units | No. of Samples | No. of Non-detects | Mean | Median | CV | No. of Samples | No. of Non-detects | Mean | Median | CV |
| **General Minerals and Nutrients** | | | | | | | | | | | | | |
| Calcium | 96 | 1.0 | mg/l | 30 | 0 | 19 | 11 | 0.86 | 32 | 1 | 6.7 | 5.8 | 0.55 |
| Magnesium | 96 | 1.0 | mg/l | 30 | 0 | 6.8 | 3.9 | 0.92 | 32 | 8 | 1.5 | 1.2 | 0.66 |
| Potassium | 94 | 1.0 | mg/l | 36 | 0 | 4.0 | 2.8 | 0.81 | 38 | 0 | 3.6 | 2.9 | 0.66 |
| Sodium | 96 | 1.0 | mg/l | 33 | 0 | 37 | 19 | 1.03 | 36 | 0 | 6.2 | 5.0 | 0.81 |
| Bicarbonate | 94 | 2.0 | mg/l | 33 | 0 | 48 | 21 | 0.93 | 35 | 0 | 21 | 13 | 1.04 |
| Carbonate | 94 | 2.0 | mg/l | 33 | 33 | S.I.D. | S.I.D. | S.I.D. | 35 | 35 | S.I.D. | S.I.D. | S.I.D. |
| Chloride | 94 | 2.0 | mg/l | 33 | 0 | 50 | 15.8 | 1.28 | 33 | 2 | 5.0 | 4.2 | 0.69 |
| Fluoride | 94 | 0.1 | mg/l | 33 | 18 | 0.13 | 0.05 | 0.81 | 33 | 27 | S.I.D. | S.I.D. | S.I.D. |
| Nitrate | 94 | 0.1 | mg/l | 33 | 1 | 2.6 | 2.0 | 0.63 | 33 | 1 | 3.9 | 2.1 | 1.38 |
| Sulfate | 94 | 0.1 | mg/l | 33 | 0 | 35 | 11 | 1.18 | 33 | 0 | 6.9 | 3.8 | 1.05 |
| Alkalinity | 94 | 4.0 | mg/l | 33 | 0 | 48 | 21 | 0.93 | 35 | 0 | 20 | 13 | 0.91 |
| Hardness | 96 | 2.0 | mg/l | 30 | 0 | 76 | 42 | 0.87 | 31 | 0 | 23 | 20 | 0.53 |
| COD | 97 | 5 | mg/l | 24 | 0 | 98 | 89 | 0.80 | 32 | 5 | 89 | 39 | 1.87 |
| pH | 94 | 0-14 | | 33 | 0 | 7.0 | 6.8 | 0.07 | 35 | 0 | 6.5 | 6.5 | 0.06 |
| MBAS | 97 | 0.05 | mg/l | 22 | 11 | 0.18 | 0.04 | 1.52 | 29 | 26 | S.I.D. | S.I.D. | S.I.D. |
| Specific Conductance | 94 | 1.0 | umhos/cm | 31 | 0 | 356 | 167 | 0.99 | 33 | 0 | 90 | 61 | 0.77 |
| Total Dissolved Solids | 96 | 2.0 | mg/l | 29 | 0 | 226 | 106 | 0.93 | 32 | 0 | 58 | 38 | 0.80 |
| Turbidity | 94 | 0.1 | NTU | 33 | 0 | 31 | 24 | 0.67 | 34 | 0 | 34 | 19 | 1.17 |
| Total Suspended Solids | 96 | 2.0 | mg/l | 29 | 0 | 66 | 53 | 0.65 | 30 | 0 | 95 | 61 | 1.16 |
| Total Organic Carbon | 94 | 1.0 | mg/l | 35 | 0 | 10 | 7.3 | 0.74 | 38 | 0 | 9.8 | 7.1 | 0.76 |
| Dissolved Phosphorus | 94 | 0.05 | mg/l | 33 | 1 | 0.30 | 0.19 | 0.86 | 32 | 0 | 0.29 | 0.25 | 0.57 |
| Total Phosphorus | 94 | 0.05 | mg/l | 32 | 1 | 0.39 | 0.28 | 0.77 | 32 | 0 | 0.39 | 0.32 | 0.77 |
| NH3-N | 94 | 0.1 | mg/l | 33 | 8 | 1.04 | 0.25 | 2.11 | 34 | 7 | 0.34 | 0.25 | 1.04 |
| Nitrate-N | 96 | 0.1 | mg/l | 31 | 7 | 0.48 | 0.43 | 0.82 | 32 | 11 | 0.86 | 0.46 | 1.51 |
| Nitrite-N | 94 | 0.1 | mg/l | 34 | 7 | 0.16 | 0.07 | 1.74 | 33 | 12 | 0.10 | 0.05 | 1.01 |
| TKN | 96 | 0.1 | mg/l | 32 | 0 | 3.4 | 2.2 | 0.94 | 35 | 0 | 2.9 | 2.0 | 1.04 |
| **Metals** | | | | | | | | | | | | | |
| Dissolved Aluminum | 96 | 100 | µg/l | 33 | 24 | 241 | 50 | 3.19 | 36 | 26 | 105 | 50 | 1.03 |
| Total Aluminum | 96 | 100 | µg/l | 33 | 8 | 4055 | 295 | 4.87 | 36 | 6 | 599 | 287 | 1.08 |
| Dissolved Antimony | 97 | 5 | µg/l | 24 | 24 | S.I.D. | S.I.D. | S.I.D. | 32 | 32 | S.I.D. | S.I.D. | S.I.D. |
| Total Antimony | 97 | 5 | µg/l | 24 | 24 | S.I.D. | S.I.D. | S.I.D. | 32 | 32 | S.I.D. | S.I.D. | S.I.D. |
| Dissolved Arsenic | 97 | 5 | µg/l | 24 | 23 | S.I.D. | S.I.D. | S.I.D. | 32 | 32 | S.I.D. | S.I.D. | S.I.D. |
| Total Arsenic | 97 | 5 | µg/l | 24 | 22 | S.I.D. | S.I.D. | S.I.D. | 32 | 29 | S.I.D. | S.I.D. | S.I.D. |
| Dissolved Barium | 97 | 10 | µg/l | 24 | 2 | 39 | 33 | 0.81 | 32 | 17 | 14 | 5.0 | 0.92 |
| Total Barium | 97 | 10 | µg/l | 24 | 2 | 114 | 41 | 2.64 | 32 | 11 | 21 | 21 | 0.72 |
| Dissolved Beryllium | 97 | 1 | µg/l | 17 | 17 | S.I.D. | S.I.D. | S.I.D. | 19 | 19 | S.I.D. | S.I.D. | S.I.D. |
| Total Beryllium | 97 | 1 | µg/l | 24 | 23 | S.I.D. | S.I.D. | S.I.D. | 32 | 32 | S.I.D. | S.I.D. | S.I.D. |

# Table D-1 Summary of 1994-2000 Land Use Results by Site

| | | | | Light Industrial | | | | | Educational | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Data Included Since[a] | DL | Units | No. of Samples | No. of Non-detects | Mean | Median | CV | No. of Samples | No. of Non-detects | Mean | Median | CV |
| **General Minerals and Nutrients** | | | | | | | | | | | | | |
| Calcium | 96 | 1.0 | mg/l | 40 | 0 | 12 | 8.8 | 1.01 | 39 | 0 | 16 | 10 | 0.71 |
| Magnesium | 96 | 1.0 | mg/l | 40 | 0 | 2.3 | 1.9 | 1.13 | 39 | 8 | 3.2 | 2.4 | 0.96 |
| Potassium | 94 | 1.0 | mg/l | 50 | 1 | 2.7 | 2.2 | 0.59 | 41 | 0 | 3.4 | 2.7 | 0.49 |
| Sodium | 96 | 1.0 | mg/l | 47 | 0 | 14 | 12 | 0.69 | 41 | 0 | 26 | 8.0 | 2.21 |
| Bicarbonate | 94 | 2.0 | mg/l | 47 | 0 | 26 | 20 | 0.92 | 40 | 0 | 39 | 28 | 0.76 |
| Carbonate | 94 | 2.0 | mg/l | 47 | 47 | S.I.D. | S.I.D. | S.I.D. | 40 | 40 | S.I.D. | S.I.D. | S.I.D. |
| Chloride | 94 | 2.0 | mg/l | 47 | 0 | 12 | 8.6 | 0.80 | 40 | 4 | 34 | 4.6 | 2.89 |
| Fluoride | 94 | 0.1 | mg/l | 47 | 22 | 0.13 | 0.11 | 0.94 | 40 | 24 | 0.14 | 0.050 | 1.21 |
| Nitrate | 94 | 0.1 | mg/l | 47 | 0 | 4.1 | 2.4 | 1.09 | 40 | 2 | 2.6 | 2.2 | 0.73 |
| Sulfate | 94 | 0.1 | mg/l | 47 | 0 | 12.6 | 9.2 | 1.02 | 40 | 0 | 17.3 | 9.3 | 1.23 |
| Alkalinity | 94 | 4.0 | mg/l | 47 | 0 | 25 | 19 | 0.94 | 40 | 0 | 36 | 26 | 0.72 |
| Hardness | 96 | 2.0 | mg/l | 40 | 0 | 39 | 30 | 1.02 | 39 | 0 | 52 | 40 | 0.79 |
| COD | 97 | 5 | mg/l | 36 | 4 | 80 | 51 | 0.92 | 40 | 10 | 37 | 34 | 0.85 |
| pH | 94 | 0-14 | | 47 | 0 | 6.8 | 6.8 | 0.06 | 40 | 0 | 7.0 | 6.9 | 0.07 |
| MBAS | 97 | 0.05 | mg/l | 32 | 10 | 0.13 | 0.11 | 0.90 | 38 | 33 | S.I.D. | S.I.D. | S.I.D. |
| Specific Conductance | 94 | 1.0 | umhos/cm | 43 | 0 | 147 | 119 | 0.77 | 39 | 0 | 243 | 111 | 1.41 |
| Total Dissolved Solids | 96 | 2.0 | mg/l | 40 | 0 | 95 | 77 | 0.80 | 39 | 0 | 147 | 68 | 1.35 |
| Turbidity | 94 | 0.1 | NTU | 47 | 0 | 76 | 55 | 1.59 | 41 | 0 | 64 | 36 | 1.14 |
| Total Suspended Solids | 96 | 2.0 | mg/l | 41 | 0 | 240 | 129 | 1.36 | 39 | 0 | 95 | 61 | 1.05 |
| Total Organic Carbon | 94 | 1.0 | mg/l | 47 | 0 | 11.9 | 9.8 | 0.77 | 42 | 0 | 7.5 | 6.5 | 0.50 |
| Dissolved Phosphorus | 94 | 0.05 | mg/l | 46 | 4 | 0.27 | 0.20 | 1.01 | 37 | 1 | 0.27 | 0.20 | 0.86 |
| Total Phosphorus | 94 | 0.05 | mg/l | 45 | 2 | 0.41 | 0.30 | 0.92 | 37 | 0 | 0.31 | 0.23 | 0.65 |
| NH3-N | 94 | 0.1 | mg/l | 48 | 9 | 0.48 | 0.26 | 1.36 | 40 | 12 | 0.28 | 0.15 | 1.58 |
| Nitrate-N | 96 | 0.1 | mg/l | 43 | 2 | 0.87 | 0.52 | 1.32 | 39 | 12 | 0.51 | 0.48 | 0.86 |
| Nitrite-N | 94 | 0.1 | mg/l | 47 | 9 | 0.09 | 0.06 | 0.73 | 39 | 13 | 0.09 | 0.05 | 1.41 |
| TKN | 96 | 0.1 | mg/l | 45 | 0 | 3.0 | 2.3 | 0.72 | 39 | 0 | 1.6 | 1.3 | 0.73 |
| **Metals** | | | | | | | | | | | | | |
| Dissolved Aluminum | 96 | 100 | µg/l | 47 | 23 | 460 | 117 | 1.96 | 42 | 11 | 397 | 248 | 1.21 |
| Total Aluminum | 96 | 100 | µg/l | 47 | 7 | 1824 | 470 | 2.37 | 42 | 2 | 881 | 720 | 0.83 |
| Dissolved Antimony | 97 | 5 | µg/l | 37 | 37 | S.I.D. | S.I.D. | S.I.D. | 42 | 42 | S.I.D. | S.I.D. | S.I.D. |
| Total Antimony | 97 | 5 | µg/l | 37 | 37 | S.I.D. | S.I.D. | S.I.D. | 42 | 42 | S.I.D. | S.I.D. | S.I.D. |
| Dissolved Arsenic | 97 | 5 | µg/l | 37 | 37 | S.I.D. | S.I.D. | S.I.D. | 42 | 39 | S.I.D. | S.I.D. | S.I.D. |
| Total Arsenic | 97 | 5 | µg/l | 37 | 34 | S.I.D. | S.I.D. | S.I.D. | 42 | 39 | S.I.D. | S.I.D. | S.I.D. |
| Dissolved Barium | 97 | 10 | µg/l | 37 | 6 | 34 | 26 | 0.81 | 42 | 6 | 28 | 26 | 0.72 |
| Total Barium | 97 | 10 | µg/l | 37 | 4 | 68 | 36 | 1.38 | 42 | 6 | 37 | 33 | 0.74 |
| Dissolved Beryllium | 97 | 1 | µg/l | 34 | 34 | S.I.D. | S.I.D. | S.I.D. | 29 | 29 | S.I.D. | S.I.D. | S.I.D. |
| Total Beryllium | 97 | 1 | µg/l | 37 | 37 | S.I.D. | S.I.D. | S.I.D. | 42 | 42 | S.I.D. | S.I.D. | S.I.D. |

## Table D-1 Summary of 1994-2000 Land Use Results by Site

| | | | | Commercial | | | | | High Density Single Family Residential | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Data Included Since[a] | DL | Units | No. of Samples | No. of Non-detects | Mean | Median | CV | No. of Samples | No. of Non-detects | Mean | Median | CV |
| Dissolved Boron | 97 | 100 | µg/l | 24 | 3 | 198 | 188 | 0.49 | 32 | 12 | 126 | 125 | 0.58 |
| Total Boron | 97 | 100 | µg/l | 24 | 1 | 261 | 254 | 0.41 | 32 | 5 | 181 | 171 | 0.52 |
| Dissolved Cadmium | 97 | 1 | µg/l | 24 | 21 | S.I.D. | S.I.D. | S.I.D. | 32 | 31 | S.I.D. | S.I.D. | S.I.D. |
| Total Cadmium | 97 | 1 | µg/l | 24 | 19 | 0.73 | 0.50 | 0.71 | 32 | 30 | S.I.D. | S.I.D. | S.I.D. |
| Dissolved Chromium | 97 | 5 | µg/l | 24 | 24 | S.I.D. | S.I.D. | S.I.D. | 32 | 32 | S.I.D. | S.I.D. | S.I.D. |
| Total Chromium | 97 | 5 | µg/l | 24 | 18 | 27 | 2.5 | 4.18 | 32 | 29 | S.I.D. | S.I.D. | S.I.D. |
| Dissolved Chromium +6 | 94 | 10 | µg/l | 33 | 33 | S.I.D. | S.I.D. | S.I.D. | 36 | 36 | S.I.D. | S.I.D. | S.I.D. |
| Dissolved Copper | 97 | 5 | µg/l | 24 | 3 | 14 | 11 | 0.84 | 32 | 15 | 8.5 | 6.7 | 0.95 |
| Total Copper | 97 | 5 | µg/l | 24 | 0 | 39 | 22 | 1.57 | 32 | 2 | 15 | 11 | 0.57 |
| Dissolved Iron | 94 | 100 | µg/l | 39 | 17 | 382 | 106 | 2.81 | 38 | 27 | 123 | 50 | 1.20 |
| Total Iron | 94 | 100 | µg/l | 40 | 2 | 5319 | 587 | 5.24 | 38 | 7 | 1117 | 546 | 1.36 |
| Dissolved Lead | 97 | 5 | µg/l | 24 | 20 | S.I.D. | S.I.D. | S.I.D. | 32 | 28 | S.I.D. | S.I.D. | S.I.D. |
| Total Lead | 97 | 5 | µg/l | 24 | 15 | 18 | 2.5 | 2.80 | 32 | 14 | 10 | 5.4 | 1.03 |
| Dissolved Manganese | 98 | 100 | µg/l | 14 | 14 | S.I.D. | S.I.D. | S.I.D. | 11 | 10 | S.I.D. | S.I.D. | S.I.D. |
| Total Manganese | 98 | 100 | µg/l | 14 | 13 | S.I.D. | S.I.D. | S.I.D. | 11 | 10 | S.I.D. | S.I.D. | S.I.D. |
| Dissolved Mercury | 94 | 1 | µg/l | 37 | 35 | S.I.D. | S.I.D. | S.I.D. | 35 | 35 | S.I.D. | S.I.D. | S.I.D. |
| Total Mercury | 94 | 1 | µg/l | 37 | 35 | S.I.D. | S.I.D. | S.I.D. | 35 | 34 | S.I.D. | S.I.D. | S.I.D. |
| Dissolved Nickel | 97 | 5 | µg/l | 24 | 21 | S.I.D. | S.I.D. | S.I.D. | 32 | 32 | S.I.D. | S.I.D. | S.I.D. |
| Nickel | 97 | 5 | µg/l | 24 | 16 | 15 | 2.5 | 3.69 | 32 | 27 | S.I.D. | S.I.D. | S.I.D. |
| Dissolved Selenium | 94 | 5 | µg/l | 40 | 40 | S.I.D. | S.I.D. | S.I.D. | 38 | 38 | S.I.D. | S.I.D. | S.I.D. |
| Total Selenium | 94 | 5 | µg/l | 40 | 35 | S.I.D. | S.I.D. | S.I.D. | 38 | 38 | S.I.D. | S.I.D. | S.I.D. |
| Dissolved Silver | 97 | 1 | µg/l | 24 | 23 | S.I.D. | S.I.D. | S.I.D. | 32 | 32 | S.I.D. | S.I.D. | S.I.D. |
| Total Silver | 97 | 1 | µg/l | 24 | 22 | S.I.D. | S.I.D. | S.I.D. | 32 | 31 | S.I.D. | S.I.D. | S.I.D. |
| Dissolved Thallium | 97 | 5 | µg/l | 24 | 24 | S.I.D. | S.I.D. | S.I.D. | 32 | 32 | S.I.D. | S.I.D. | S.I.D. |
| Total Thallium | 97 | 5 | µg/l | 24 | 24 | S.I.D. | S.I.D. | S.I.D. | 32 | 32 | S.I.D. | S.I.D. | S.I.D. |
| Dissolved Zinc | 94 | 50 | µg/l | 40 | 4 | 152 | 130 | 0.66 | 38 | 30 | 44 | 25 | 1.42 |
| Total Zinc | 94 | 50 | µg/l | 40 | 0 | 241 | 192 | 0.71 | 38 | 13 | 79 | 66 | 0.75 |
| **VOCs and SVOCs** | | | | | | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | 99 | 1 | µg/l | 0 | 0 | S.I.D. | S.I.D. | S.I.D. | 5 | 5 | S.I.D. | S.I.D. | S.I.D. |
| PAHs | | | | | | | | | | | | | |
| Acenaphthene | 99 | 0.05 | µg/l | 0 | 0 | S.I.D. | S.I.D. | S.I.D. | 5 | 5 | S.I.D. | S.I.D. | S.I.D. |
| Acenaphthylene | 99 | 0.05 | µg/l | 0 | 0 | S.I.D. | S.I.D. | S.I.D. | 5 | 5 | S.I.D. | S.I.D. | S.I.D. |
| Antracene | 99 | 0.05 | µg/l | 0 | 0 | S.I.D. | S.I.D. | S.I.D. | 5 | 5 | S.I.D. | S.I.D. | S.I.D. |
| Benzo(a)anthracene | 99 | 0.1 | µg/l | 0 | 0 | S.I.D. | S.I.D. | S.I.D. | 5 | 4 | S.I.D. | S.I.D. | 1.24 |
| Benzo(a)pyrene | 99 | 0.1 | µg/l | 0 | 0 | S.I.D. | S.I.D. | S.I.D. | 5 | 5 | S.I.D. | S.I.D. | S.I.D. |
| Benzo(b)fluoranthene | 99 | 0.1 | µg/l | 0 | 0 | S.I.D. | S.I.D. | S.I.D. | 5 | 4 | S.I.D. | S.I.D. | 1.29 |
| Benzo(k)fluoranthene | 99 | 0.1 | µg/l | 0 | 0 | S.I.D. | S.I.D. | S.I.D. | 5 | 4 | S.I.D. | S.I.D. | 1.18 |
| Chrysene | 99 | 0.1 | µg/l | 0 | 0 | S.I.D. | S.I.D. | S.I.D. | 5 | 4 | S.I.D. | S.I.D. | 1.18 |

# Table D-1 Summary of 1994-2000 Land Use Results by Site

| | | | | Light Industrial | | | | | Educational | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Data Included Since[a] | DL | Units | No. of Samples | No. of Non-detects | Mean | Median | CV | No. of Samples | No. of Non-detects | Mean | Median | CV |
| Dissolved Boron | 97 | 100 | µg/l | 37 | 18 | 122 | 102 | 0.71 | 42 | 5 | 189 | 153 | 0.65 |
| Total Boron | 97 | 100 | µg/l | 36 | 10 | 187 | 181 | 0.63 | 42 | 4 | 254 | 227 | 0.58 |
| Dissolved Cadmium | 97 | 1 | µg/l | 37 | 34 | S.I.D. | S.I.D. | S.I.D. | 42 | 40 | S.I.D. | S.I.D. | S.I.D. |
| Total Cadmium | 97 | 1 | µg/l | 37 | 30 | S.I.D. | S.I.D. | S.I.D. | 42 | 34 | S.I.D. | S.I.D. | S.I.D. |
| Dissolved Chromium | 97 | 5 | µg/l | 37 | 33 | S.I.D. | S.I.D. | S.I.D. | 42 | 41 | S.I.D. | S.I.D. | S.I.D. |
| Total Chromium | 97 | 5 | µg/l | 37 | 25 | 6.8 | 2.5 | 1.60 | 42 | 33 | 3.6 | 2.5 | 0.74 |
| Dissolved Chromium +6 | 94 | 10 | µg/l | 47 | 47 | S.I.D. | S.I.D. | S.I.D. | 43 | 43 | S.I.D. | S.I.D. | S.I.D. |
| Dissolved Copper | 97 | 5 | µg/l | 37 | 5 | 20 | 14 | 1.07 | 42 | 8 | 13 | 9.9 | 0.94 |
| Total Copper | 97 | 5 | µg/l | 37 | 0 | 32 | 21 | 1.03 | 42 | 0 | 24 | 15 | 1.49 |
| Dissolved Iron | 94 | 100 | µg/l | 51 | 25 | 698 | 104 | 2.99 | 42 | 15 | 454 | 190 | 2.30 |
| Total Iron | 94 | 100 | µg/l | 51 | 5 | 6504 | 600 | 4.26 | 42 | 4 | 2705 | 625 | 3.32 |
| Dissolved Lead | 97 | 5 | µg/l | 37 | 32 | S.I.D. | S.I.D. | S.I.D. | 42 | 40 | S.I.D. | S.I.D. | S.I.D. |
| Total Lead | 97 | 5 | µg/l | 37 | 18 | 17 | 5.1 | 1.88 | 42 | 30 | 4.9 | 2.5 | 1.09 |
| Dissolved Manganese | 98 | 100 | µg/l | 26 | 23 | S.I.D. | S.I.D. | S.I.D. | 17 | 17 | S.I.D. | S.I.D. | S.I.D. |
| Total Manganese | 98 | 100 | µg/l | 26 | 23 | S.I.D. | S.I.D. | S.I.D. | 17 | 17 | S.I.D. | S.I.D. | S.I.D. |
| Dissolved Mercury | 94 | 1 | µg/l | 48 | 48 | S.I.D. | S.I.D. | S.I.D. | 40 | 40 | S.I.D. | S.I.D. | S.I.D. |
| Total Mercury | 94 | 1 | µg/l | 48 | 45 | S.I.D. | S.I.D. | S.I.D. | 40 | 40 | S.I.D. | S.I.D. | S.I.D. |
| Dissolved Nickel | 97 | 5 | µg/l | 37 | 23 | 5.0 | 2.5 | 0.90 | 42 | 38 | S.I.D. | S.I.D. | S.I.D. |
| Nickel | 97 | 5 | µg/l | 37 | 15 | 9.8 | 6.0 | 1.47 | 42 | 26 | 4.7 | 2.5 | 0.69 |
| Dissolved Selenium | 94 | 5 | µg/l | 51 | 51 | S.I.D. | S.I.D. | S.I.D. | 42 | 42 | S.I.D. | S.I.D. | S.I.D. |
| Total Selenium | 94 | 5 | µg/l | 51 | 48 | S.I.D. | S.I.D. | S.I.D. | 42 | 42 | S.I.D. | S.I.D. | S.I.D. |
| Dissolved Silver | 97 | 1 | µg/l | 37 | 37 | S.I.D. | S.I.D. | S.I.D. | 42 | 42 | S.I.D. | S.I.D. | S.I.D. |
| Total Silver | 97 | 1 | µg/l | 37 | 37 | S.I.D. | S.I.D. | S.I.D. | 42 | 42 | S.I.D. | S.I.D. | S.I.D. |
| Dissolved Thallium | 97 | 5 | µg/l | 37 | 37 | S.I.D. | S.I.D. | S.I.D. | 42 | 42 | S.I.D. | S.I.D. | S.I.D. |
| Total Thallium | 97 | 5 | µg/l | 37 | 37 | S.I.D. | S.I.D. | S.I.D. | 42 | 42 | S.I.D. | S.I.D. | S.I.D. |
| Dissolved Zinc | 94 | 50 | µg/l | 51 | 3 | 407 | 303 | 1.18 | 42 | 19 | 66 | 56 | 0.83 |
| Total Zinc | 94 | 50 | µg/l | 51 | 0 | 639 | 366 | 1.53 | 42 | 5 | 138 | 98 | 1.73 |
| **VOCs and SVOCs** | | | | | | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | 99 | 1 | µg/l | 1 | 1 | S.I.D. | S.I.D. | S.I.D. | 0 | 0 | S.I.D. | S.I.D. | S.I.D. |
| PAHs | | | | | | | | | | | | | |
| Acenaphthene | 99 | 0.05 | µg/l | 1 | 1 | S.I.D. | S.I.D. | S.I.D. | 0 | 0 | S.I.D. | S.I.D. | S.I.D. |
| Acenaphthylene | 99 | 0.05 | µg/l | 1 | 1 | S.I.D. | S.I.D. | S.I.D. | 0 | 0 | S.I.D. | S.I.D. | S.I.D. |
| Antracene | 99 | 0.05 | µg/l | 1 | 1 | S.I.D. | S.I.D. | S.I.D. | 0 | 0 | S.I.D. | S.I.D. | S.I.D. |
| Benzo(a)anthracene | 99 | 0.1 | µg/l | 1 | 1 | S.I.D. | S.I.D. | S.I.D. | 0 | 0 | S.I.D. | S.I.D. | S.I.D. |
| Benzo(a)pyrene | 99 | 0.1 | µg/l | 1 | 1 | S.I.D. | S.I.D. | S.I.D. | 0 | 0 | S.I.D. | S.I.D. | S.I.D. |
| Benzo(b)fluoranthene | 99 | 0.1 | µg/l | 1 | 1 | S.I.D. | S.I.D. | S.I.D. | 0 | 0 | S.I.D. | S.I.D. | S.I.D. |
| Benzo(k)fluoranthene | 99 | 0.1 | µg/l | 1 | 1 | S.I.D. | S.I.D. | S.I.D. | 0 | 0 | S.I.D. | S.I.D. | S.I.D. |
| Chrysene | 99 | 0.1 | µg/l | 1 | 1 | S.I.D. | S.I.D. | S.I.D. | 0 | 0 | S.I.D. | S.I.D. | S.I.D. |

# Table D-1 Summary of 1994-2000 Land Use Results by Site

| | Data Included Since[a] | DL | Units | Commercial | | | | | High Density Single Family Residential | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | No. of Samples | No. of Non-detects | Mean | Median | CV | No. of Samples | No. of Non-detects | Mean | Median | CV |
| Dibenz(a,h)anthracene | 99 | 0.1 | µg/l | 0 | 0 | S.I.D. | S.I.D. | S.I.D. | 5 | 5 | S.I.D. | S.I.D. | S.I.D. |
| Fluoranthene | 99 | 0.1 | µg/l | 0 | 0 | S.I.D. | S.I.D. | S.I.D. | 5 | 3 | 0.53 | 0.050 | 1.67 |
| Fluorene | 99 | 0.1 | µg/l | 0 | 0 | S.I.D. | S.I.D. | S.I.D. | 5 | 5 | S.I.D. | S.I.D. | S.I.D. |
| Indeno (1,2,3-cd)pyrene | 99 | 0.1 | µg/l | 0 | 0 | S.I.D. | S.I.D. | S.I.D. | 5 | 5 | S.I.D. | S.I.D. | S.I.D. |
| Naphthalene | 99 | 0.05 | µg/l | 0 | 0 | S.I.D. | S.I.D. | S.I.D. | 5 | 3 | 0.04 | 0.025 | 0.59 |
| Phenanthrene | 99 | 0.05 | µg/l | 0 | 0 | S.I.D. | S.I.D. | S.I.D. | 5 | 3 | 0.13 | 0.025 | 1.66 |
| Pyrene | 99 | 0.05 | µg/l | 0 | 0 | S.I.D. | S.I.D. | S.I.D. | 5 | 1 | 0.83 | 0.37 | 1.44 |
| Total Phenols | 94 | 0.1 | mg/l | 8 | 8 | S.I.D. | S.I.D. | S.I.D. | 3 | 3 | S.I.D. | S.I.D. | S.I.D. |
| TPH | 94 | 1 | mg/l | 8 | 2 | 3.1 | 2.9 | 0.63 | 3 | 0 | 1.3 | 1.2 | 0.23 |
| All other SVOCs | 94 | 0.05-5. | µg/l | 23 | 23 | S.I.D. | S.I.D. | S.I.D. | 26 | 26 | S.I.D. | S.I.D. | S.I.D. |
| **Miscellaneous Constituents** | | | | | | | | | | | | | |
| Oil and Grease | 94 | 1 | mg/l | 8 | 1 | 3.3 | 2.9 | 0.51 | 3 | 0 | 1.3 | 1.2 | 0.23 |
| Glyphosate | 98 | 25 | µg/l | 14 | 14 | S.I.D. | S.I.D. | S.I.D. | 11 | 11 | S.I.D. | S.I.D. | S.I.D. |
| **Indicator Bacteria** | | | | | | | | | | | | | |
| Total Coliform | 94 | 20 | MPN/100m | 8 | 0 | 1,140,000 | 1,250,000 | 0.71 | 3 | 0 | 1,366,667 | 1,600,000 | 0.30 |
| Fecal Coliform | 94 | 20 | MPN/100m | 8 | 0 | 528,750 | 90,000 | 1.35 | 3 | 0 | 933,333 | 900,000 | 0.70 |

Source:
Los Angeles County Department of Public Works

CV = Coeffiecient of variation
DL = Detection Limit
S.I.D. = Statistically Invalid Data, not enough data above detection limit collected
a) Detection limtis have changed throughout the monitoring process. Only data matching the current detection limit is displayed in this table. The *Data Included Since* field indicates the first year of the storm season with the current detection limit.

# Table D-1  Summary of 1994-2000 Land Use Results by Site

| | | | | Light Industrial | | | | | Educational | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Data Included Since[a] | DL | Units | No. of Samples | No. of Non-detects | Mean | Median | CV | No. of Samples | No. of Non-detects | Mean | Median | CV |
| Dibenz(a,h)anthracene | 99 | 0.1 | µg/l | 1 | 1 | S.I.D. | S.I.D. | S.I.D. | 0 | 0 | S.I.D. | S.I.D. | S.I.D. |
| Fluoranthene | 99 | 0.1 | µg/l | 1 | 1 | S.I.D. | S.I.D. | S.I.D. | 0 | 0 | S.I.D. | S.I.D. | S.I.D. |
| Fluorene | 99 | 0.1 | µg/l | 1 | 1 | S.I.D. | S.I.D. | S.I.D. | 0 | 0 | S.I.D. | S.I.D. | S.I.D. |
| Indeno (1,2,3-cd)pyrene | 99 | 0.1 | µg/l | 1 | 1 | S.I.D. | S.I.D. | S.I.D. | 0 | 0 | S.I.D. | S.I.D. | S.I.D. |
| Naphthalene | 99 | 0.05 | µg/l | 1 | 1 | S.I.D. | S.I.D. | S.I.D. | 0 | 0 | S.I.D. | S.I.D. | S.I.D. |
| Phenanthrene | 99 | 0.05 | µg/l | 1 | 1 | S.I.D. | S.I.D. | S.I.D. | 0 | 0 | S.I.D. | S.I.D. | S.I.D. |
| Pyrene | 99 | 0.05 | µg/l | 1 | 1 | S.I.D. | S.I.D. | S.I.D. | 0 | 0 | S.I.D. | S.I.D. | S.I.D. |
| Total Phenols | 94 | 0.1 | mg/l | 5 | 5 | S.I.D. | S.I.D. | S.I.D. | 0 | 0 | S.I.D. | S.I.D. | S.I.D. |
| TPH | 94 | 1 | mg/l | 5 | 1 | 1.7 | 1.4 | 0.68 | 0 | 0 | S.I.D. | S.I.D. | S.I.D. |
| All other SVOCs | 94 | .05-5. | µg/l | 24 | 24 | S.I.D. | S.I.D. | S.I.D. | 23 | 23 | S.I.D. | S.I.D. | S.I.D. |
| **Miscellaneous Constituents** | | | | | | | | | | | | | |
| Oil and Grease | 94 | 1 | mg/l | 5 | 1 | 1.7 | 1.4 | 0.68 | 0 | 0 | S.I.D. | S.I.D. | S.I.D. |
| Glyphosate | 98 | 25 | µg/l | 26 | 26 | S.I.D. | S.I.D. | S.I.D. | 17 | 15 | S.I.D. | S.I.D. | S.I.D. |
| **Indicator Bacteria** | | | | | | | | | | | | | |
| Total Coliform | 94 | 20 | MPN/100m | 5 | 0 | 454,000 | 160,000 | 1.42 | 0 | 0 | S.I.D. | S.I.D. | S.I.D. |
| Fecal Coliform | 94 | 20 | MPN/100m | 5 | 0 | 338,220 | 30,000 | 2.09 | 0 | 0 | S.I.D. | S.I.D. | S.I.D. |

Source:
Los Angeles County Department of Public Works

CV = Coeffiecient of variation
DL = Detection Limit
S.I.D. = Statistically Invalid Data, not enough data above detection limit collected
a) Detection limtis have changed throughout the monitoring process. Only data matching the current detection limit is displayed in this table. The *Data Included Since* field indicates the first year of the storm season with the current detection limit.

# Table D-2 Summary of Regional Groundwater Quality

| Water Quality Constituent | Units of Measure[1] | Mean[2] | Maximum | Number of Analyses |
|---|---|---|---|---|
| **General Parameters** | | | | |
| Total Dissolved Solid (TDS) | mg/L | 747 | 11000 | 153 |
| Alkalinity | mg/L | 243 | 1420 | 153 |
| Bicarbonate as HCO3,calculated | mg/L | 295 | 1720 | 153 |
| Calcium, Total, ICAP | mg/L | 85 | 1400 | 153 |
| Carbonate as CO3, Calculated | mg/L | 2 | 22.3 | 153 |
| Hardness (Total, as CaCO3) | mg/L | 311 | 5140 | 153 |
| Chloride | mg/L | 190 | 5600 | 153 |
| Fluoride | mg/L | 0.34 | 0.98 | 153 |
| Hydroxide as OH, Calculated | mg/L | 0.021 | 0.2 | 153 |
| Magnesium, Total, ICAP | mg/L | 24 | 400 | 153 |
| Mercury | ug/l | 0 | 0 | 153 |
| Nitrate-N by IC | mg/L | 0.85 | 14 | 153 |
| Nitrite, Nitrogen by IC | mg/L | 0.004 | 0.59 | 153 |
| Potassium, Total, ICAP | mg/L | 5.93 | 43 | 153 |
| Sodium, Total, ICAP | mg/L | 136 | 1900 | 153 |
| Sulfate | mg/L | 101 | 1400 | 153 |
| Surfactants (MBAS) | mg/L | 0.017 | 0.764 | 153 |
| Total Nitrate, Nitrite-N, CALC | mg/L | 0.86 | 14 | 153 |
| Total Organic Carbon | mg/L | 3.4 | 46 | 153 |
| Carbon Dioxide | mg/L | 8 | 47.1 | 153 |
| Lab pH | Units | 8.0 | 9.1 | 153 |
| Specific Conductance | umho/cm | 1168 | 17500 | 153 |
| Turbidity | NTU | 2.3 | 63 | 153 |
| **Metals** | | | | |
| Aluminum, Total, ICAP/MS | ug/l | 2.48 | 120 | 153 |
| Antimony, Total, ICAP/MS | ug/l | 0.036 | 5.5 | 153 |
| Arsenic, Total, ICAP/MS | ug/l | 2.76 | 36 | 153 |
| Barium, Total, ICAP/MS | ug/l | 72 | 300 | 153 |
| Beryllium, Total, ICAP/MS | ug/l | 0 | 0 | 153 |
| Boron | mg/L | 0 | 4.5 | 153 |
| Chromium, Total, ICAP/MS | ug/l | 3.54 | 350 | 153 |
| Hexavalent Chromium (Cr VI) | mg/l | 0.019 | 1.1 | 72 |
| Cadmium, Total, ICAP/MS | ug/l | 0 | 0 | 153 |
| Copper, Total, ICAP/MS | ug/l | 0.067 | 2.9 | 153 |
| Iron, Total, ICAP | mg/L | 0 | 0.61 | 153 |
| Lead, Total, ICAP/MS | ug/l | 0.011 | 0.7 | 153 |
| Manganese, Total, ICAP/MS | ug/l | 78 | 1200 | 153 |
| Nickel, Total, ICAP/MS | ug/l | 1.16 | 55 | 153 |
| Selenium, Total, ICAP/MS | ug/l | 0.34 | 32 | 153 |
| Silver, Total, ICAP/MS | ug/l | 0.44 | 52 | 153 |
| Thallium, Total, ICAP/MS | ug/l | 0 | 0 | 153 |
| Zinc, Total, ICAP/MS | ug/l | 0.77 | 29 | 153 |
| **Volatile Organic Compounds** | | | | |
| MTBE | ug/l | 0 | 0 | 153 |
| Benzene | ug/l | 0 | 0 | 153 |
| Toluene | ug/l | 0 | 0 | 153 |
| m,p-Xylenes | ug/l | 0.008 | 1.2 | 153 |
| o-Xylene | ug/l | 0 | 0 | 153 |
| Ethyl benzene | ug/l | 0 | 0 | 153 |
| Trichloroethylene (TCE) | ug/l | 1.153 | 57 | 153 |
| Tetrachloroethylene (PCE) | ug/l | 0.30 | 10 | 153 |
| 1,1,1-Trichloroethane | ug/l | 0.098 | 15 | 153 |
| 1,1,1,2-Tetrachloroethane | ug/l | 0 | 0 | 153 |
| 1,1,2,2-Tetrachloroethane | ug/l | 0 | 0 | 153 |
| 1,1,2-Trichloroethane | ug/l | 0 | 0 | 153 |
| 1,1-Dichloroethane | ug/l | 0.006 | 0.9 | 153 |
| 1,1-Dichloroethylene | ug/l | 0.31 | 32 | 153 |

# Table D-2 Summary of Regional Groundwater Quality

| Water Quality Constituent | Units of Measure[1] | Mean[2] | Maximum | Number of Analyses |
|---|---|---|---|---|
| 1,1-Dichloropropene | ug/l | 0 | 0 | 153 |
| 1,2-Dichloroethane | ug/l | 0.008 | 0.6 | 153 |
| 1,2,3-Trichlorobenzene | ug/l | 0 | 0 | 153 |
| 1,2,3-Trichloropropane | ug/l | 0 | 0 | 153 |
| 1,2,4-Trichlorobenzene | ug/l | 0 | 0 | 153 |
| 1,2,4-Trimethylbenzene | ug/l | 0 | 0 | 153 |
| 1,2-Dichloropropane | ug/l | 0 | 0 | 153 |
| 1,3,5-Trimethylbenzene | ug/l | 0 | 0 | 153 |
| 1,3-Dichlorobenzene | ug/l | 0 | 0 | 153 |
| 1,3-Dichloropropane | ug/l | 0 | 0 | 153 |
| 2,2-Dichloropropane | ug/l | 0 | 0 | 153 |
| 2-Butanone (MEK) | ug/l | 0 | 0 | 153 |
| 4-Methyl-2-Pentanone (MIBK) | ug/l | 0 | 0 | 153 |
| Bromobenzene | ug/l | 0 | 0 | 153 |
| Bromochloromethane | ug/l | 0 | 0 | 153 |
| Bromodichloromethane | ug/l | 0 | 0 | 153 |
| Bromoform | ug/l | 0 | 0 | 153 |
| Bromomethane (Methyl Bromide) | ug/l | 0 | 0 | 153 |
| Carbon Tetrachloride | ug/l | 0.054 | 7.8 | 153 |
| Chlorobenzene | ug/l | 0 | 0 | 153 |
| Chlorodibromomethane | ug/l | 0 | 0 | 153 |
| Chloroethane | ug/l | 0 | 0 | 153 |
| Chloroform (Trichloromethane) | ug/l | 0.084 | 8.2 | 153 |
| Chloromethane(Methyl Chloride) | ug/l | 0 | 0 | 153 |
| cis-1,2-Dichloroethylene | ug/l | 0.15 | 19 | 153 |
| cis-1,3-Dichloropropene | ug/l | 0 | 0 | 153 |
| Dibromomethane | ug/l | 0 | 0 | 153 |
| Di-Isopropyl Ether | ug/l | 0.180 | 13 | 153 |
| Ethyl Tertiary Butyl Ether | ug/l | 0 | 0 | 153 |
| Fluorotrichloromethane-Freon11 | ug/l | 0.059 | 9.1 | 153 |
| Hexachlorobutadiene | ug/l | 0.004 | 0.6 | 153 |
| Isopropylbenzene | ug/l | 0.042 | 6.4 | 153 |
| Methylene Chloride | ug/l | 0 | 0 | 153 |
| Naphthalene | ug/l | 0 | 0 | 153 |
| n-Butylbenzene | ug/l | 0 | 0 | 153 |
| n-Propylbenzene | ug/l | 0.043 | 6.6 | 153 |
| o-Chlorotoluene | ug/l | 0 | 0 | 153 |
| o-Dichlorobenzene (1,2-DCB) | ug/l | 0 | 0 | 153 |
| p-Chlorotoluene | ug/l | 0 | 0 | 153 |
| p-Dichlorobenzene | ug/l | 0 | 0 | 153 |
| p-Isopropyltoluene | ug/l | 0 | 0 | 153 |
| sec-Butylbenzene | ug/l | 0.005 | 0.8 | 153 |
| Styrene | ug/l | 0 | 0 | 153 |
| tert-Butylbenzene | ug/l | 0 | 0 | 153 |
| Tertiary Amyl Methyl Ether | ug/l | 0 | 0 | 153 |
| trans-1,2-Dichloroethylene | ug/l | 0 | 0 | 153 |
| trans-1,3-Dichloropropene | ug/l | 0 | 0 | 153 |
| Vinyl chloride (VC) | ug/l | 0 | 0 | 153 |
| Perchlorate | ug/l | 0 | 0 | 73 |

Source: Water Replenishment District data for Central and West Basins, February through September 2002

1. mg/L = milligrams per liter; ug/L = micrograms per liter; umho/cm = micromhos per centimeter.
2. To compute summary stastitics, analyses resulting in no detection (ND) of the constituent were assigned the numerical value 0.

# TABLE E-1

## SOIL ANALYTICAL RESULTS - VOLATILE ORGANIC COMPOUNDS

Los Angeles and San Gabriel Rivers Watershed Council

Water Augmentation Study

| Site | Well/Boring No. | Sample No. | Sample Depth (feet bgs)[1] | | | Sample Date | Volatile Organic Compounds [2] |
|---|---|---|---|---|---|---|---|
| Broadous | L-D | B-L-D | 32.0 | | | 08/26/01 | ND [3] |
| Hall House | HA | HA-1 | 0.5 | - | 1.0 | 10/28/02 | ND |
| | HA | HA-2 | 8.0 | - | 8.5 | 10/28/02 | ND |
| | H-B1 | H-B1 | 8.0 | - | 8.5 | 03/10/05 | ND |
| IMAX | I-B1 | I-B1 | 5.0 | | | 03/10/05 | ND |
| | LS-02 | LS-02 | 5.0 | | | 10/16/01 | ND |
| Metal Recycler | M-B1 | B1-1 | 4.5 | - | 5.0 | 08/22/03 | ND |
| | M-B2 | B2-1 | 5.0 | - | 5.5 | 08/22/03 | ND |
| | M-B3 | B3-1 | 5.0 | - | 5.5 | 08/22/03 | ND |
| | M-LS-01 | LS-01-1 | 20.0 | - | 21.5 | 11/05/03 | ND |
| | | LS-01-3 | 52.0 | - | 52.5 | 11/05/03 | ND |
| | M-LS-02 | LS-02-1 | 36.5 | - | 38.0 | 11/05/03 | ND |
| Sun-Valley | S-B-01-1 | S-B-01-1 | 22.5 | - | 23.0 | 03/17/05 | ND |
| | S-B-01-2 | S-B-01-2 | 45.5 | - | 46.0 | 03/17/05 | ND |
| | S-1 | S-1 | 5.0 | - | 5.5 | 10/29/03 | ND |
| | S-LS-02 | LS-02-45.75 | 45.75 | - | 46.25 | 11/06/03 | ND |
| | | LS-02-46.25 | 46.25 | - | 46.75 | 11/06/03 | ND |
| | S-LS-01 | LS-01-23.5 | 23.00 | - | 23.50 | 11/11/03 | ND |
| Veteran's Park | V-B1 | V-B1 | 10.0 | | | 03/11/05 | ND |
| | V-LS-01 | LS-01-1 | 10.5 | - | 11.0 | 10/29/03 | ND |
| | | LS-01-2 | 15.5 | - | 18.0 | 10/29/03 | ND |

1. feet bgs = feet below ground surface
2. Samples analyzed for volatile and semi-volatile organic compounds using EPA Methods 8260B and 8270C.
3. ND = not detected; sample result is below the reported limit of quantitation.

# TABLE E-2

## SOIL ANALYTICAL RESULTS - GENERAL MINERALS AND OTHER CONSTITUENTS

Los Angeles and San Gabriel Rivers Watershed Council
Water Augmentation Study

| | | | Broadous | Hall House | | | IMAX | | Metal Recycler | | Sun Valley | | | | | Veterans Park | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units** | **B-L-D 8/26/01** | **HA-1 2/28/02** | **HA-2 2/28/02** | **H-B1 3/10/05** | **I-B1 3/10/05** | **I-LS-02 10/16/01** | **M-LS-01 11/5/03** | **M-LS-02 11/5/03** | **S-B-01-1 3/17/05** | **S-B-01-2 3/17/05** | **S-1 10/29/03** | **S-LS-01 11/11/03** | **S-LS-02 11/6/03** | **V-B1 3/11/05** | **V-LS-01 10/29/03** |
| Alkalinity, Total (as CaCO3) | SM 2320B M | mg/kg[1] | -- | -- | -- | 180 | 60 | -- | 270 | 50 | 110 | 50 | -- | 190 | 40 | 610 | 800 |
| Ammonia | EPA 350.2M | mg/kg | <1.03[2] | 38.8 | 10 | 25 | 8.4 | <1 | <5 | <5 | 17 | <5 | -- | <5 | <5 | <5 | <5 |
| Bicarbonate (as CaCO3) | SM 2320B M | mg/kg | -- | -- | -- | 170 | 60 | -- | 130 | 50 | 110 | 50 | -- | 190 | 40 | 580 | 8,000 |
| Bromide | EPA 300.0 | mg/kg | <5.17 | <0.662 | <0.662 | <1 | <1 | <5.75 | 1.2 | <1 | <1 | <1 | -- | <1 | <1 | <1 | <1 |
| Calcium | EPA 6010B | mg/kg | 6,650 | 6,790 | 22,400 | 5,100 | 3,310 | 4,240 | 5,050 | 1,870 | 2,310 | 3,170 | -- | 3,160 | 4,690 | 5,910 | 17,500 |
| Carbon, Total Organic | EPA 9060 | mg/kg | -- | 94.2 | 8.67 | 700 | 3,800 | -- | 1,700 | <500 | <500 | <500 | -- | <500 | <500 | 1,200 | -- |
| Carbonate (as CaCO3) | SM 2320B M | mg/kg | -- | -- | -- | 10 | <1 | -- | 140 | <1 | <5 | <5 | -- | <1 | <5 | 30 | 30 |
| Chemical Oxygen Demand | EPA 410.1M | mg/kg | -- | -- | -- | 2,000 | 7,500 | -- | 4,300 | 1,800 | 880 | 1,500 | -- | 2,200 | 2,800 | 3,400 | 3,600 |
| Chloride | EPA 300.0 | mg/kg | 29.1 | 58.8 | 14.4 | <10 | <10 | 28.3 | 13 | 22 | <10 | <10 | -- | <10 | <10 | 18 | 47 |
| Fluoride | EPA 340.2M | mg/kg | 0.702 J[3] | 2.59 | 1.72 | 4 | 1.8 | <1.15 | 1.9 | 0.92 | 1.5 | <0.5 | -- | 2 | 1.3 | 4.2 | 4.5 |
| Hydroxide (as CaCO3) | SM 2320B M | mg/kg | -- | -- | -- | <1 | <1 | -- | <1 | <1 | <5 | <5 | -- | <1 | <5 | <1 | <5 |
| Magnesium | EPA 6010B | mg/kg | 3,660 | 6,610 | 9,970 | 5,620 | 6,650 | 8,550 | 3,110 | 1,790 | 2,180 | 2,310 | -- | 2,120 | 4,200 | 6,380 | 5,080 |
| Nitrate (as N) | EPA 300.0 | mg/kg | 9.3 | 3.86 | <0.143 | 1.5 | 1.7 | 79 | 1.9 | 2.9 | 1.1 | 1.2 | <1 | 1.8 | 1.4 | 1.7 | 1 |
| Nitrite (as N) | EPA 300.0 | mg/kg | <1.03 | <0.2 | <0.2 | <1 | <1 | <5.75 | <1 | <1 | <1 | <1 | -- | <1 | <1 | <1 | 1.1 |
| Nitrogen, Organic | SM 4500-N(org) | mg/kg | -- | 505 | 43.2 | 150 | 390 | 430 | 56 | 28 | 93 | <10 | -- | 28 | 98 | 110 | 98 |
| o-Phosphate (as P) | EPA 300.0 | mg/kg | -- | 9.26 | <2.36 | -- | -- | <5.75 | -- | -- | -- | -- | 6 | -- | -- | -- | -- |
| Oil and Grease | EPA 413.1M | mg/kg | 14.5 | -- | -- | <10 | <10 | <11.5 | 28 | 46 | -- | -- | -- | <10 | 76 | 69 | 20 |
| Perchlorate | EPA 314.0M | µg/kg | 330 | <12.6 | <12.6 | <20 | <20 | 24.8 J | <20 | <20 | <20 | <20 | -- | <20 | <20 | <20 | <20 |
| pH | EPA 9045C | pH units | 8.82 | 7.05 | 8.06 | 7.58 | 6.67 | 7.34 | 8.76 | 8.38 | 7.14 | 7.68 | -- | 8.25 | 6.8 | 7.78 | 9.24 |
| Phosphorus | EPA 365.3M | mg/kg | -- | 140 | 11.5 | 270 | 730 | -- | 450 | 340 | 190 | 200 | -- | 340 | 680 | 760 | 230 |
| Potassium | EPA 6010B | mg/kg | 1,880 | 4,220 | 3,960 | 3,350 | 3,020 | 3,880 | 840 | 983 | 1,410 | 1,300 | -- | 1,350 | 2,590 | 3,210 | 408 |
| Sodium | EPA 6010B | mg/kg | 318 | 432 | 689 | 254 | 129 | 282 | 287 | 177 | 136 | 156 | -- | 499 | 256 | 208 | 197 |
| Sulfate | EPA 300.0 | mg/kg | 40.2 | 73.4 | 18 | <10 | <10 | 107 | 140 | 170 | <10 | <10 | -- | 130 | 70 | 31 | 400 |
| Surfactants | EPA 425.1M | mg/kg | -- | -- | -- | <1 | <1 | -- | <0.1 | <0.1 | <1 | <1 | -- | <1 | <0.1 | <1 | <1 |
| Total Kjeldahl Nitrogen | EPA 351.3M | mg/kg | 7.56 | 544 | 53.2 | 170 | 390 | 374 | 56 | 28 | 110 | <10 | <10 | 28 | 98 | 110 | 98 |

1. mg/kg = milligrams per kilogram; µg/kg = micrograms per kilogram.
2. Constituents that are not detected are denoted as being < their reporting limit.

# TABLE E-3

## SOIL ANALYTICAL RESULTS - METALS

Los Angeles and San Gabriel Rivers Watershed Council
Water Augmentation Study

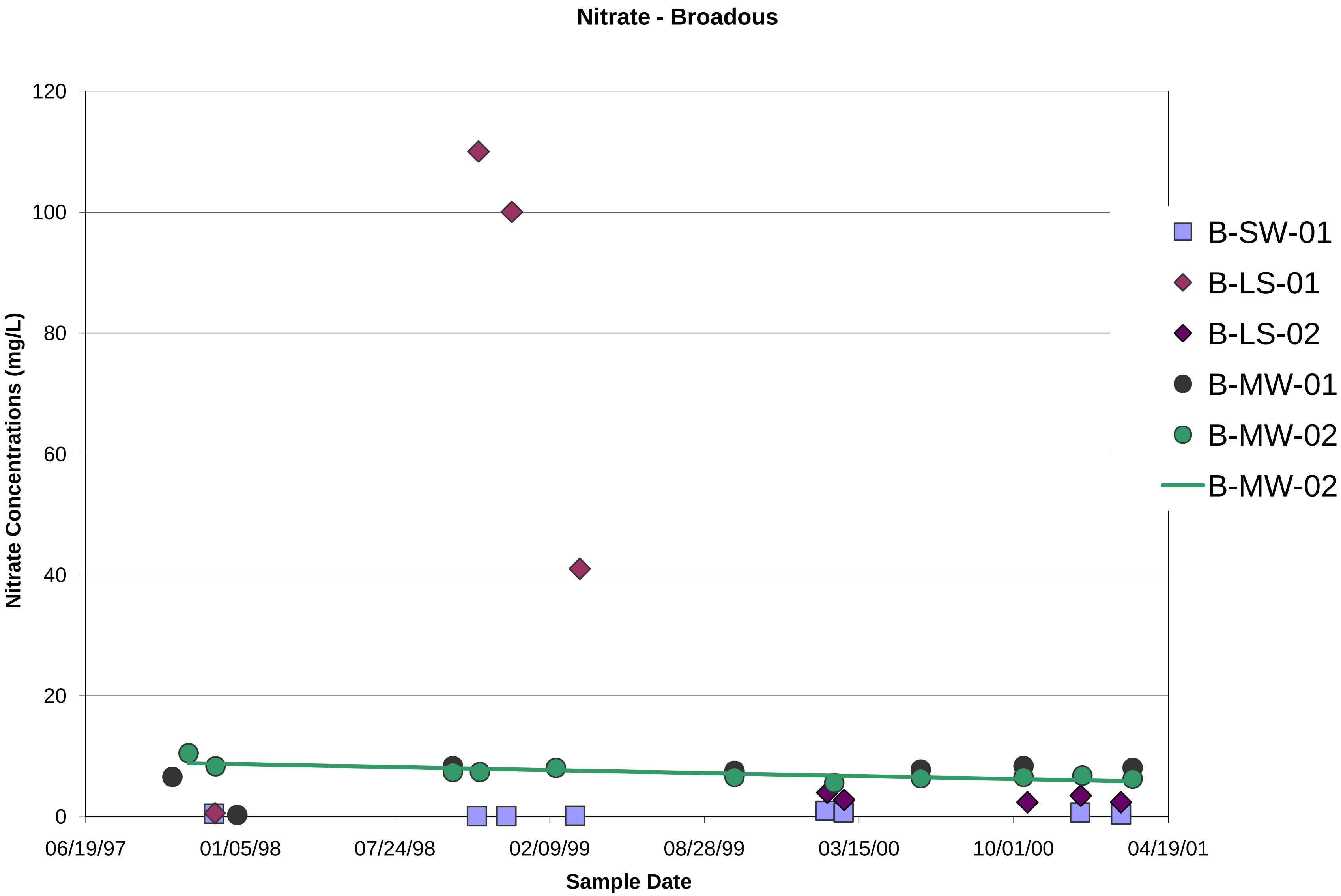
| | | | Broadous | Hall House | | | IMAX | | Metal Recycler | | Sun Valley | | | | | Veterans Park | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analyte** | **Method** | **Units[1]** | **B-L-D 8/26/01** | **HA-1 2/28/02** | **HA-2 2/28/02** | **H-B1 3/10/05** | **I-B1 3/10/05** | **I-LS-02 10/16/01** | **M-LS-01 11/5/03** | **M-LS-02 11/5/03** | **S-B-01-1 3/17/05** | **S-B-01-2 3/17/05** | **S-1 10/29/03** | **S-LS-01 11/11/03** | **S-LS-02 11/6/03** | **V-B1 3/11/05** | **V-LS-01 10/29/03** |
| Aluminum | EPA 6010B | mg/kg | 6,820 | 13,200 | 18,400 | 9,320 | 15,300 | 27,000 | 6,120 | 3,770 | 4,760 | 4,570 | --2 | 6,100 | 8,280 | 8,880 | 6,780 |
| Antimony | EPA 6010B | mg/kg | <10.3 | <2.48 | <2.48 | <0.75 | <0.75 | <11.5 | 1 | <0.75[3] | <0.75 | <0.75 | <0.75 | 0.881 | 1 | <0.75 | <0.75 |
| Arsenic | EPA 6010B | mg/kg | -- | 3.01 | 1.03 | <0.75 | 10.7 | 15.6 | <0.75 | <0.75 | 1.74 | 1.14 | <0.75 | <0.75 | <0.75 | 3.42 | <0.75 |
| Barium | EPA 6010B | mg/kg | 117 | 140 | 132 | 82.5 | 125 | 156 | 75.8 | 39.5 | 72.3 | 47.3 | 29.1 | 49 | 78.1 | 85.8 | 7.11 |
| Beryllium | EPA 6010B | mg/kg | <1.03 | <0.139 | <0.139 | <0.25 | 0.691 | 0.961 J[4] | <0.25 | <0.25 | <0.25 | <0.25 | <0.25 | <0.25 | <0.25 | <0.25 | <0.25 |
| Boron | EPA 6010B | mg/kg | -- | -- | -- | 1.56 | <1 | -- | 6.69 | 1 | 16.2 | 16.2 | -- | <1 | <1 | 2.9 | <1 |
| Cadmium | EPA 6010B | mg/kg | <1.03 | <0.426 | <0.426 | <0.5 | 0.649 | <1.15 | 1 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 | <0.5 |
| Chromium (Total) | EPA 6010B | mg/kg | 12.3 | 19.3 | 22.5 | 10.5 | 38.3 | 51.8 | 4.31 | 5.49 | 3.2 | 4.01 | 2.29 | 7.27 | 7.88 | 13.8 | 29.4 |
| Chromium, Hexavalent | EPA 7199 | µg/kg | <450 | -- | -- | 46 | 410 | <506 | 46 | <40 | <40 | <40 | -- | <40 | <40 | <40 | 220 |
| Cobalt | EPA 6010B | mg/kg | 5.61 | 7.62 | 9.78 | 8.42 | 14.3 | 15.9 | 6.03 | 2.95 | 3.44 | 3.86 | 2.32 | 3.5 | 7.78 | 8.58 | 7.49 |
| Copper | EPA 6010B | mg/kg | 12.2 | 28 | 20.7 | 16.2 | 37.9 | 41.9 | 5.23 | 21.1 | 8.16 | 13.4 | 4.08 | 17 | 25.2 | 15.6 | 43.2 |
| Iron | EPA 6010B | mg/kg | 13,800 | 17,700 | 23,500 | 14,000 | 32,000 | 35,600 | 9,360 | 4,670 | 5,820 | 6,170 | -- | 6,630 | 12,600 | 15,000 | 26,700 |
| Lead | EPA 6010B | mg/kg | -- | 93.4 | 1.63 | 2.14 | 8.89 | 9.1 | 40 | 1.19 | 1.43 | 5.42 | 0.544 | 2.38 | 2.47 | 3.24 | 6.49 |
| Manganese | EPA 6010B | mg/kg | 175 | 336 | 448 | 262 | 497 | 592 | 195 | 141 | 118 | 110 | -- | 142 | 187 | 362 | 64.3 |
| Mercury | EPA 7471A | mg/kg | <0.103 | 0.185 | 0.072 | <0.0835 | <0.0835 | 0.031 J | 0 | <0.0835 | <0.0835 | <0.835 | <0.0835 | <0.0835 | <0.0835 | <0.0835 | <0.0835 |
| Molybdenum | EPA 6010B | mg/kg | -- | -- | -- | 0.883 | <0.25 | -- | 0.59 | 0.8 | <0.25 | <0.25 | <0.25 | 0.498 | <0.25 | <0.25 | <0.25 |
| Nickel | EPA 6010B | mg/kg | 4.85 | 13.2 | 15.7 | 8.1 | 38.4 | 48.2 | 9.82 | 2.76 | 2.93 | 3.46 | 1.66 | 3.75 | 6.07 | 12.3 | 9.28 |
| Selenium | EPA 6010B | mg/kg | -- | <0.336 | <0.336 | <0.75 | <0.75 | 0.621 J | <0.75 | <0.75 | <0.75 | <0.75 | <0.75 | <0.75 | <0.75 | <0.75 | <0.75 |
| Silver | EPA 6010B | mg/kg | <2.07 | <0.74 | <0.74 | <0.25 | <0.25 | <2.3 | <0.25 | <0.25 | <0.25 | <0.25 | <0.25 | <0.25 | <0.25 | <0.25 | <0.25 |
| Strontium | EPA 6010B | mg/kg | -- | -- | -- | 62.3 | 30 | -- | 39 | 20.9 | 65.9 | 30.7 | -- | 50.3 | 41.7 | 47.2 | 79.3 |
| Thallium | EPA 6010B | mg/kg | -- | <0.359 | <0.359 | <0.75 | <0.75 | <2.3 | 5.98 | 3.34 | <0.75 | <0.75 | <0.75 | 7.35 | 8 | <0.75 | <0.75 |
| Tin | EPA 6010B | mg/kg | -- | -- | -- | <2.5 | <2.5 | -- | 3 | <2.5 | <2.5 | <2.5 | -- | <2.5 | <2.5 | <2.5 | 2.71 |
| Titanium | EPA 6010B | mg/kg | -- | -- | -- | 1,160 | 3,730 | -- | 581 | 326 | 405 | 405 | -- | 462 | 848 | 715 | 614 |
| Vanadium | EPA 6010B | mg/kg | 13.6 | 36.7 | 50 | 28.6 | 61.5 | 83.4 | 8.47 | 8.16 | 10.1 | 10.5 | 8.78 | 10.5 | 23.7 | 27.8 | 49.1 |
| Zinc | EPA 6010B | mg/kg | 23.3 B[5] | 175 | 67.4 | 49.3 | 85.3 | 97.5 | 173 | 21.2 | 20.4 | 22.6 | 15.1 | 25.1 | 43.5 | 42.5 | 88.7 |

1. mg/kg = milligrams per kilogram; µg/kg = micrograms per kilogram.
2. "--" = not analyzed.
3. Constituents that are not detected are denoted as being < their reporting limit.

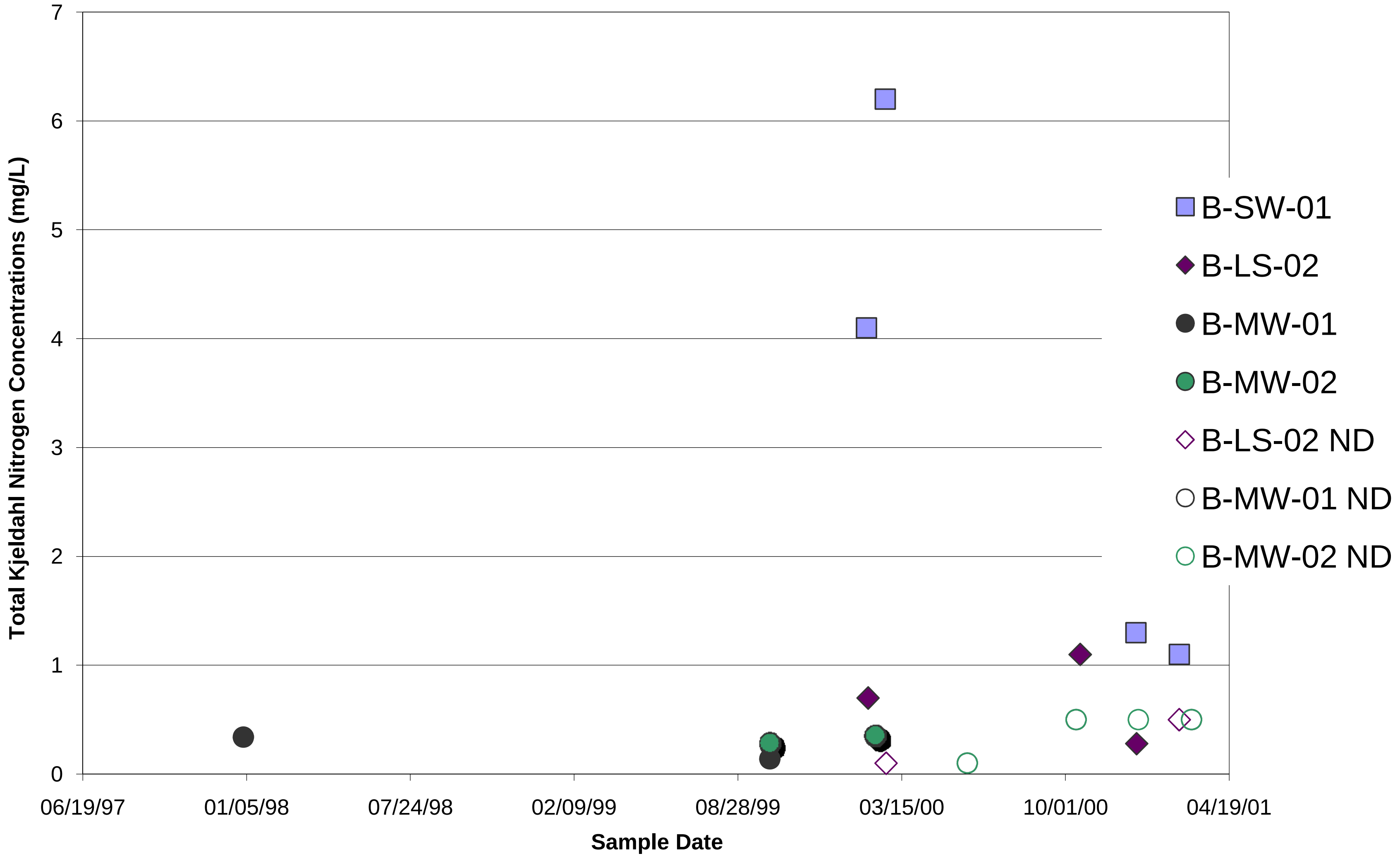
Significant Mann-Kendall Trends

| **Location** | **Constituent** | **Actual Value** | **Critical Value** | **Trend[1]** |
|---|---|---|---|---|
| M-LS-01 | MTBE | 12 | +/-11 | + |
| M-MW-01 | Chloride | 15 | +/-13 | + |
| M-LS-01 | TKN | -11 | +/-11 | - |
| S-LS-01 | Arsenic | -11 | +/-11 | - |
| S-LS-04 | Arsenic | -11 | +/-11 | - |
| S-LS-01 | TDS | -15 | +/-11 | - |
| S-LS-03 | TDS | -11 | +/-11 | - |
| S-LS-02 | Chloride | -14 | +/-11 | - |
| S-LS-03 | Chloride | -11 | +/-11 | - |
| S-LS-01 | Nitrate | -12 | +/-11 | - |
| S-LS-03 | Nitrate | -12 | +/-11 | - |
| S-LS-03 | Cu-Dissolved | 15 | +/-11 | + |
| S-LS-01 | Cu-Dissolved | 11 | +/-11 | + |
| S-LS-03 | Cu-Total | 11 | +/-11 | + |
| V-MW-02 | Arsenic-Dissolved | -11 | +/-11 | - |
| V-MW-03 | Arsenic-Dissolved | -22 | +/-18 | - |
| V-MW-02 | Arsenic-Total | -13 | +/-11 | - |
| V-MW-03 | Arsenic-Total | -22 | +/-18 | - |
| V-LS-01 | Chloride | -14 | +/-11 | - |
| V-LS-02 | Chloride | -13 | +/-11 | - |
| V-MW-02 | Chloride | -11 | +/-11 | - |
| V-MW-04 | Chloride | -32 | +/-18 | - |
| V-MW-02 | Copper-Dissolved | -13 | +/-11 | - |
| V-MW-02 | Copper-Total | -13 | +/-11 | - |
| V-LS-02 | Nitrate | -13 | +/-11 | - |
| V-MW-02 | Nitrate | 14 | +/-11 | + |
| V-MW-03 | Nitrate | -22 | +/-18 | - |
| V-MW-04 | Nitrate | -29 | +/-18 | - |
| V-MW-03 | Sodium | -18 | +/-18 | - |
| V-MW-04 | Sodium | -26 | +/-18 | - |
| V-MW-02 | Diss Hex Chrom | -15 | +/-11 | - |
| V-LS-02 | TDS | -15 | +/-11 | - |
| V-MW-02 | TDS | -12 | +/-11 | - |
| V-MW-04 | TDS | -19 | +/-18 | - |
| V-MW-02 | TKN | -11 | +/-11 | - |
| V-MW-04 | TKN | -21 | +/-18 | - |
| I-LS-01 | Lead-Total | -24 | +/-18 | - |
| I-LS-01 | Cu-Total | -24 | +/-18 | - |
| I-MW-01 | Cu-Total | -20 | +/-16 | - |
| I-MW-02 | Cu-Total | -44 | +/-28 | - |
| I-MW-02 | Zn-Dissolved | -40 | +/-28 | - |
| I-MW-02 | Zn-Total | -36 | +/-28 | - |
| I-MW-02 | TSS | -39 | +/-28 | - |
| I-MW-02 | Chloride | -39 | +/-28 | - |
| I-MW-02 | Nitrate | -30 | +/-28 | - |
| I-LS-02 | Nitrate | -10 | +/-8 | - |
| I-MW-01 | Arsenic - Dissolved | -14 | +/-13 | - |
| I-MW-01 | Arsenic - Total | -22 | +/-16 | - |
| H-LS-01 | Cu-Dissolved | -11 | +/-11 | - |
| H-LS-01 | Cu-Total | -8 | +/-8 | - |
| H-LS-01 | Zn-Dissolved | -13 | +/-11 | - |
| B-MW-02 | TDS | -33 | +/-23 | - |
| B-MW-02 | Zn-Dissolved | -34 | +/-21 | - |
| B-MW-01 | Cu-Dissolved | -16 | +/-13 | - |
| B-MW-02 | Cu-Dissolved | -26 | +/-18 | - |
| B-MW-01 | Cu-Total | -18 | +/-13 | - |
| B-MW-02 | Cu-Total | -28 | +/-23 | - |
| B-MW-02 | Zn-Total | -19 | +/-18 | - |
| B-LS-02 | TDS | -8 | +/-8 | - |
| B-MW-02 | Chloride | -32 | +/-23 | - |
| B-MW-02 | Nitrate | -32 | +/-23 | - |
| B-MW-02 | TSS | -28 | +/-23 | - |

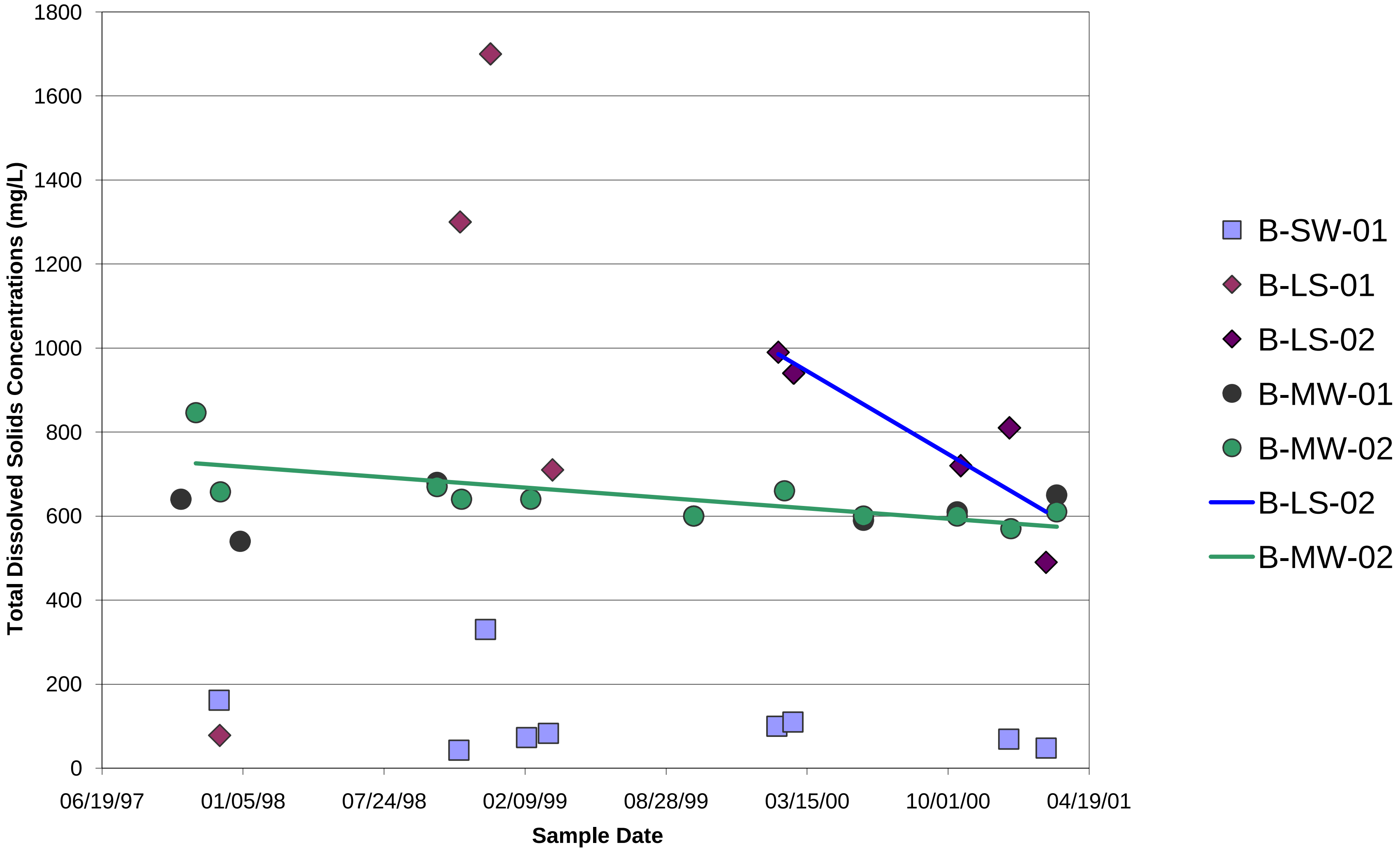
1. "+" indicates an increasing time trend, "-" indicates a decreasing time trend.


Nitrate - Broadous
Nitrate Concentrations (mg/L)
120
100
80
60
40
20
0
06/19/97
01/05/98
07/24/98
02/09/99
08/28/99
03/15/00
10/01/00
04/19/01
Sample Date
B-SW-01
B-LS-01
B-LS-02
B-MW-01
B-MW-02
B-MW-02

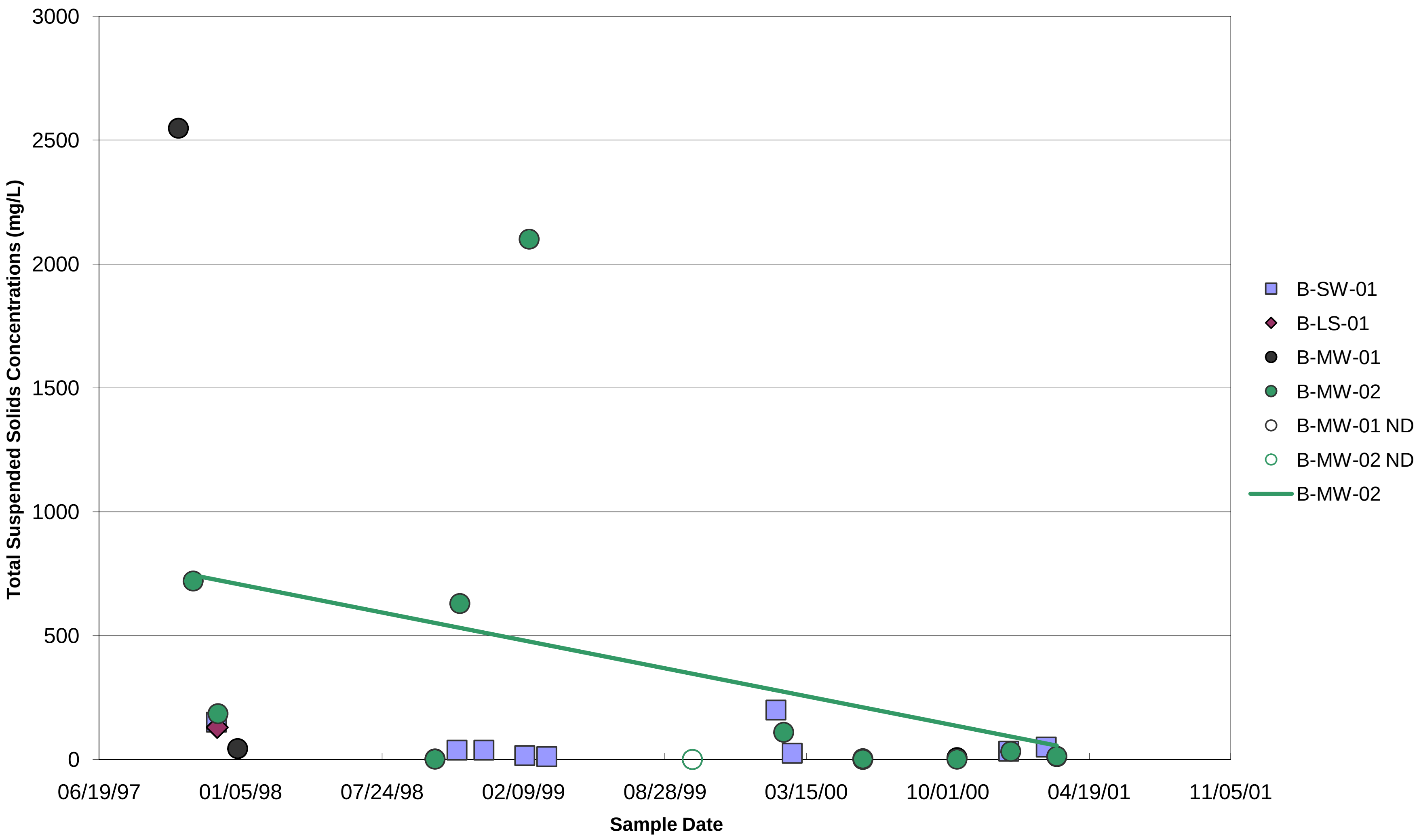
# Total Kjeldahl Nitrogen - Broadous



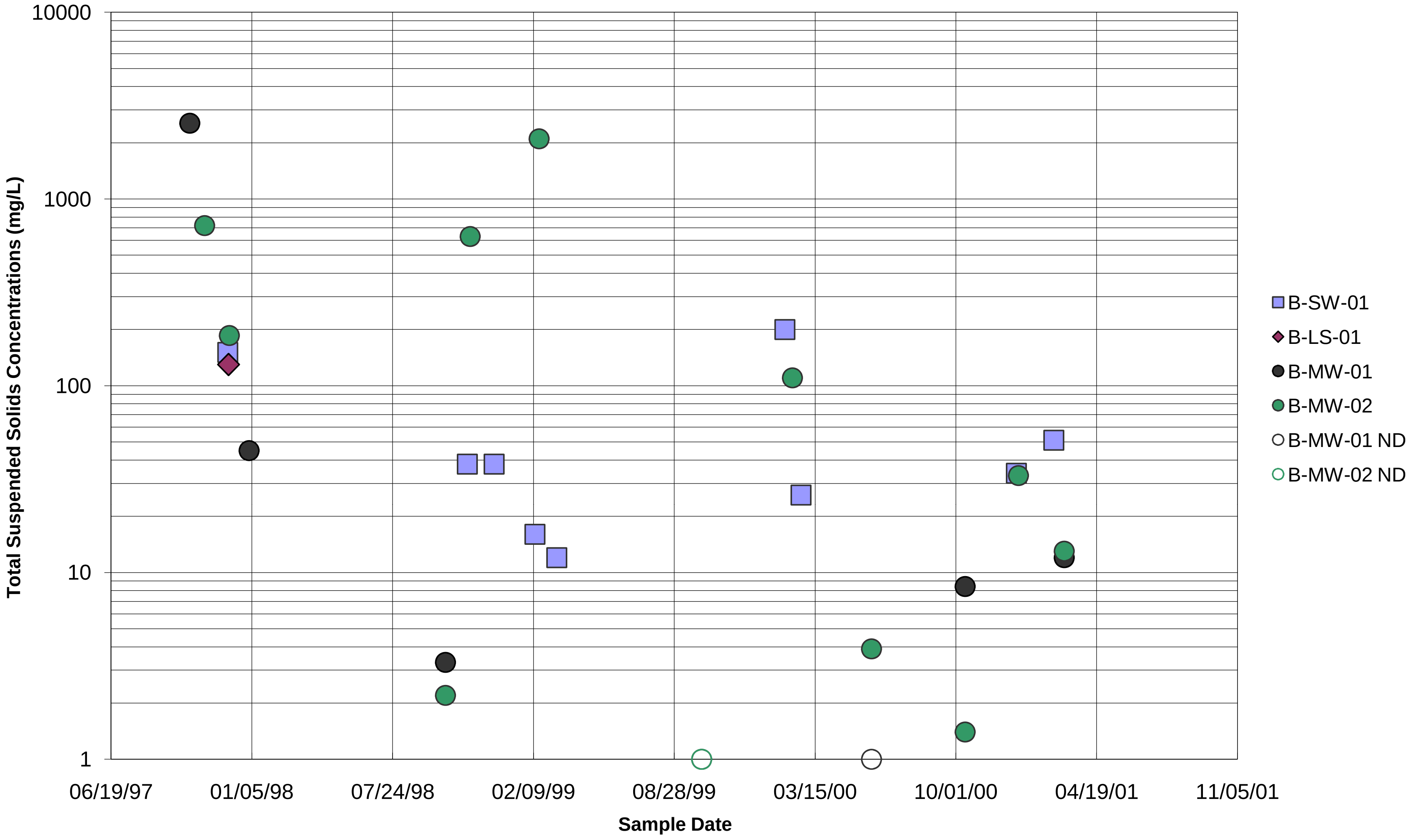
## Total Dissolved Solids - Broadous



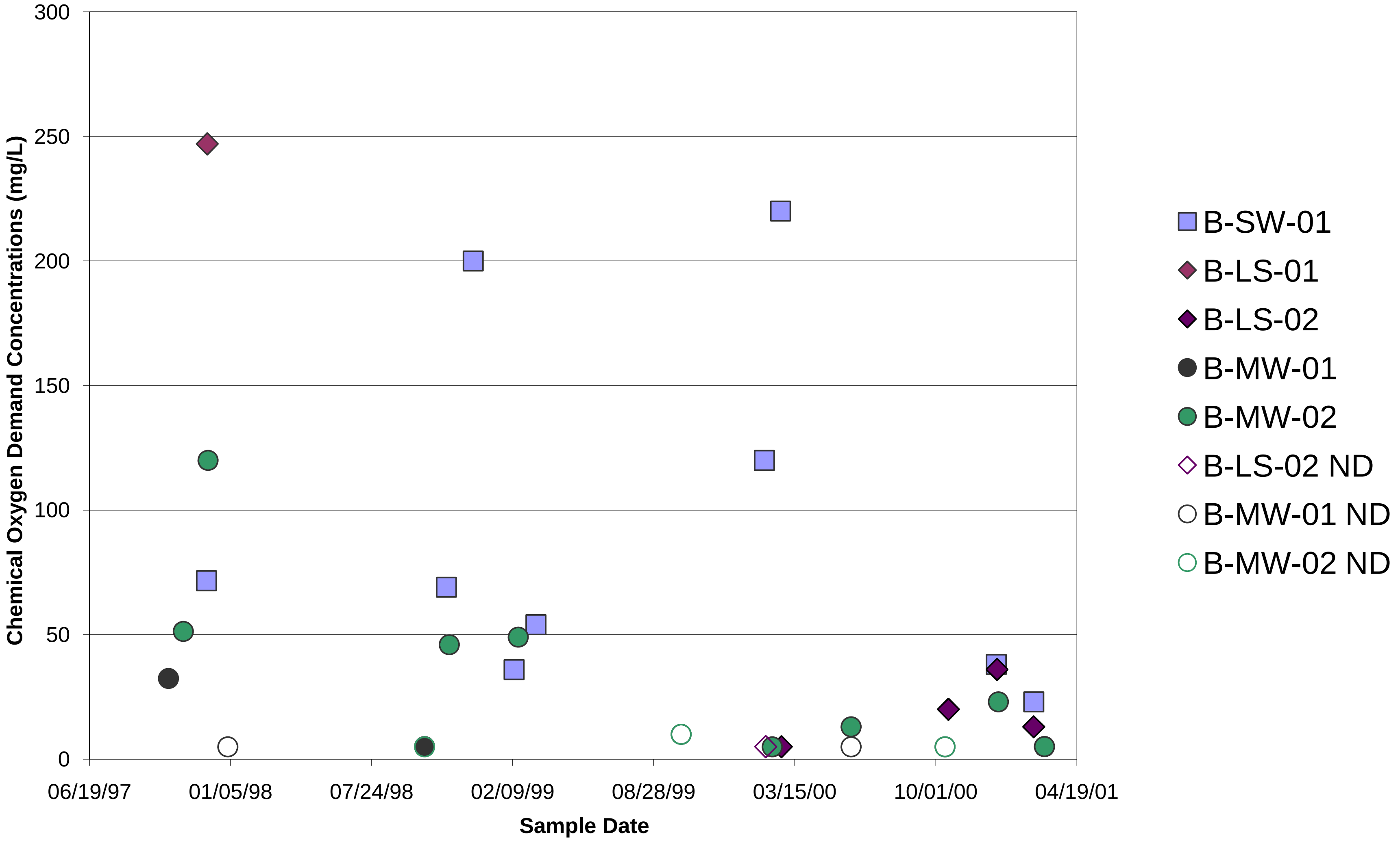
Total Suspended Solids - Broadous

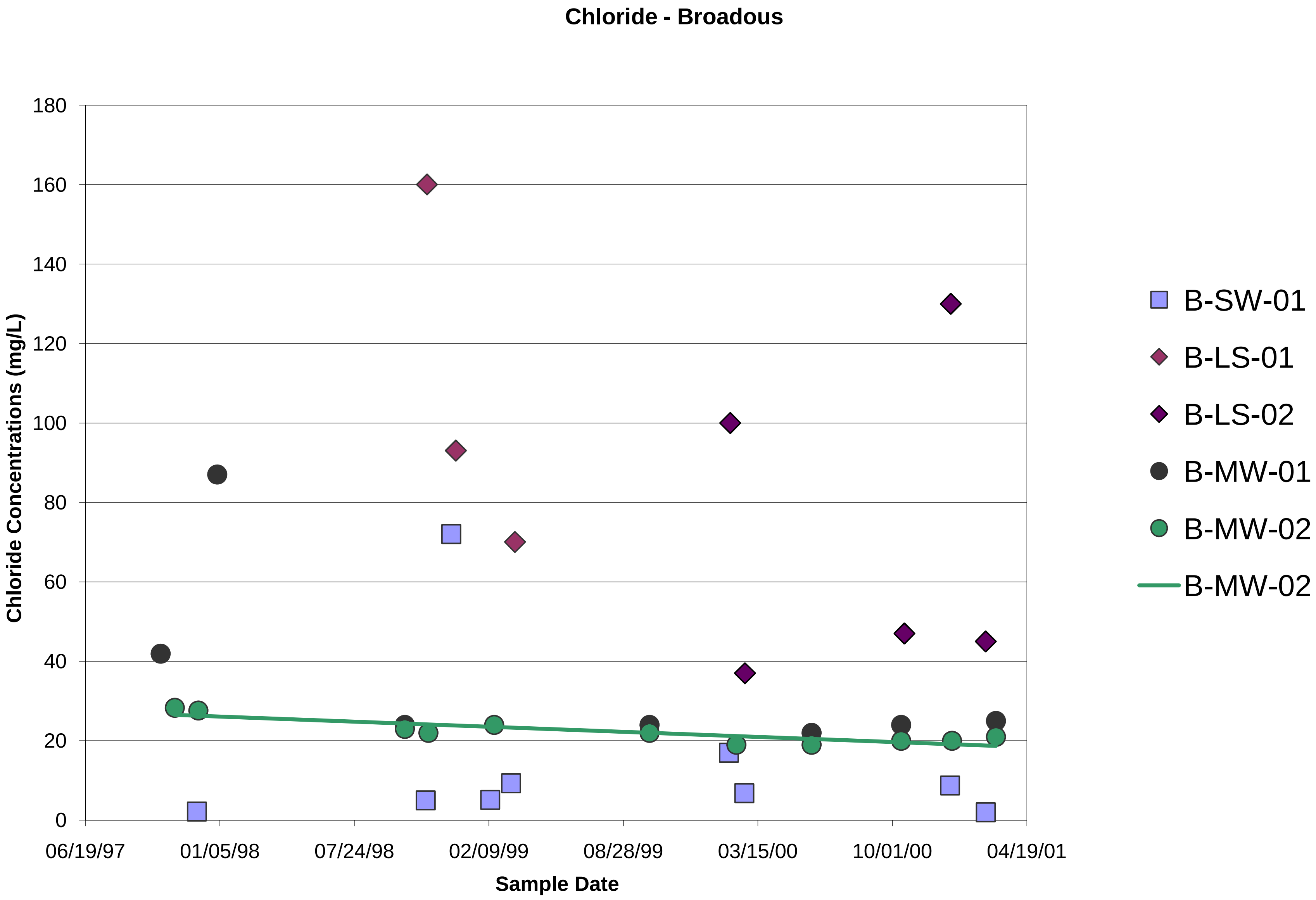


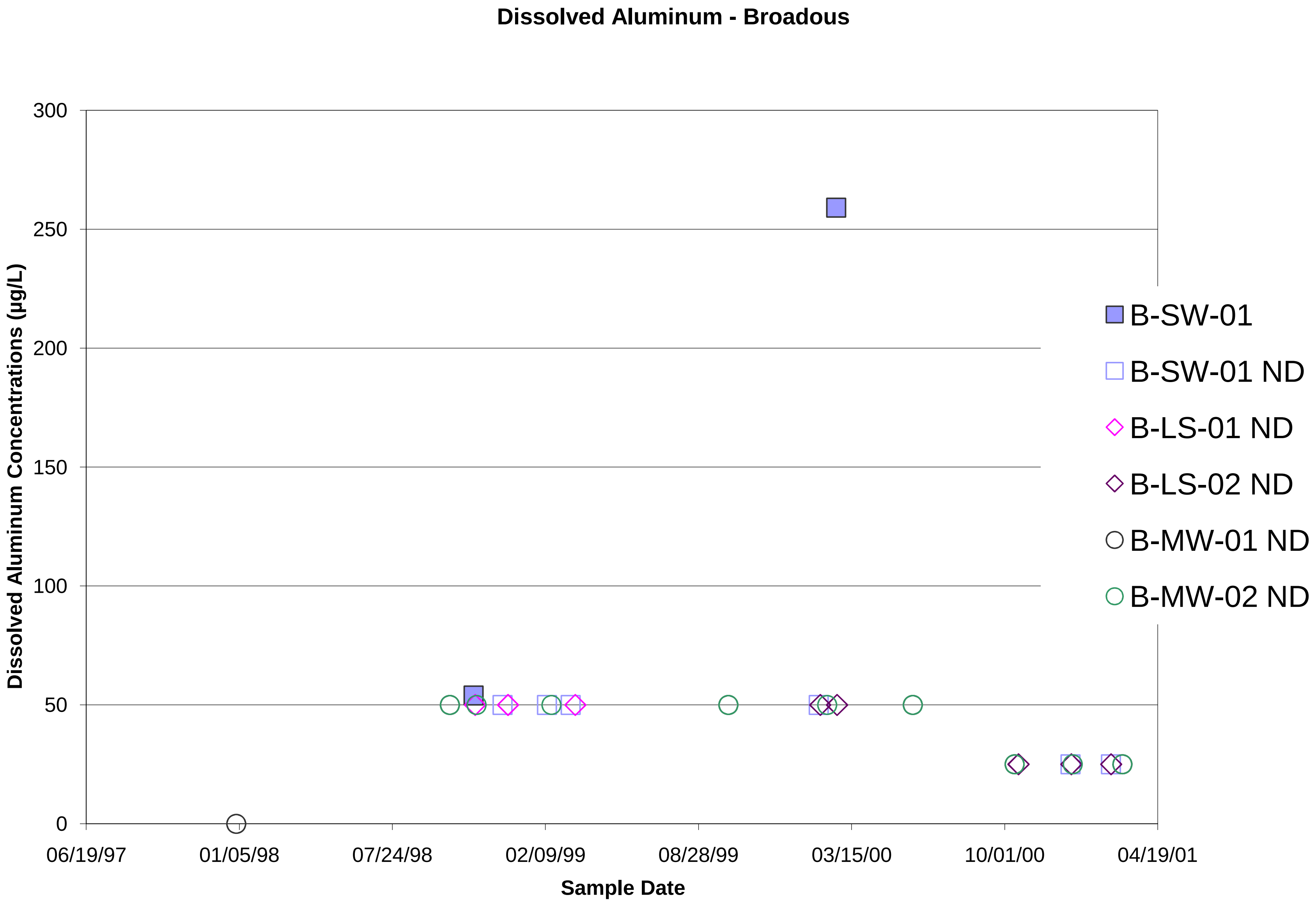
## Total Suspended Solids - Broadous - Log Scale



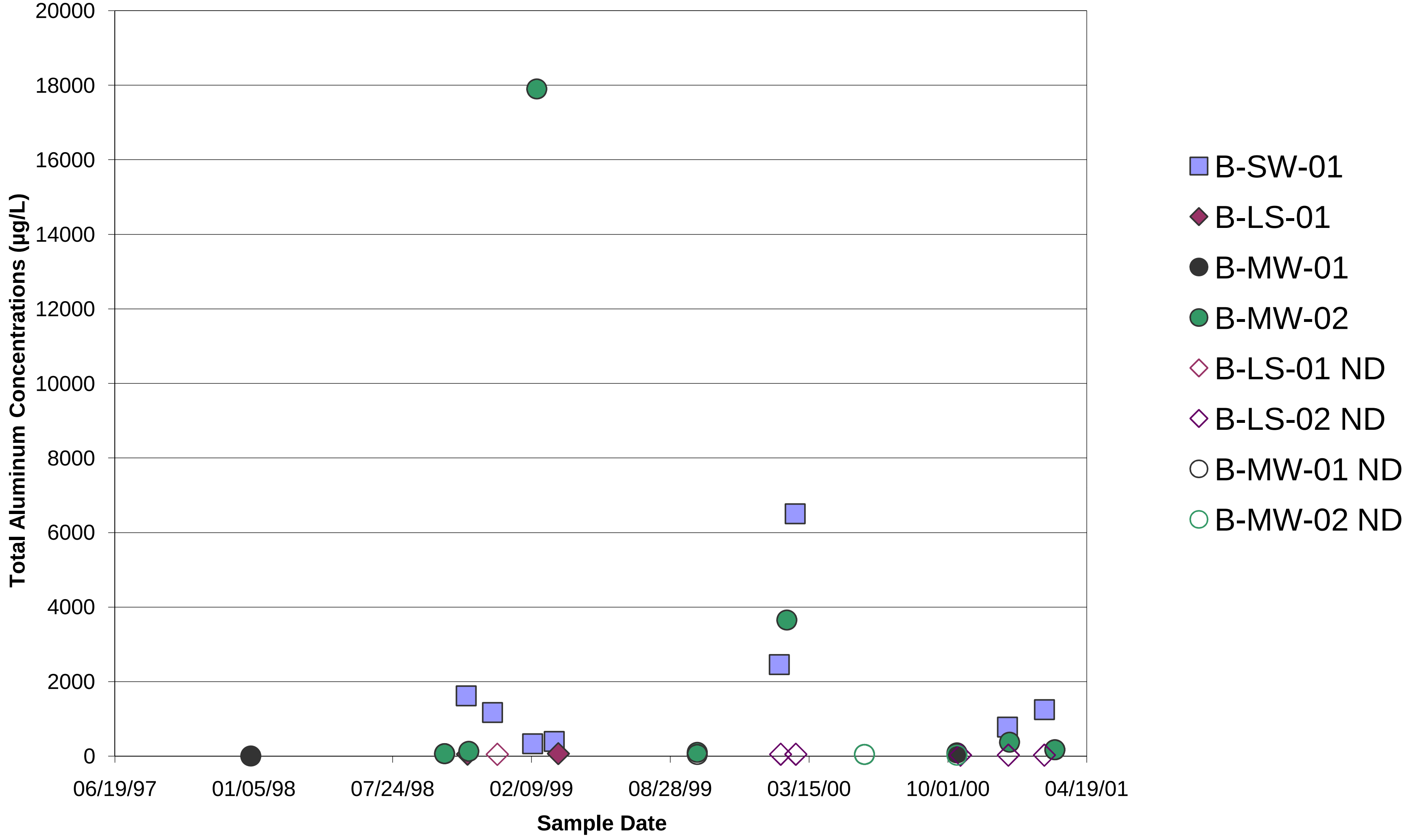
## Chemical Oxygen Demand - Broadous

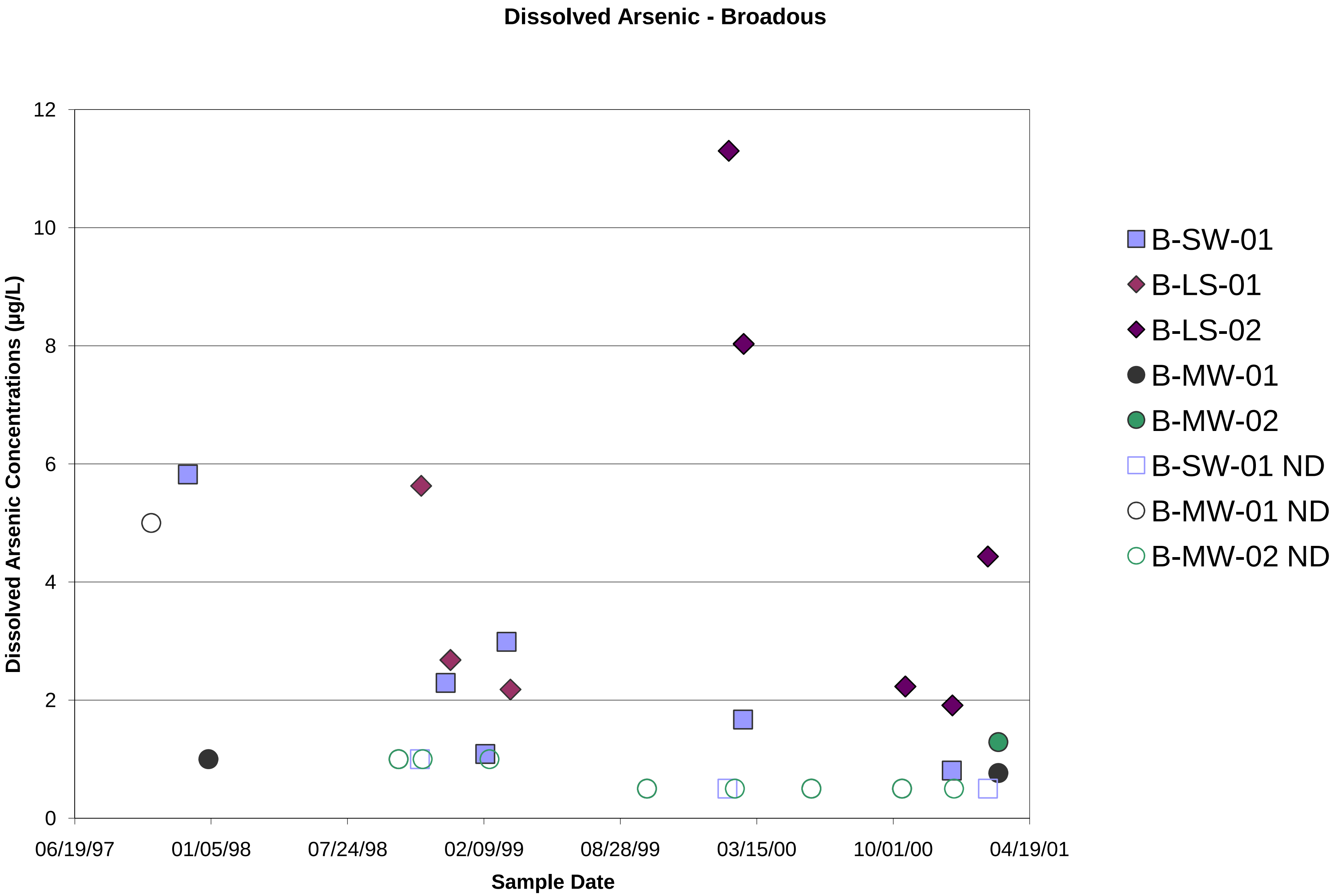



Chloride - Broadous
Chloride Concentrations (mg/L)
180
160
140
120
100
80
60
40
20
0
06/19/97
01/05/98
07/24/98
02/09/99
08/28/99
03/15/00
10/01/00
04/19/01
Sample Date
B-SW-01
B-LS-01
B-LS-02
B-MW-01
B-MW-02
B-MW-02

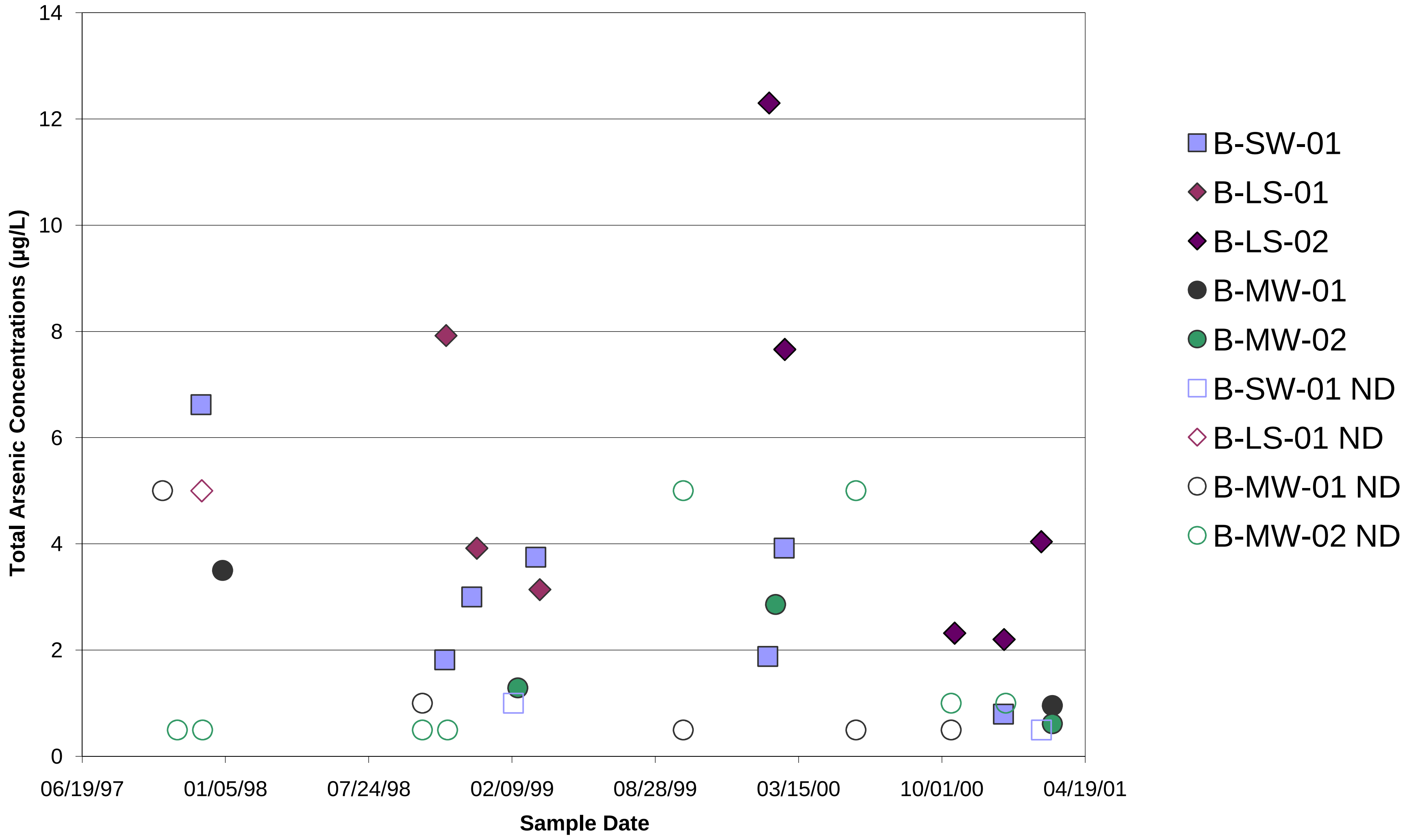

Dissolved Aluminum - Broadous
Dissolved Aluminum Concentrations (µg/L)
300
250
200
150
100
50
0
06/19/97
01/05/98
07/24/98
02/09/99
08/28/99
03/15/00
10/01/00
04/19/01
Sample Date
B-SW-01
B-SW-01 ND
B-LS-01 ND
B-LS-02 ND
B-MW-01 ND
B-MW-02 ND

## Total Aluminum - Broadous

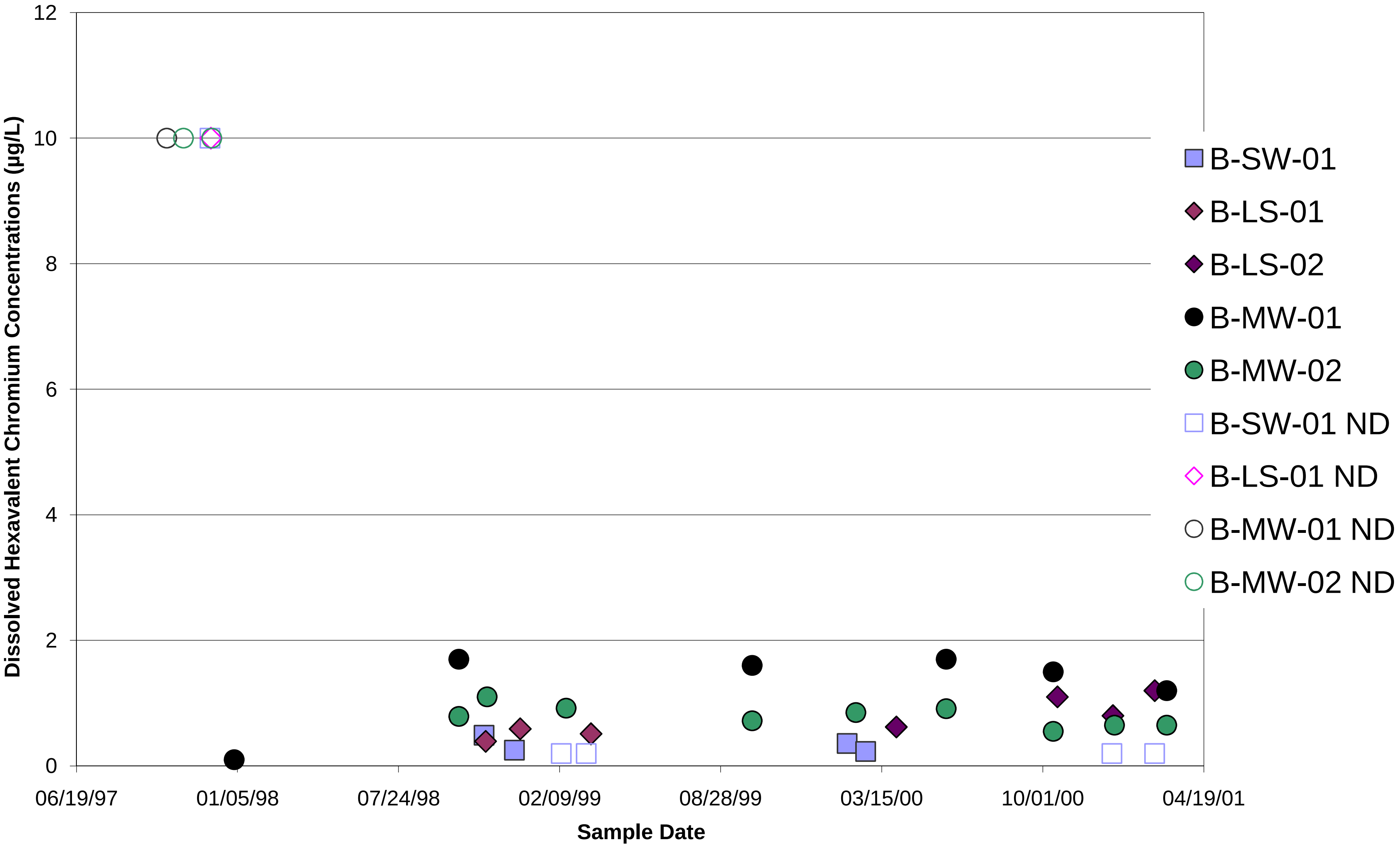



Dissolved Arsenic - Broadous
Dissolved Arsenic Concentrations (µg/L)
0
2
4
6
8
10
12
06/19/97
01/05/98
07/24/98
02/09/99
08/28/99
03/15/00
10/01/00
04/19/01
Sample Date
B-SW-01
B-LS-01
B-LS-02
B-MW-01
B-MW-02
B-SW-01 ND
B-MW-01 ND
B-MW-02 ND

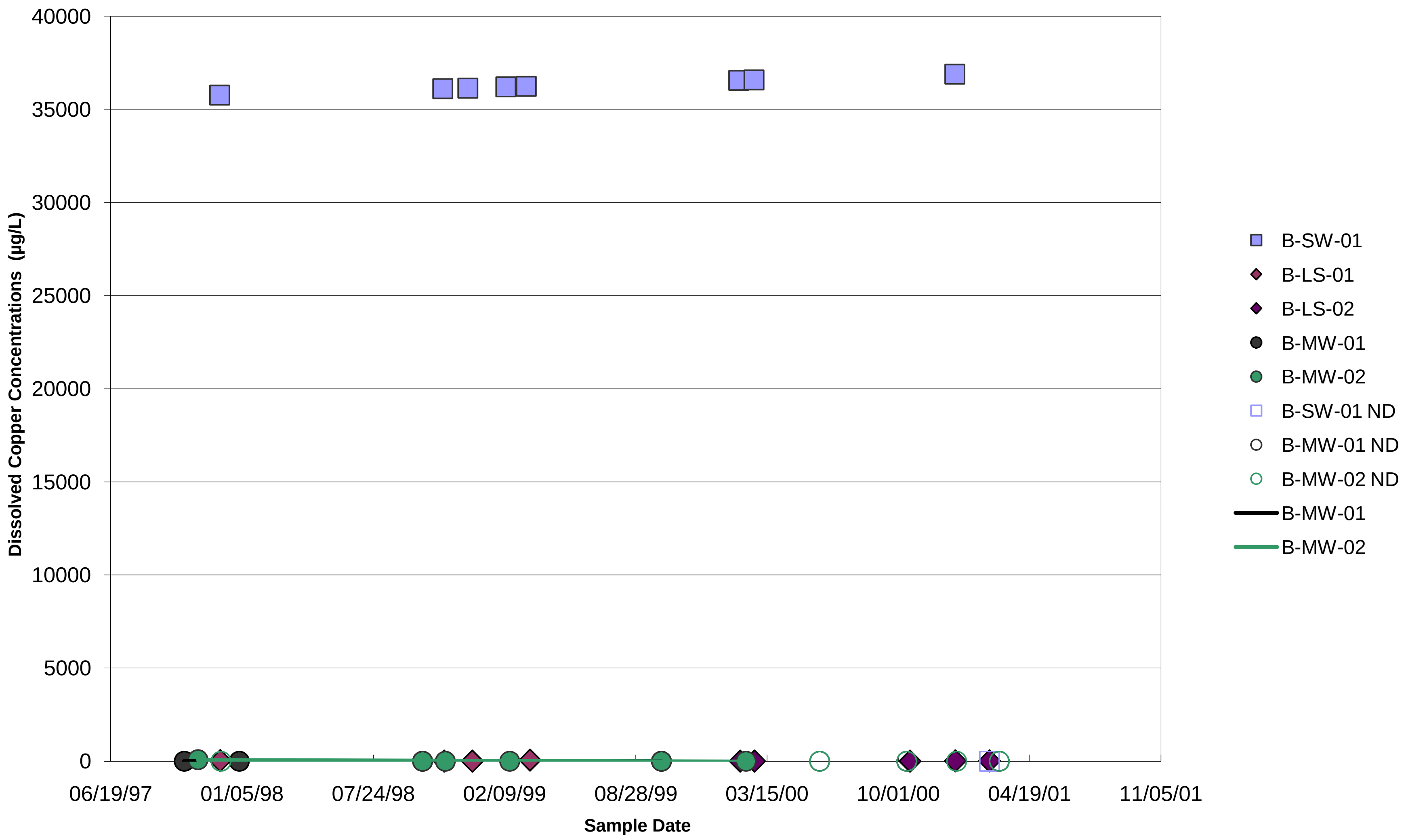
## Total Arsenic - Broadous



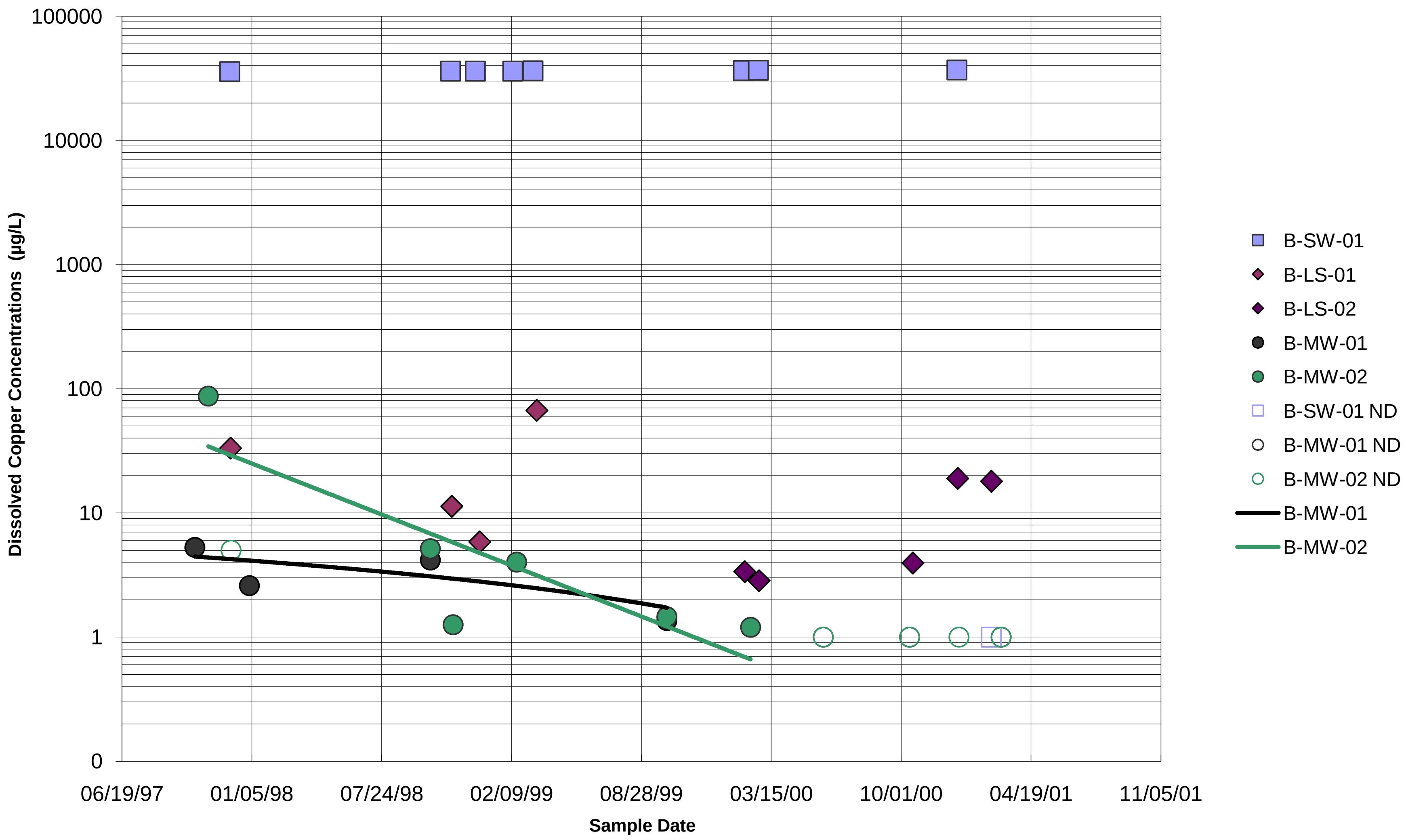
# Dissolved Hexavalent Chromium - Broadous



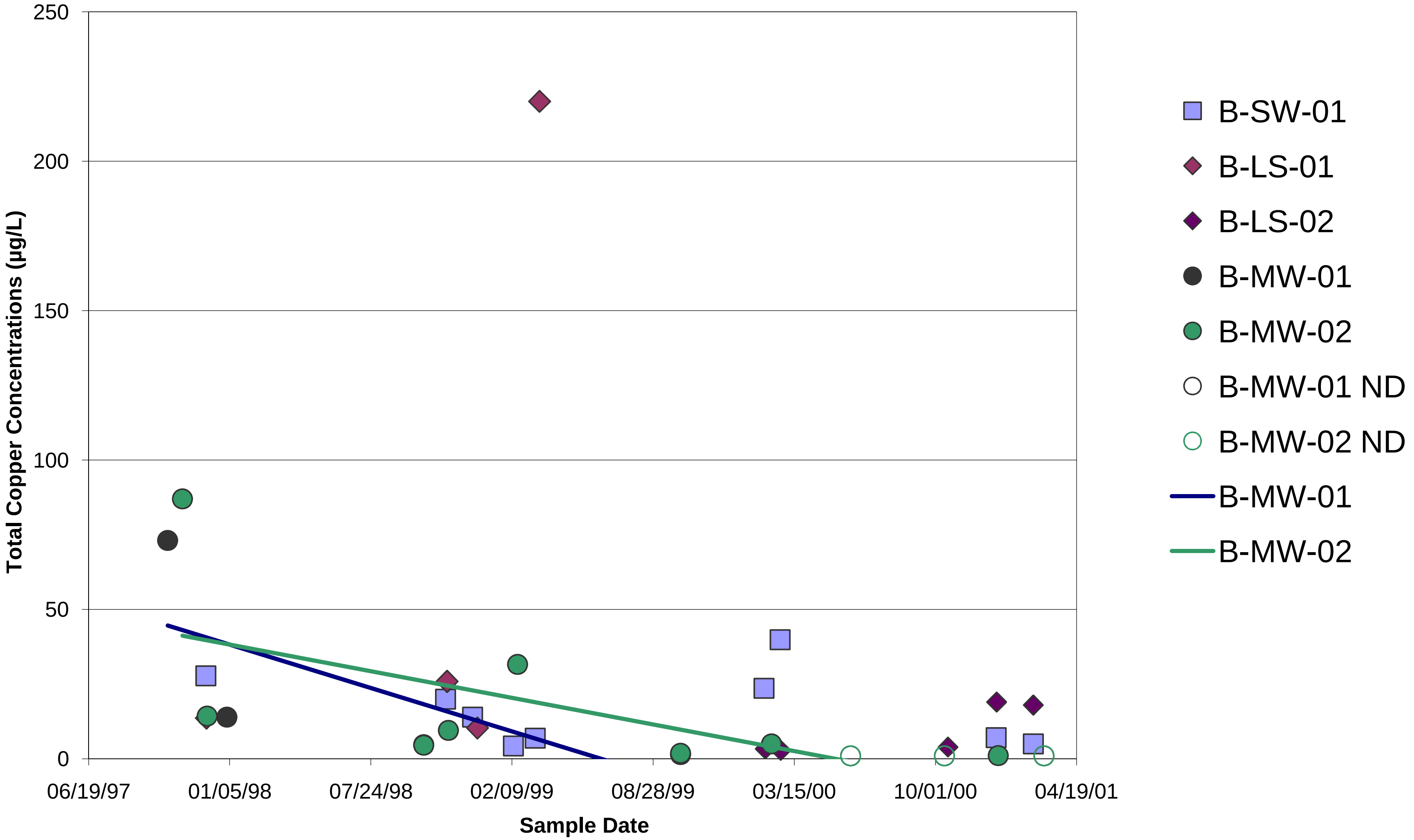
# Dissolved Copper - Broadous



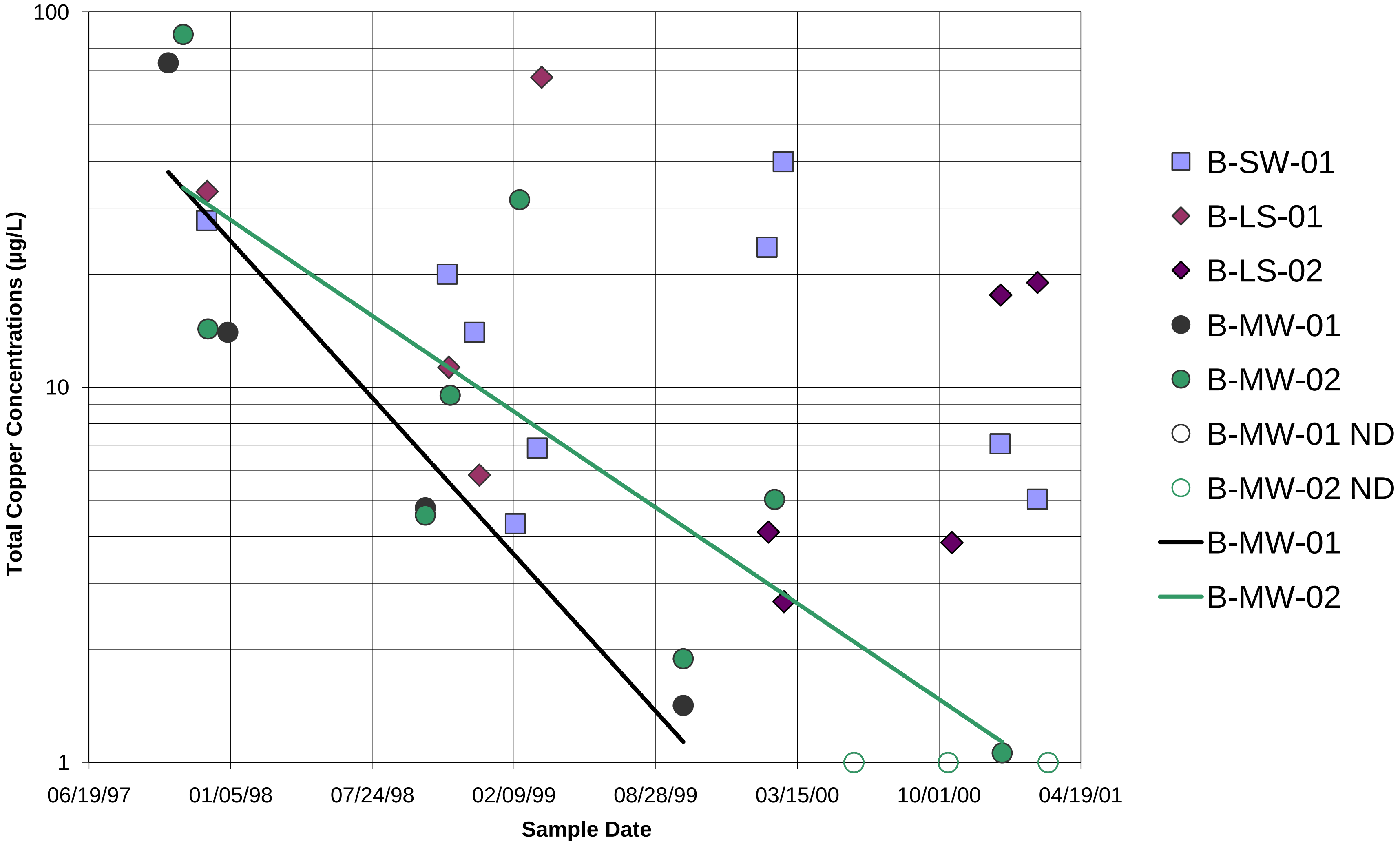
## Dissolved Copper - Broadous - Log Scale

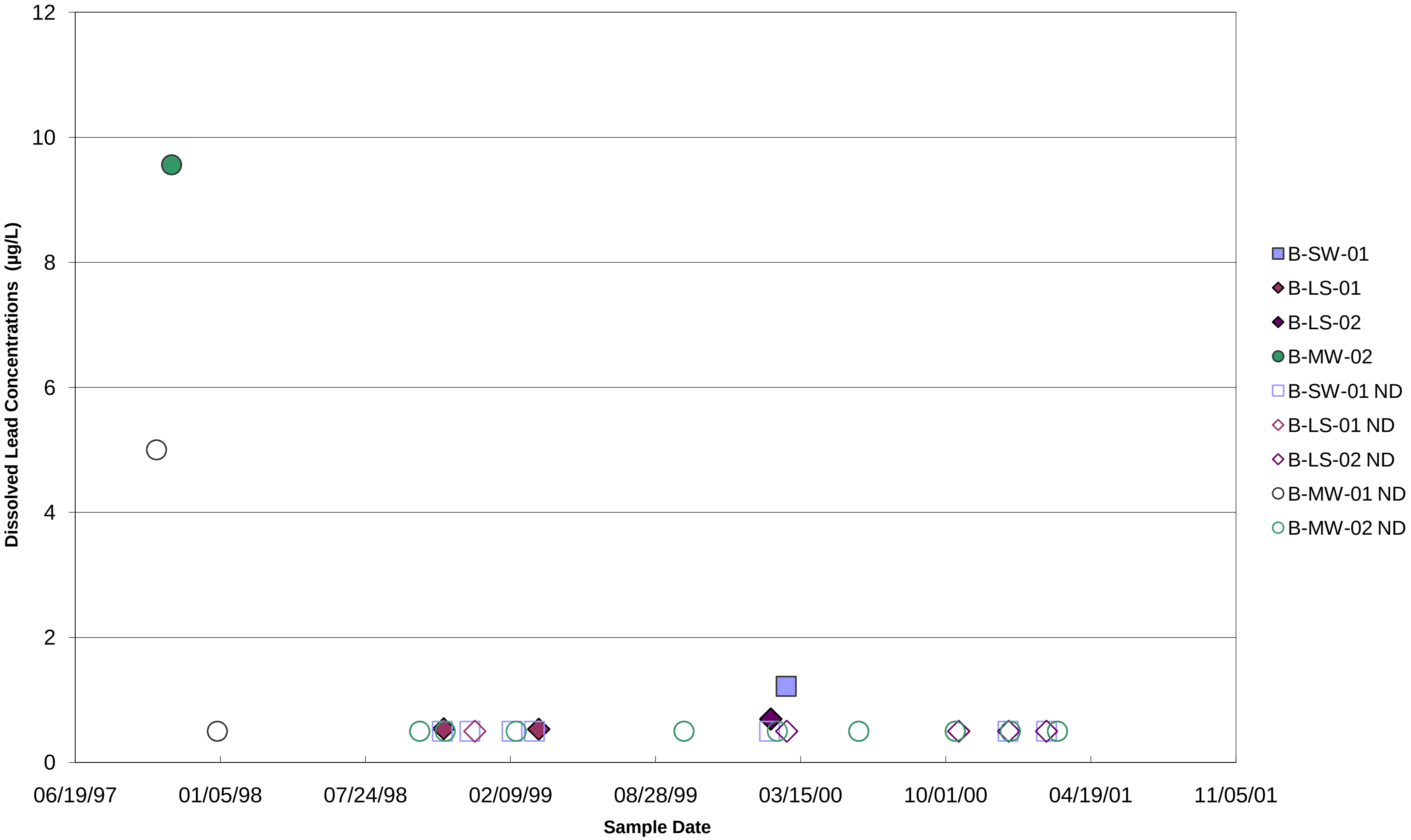


# Total Copper - Broadous



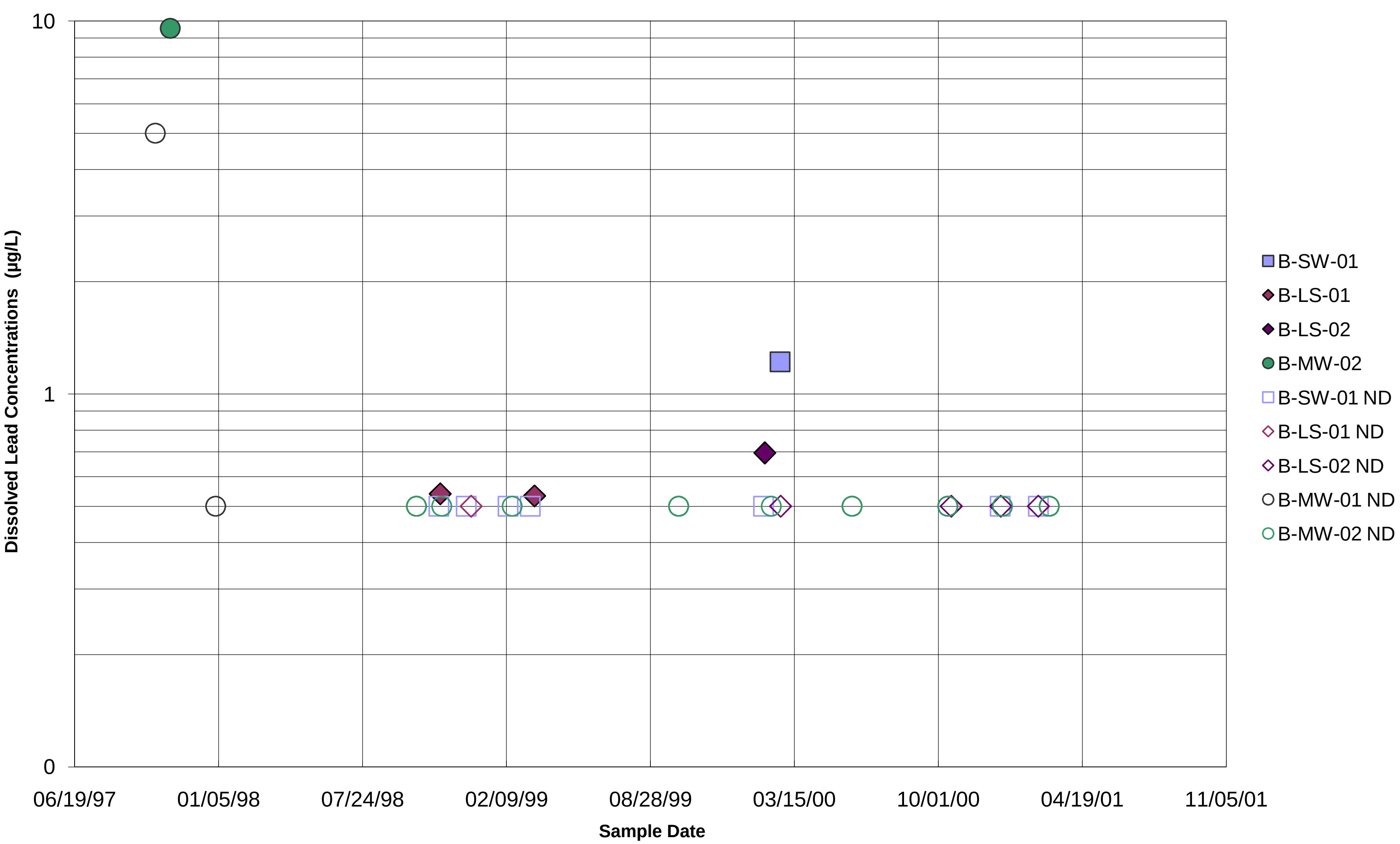
## Total Copper - Broadous - Log Scale

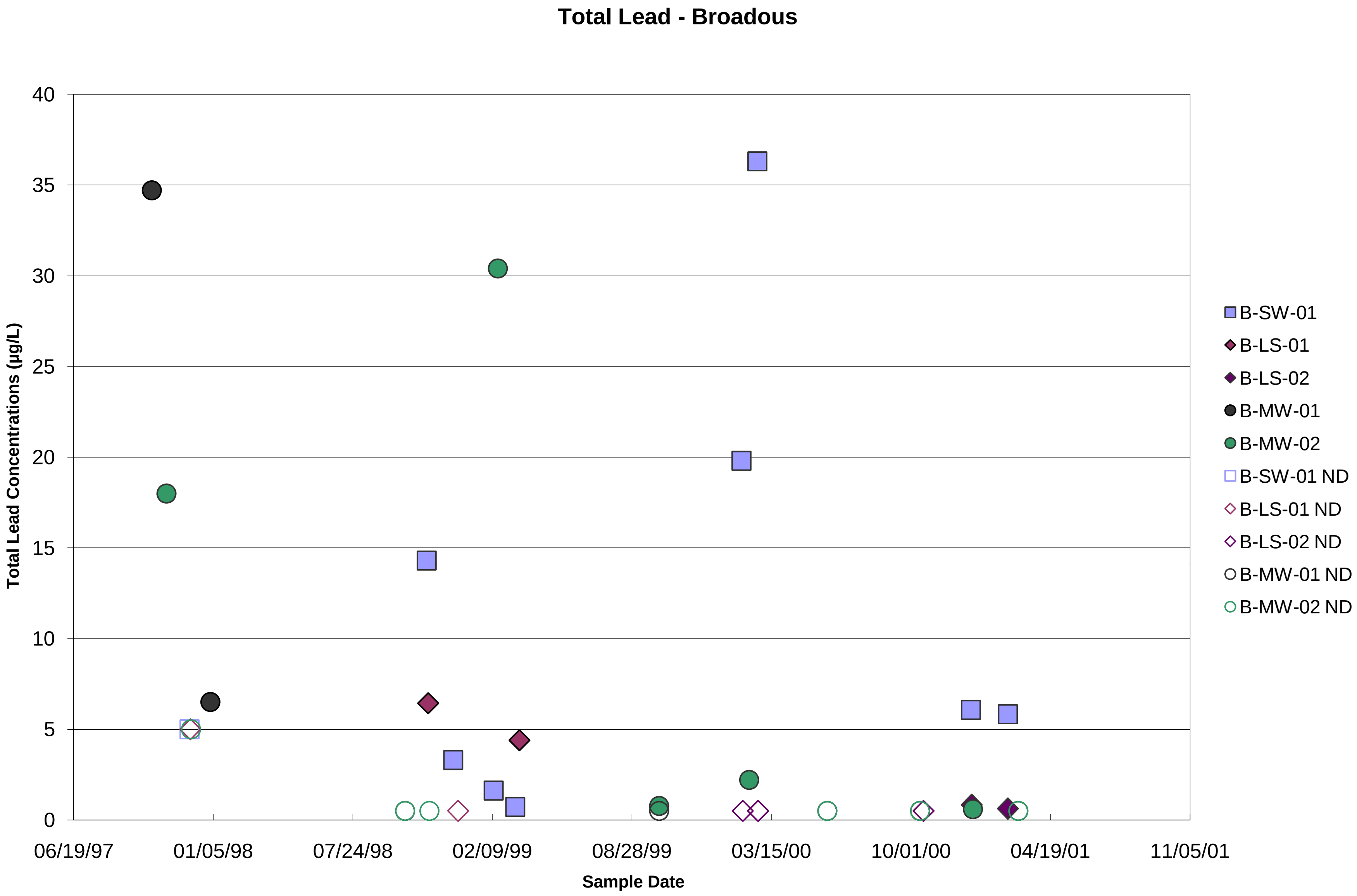




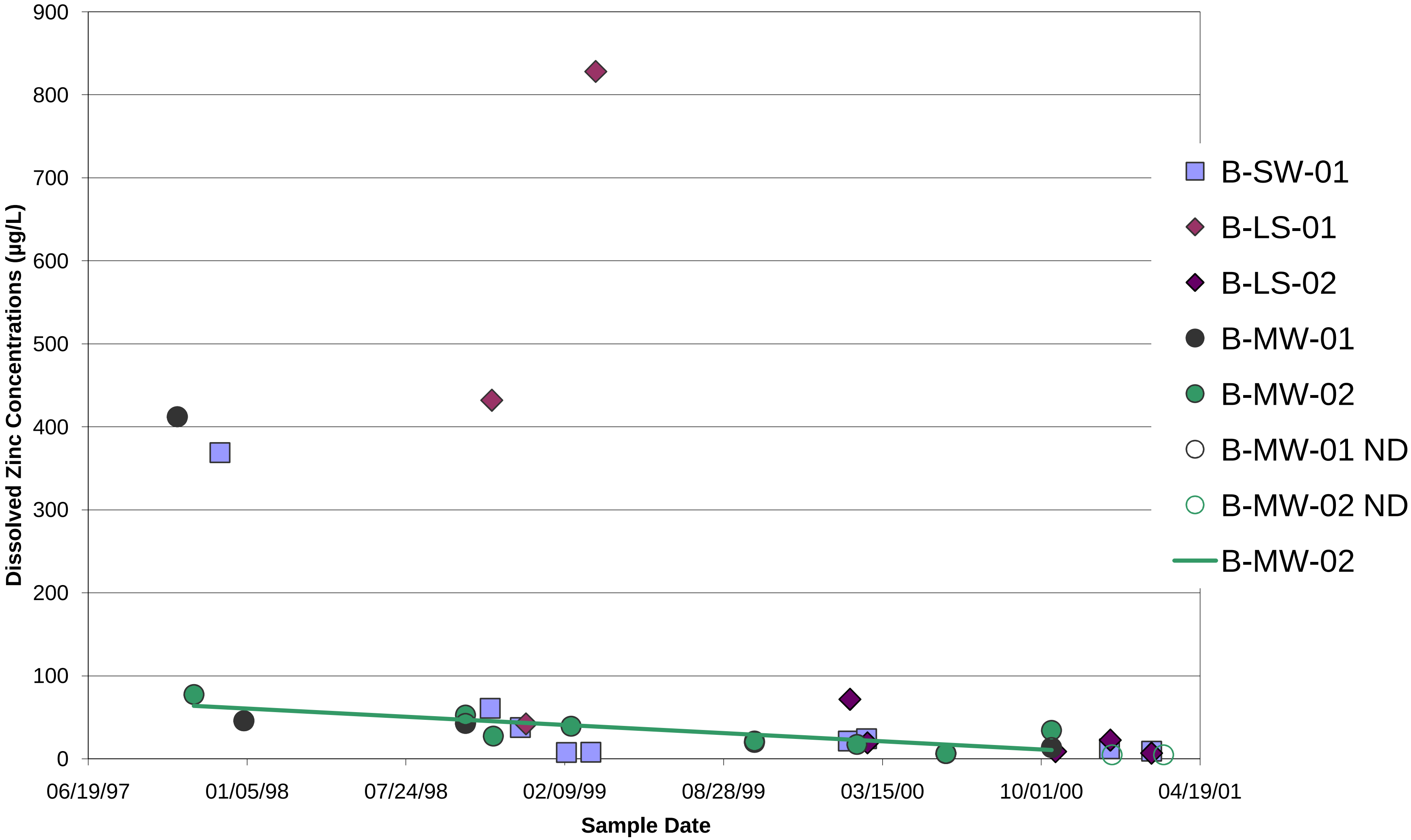
Dissolved Lead - Broadous

# Dissolved Lead - Broadous - Log Scale

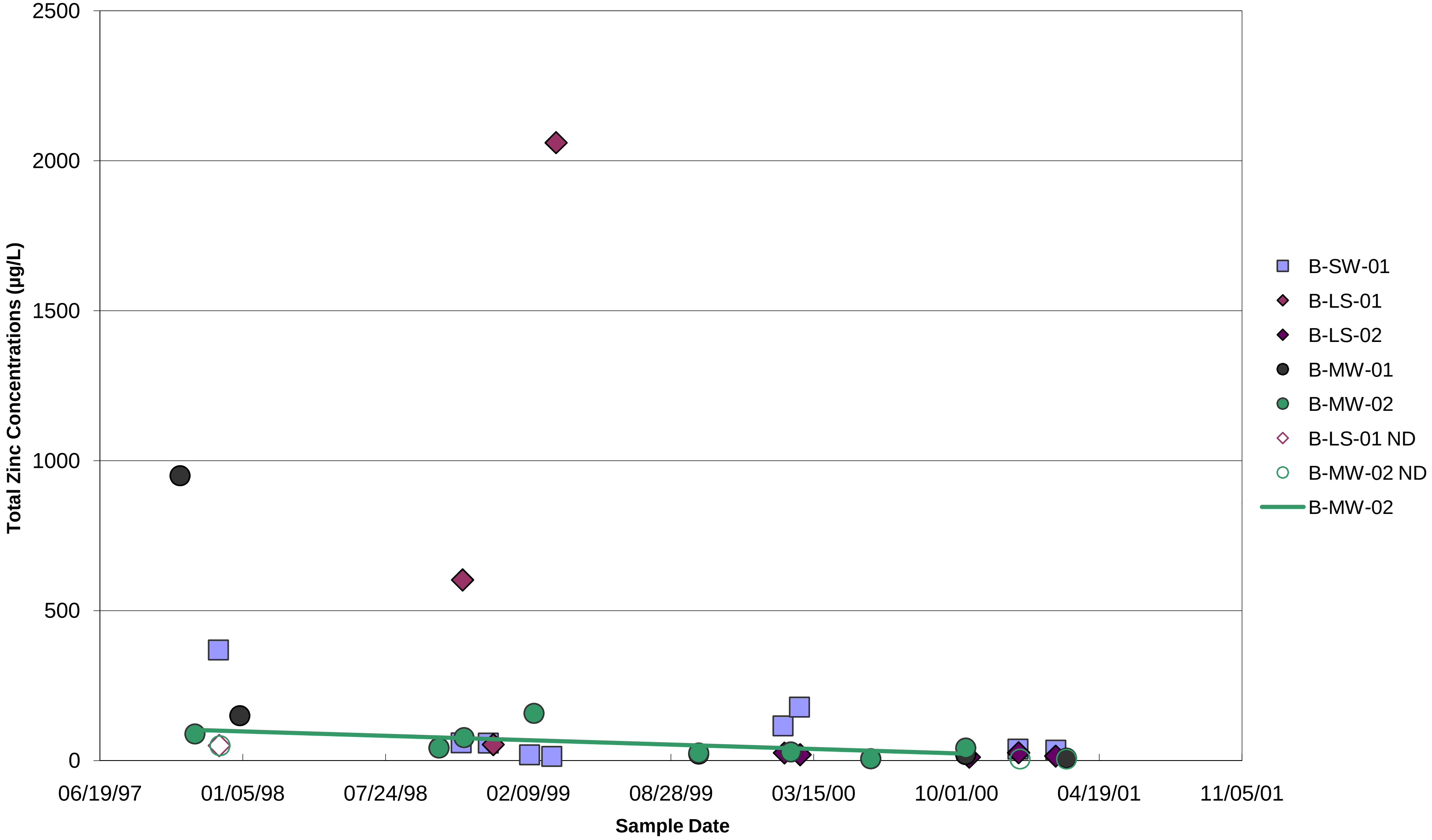



Total Lead - Broadous
40
35
30
25
20
15
10
5
0
Total Lead Concentrations (µg/L)
06/19/97
01/05/98
07/24/98
02/09/99
08/28/99
03/15/00
10/01/00
04/19/01
11/05/01
Sample Date
B-SW-01
B-LS-01
B-LS-02
B-MW-01
B-MW-02
B-SW-01 ND
B-LS-01 ND
B-LS-02 ND
B-MW-01 ND
B-MW-02 ND

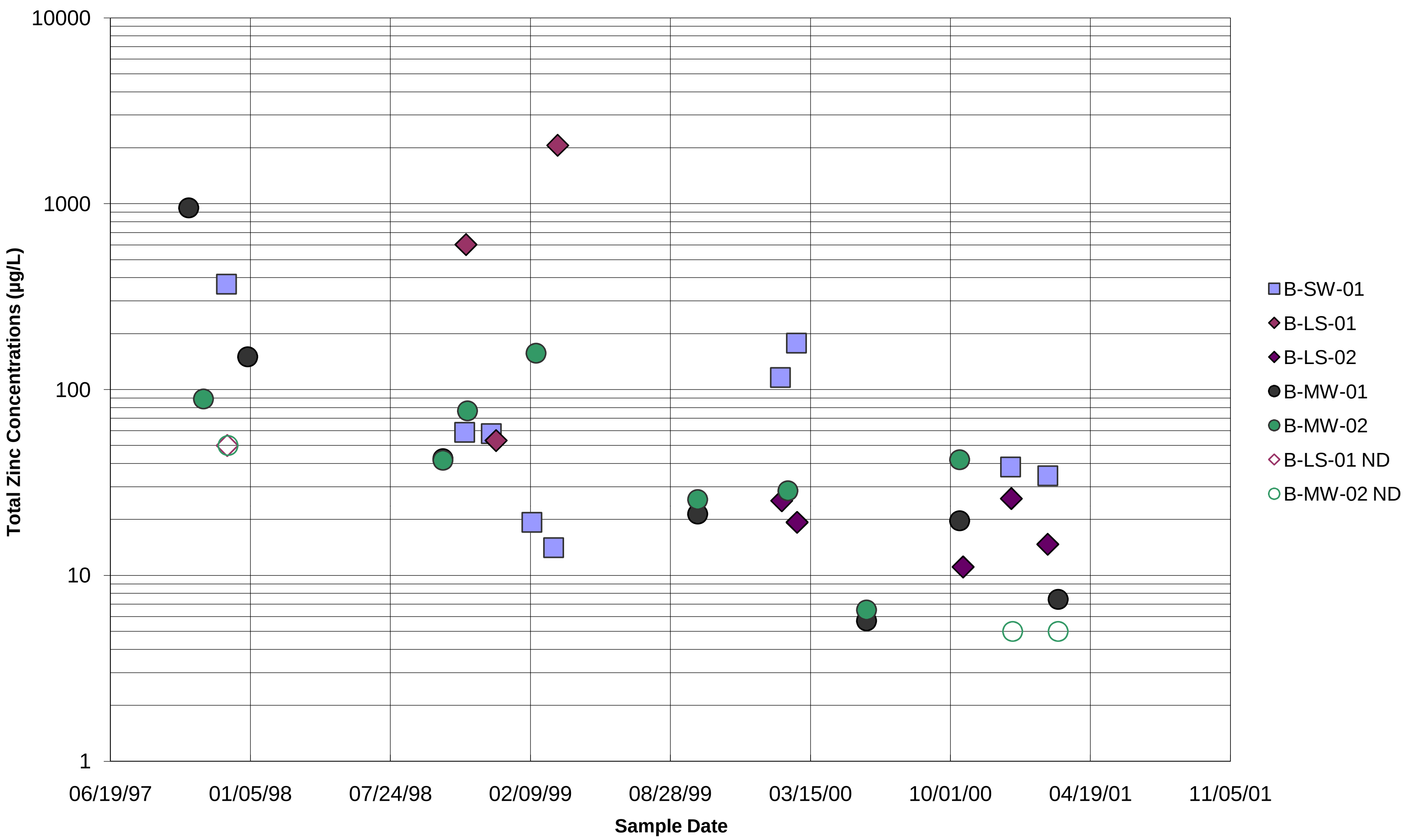
## Dissolved Zinc - Broadous

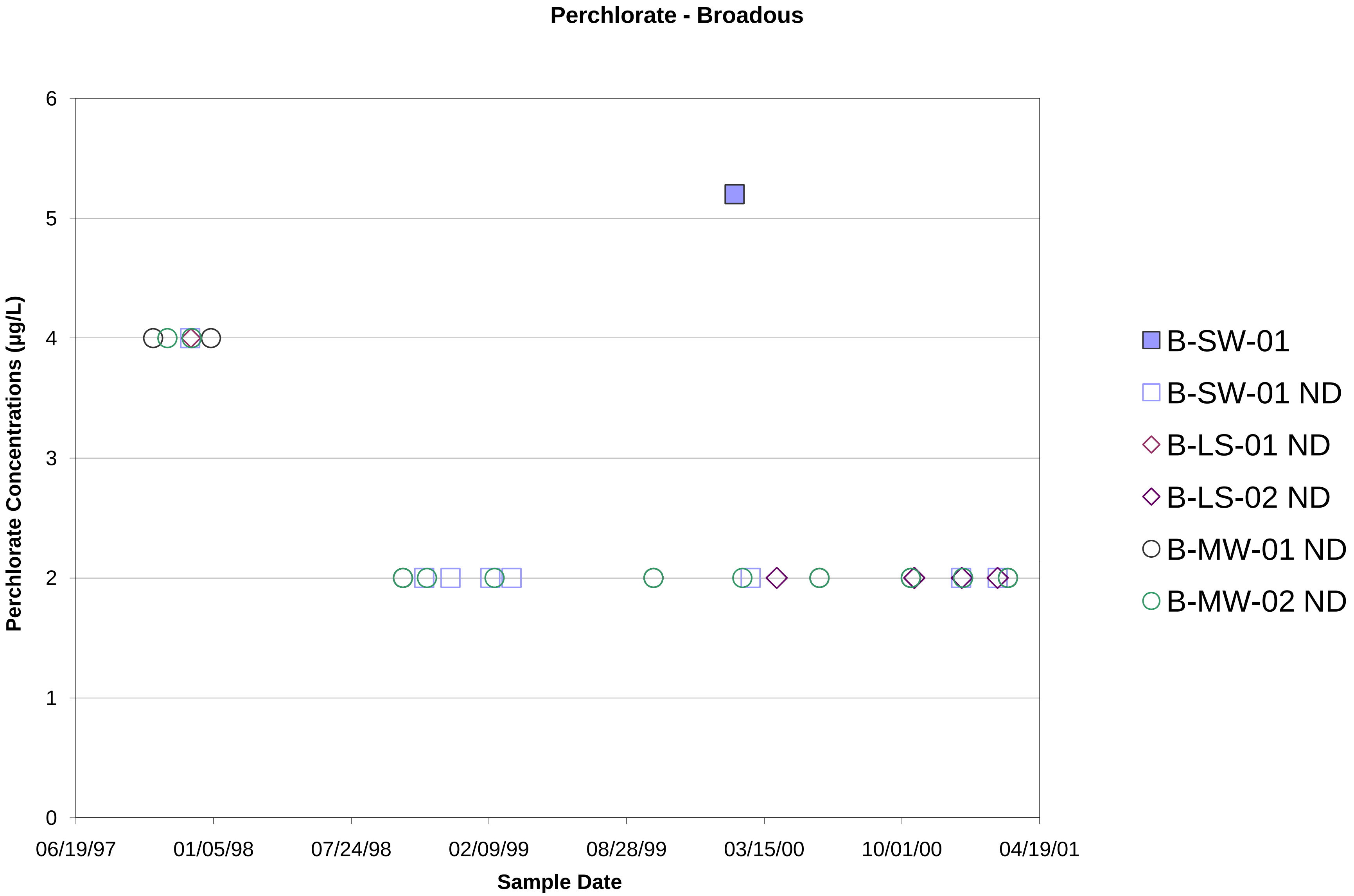


## Total Zinc - Broadous

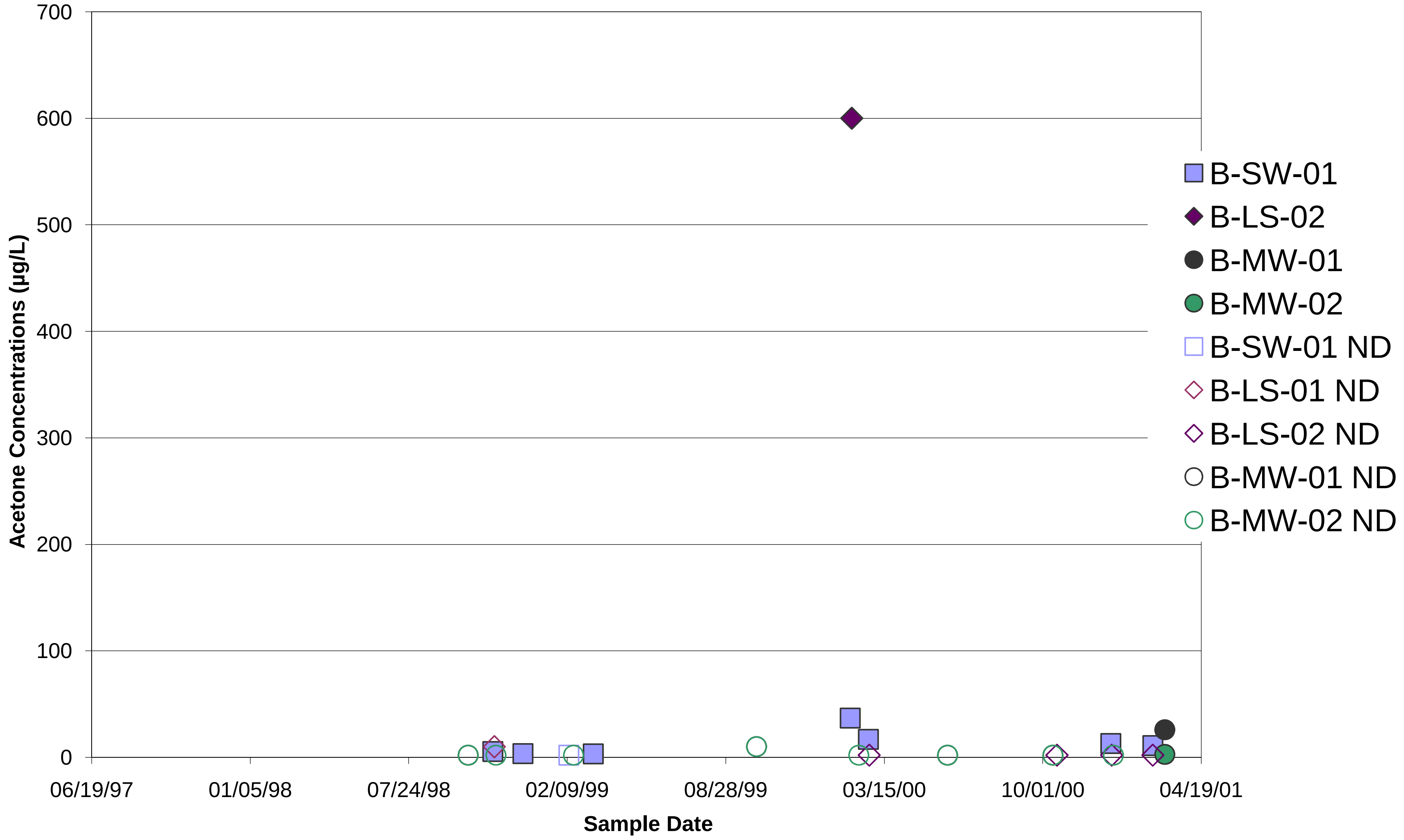


# Total Zinc - Broadous - Log Scale

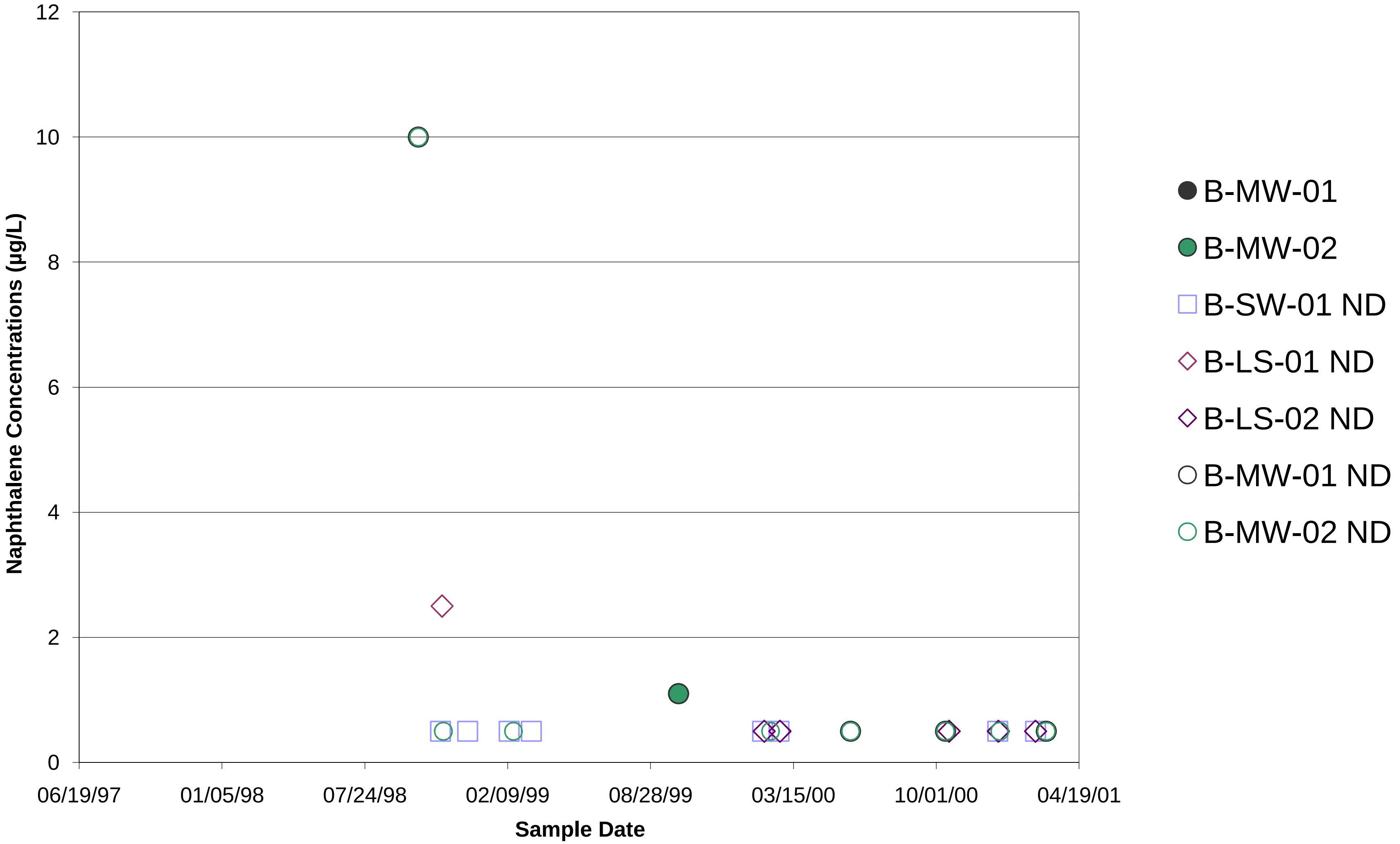



Perchlorate - Broadous
Perchlorate Concentrations (µg/L)
6
5
4
3
2
1
0
06/19/97
01/05/98
07/24/98
02/09/99
08/28/99
03/15/00
10/01/00
04/19/01
Sample Date
B-SW-01
B-SW-01 ND
B-LS-01 ND
B-LS-02 ND
B-MW-01 ND
B-MW-02 ND

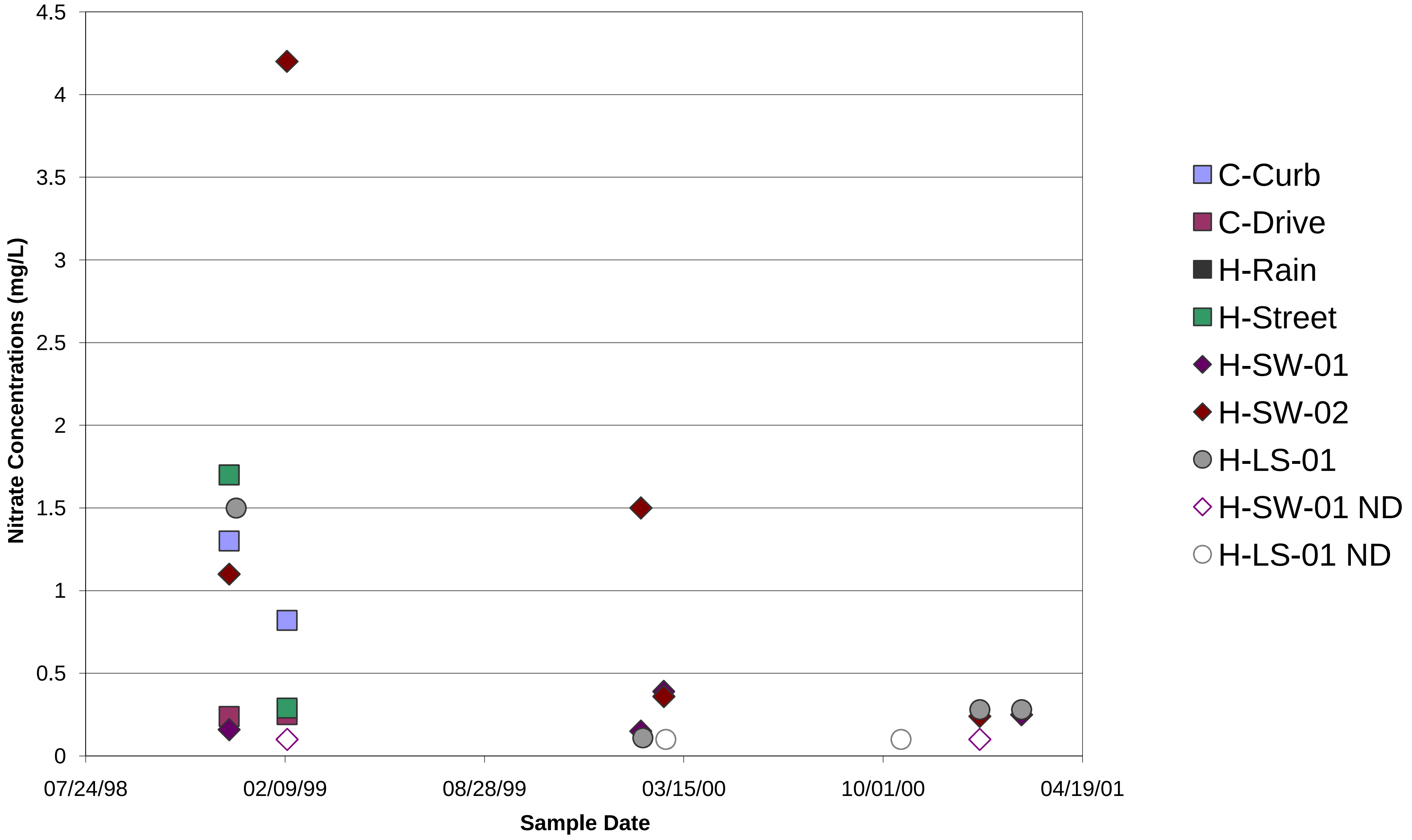
## Acetone - Broadous



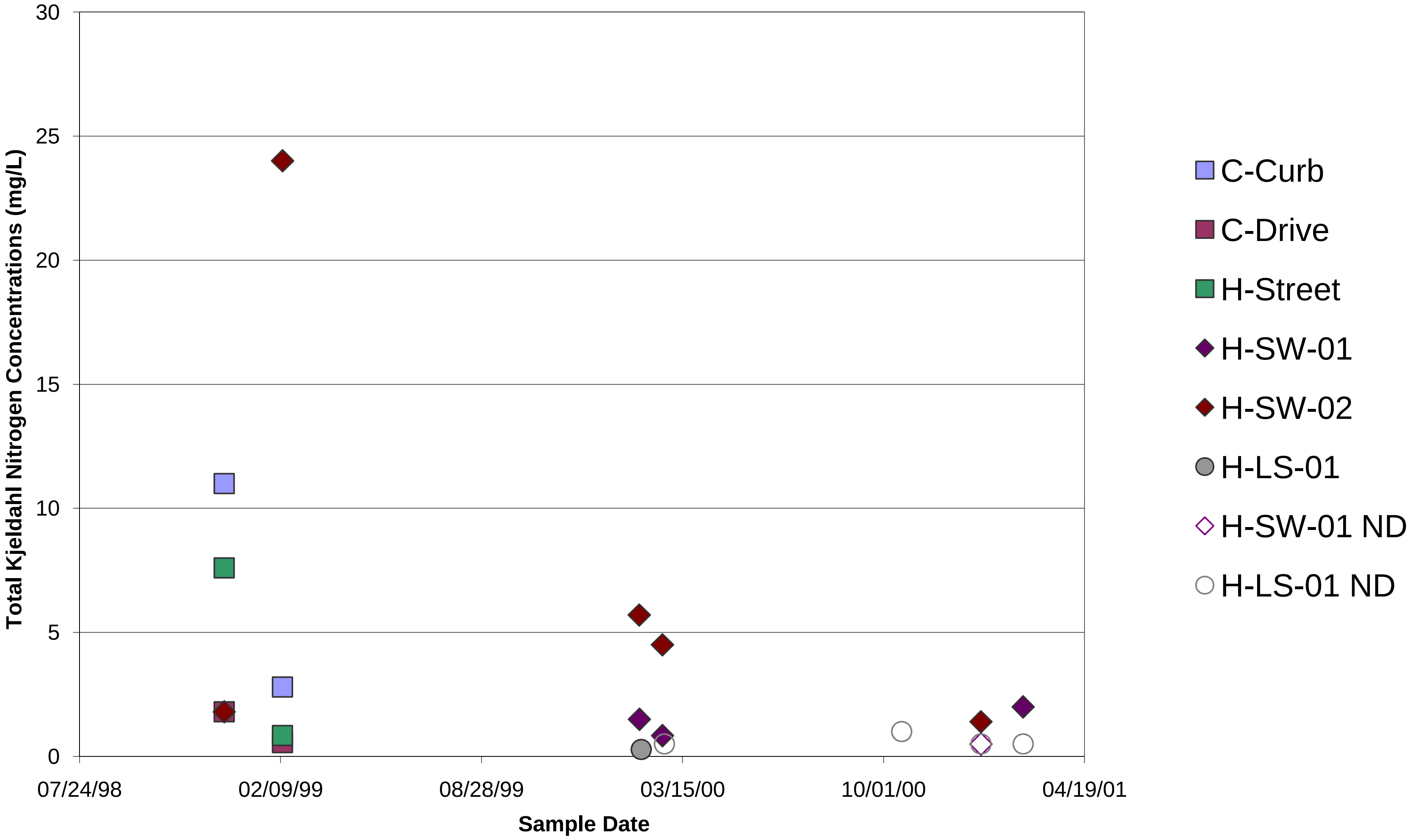
# Naphthalene - Broadous

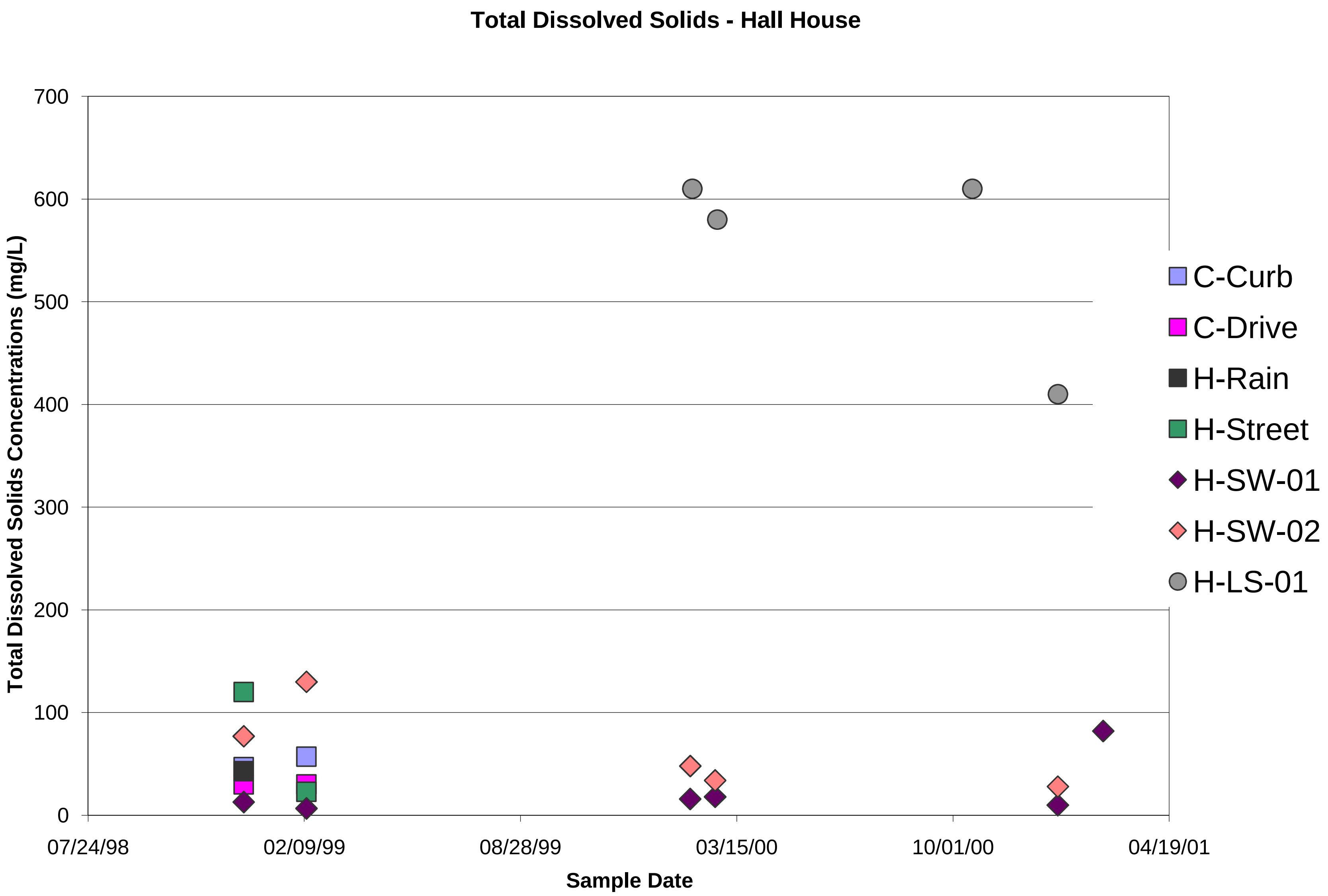


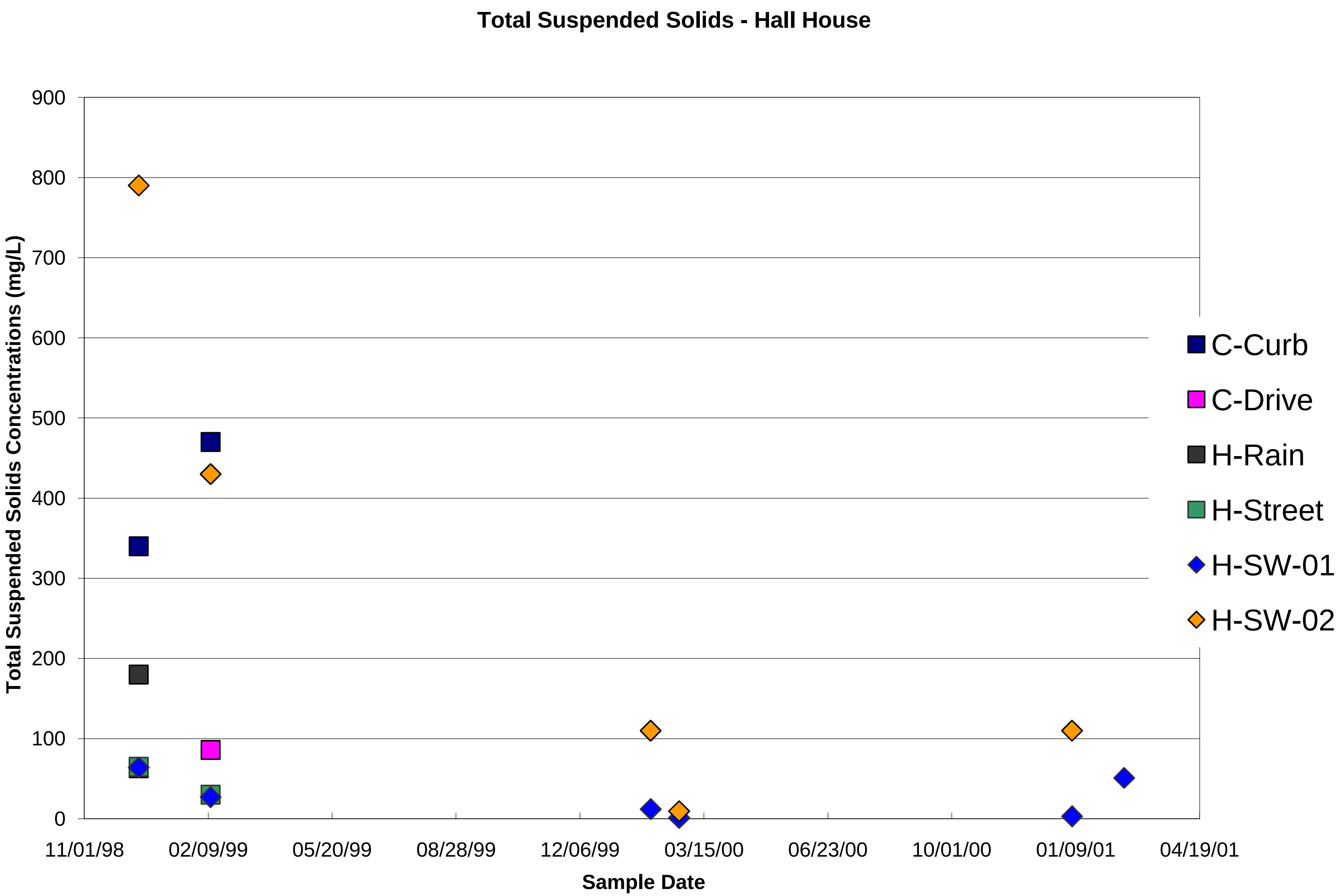
# Nitrate - Hall House



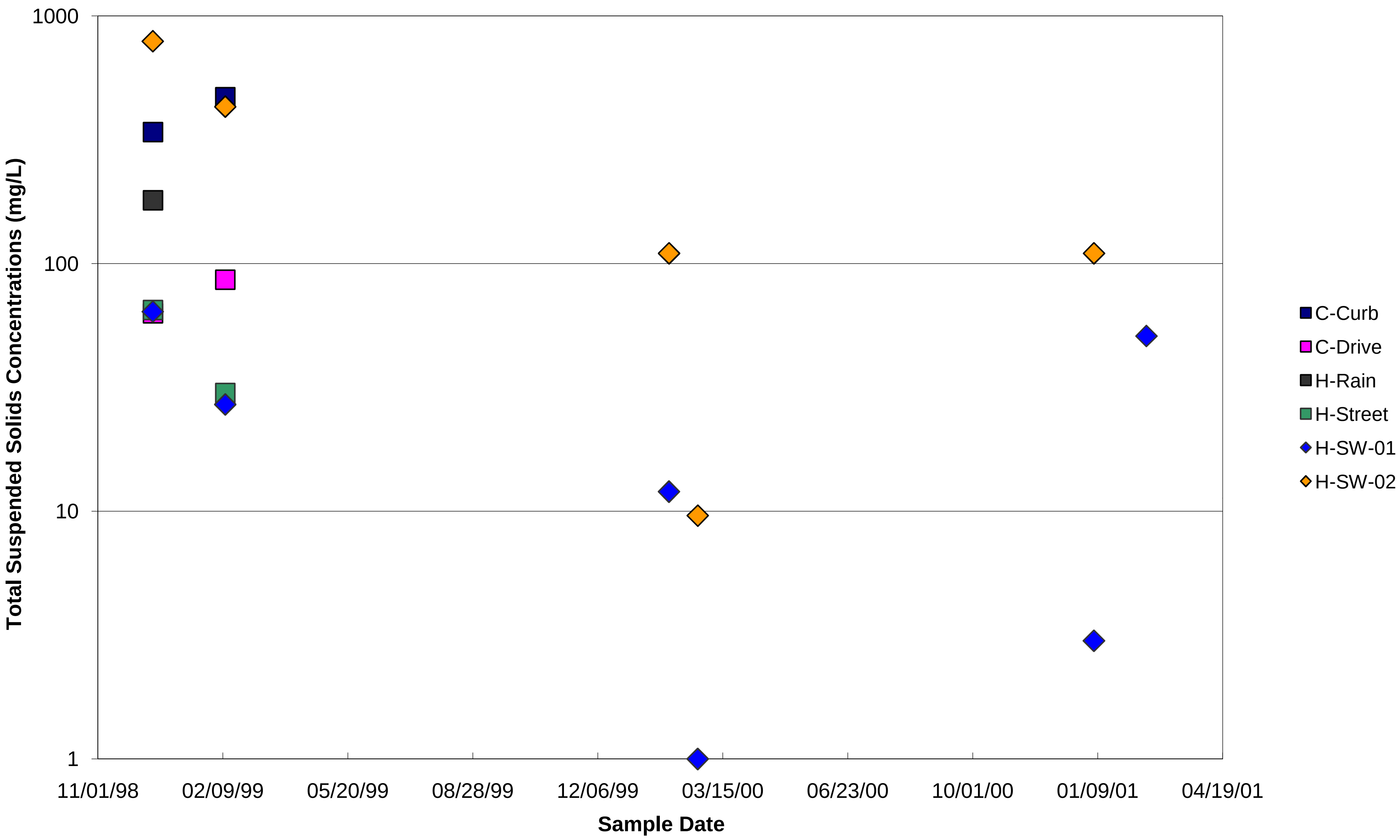
# Total Kjeldahl Nitrogen - Hall House



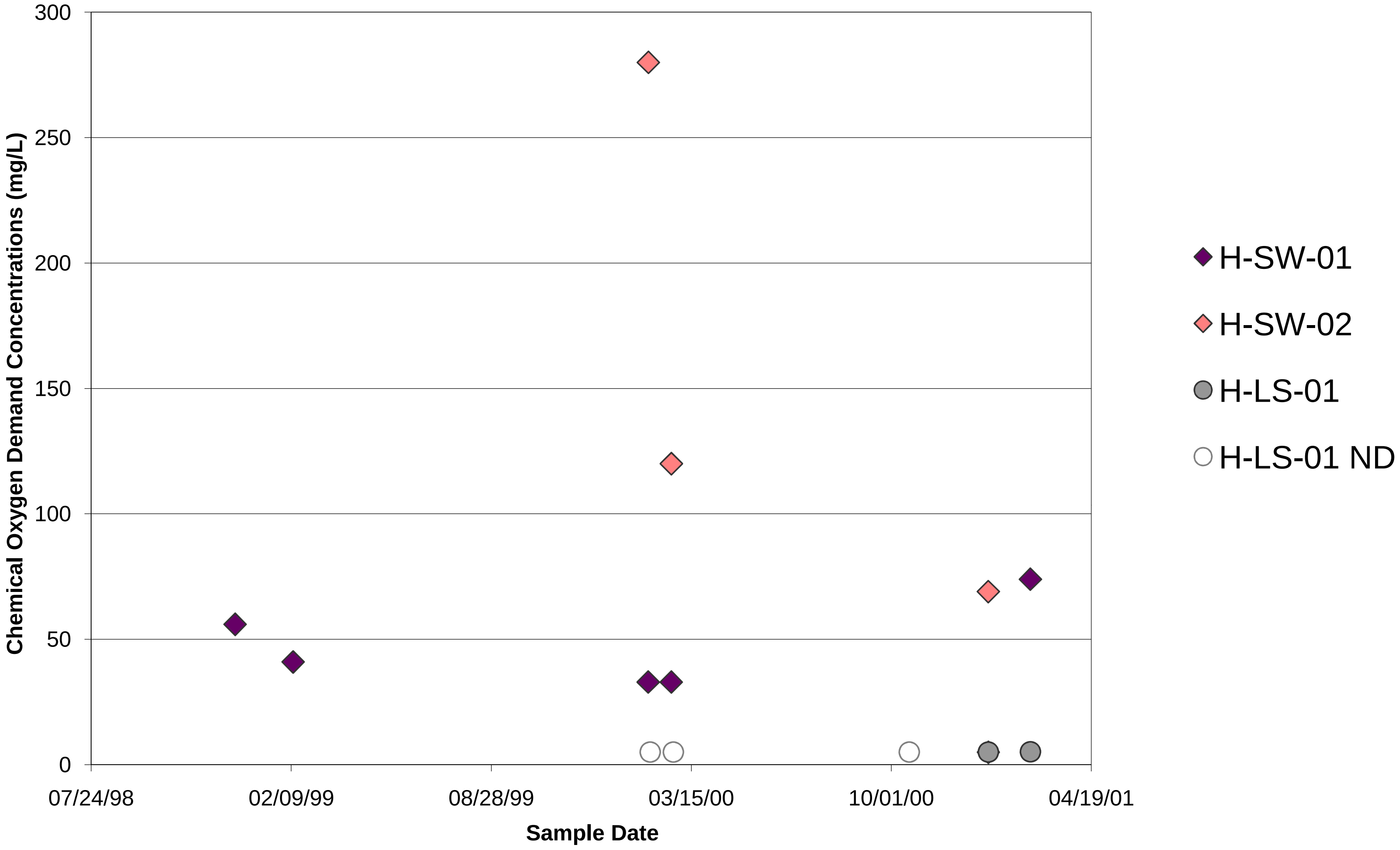

Total Dissolved Solids - Hall House
Total Dissolved Solids Concentrations (mg/L)
700
600
500
400
300
200
100
0
07/24/98
02/09/99
08/28/99
03/15/00
10/01/00
04/19/01
Sample Date
C-Curb
C-Drive
H-Rain
H-Street
H-SW-01
H-SW-02
H-LS-01


Total Suspended Solids - Hall House
Total Suspended Solids Concentrations (mg/L)
900
800
700
600
500
400
300
200
100
0
11/01/98
02/09/99
05/20/99
08/28/99
12/06/99
03/15/00
06/23/00
10/01/00
01/09/01
04/19/01
Sample Date
C-Curb
C-Drive
H-Rain
H-Street
H-SW-01
H-SW-02

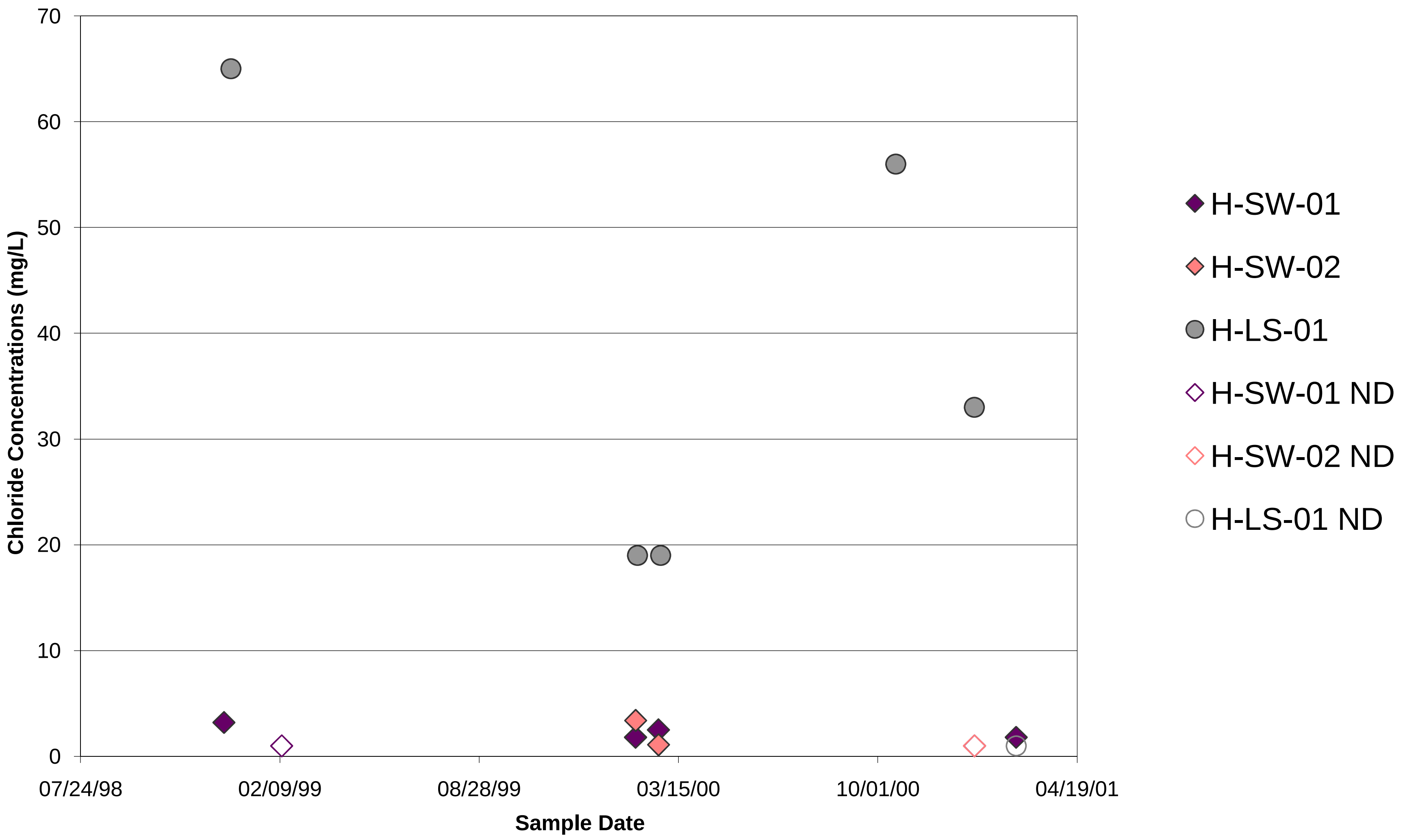
## Total Suspended Solids - Hall House - Log Scale



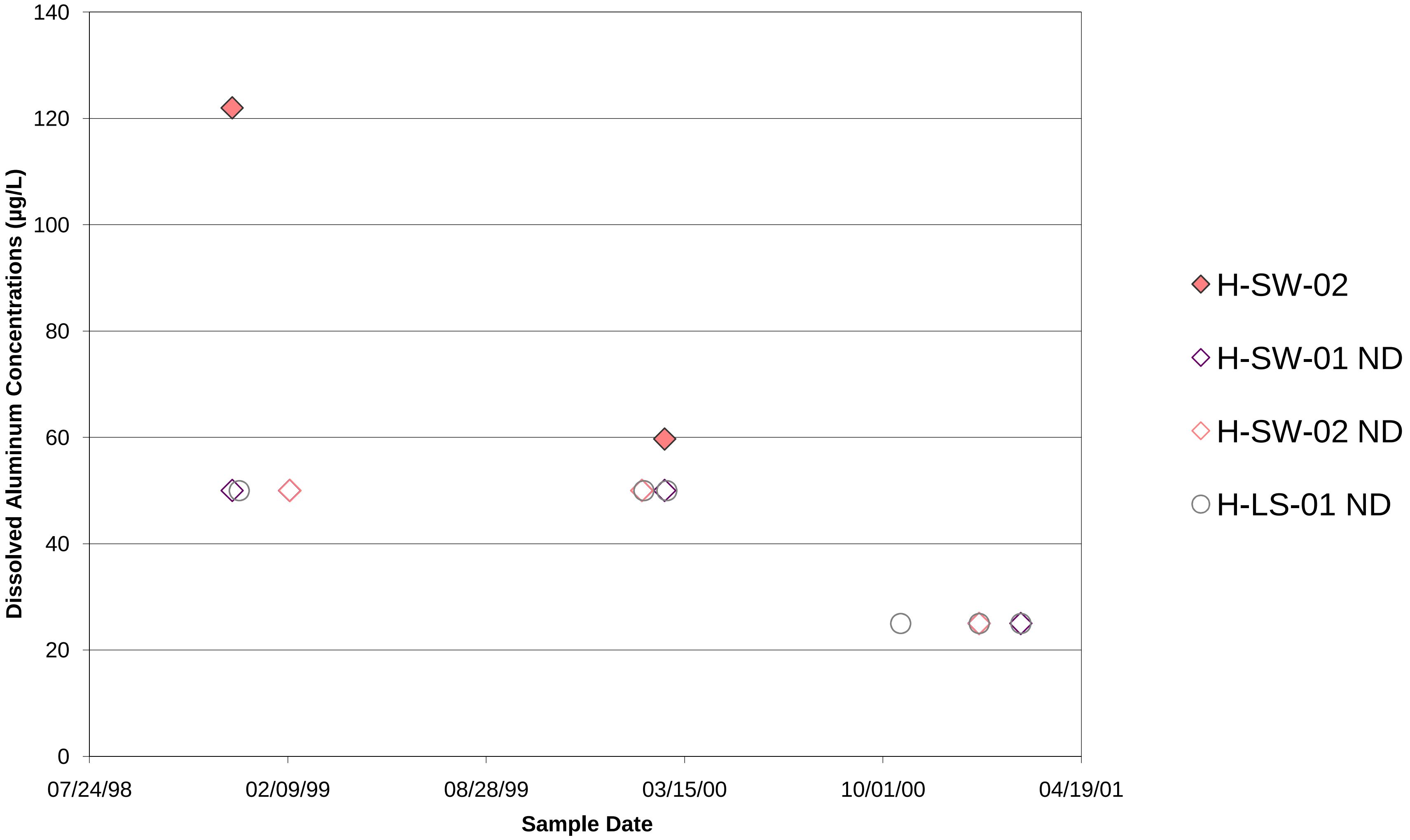
**Chemical Oxygen Demand - Hall House**

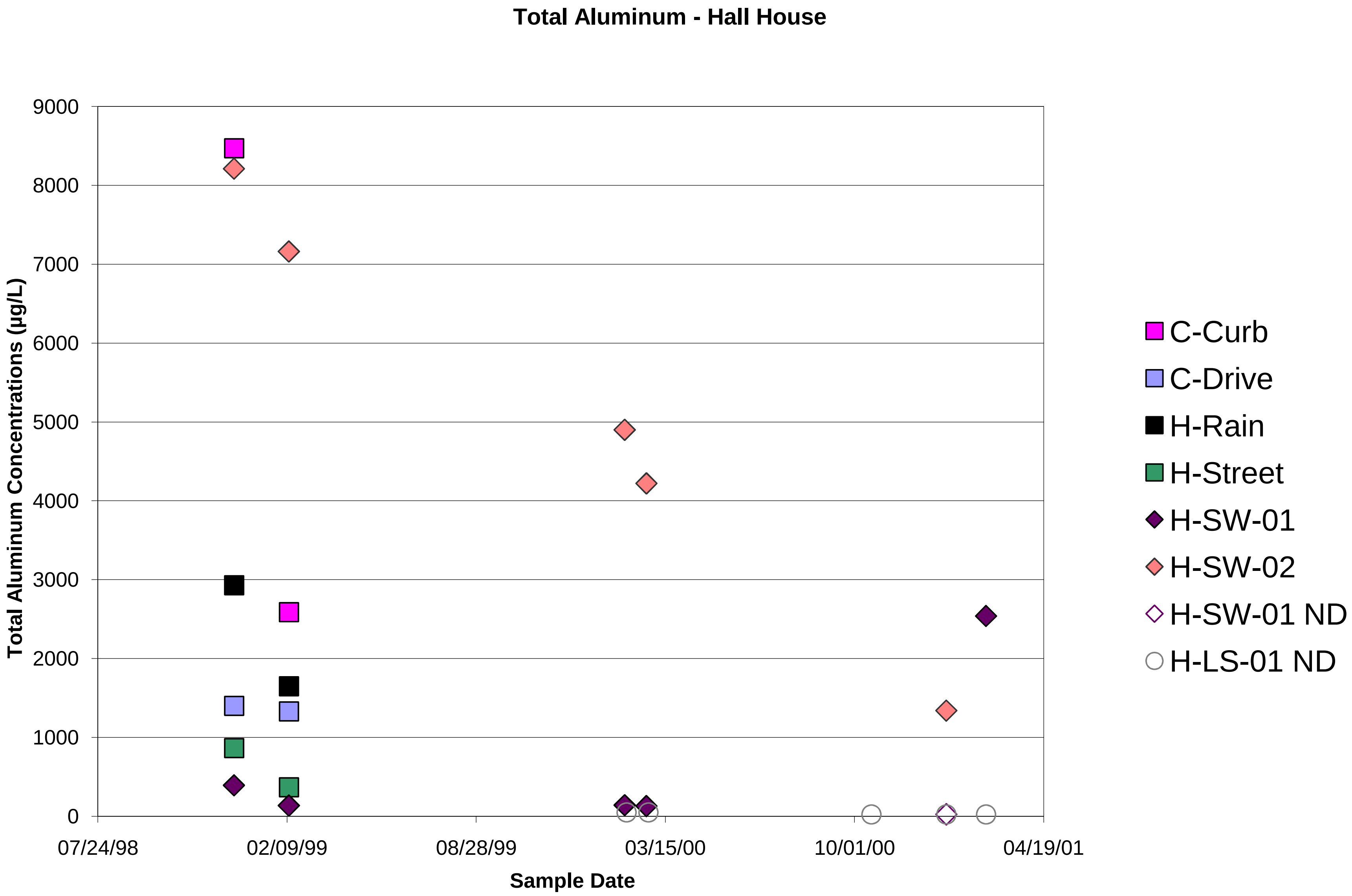


## Chloride - Hall House

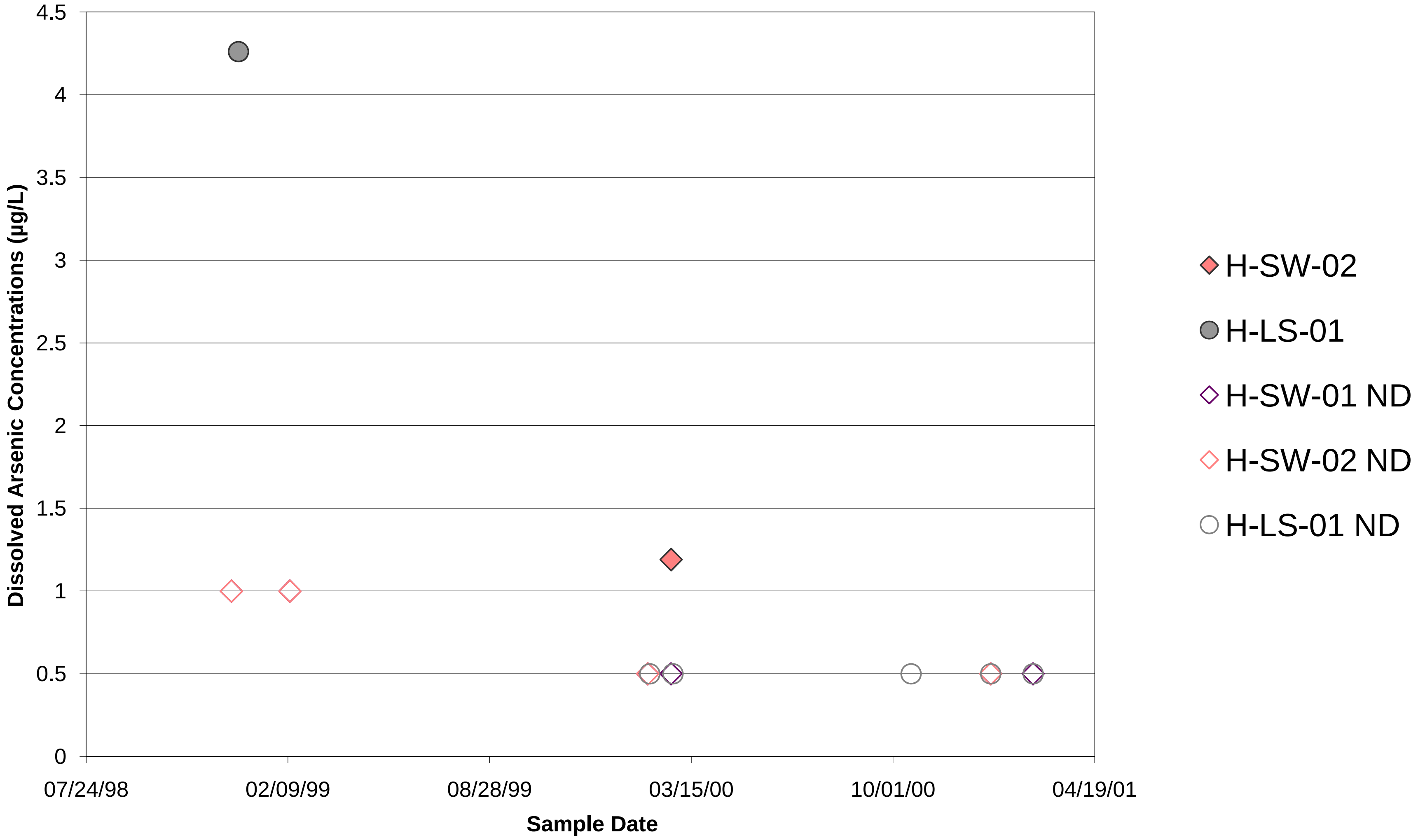


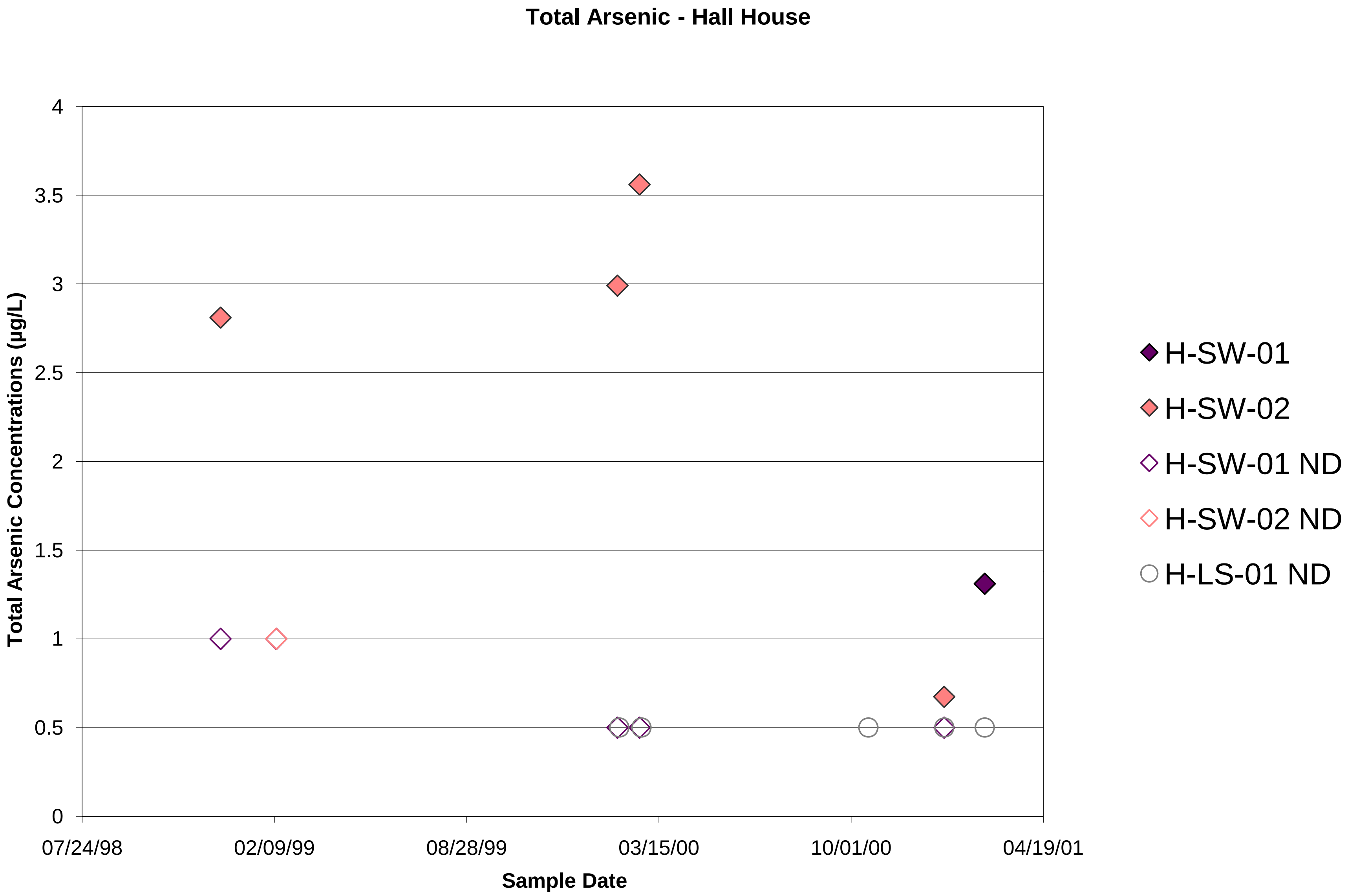
## Dissolved Aluminum - Hall House

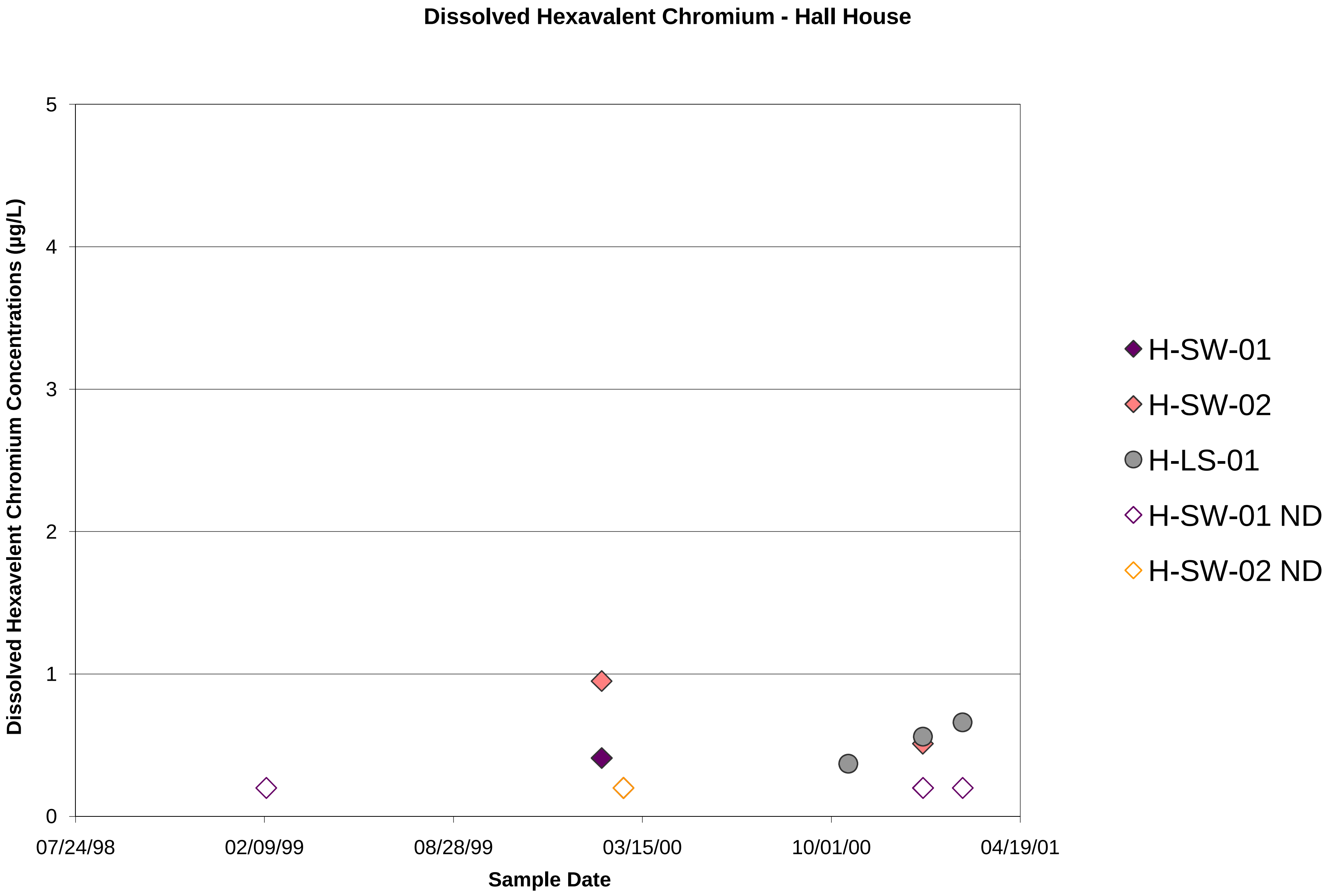



Total Aluminum - Hall House
Total Aluminum Concentrations (µg/L)
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
07/24/98
02/09/99
08/28/99
03/15/00
10/01/00
04/19/01
Sample Date
C-Curb
C-Drive
H-Rain
H-Street
H-SW-01
H-SW-02
H-SW-01 ND
H-LS-01 ND

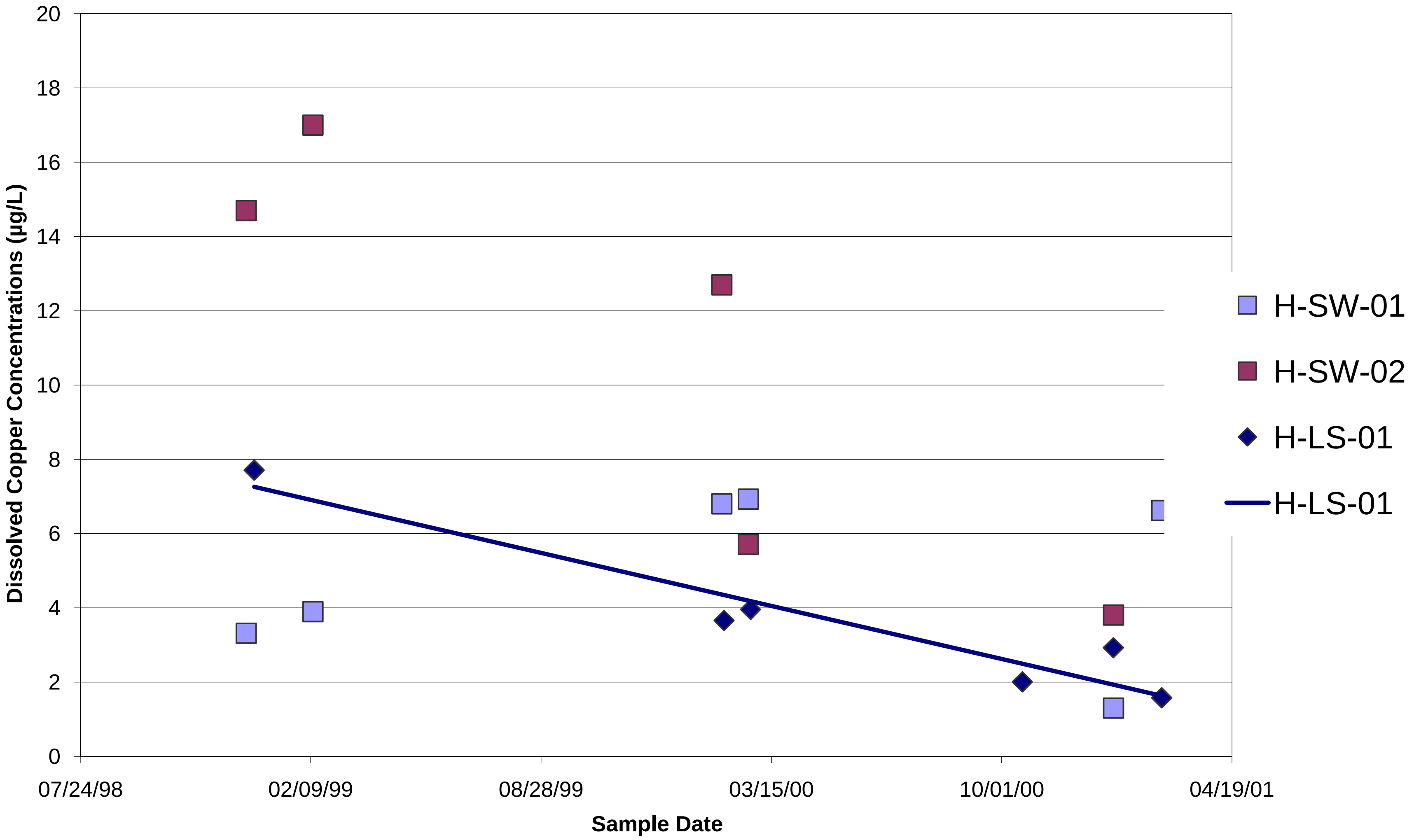
## Dissolved Arsenic - Hall House

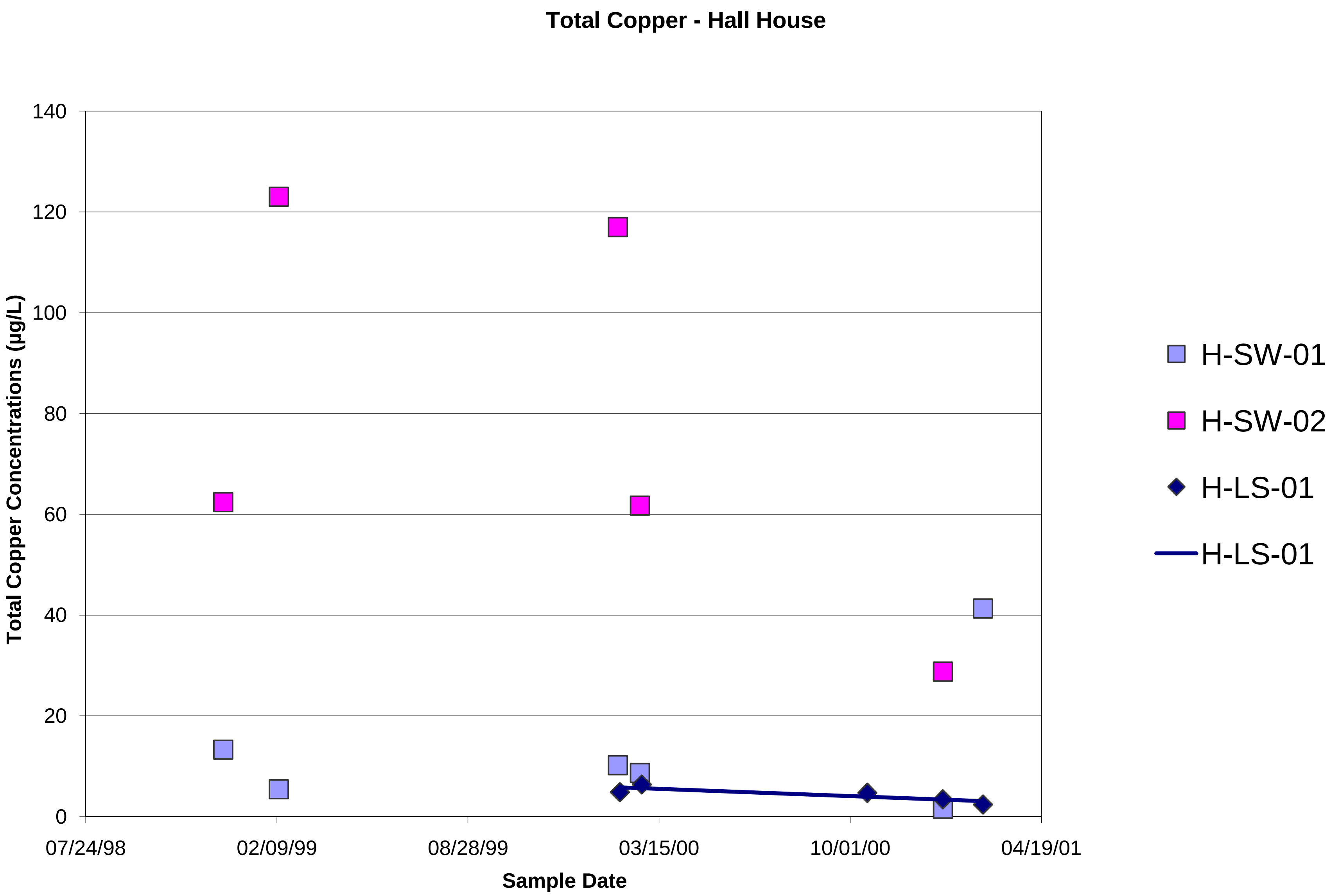


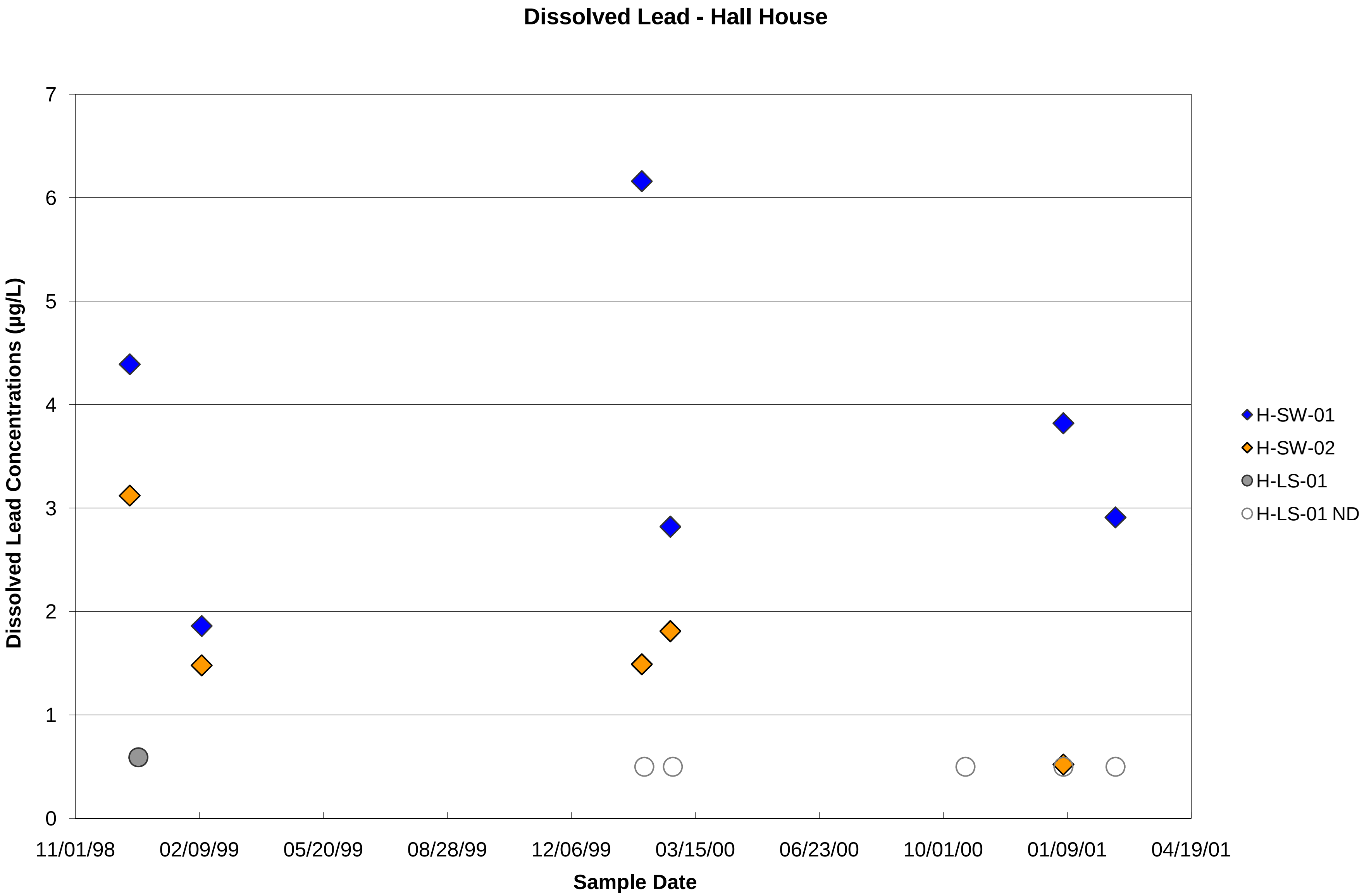

Total Arsenic - Hall House
4
3.5
3
2.5
2
1.5
1
0.5
0
Total Arsenic Concentrations (µg/L)
07/24/98
02/09/99
08/28/99
03/15/00
10/01/00
04/19/01
Sample Date
H-SW-01
H-SW-02
H-SW-01 ND
H-SW-02 ND
H-LS-01 ND


Dissolved Hexavalent Chromium - Hall House
Dissolved Hexavelent Chromium Concentrations (µg/L)
5
4
3
2
1
0
07/24/98
02/09/99
08/28/99
03/15/00
10/01/00
04/19/01
Sample Date
H-SW-01
H-SW-02
H-LS-01
H-SW-01 ND
H-SW-02 ND

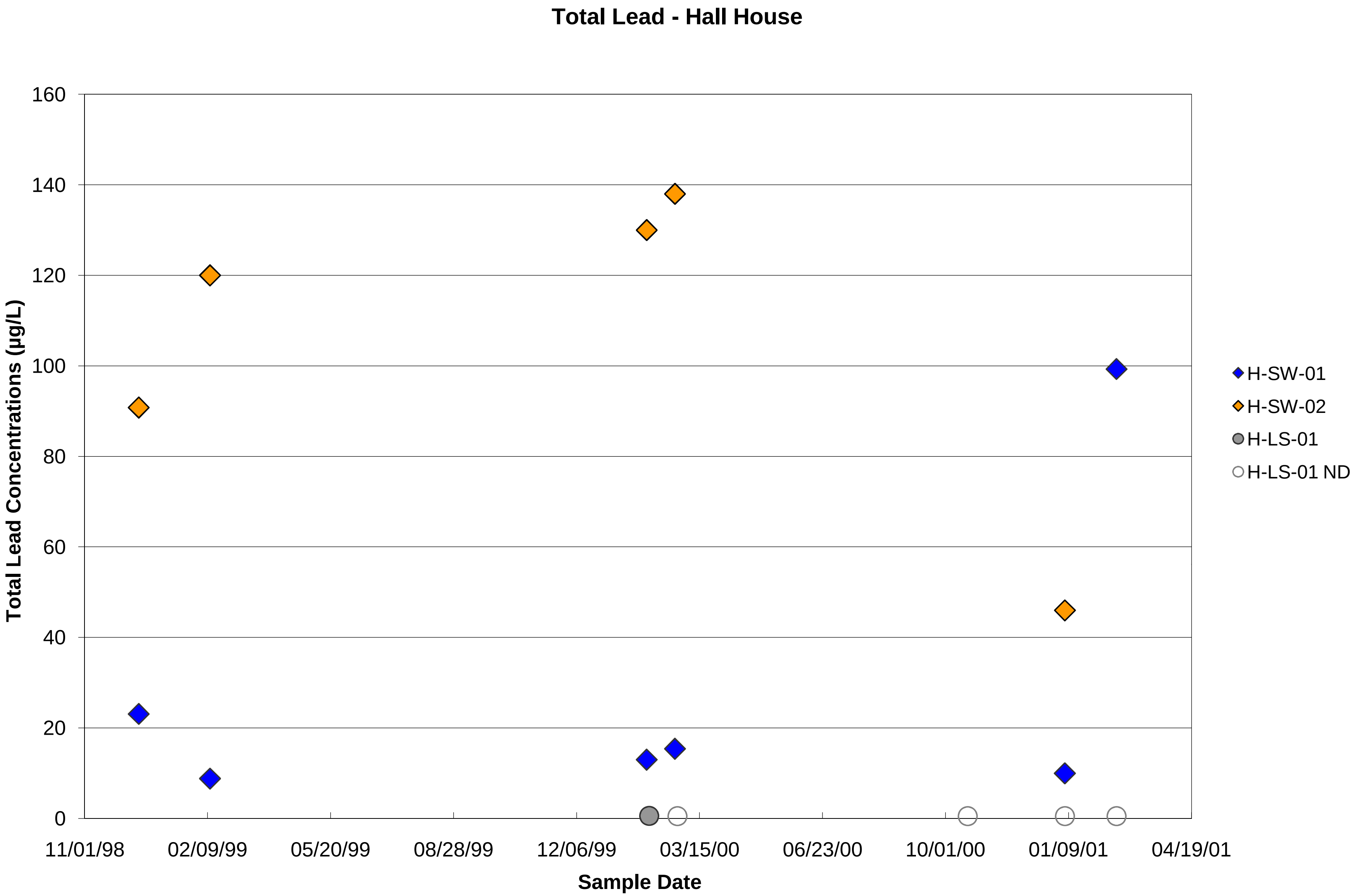
## Dissolved Copper - Hall House

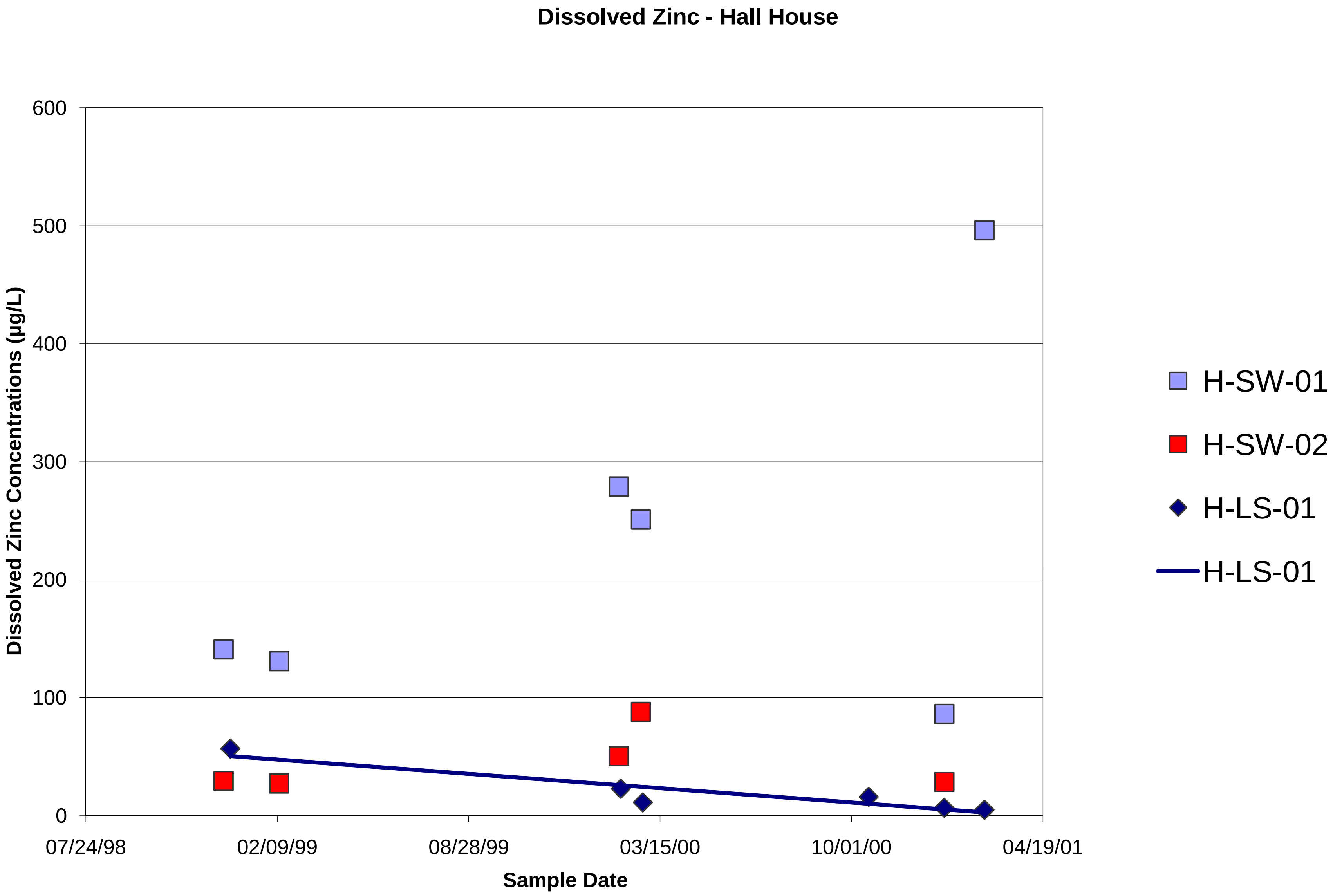



Total Copper - Hall House
Total Copper Concentrations (µg/L)
140
120
100
80
60
40
20
0
07/24/98
02/09/99
08/28/99
03/15/00
10/01/00
04/19/01
Sample Date
H-SW-01
H-SW-02
H-LS-01
H-LS-01

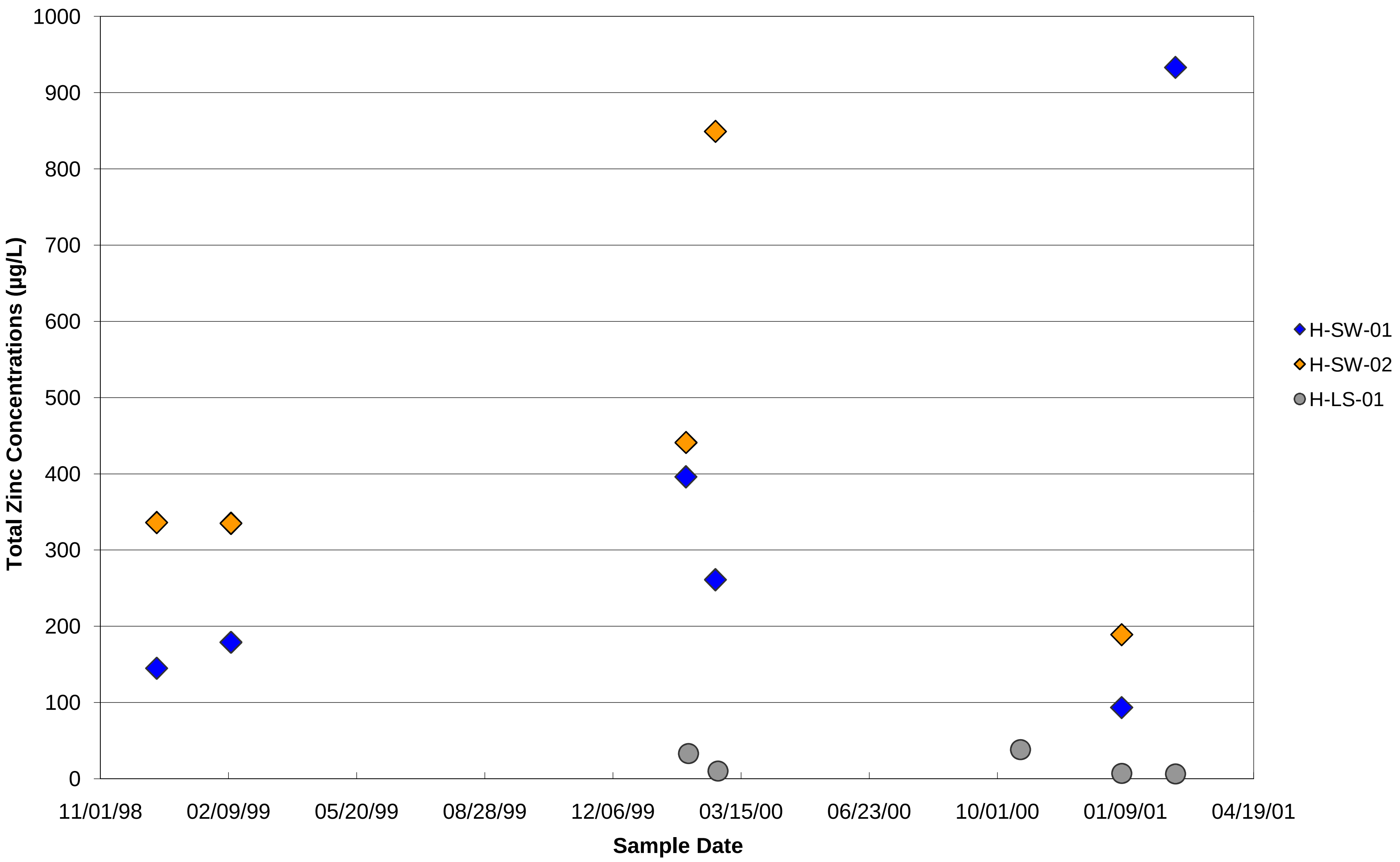


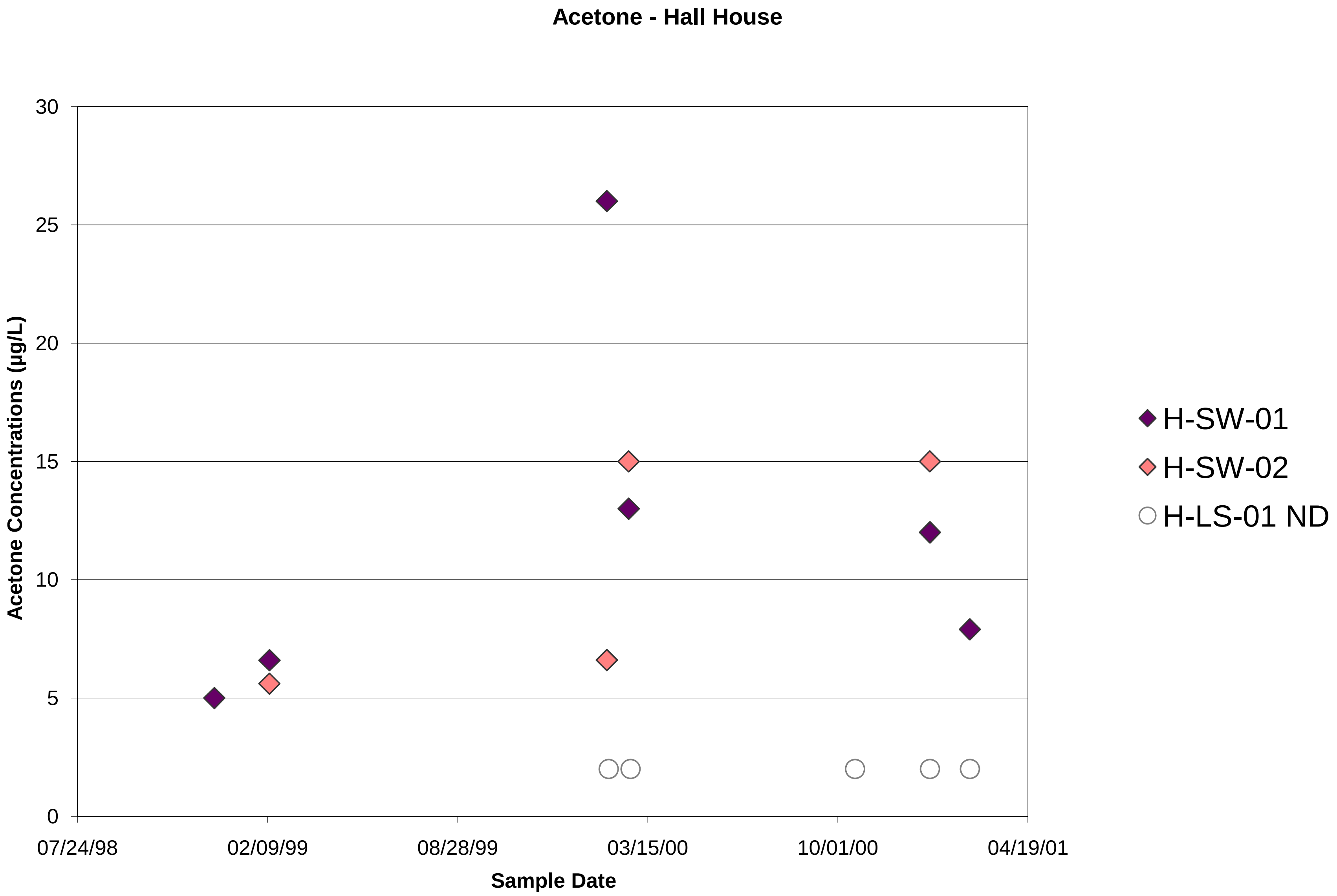
Dissolved Lead - Hall House
Dissolved Lead Concentrations (µg/L)
7
6
5
4
3
2
1
0
11/01/98
02/09/99
05/20/99
08/28/99
12/06/99
03/15/00
06/23/00
10/01/00
01/09/01
04/19/01
Sample Date
H-SW-01
H-SW-02
H-LS-01
H-LS-01 ND

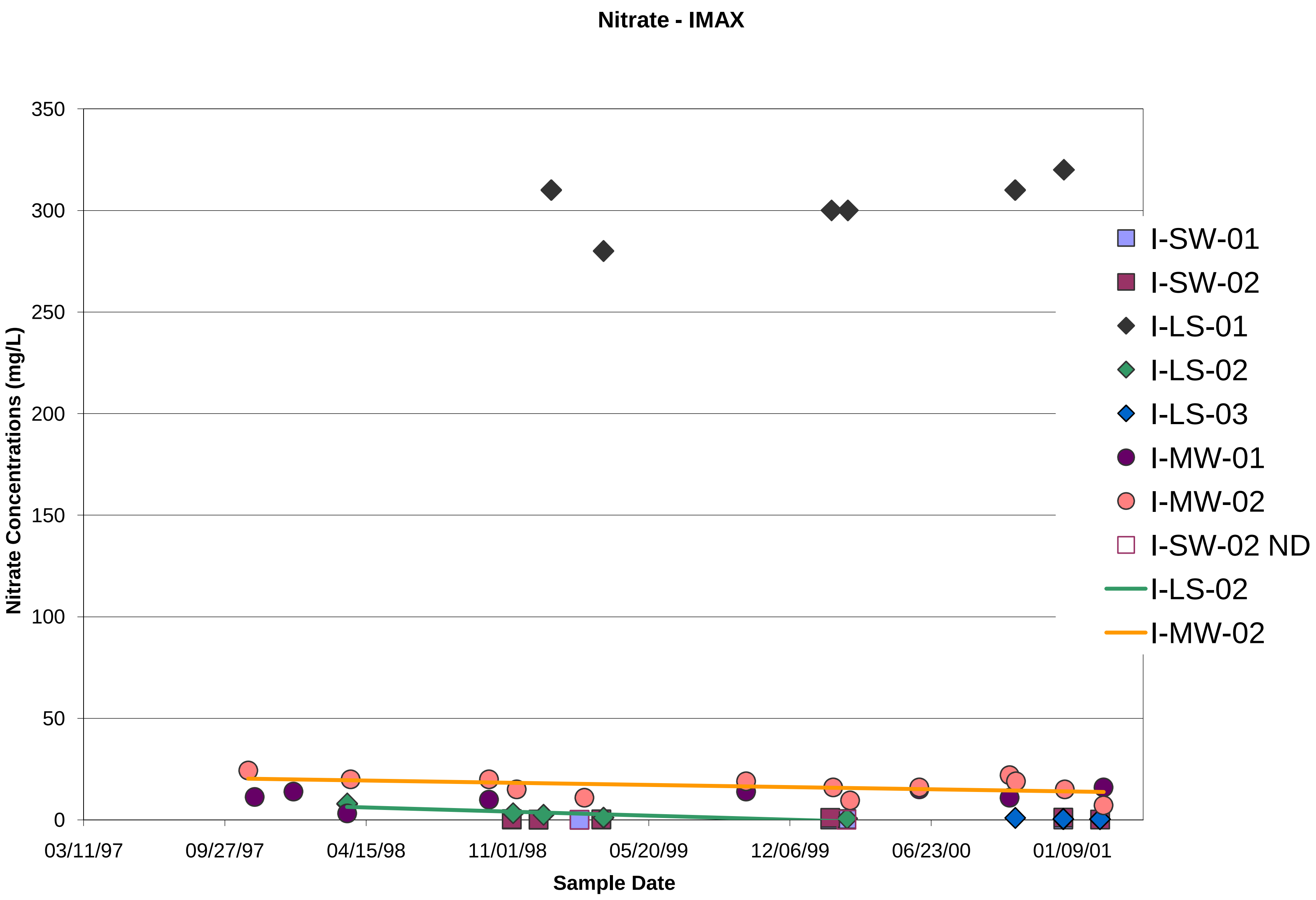

Total Lead - Hall House
Total Lead Concentrations (µg/L)
160
140
120
100
80
60
40
20
0
11/01/98
02/09/99
05/20/99
08/28/99
12/06/99
03/15/00
06/23/00
10/01/00
01/09/01
04/19/01
Sample Date
H-SW-01
H-SW-02
H-LS-01
H-LS-01 ND

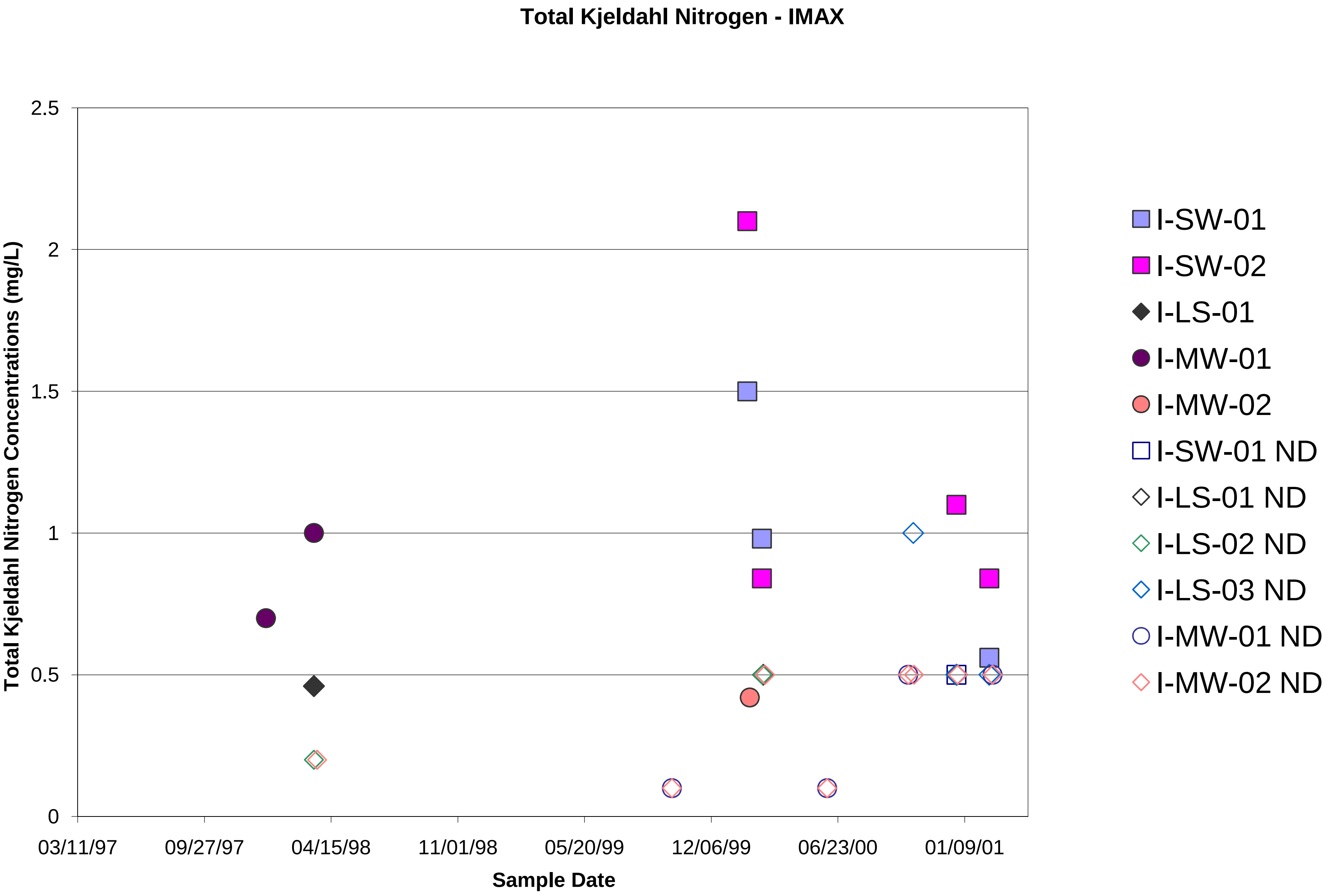

Dissolved Zinc - Hall House
Dissolved Zinc Concentrations (µg/L)
600
500
400
300
200
100
0
07/24/98
02/09/99
08/28/99
03/15/00
10/01/00
04/19/01
Sample Date
H-SW-01
H-SW-02
H-LS-01
H-LS-01

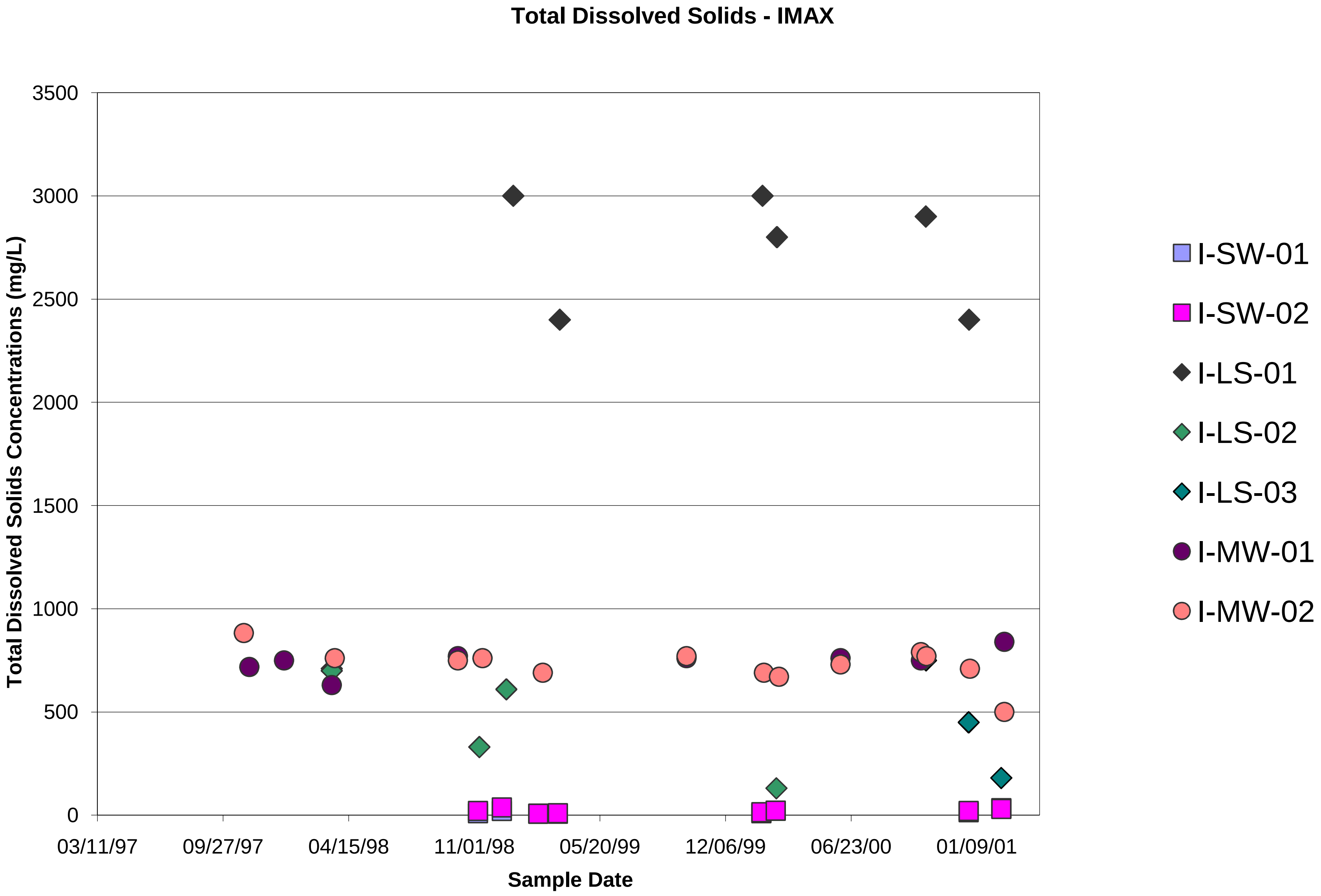
## Total Zinc - Hall House



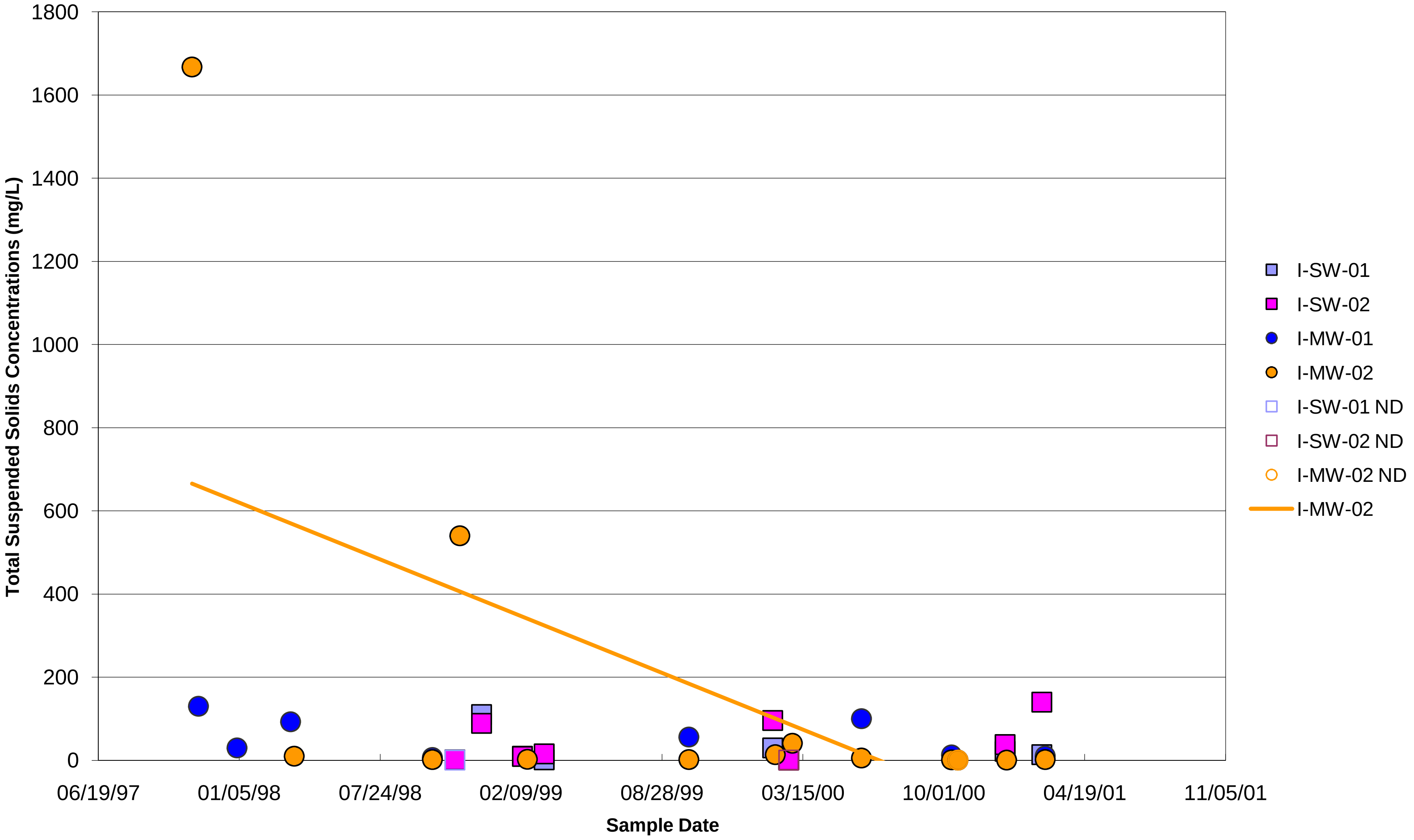

Acetone - Hall House
Acetone Concentrations (µg/L)
30
25
20
15
10
5
0
07/24/98
02/09/99
08/28/99
03/15/00
10/01/00
04/19/01
Sample Date
◆ H-SW-01
◇ H-SW-02
○ H-LS-01 ND


Nitrate - IMAX
Nitrate Concentrations (mg/L)
350
300
250
200
150
100
50
0
03/11/97
09/27/97
04/15/98
11/01/98
05/20/99
12/06/99
06/23/00
01/09/01
Sample Date
I-SW-01
I-SW-02
I-LS-01
I-LS-02
I-LS-03
I-MW-01
I-MW-02
I-SW-02 ND
I-LS-02
I-MW-02

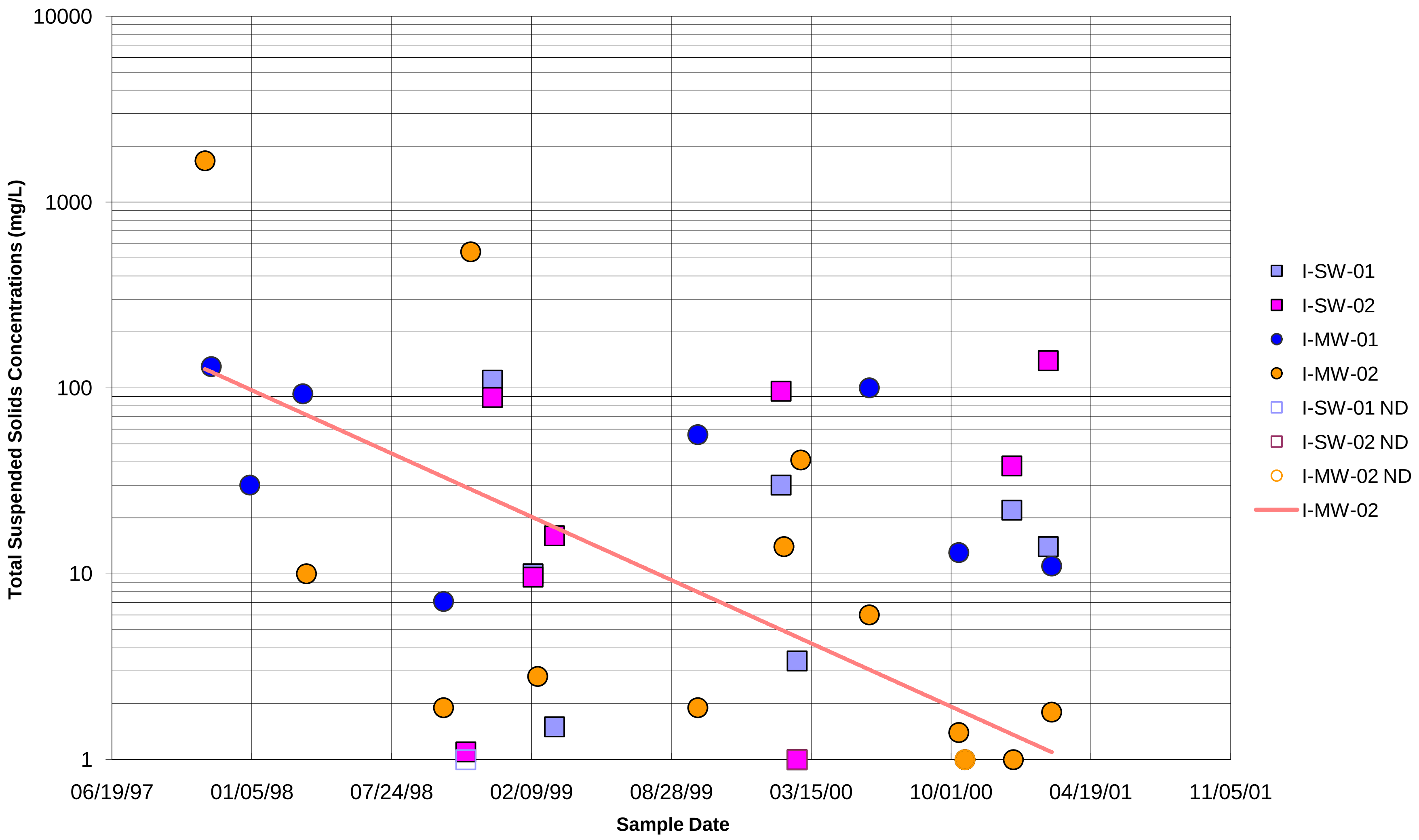

Total Kjeldahl Nitrogen - IMAX
Total Kjeldahl Nitrogen Concentrations (mg/L)
2.5
2
1.5
1
0.5
0
03/11/97
09/27/97
04/15/98
11/01/98
05/20/99
12/06/99
06/23/00
01/09/01
Sample Date
I-SW-01
I-SW-02
I-LS-01
I-MW-01
I-MW-02
I-SW-01 ND
I-LS-01 ND
I-LS-02 ND
I-LS-03 ND
I-MW-01 ND
I-MW-02 ND

Total Dissolved Solids - IMAX
Total Dissolved Solids Concentrations (mg/L)
3500
3000
2500
2000
1500
1000
500
0
03/11/97
09/27/97
04/15/98
11/01/98
05/20/99
12/06/99
06/23/00
01/09/01
Sample Date
I-SW-01
I-SW-02
I-LS-01
I-LS-02
I-LS-03
I-MW-01
I-MW-02

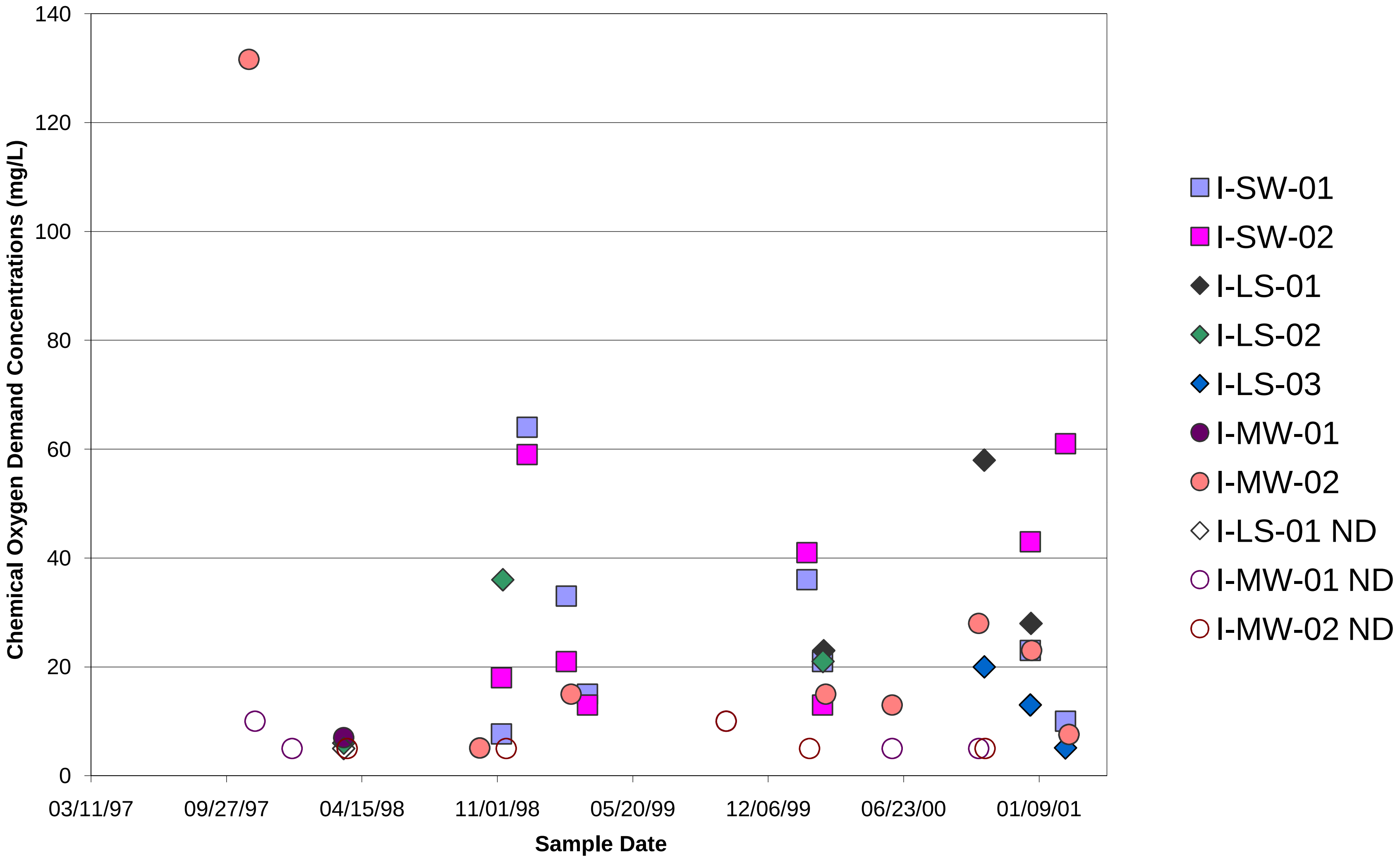
## Total Suspended Solids - IMAX



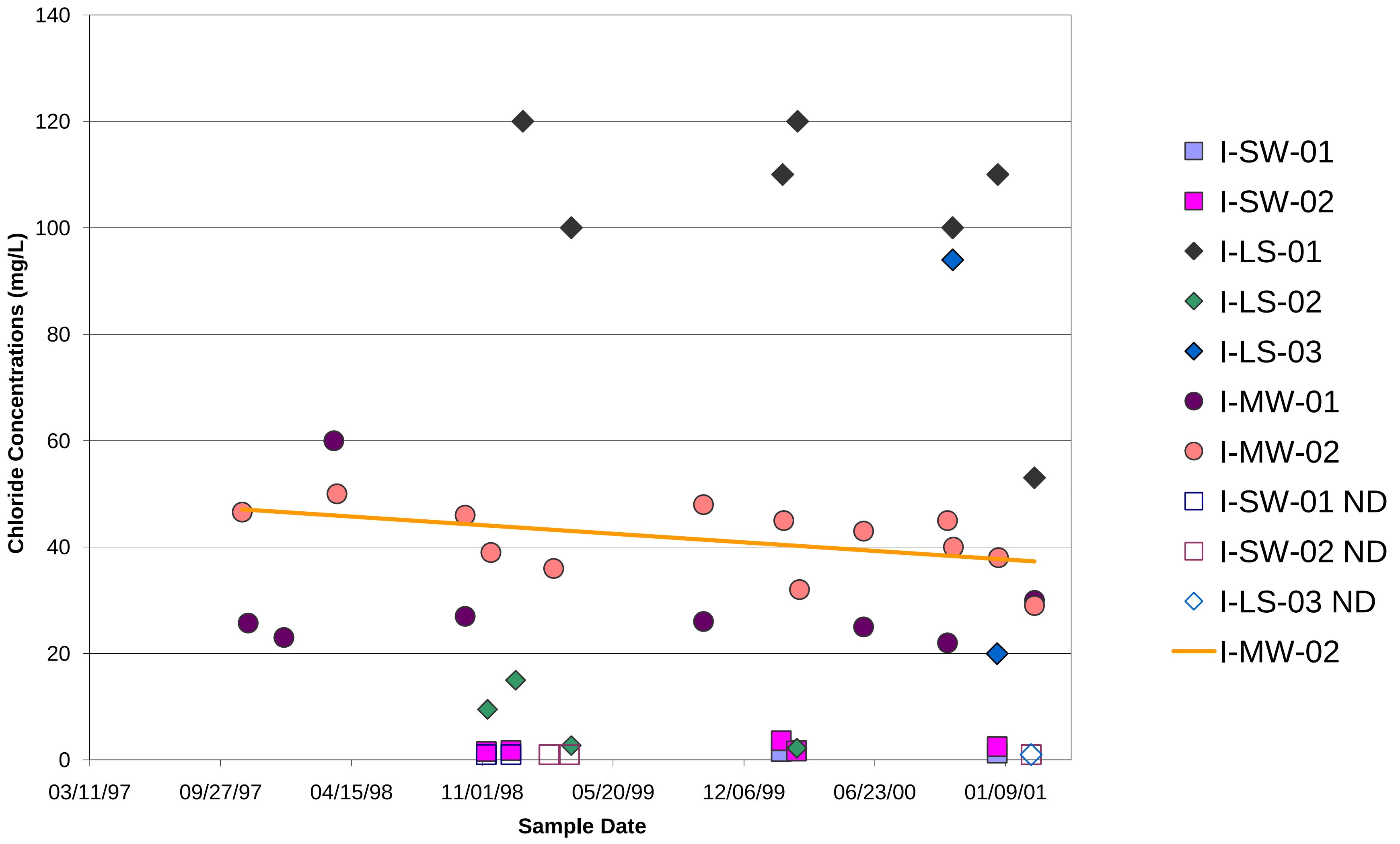
# Total Suspended Solids - IMAX - Log Scale

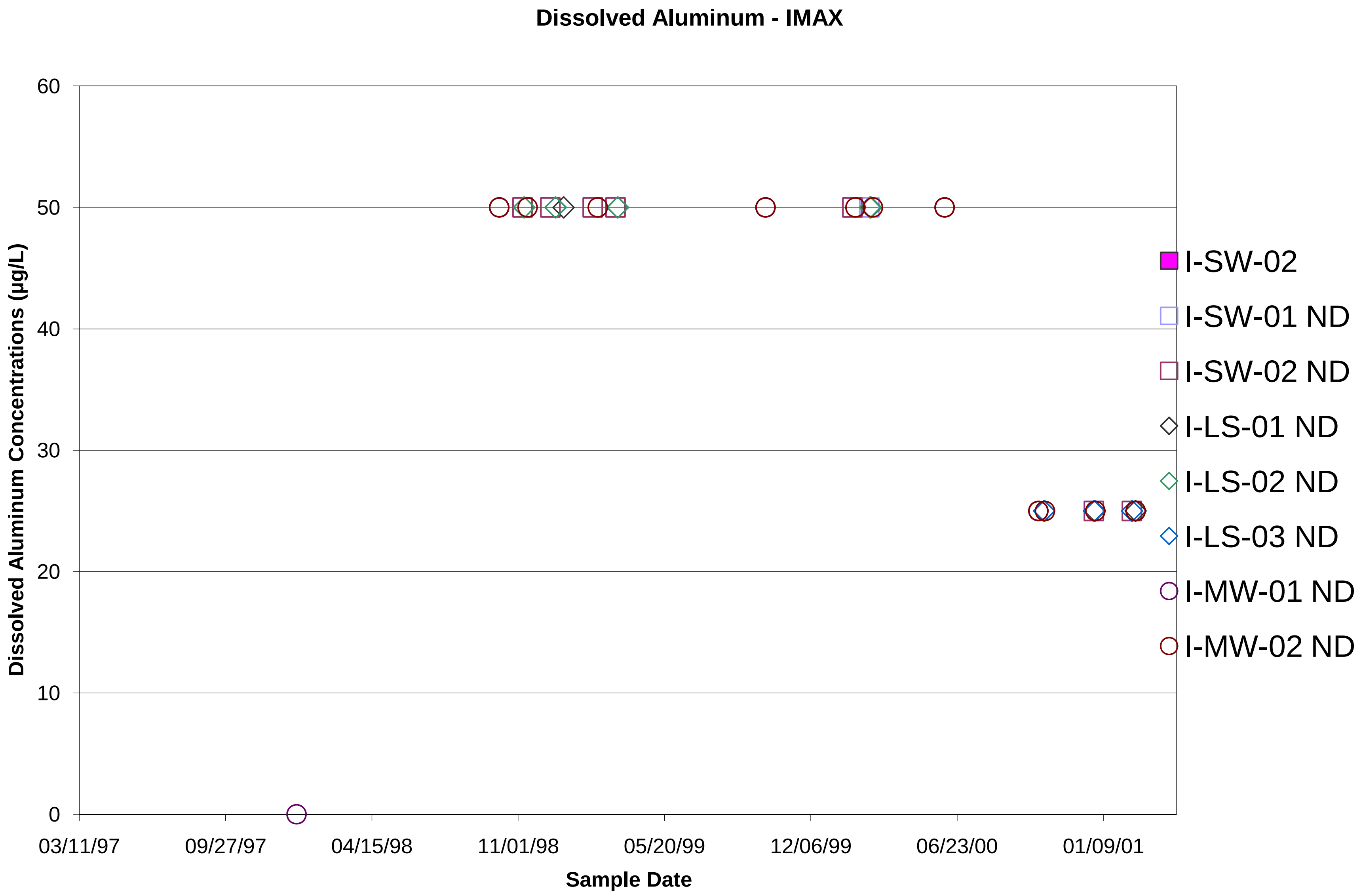


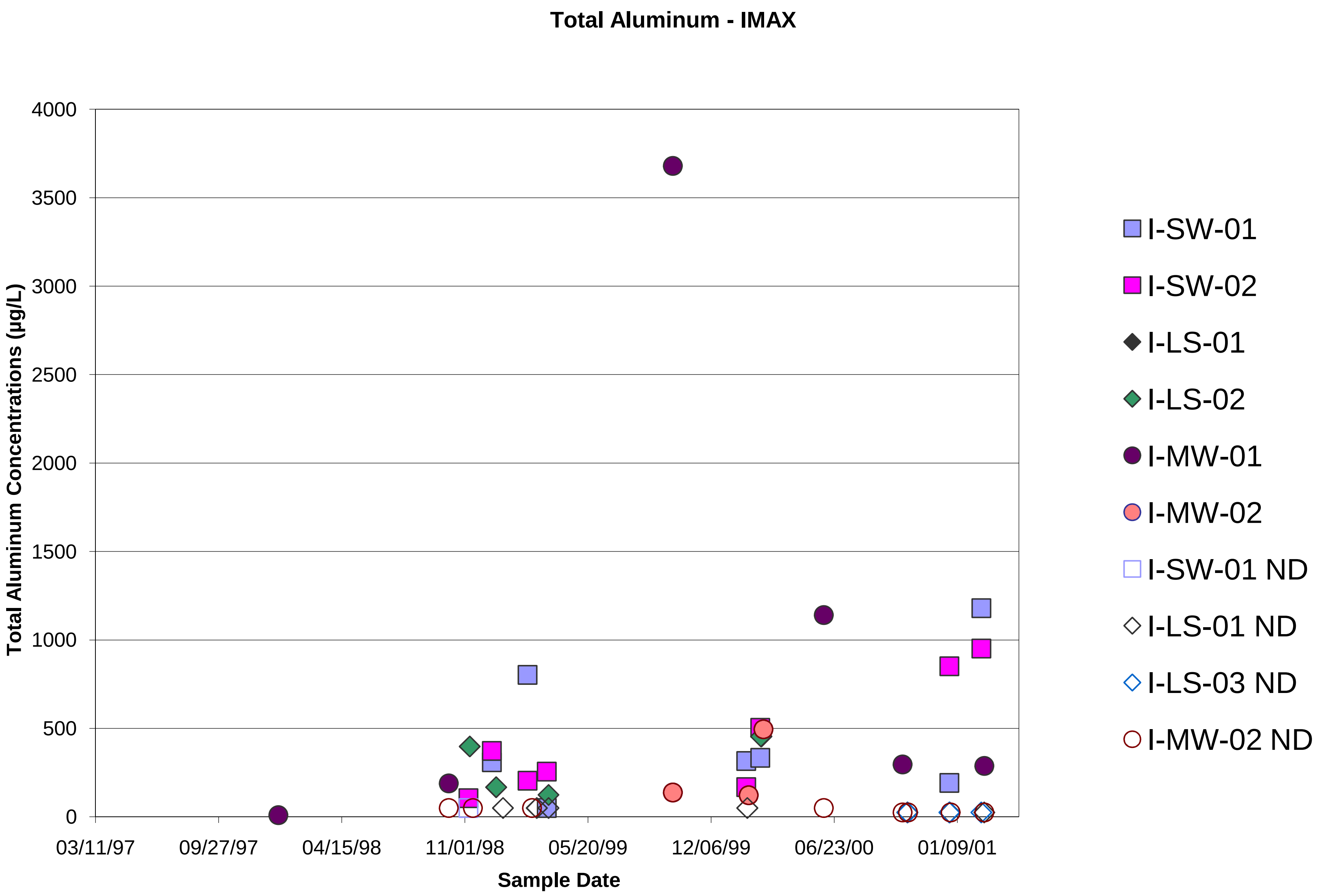
## Chemical Oxygen Demand - IMAX

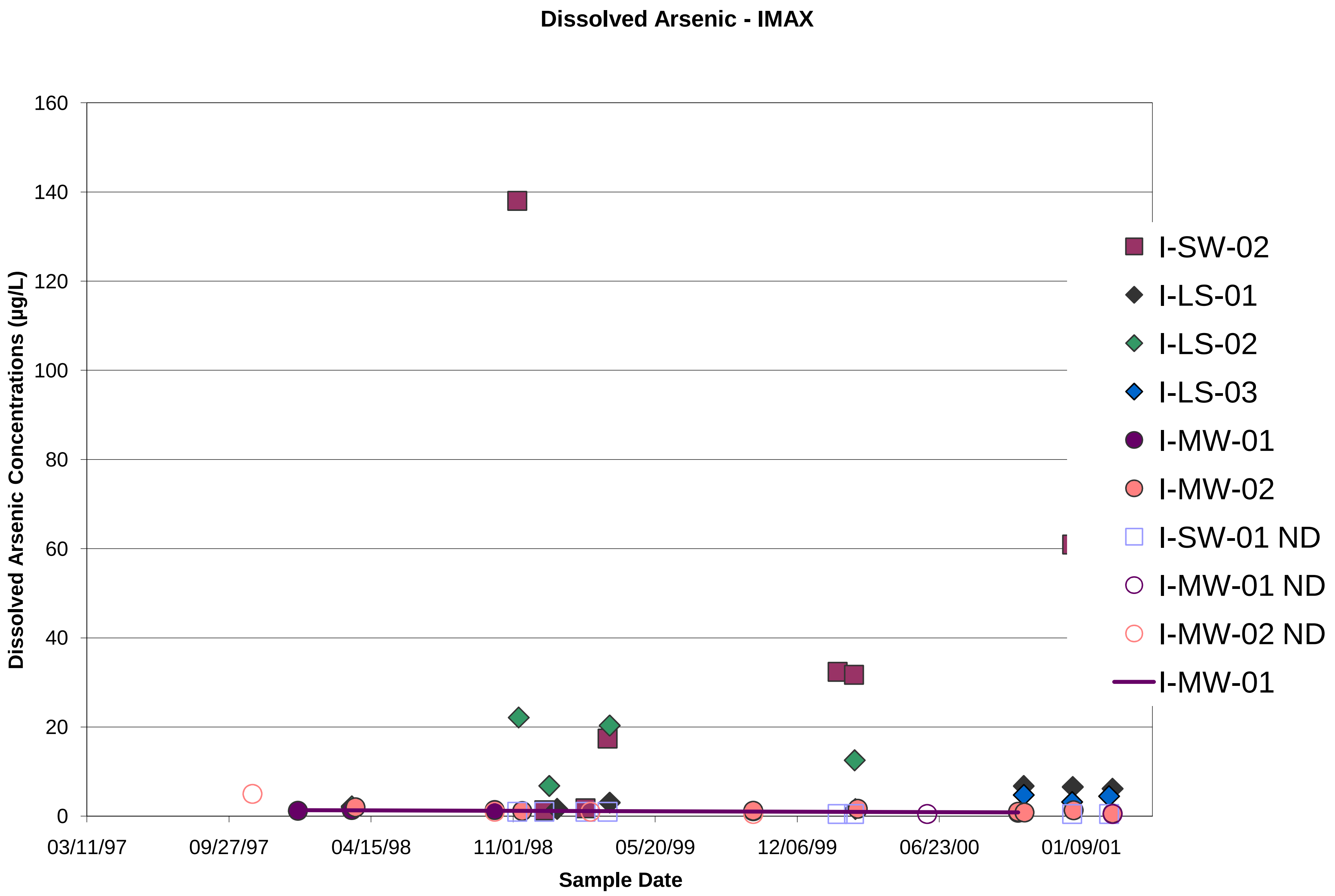


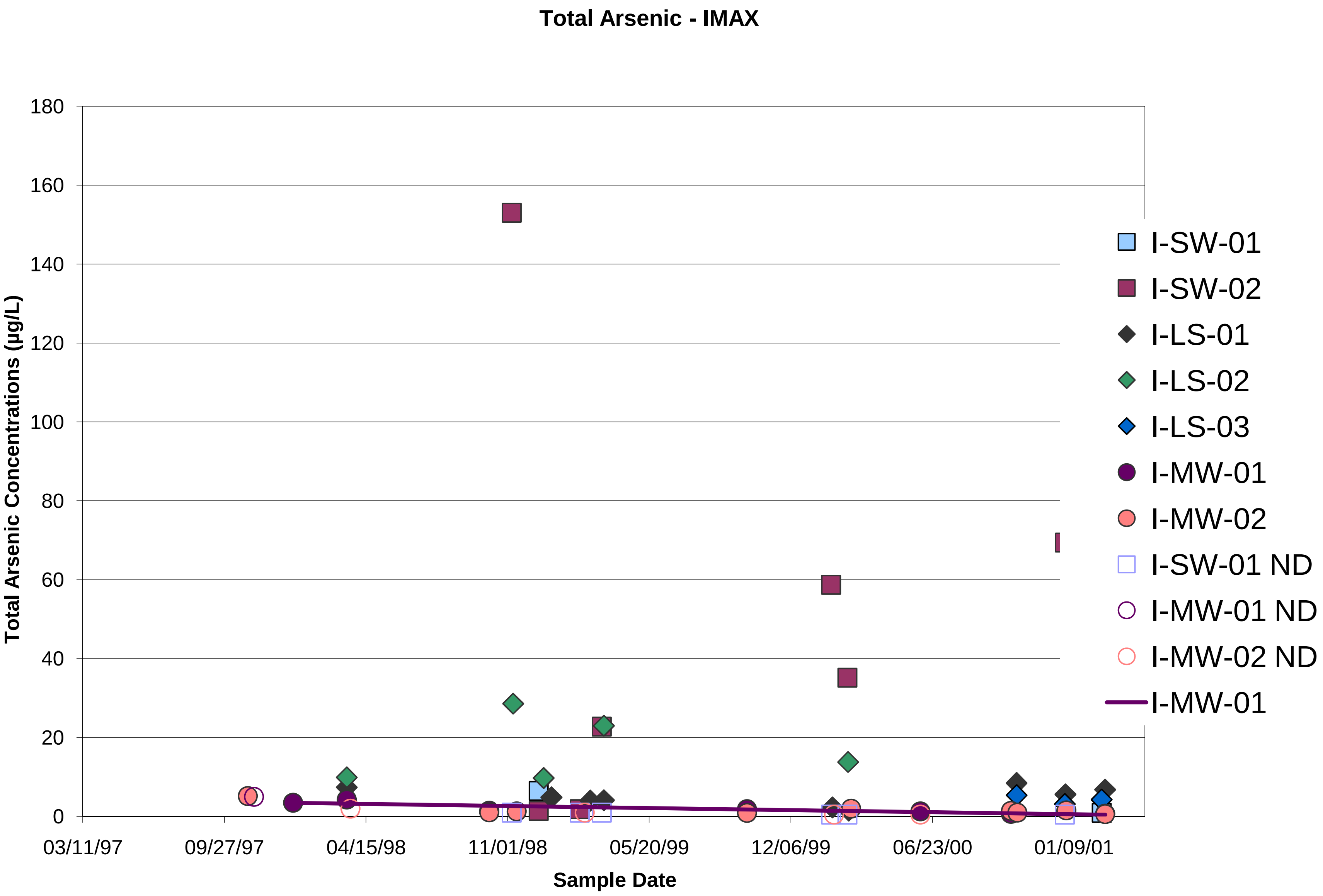
## Chloride - IMAX

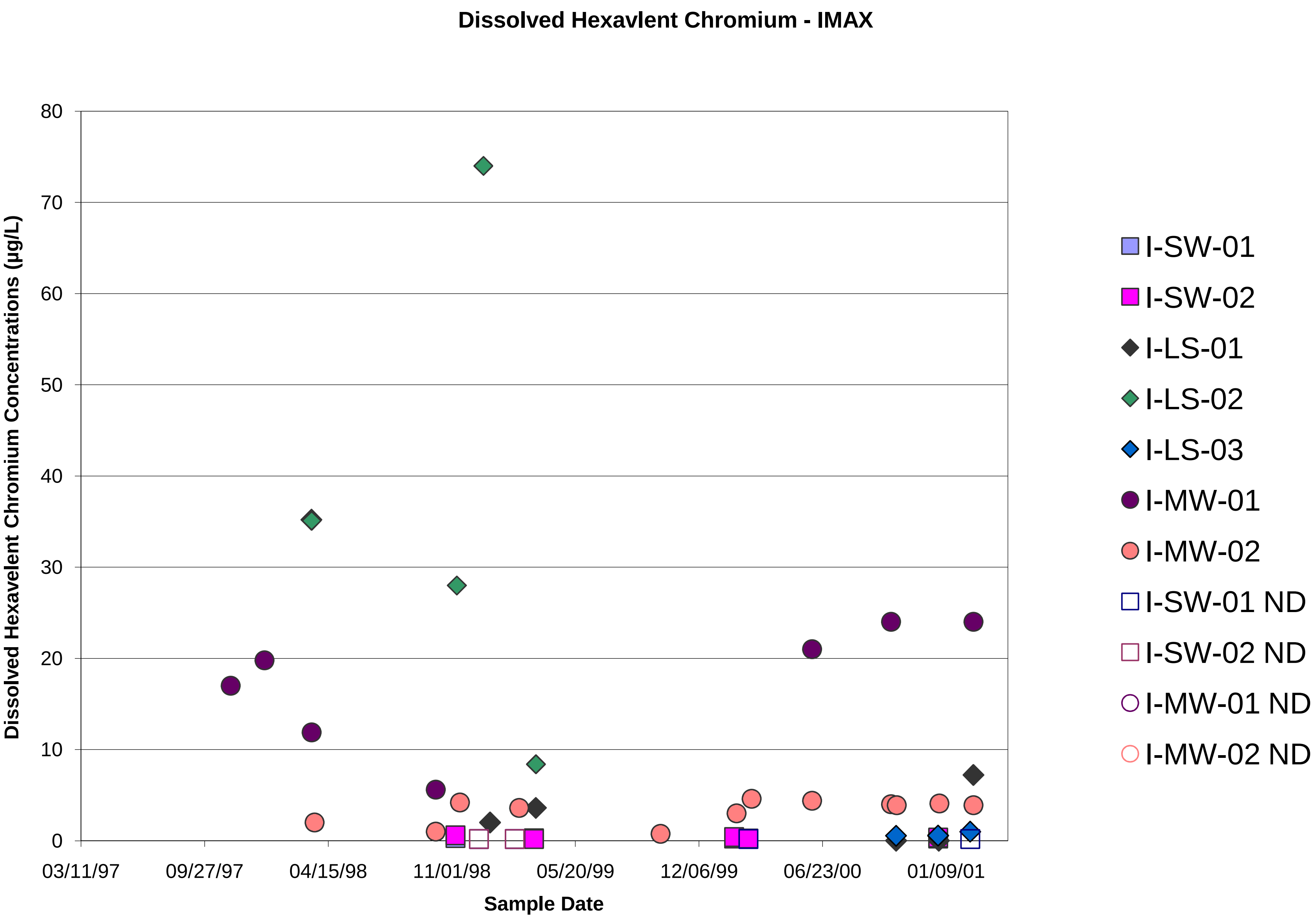


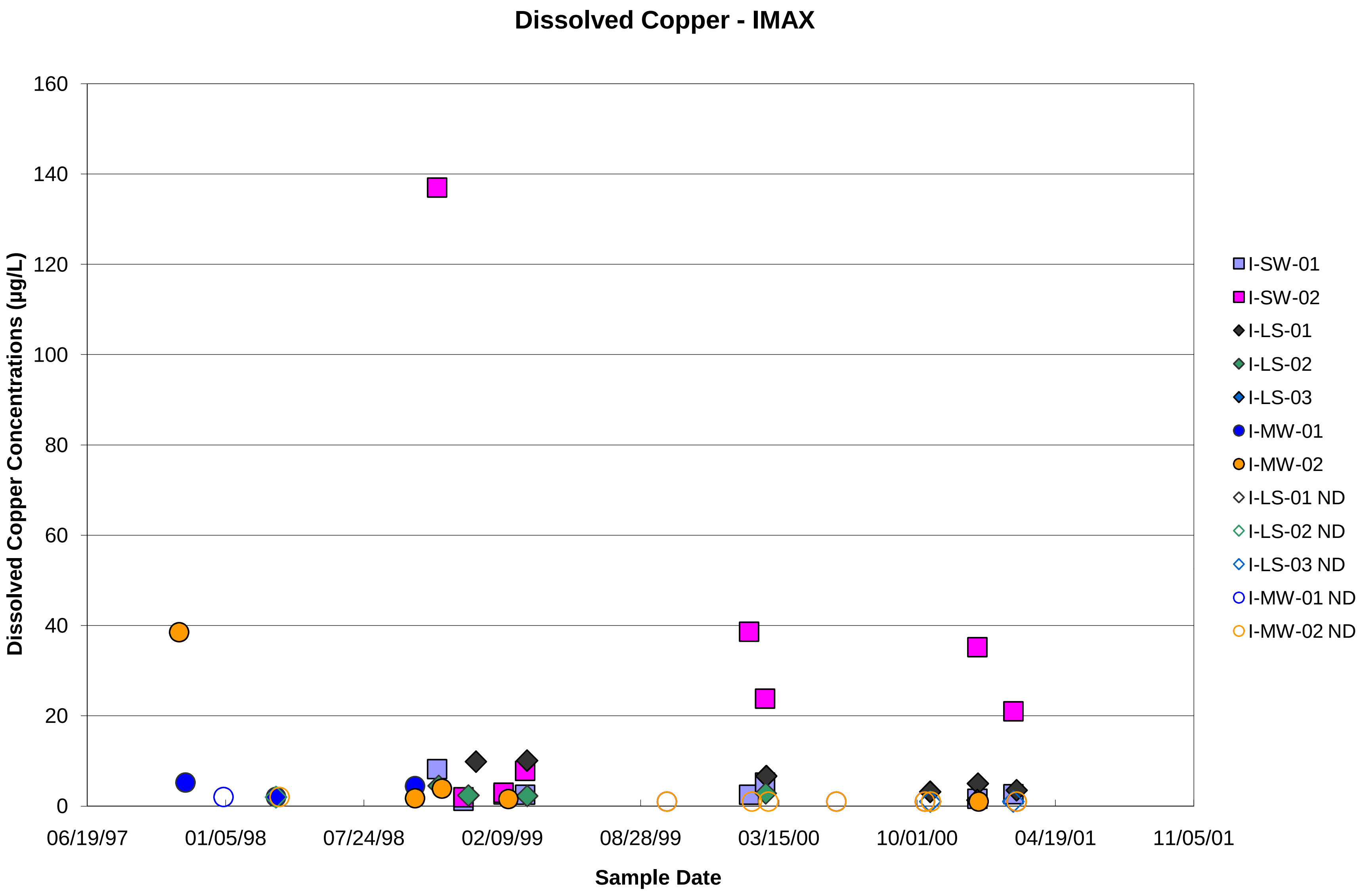

Dissolved Aluminum - IMAX
Dissolved Aluminum Concentrations (µg/L)
0
10
20
30
40
50
60
03/11/97
09/27/97
04/15/98
11/01/98
05/20/99
12/06/99
06/23/00
01/09/01
Sample Date
I-SW-02
I-SW-01 ND
I-SW-02 ND
I-LS-01 ND
I-LS-02 ND
I-LS-03 ND
I-MW-01 ND
I-MW-02 ND

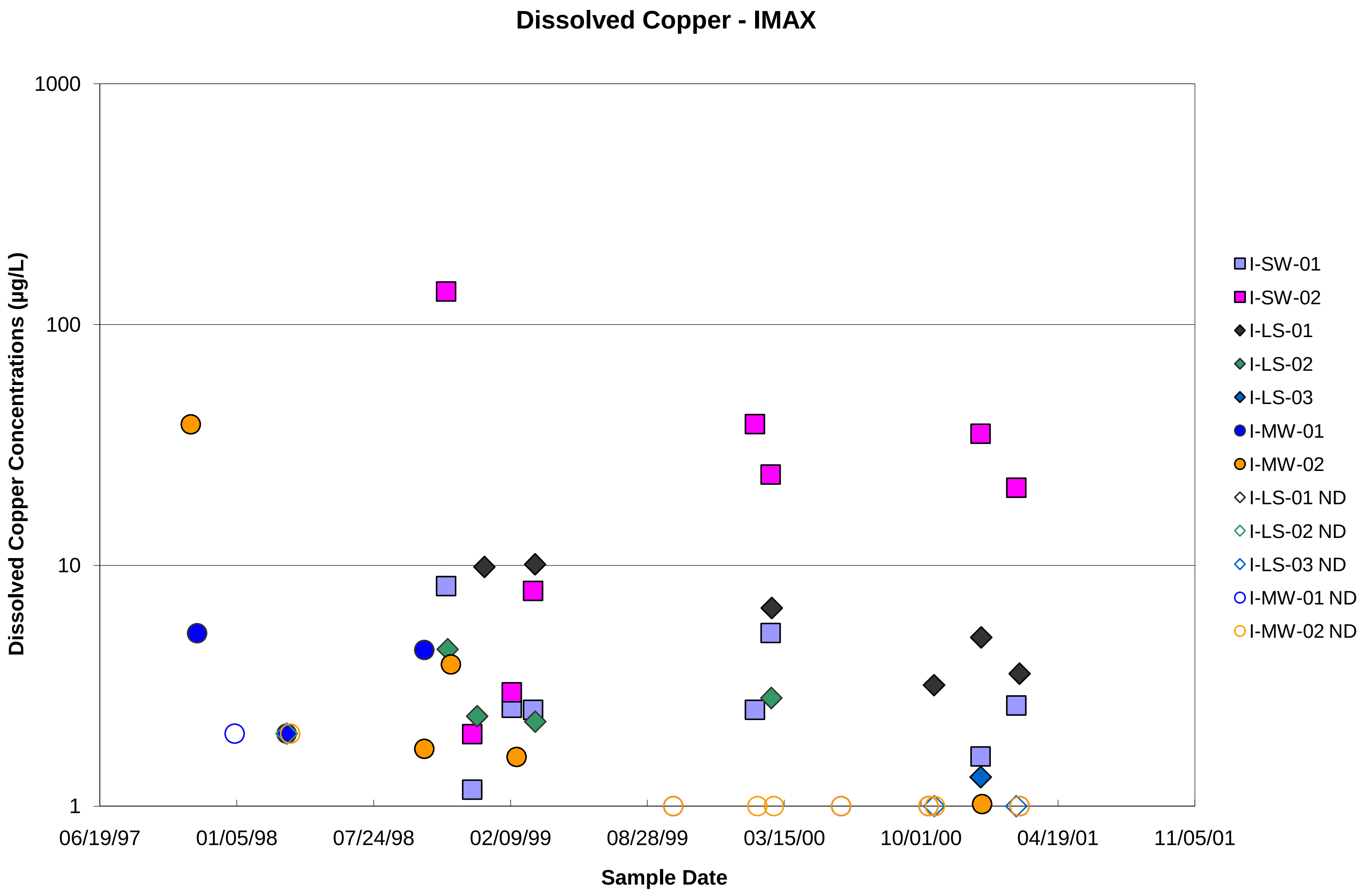

Total Aluminum - IMAX
Total Aluminum Concentrations (µg/L)
4000
3500
3000
2500
2000
1500
1000
500
0
03/11/97
09/27/97
04/15/98
11/01/98
05/20/99
12/06/99
06/23/00
01/09/01
Sample Date
I-SW-01
I-SW-02
I-LS-01
I-LS-02
I-MW-01
I-MW-02
I-SW-01 ND
I-LS-01 ND
I-LS-03 ND
I-MW-02 ND

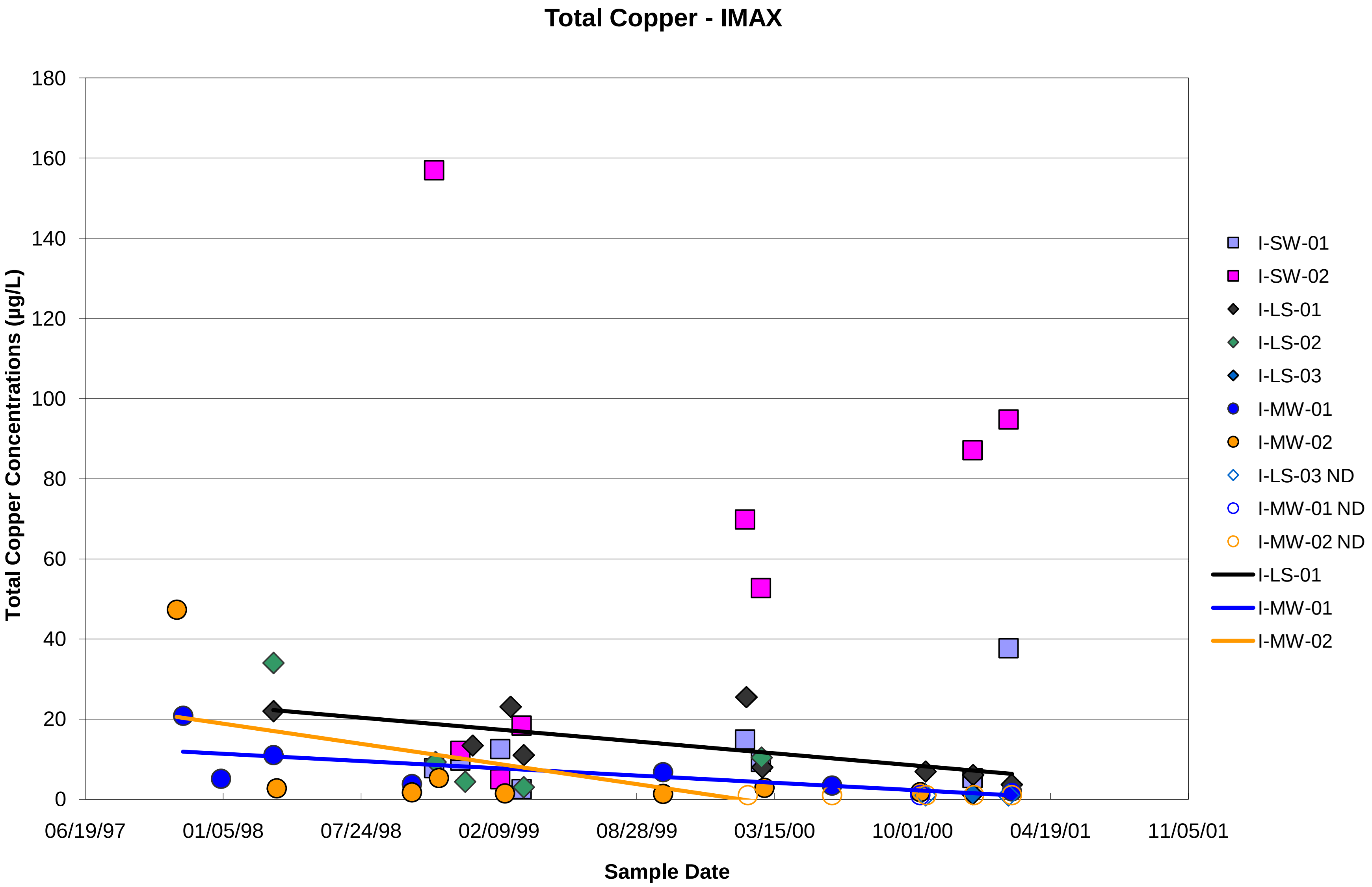
Dissolved Arsenic - IMAX
Dissolved Arsenic Concentrations (µg/L)
160
140
120
100
80
60
40
20
0
03/11/97
09/27/97
04/15/98
11/01/98
05/20/99
12/06/99
06/23/00
01/09/01
Sample Date
I-SW-02
I-LS-01
I-LS-02
I-LS-03
I-MW-01
I-MW-02
I-SW-01 ND
I-MW-01 ND
I-MW-02 ND
I-MW-01

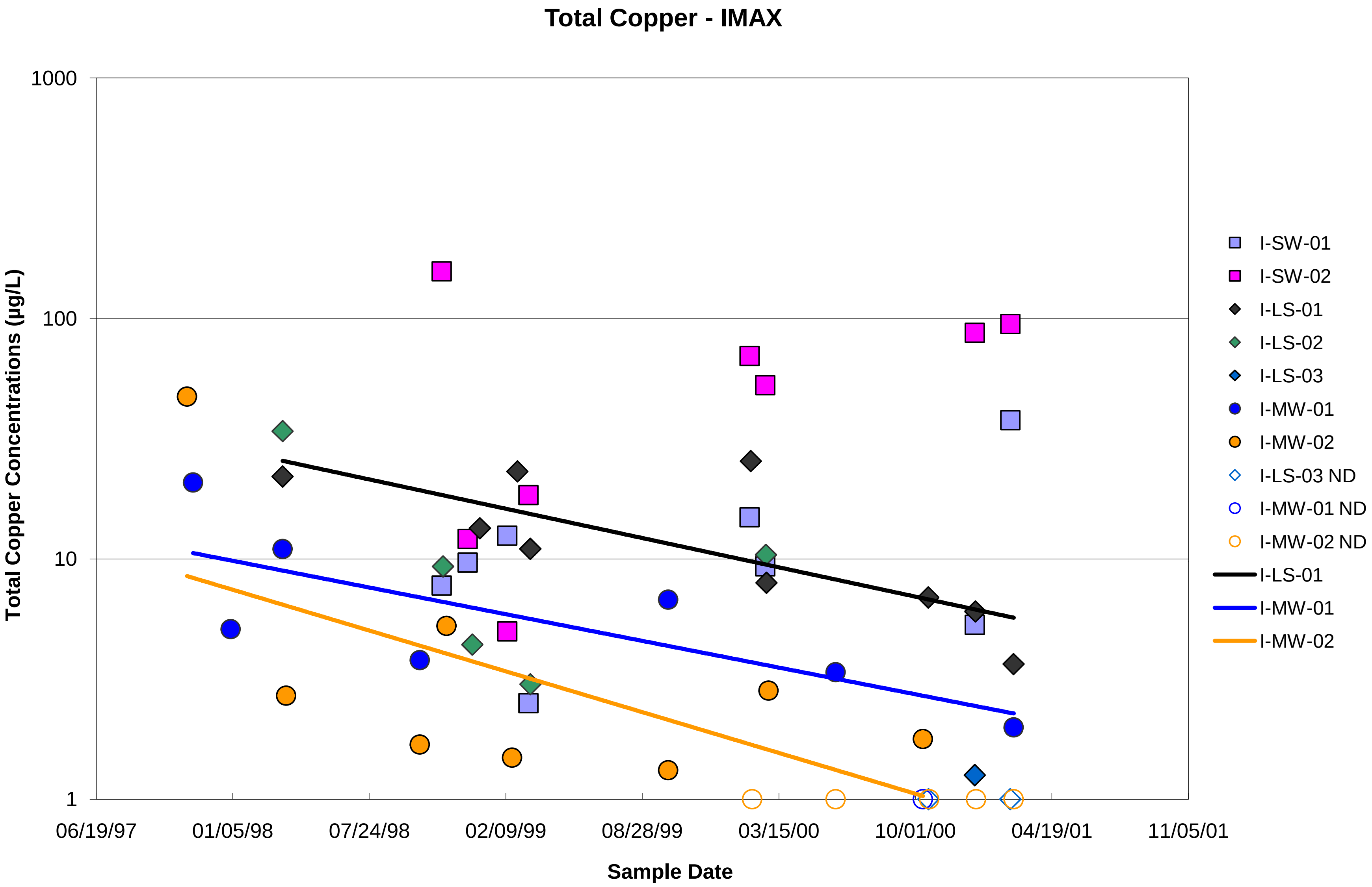

Total Arsenic - IMAX
Total Arsenic Concentrations (µg/L)
180
160
140
120
100
80
60
40
20
0
03/11/97
09/27/97
04/15/98
11/01/98
05/20/99
12/06/99
06/23/00
01/09/01
Sample Date
I-SW-01
I-SW-02
I-LS-01
I-LS-02
I-LS-03
I-MW-01
I-MW-02
I-SW-01 ND
I-MW-01 ND
I-MW-02 ND
I-MW-01

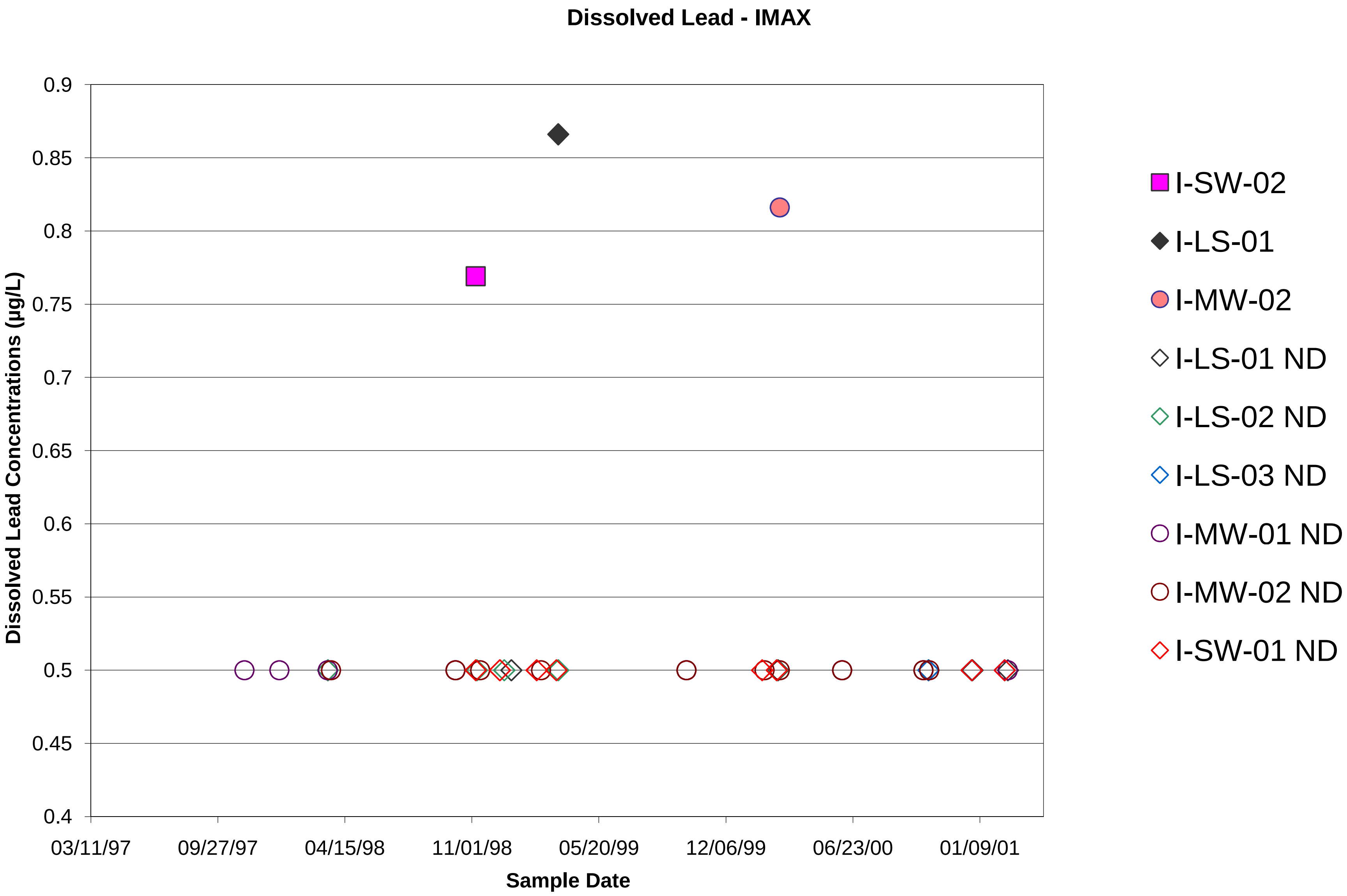

Dissolved Hexavlent Chromium - IMAX
Dissolved Hexavelent Chromium Concentrations (µg/L)
80
70
60
50
40
30
20
10
0
03/11/97
09/27/97
04/15/98
11/01/98
05/20/99
12/06/99
06/23/00
01/09/01
Sample Date
I-SW-01
I-SW-02
I-LS-01
I-LS-02
I-LS-03
I-MW-01
I-MW-02
I-SW-01 ND
I-SW-02 ND
I-MW-01 ND
I-MW-02 ND


Dissolved Copper - IMAX
Dissolved Copper Concentrations (µg/L)
160
140
120
100
80
60
40
20
0
06/19/97
01/05/98
07/24/98
02/09/99
08/28/99
03/15/00
10/01/00
04/19/01
11/05/01
Sample Date
I-SW-01
I-SW-02
I-LS-01
I-LS-02
I-LS-03
I-MW-01
I-MW-02
I-LS-01 ND
I-LS-02 ND
I-LS-03 ND
I-MW-01 ND
I-MW-02 ND

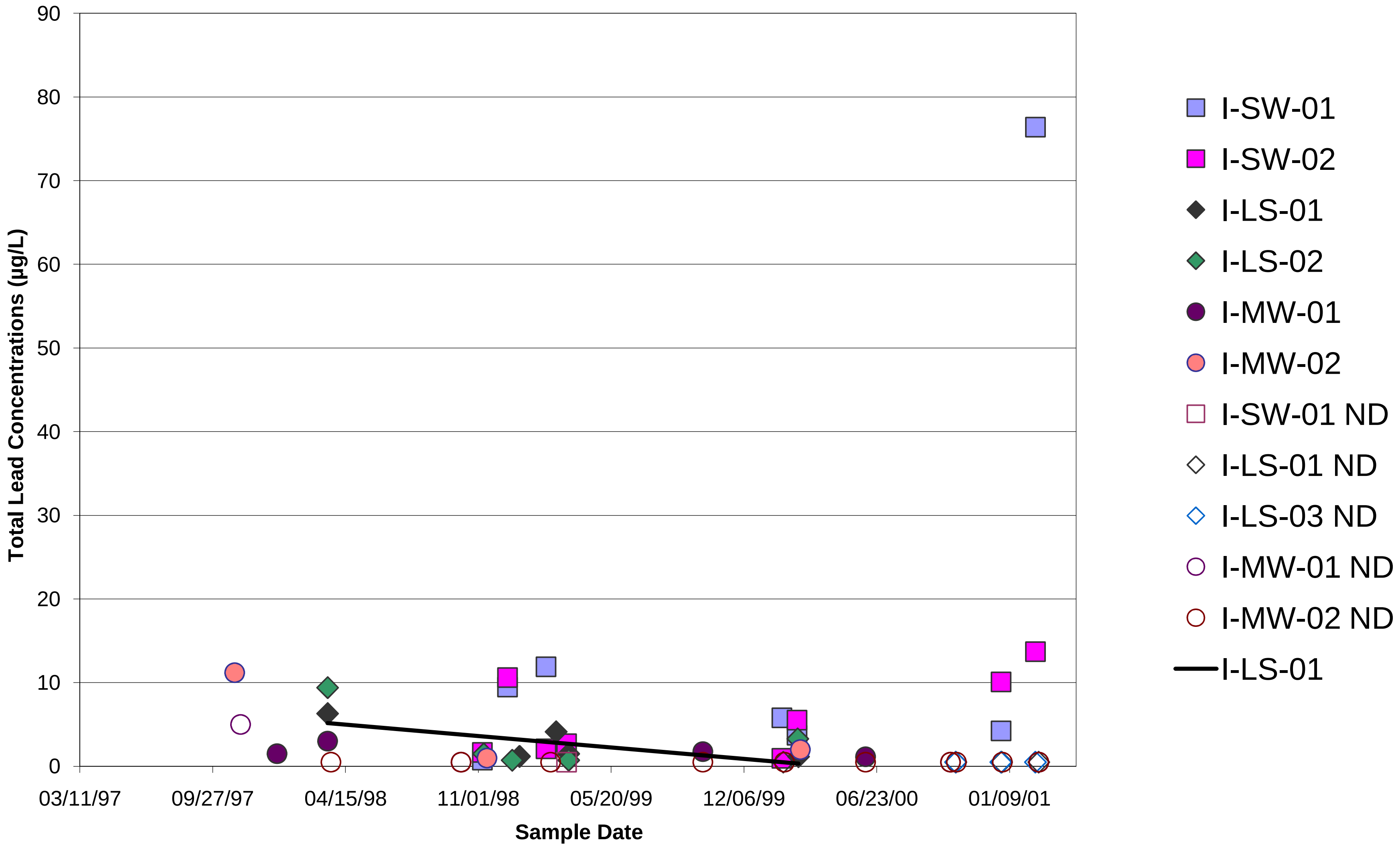

Dissolved Copper - IMAX
1000
100
10
1
Dissolved Copper Concentrations (µg/L)
06/19/97
01/05/98
07/24/98
02/09/99
08/28/99
03/15/00
10/01/00
04/19/01
11/05/01
Sample Date
I-SW-01
I-SW-02
I-LS-01
I-LS-02
I-LS-03
I-MW-01
I-MW-02
I-LS-01 ND
I-LS-02 ND
I-LS-03 ND
I-MW-01 ND
I-MW-02 ND

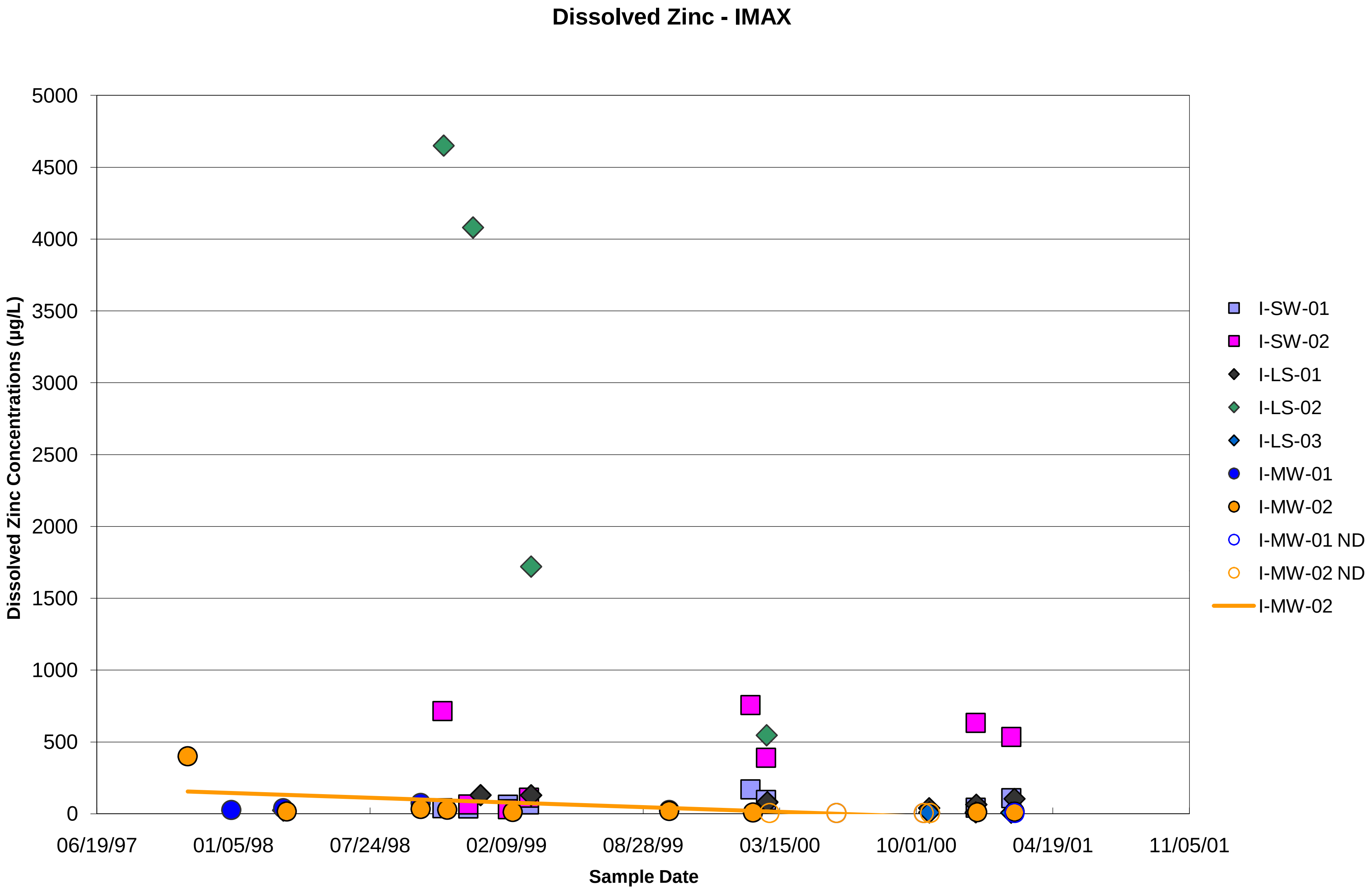

Total Copper - IMAX
Total Copper Concentrations (µg/L)
180
160
140
120
100
80
60
40
20
0
06/19/97
01/05/98
07/24/98
02/09/99
08/28/99
03/15/00
10/01/00
04/19/01
11/05/01
Sample Date
I-SW-01
I-SW-02
I-LS-01
I-LS-02
I-LS-03
I-MW-01
I-MW-02
I-LS-03 ND
I-MW-01 ND
I-MW-02 ND
I-LS-01
I-MW-01
I-MW-02

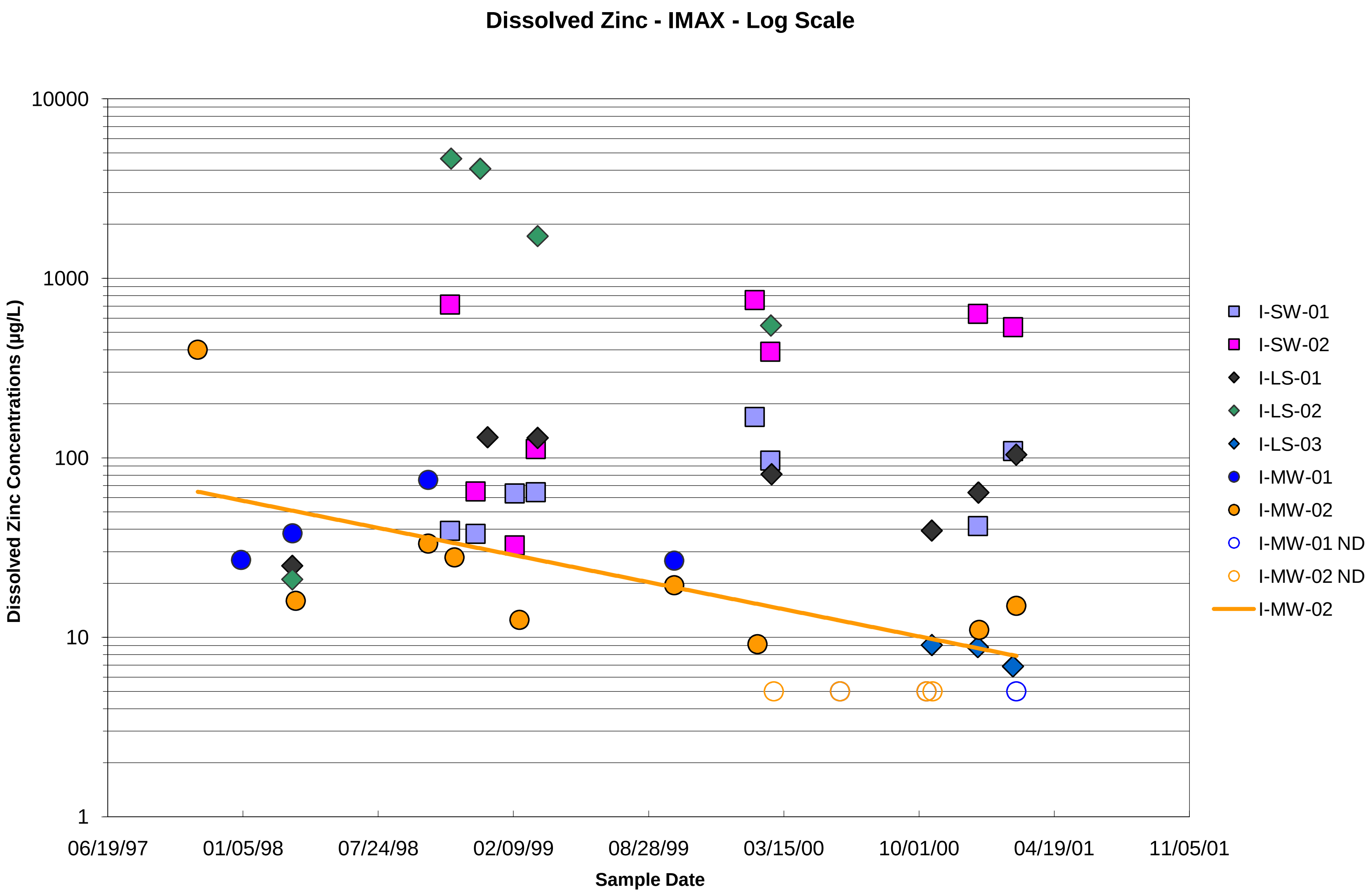

Total Copper - IMAX
Total Copper Concentrations (µg/L)
1000
100
10
1
06/19/97
01/05/98
07/24/98
02/09/99
08/28/99
03/15/00
10/01/00
04/19/01
11/05/01
Sample Date
I-SW-01
I-SW-02
I-LS-01
I-LS-02
I-LS-03
I-MW-01
I-MW-02
I-LS-03 ND
I-MW-01 ND
I-MW-02 ND
I-LS-01
I-MW-01
I-MW-02

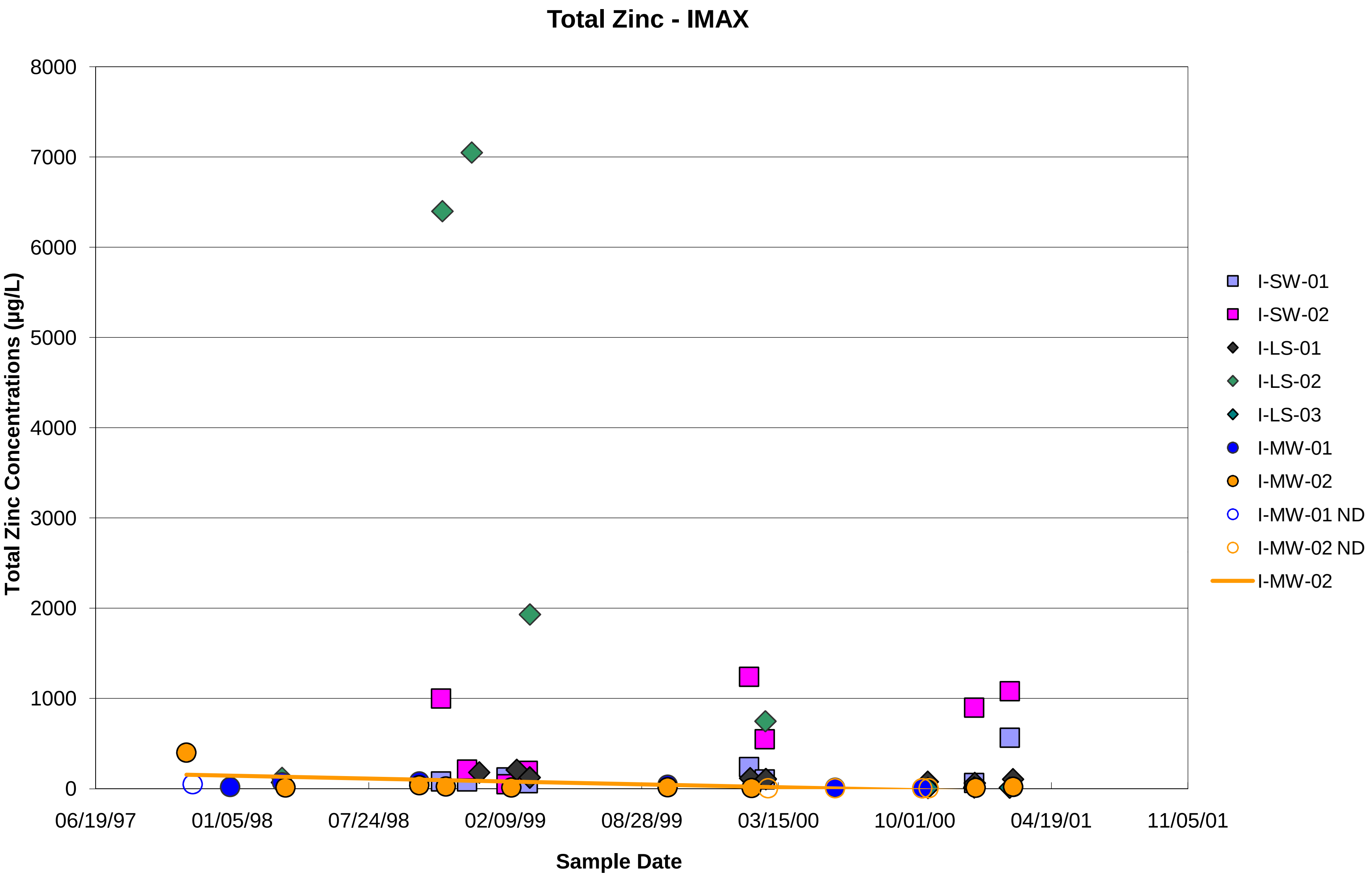

Dissolved Lead - IMAX
Dissolved Lead Concentrations (µg/L)
0.9
0.85
0.8
0.75
0.7
0.65
0.6
0.55
0.5
0.45
0.4
03/11/97
09/27/97
04/15/98
11/01/98
05/20/99
12/06/99
06/23/00
01/09/01
Sample Date
I-SW-02
I-LS-01
I-MW-02
I-LS-01 ND
I-LS-02 ND
I-LS-03 ND
I-MW-01 ND
I-MW-02 ND
I-SW-01 ND

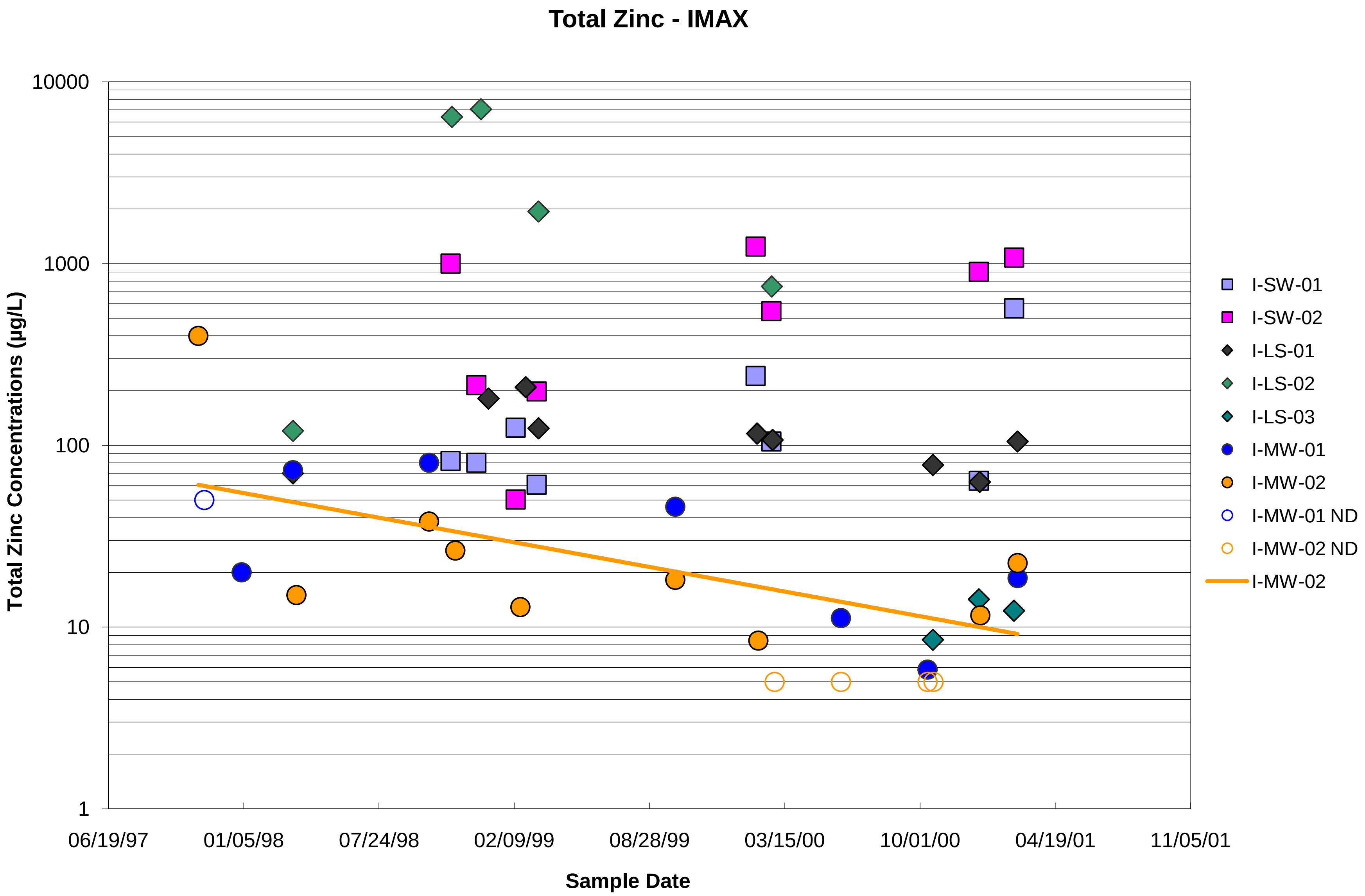
## Total Lead - IMAX



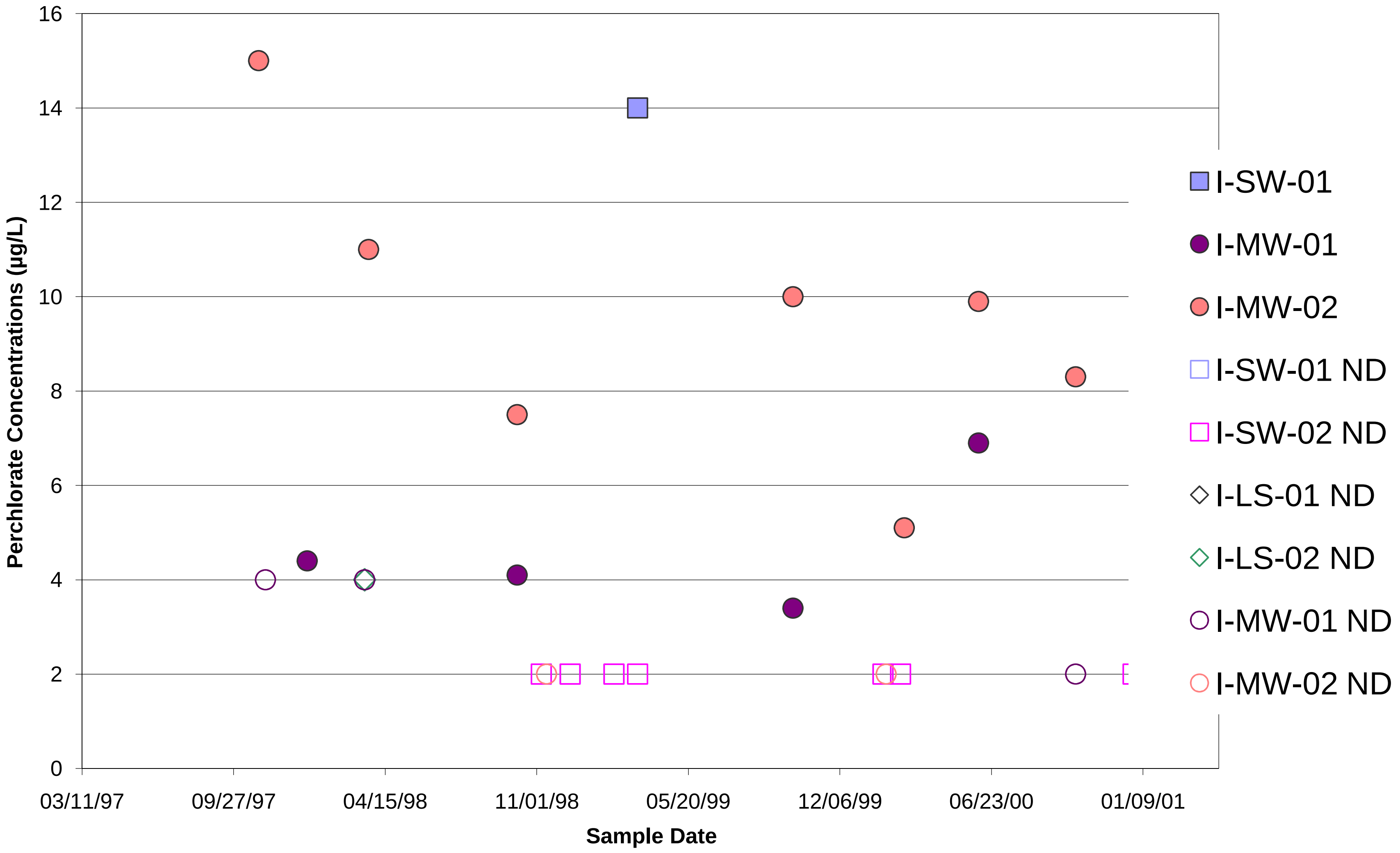

Dissolved Zinc - IMAX
Dissolved Zinc Concentrations (µg/L)
5000
4500
4000
3500
3000
2500
2000
1500
1000
500
0
06/19/97
01/05/98
07/24/98
02/09/99
08/28/99
03/15/00
10/01/00
04/19/01
11/05/01
Sample Date
I-SW-01
I-SW-02
I-LS-01
I-LS-02
I-LS-03
I-MW-01
I-MW-02
I-MW-01 ND
I-MW-02 ND
I-MW-02

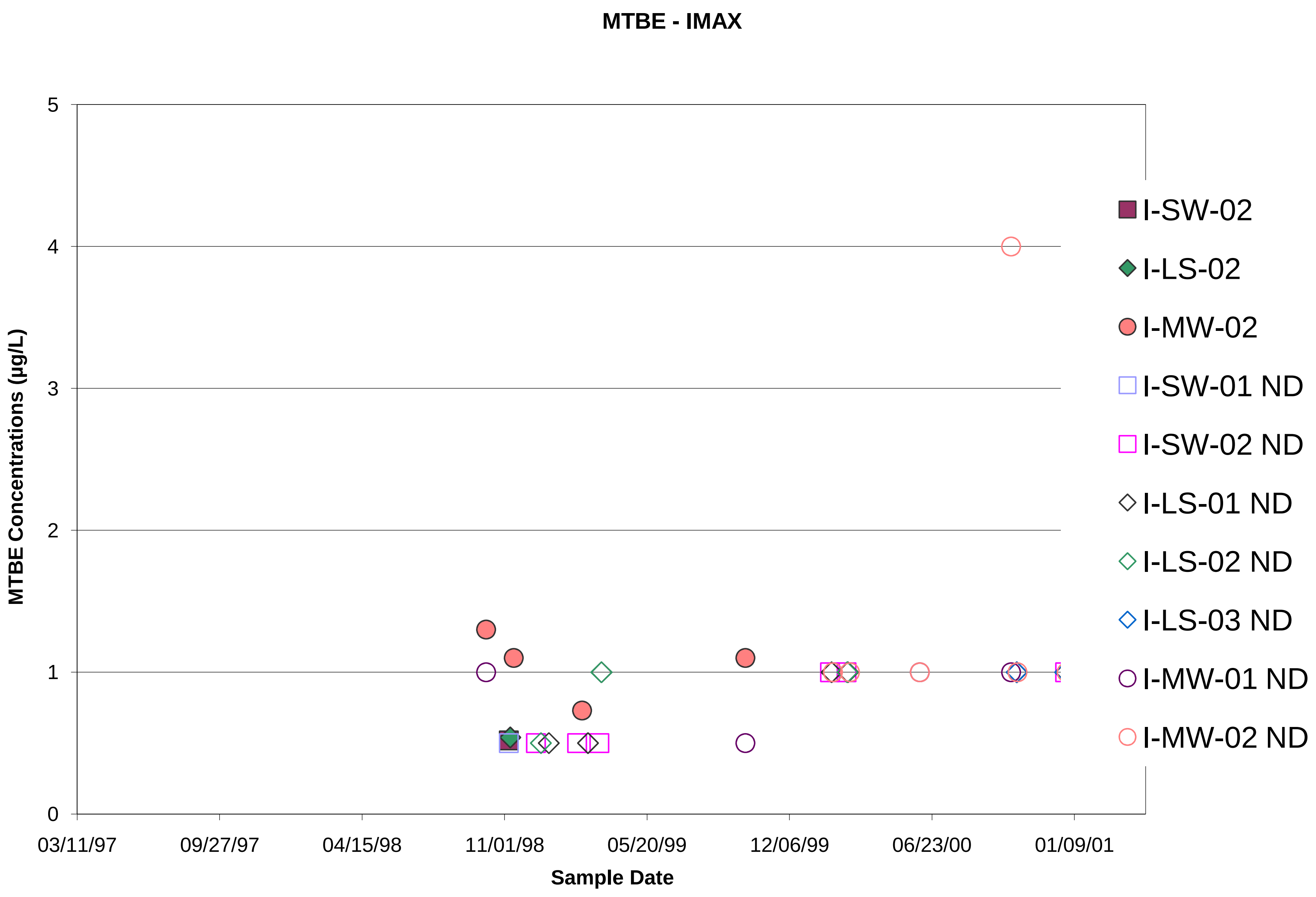

Dissolved Zinc - IMAX - Log Scale
Dissolved Zinc Concentrations (µg/L)
10000
1000
100
10
1
06/19/97
01/05/98
07/24/98
02/09/99
08/28/99
03/15/00
10/01/00
04/19/01
11/05/01
Sample Date
I-SW-01
I-SW-02
I-LS-01
I-LS-02
I-LS-03
I-MW-01
I-MW-02
I-MW-01 ND
I-MW-02 ND
I-MW-02

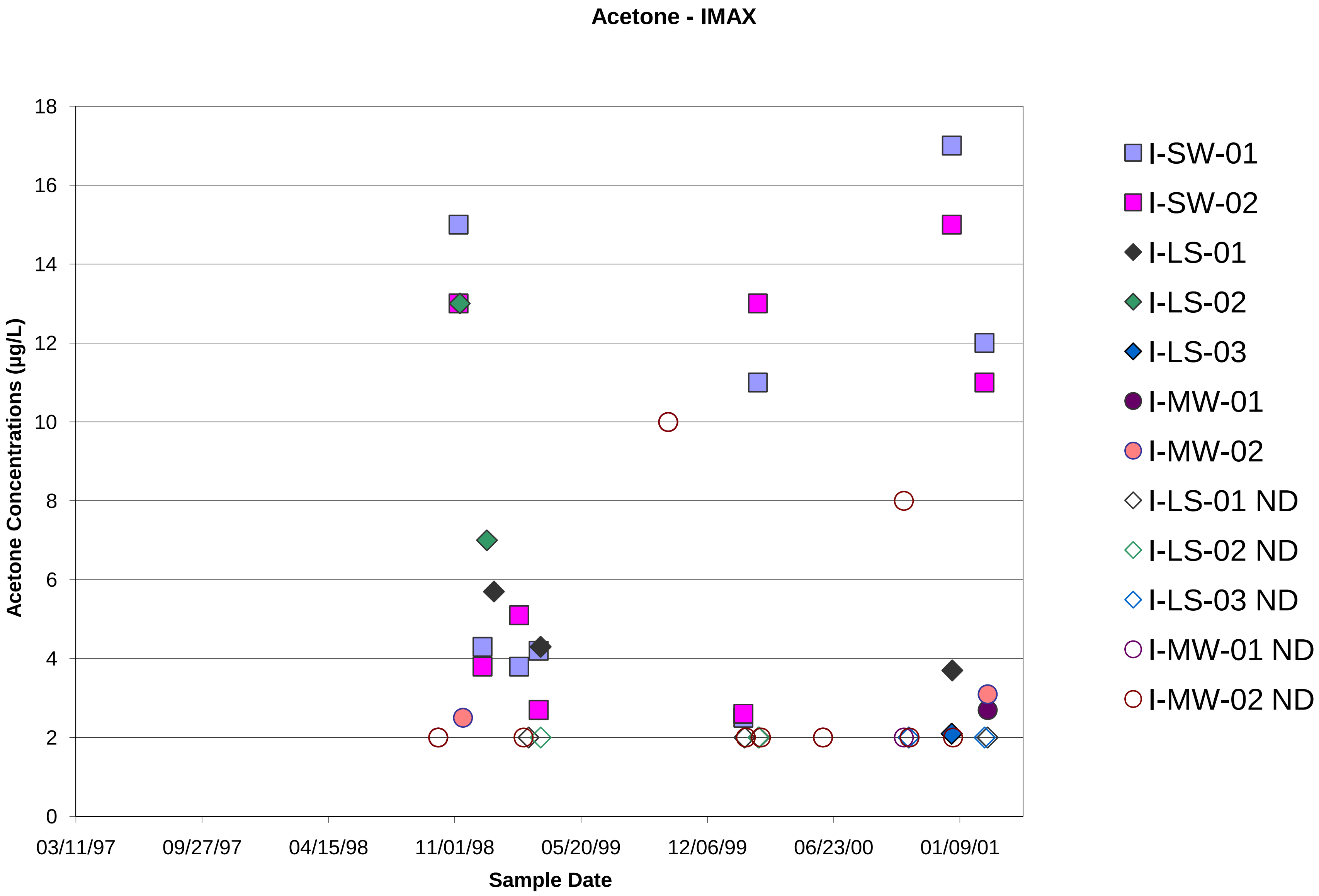

Total Zinc - IMAX
8000
7000
6000
5000
4000
3000
2000
1000
0
Total Zinc Concentrations (µg/L)
06/19/97
01/05/98
07/24/98
02/09/99
08/28/99
03/15/00
10/01/00
04/19/01
11/05/01
Sample Date
I-SW-01
I-SW-02
I-LS-01
I-LS-02
I-LS-03
I-MW-01
I-MW-02
I-MW-01 ND
I-MW-02 ND
I-MW-02

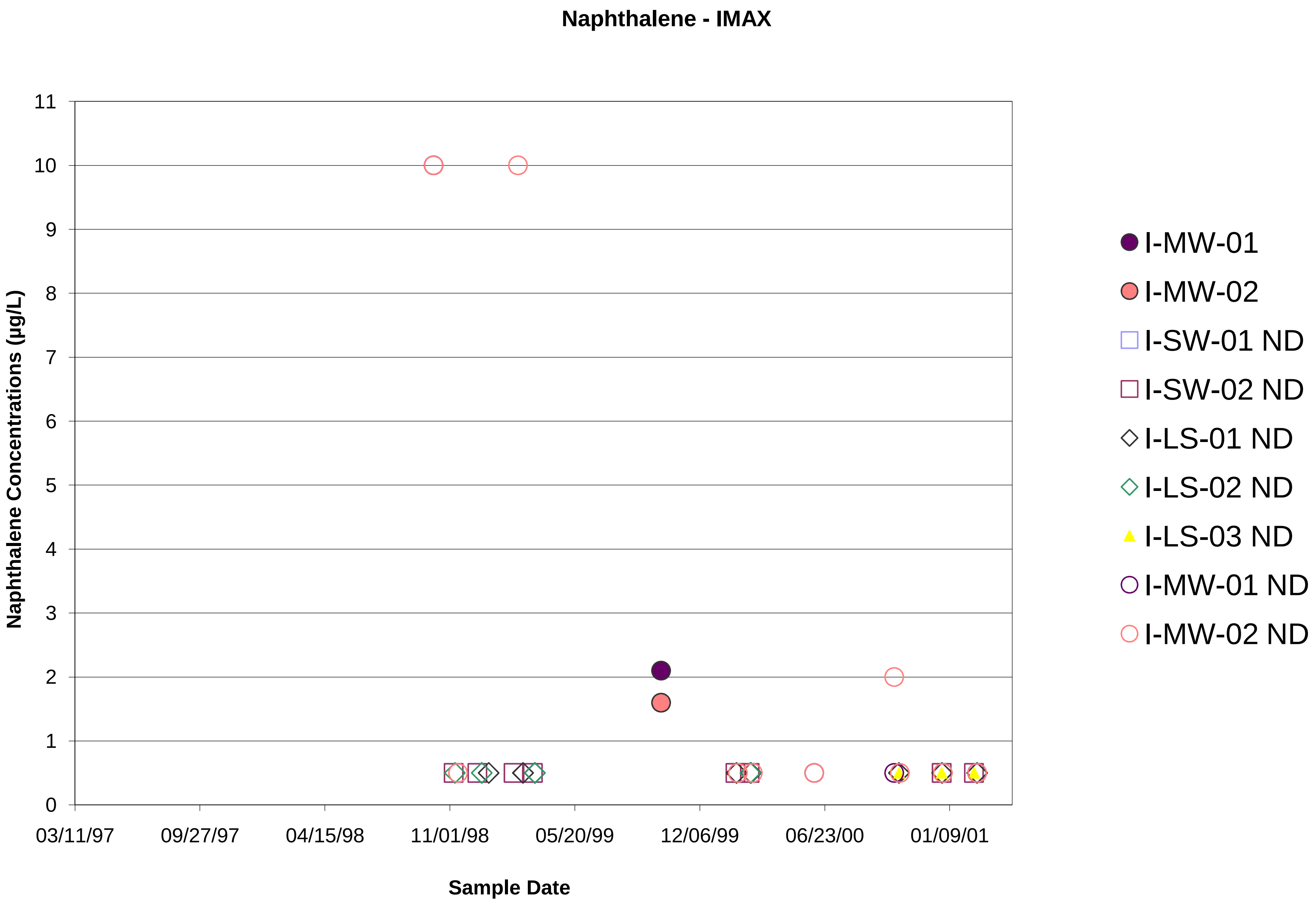

Total Zinc - IMAX
Total Zinc Concentrations (µg/L)
10000
1000
100
10
1
06/19/97
01/05/98
07/24/98
02/09/99
08/28/99
03/15/00
10/01/00
04/19/01
11/05/01
Sample Date
I-SW-01
I-SW-02
I-LS-01
I-LS-02
I-LS-03
I-MW-01
I-MW-02
I-MW-01 ND
I-MW-02 ND
I-MW-02

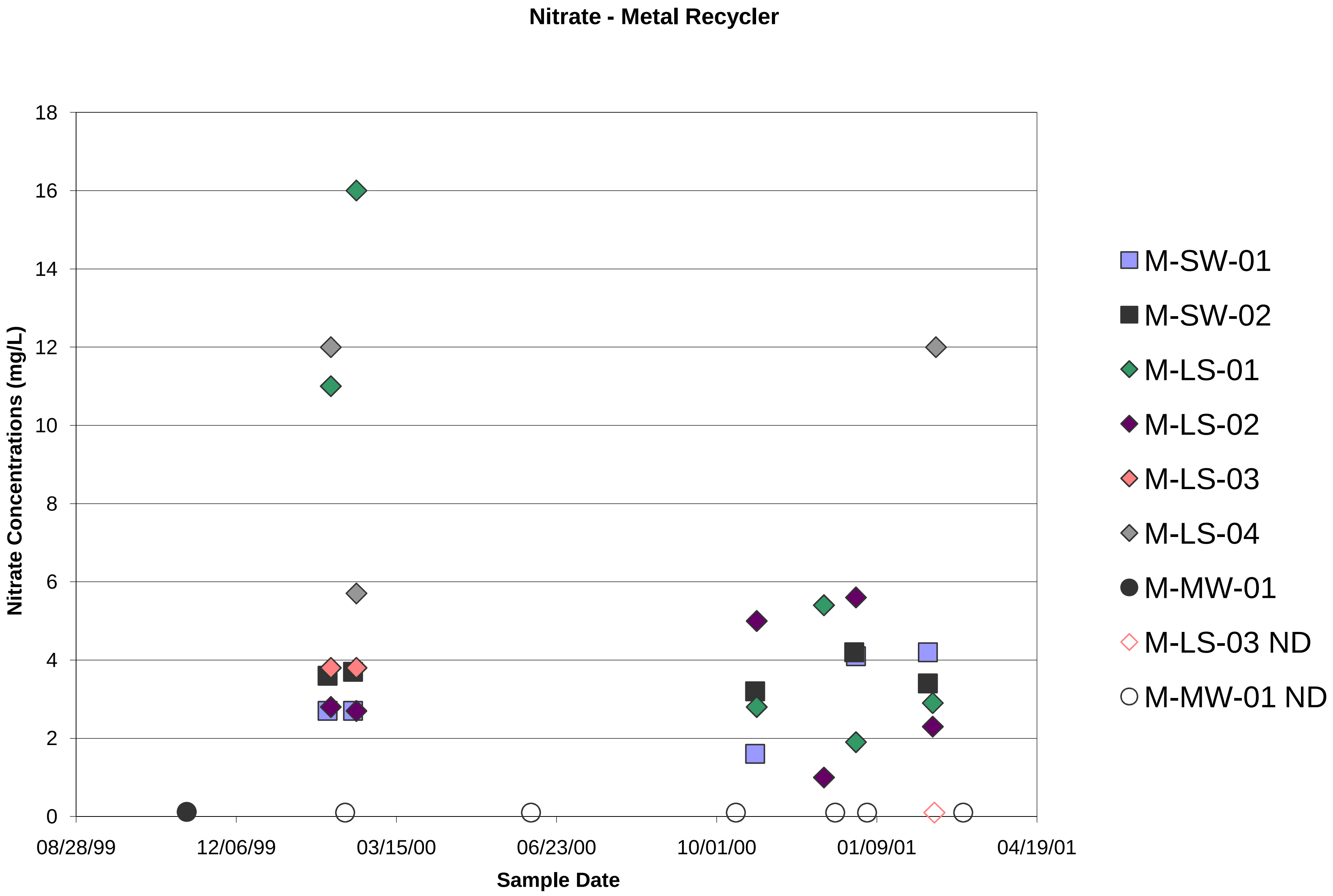
# Perchlorate - IMAX



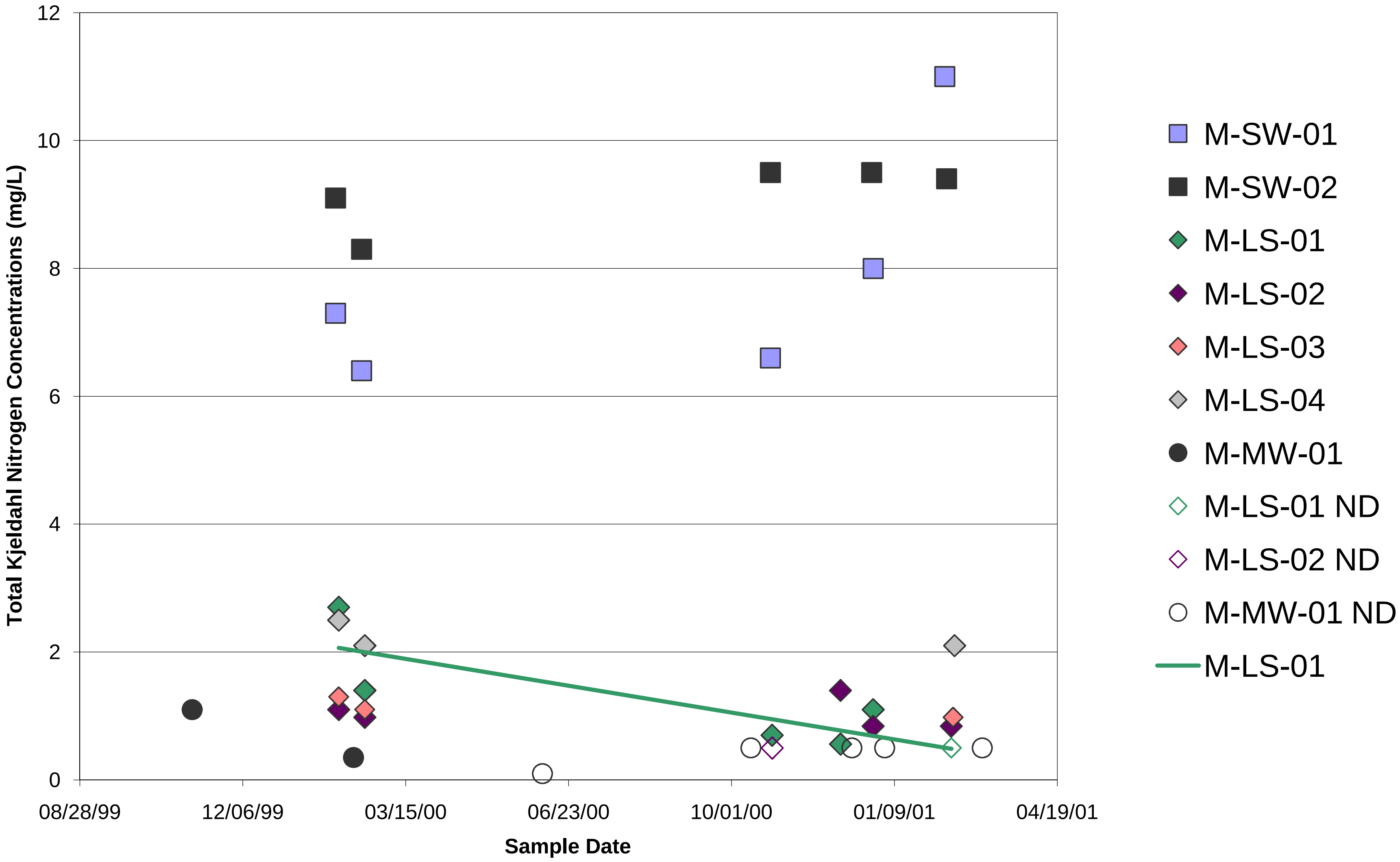

MTBE - IMAX
MTBE Concentrations (µg/L)
5
4
3
2
1
0
03/11/97
09/27/97
04/15/98
11/01/98
05/20/99
12/06/99
06/23/00
01/09/01
Sample Date
I-SW-02
I-LS-02
I-MW-02
I-SW-01 ND
I-SW-02 ND
I-LS-01 ND
I-LS-02 ND
I-LS-03 ND
I-MW-01 ND
I-MW-02 ND

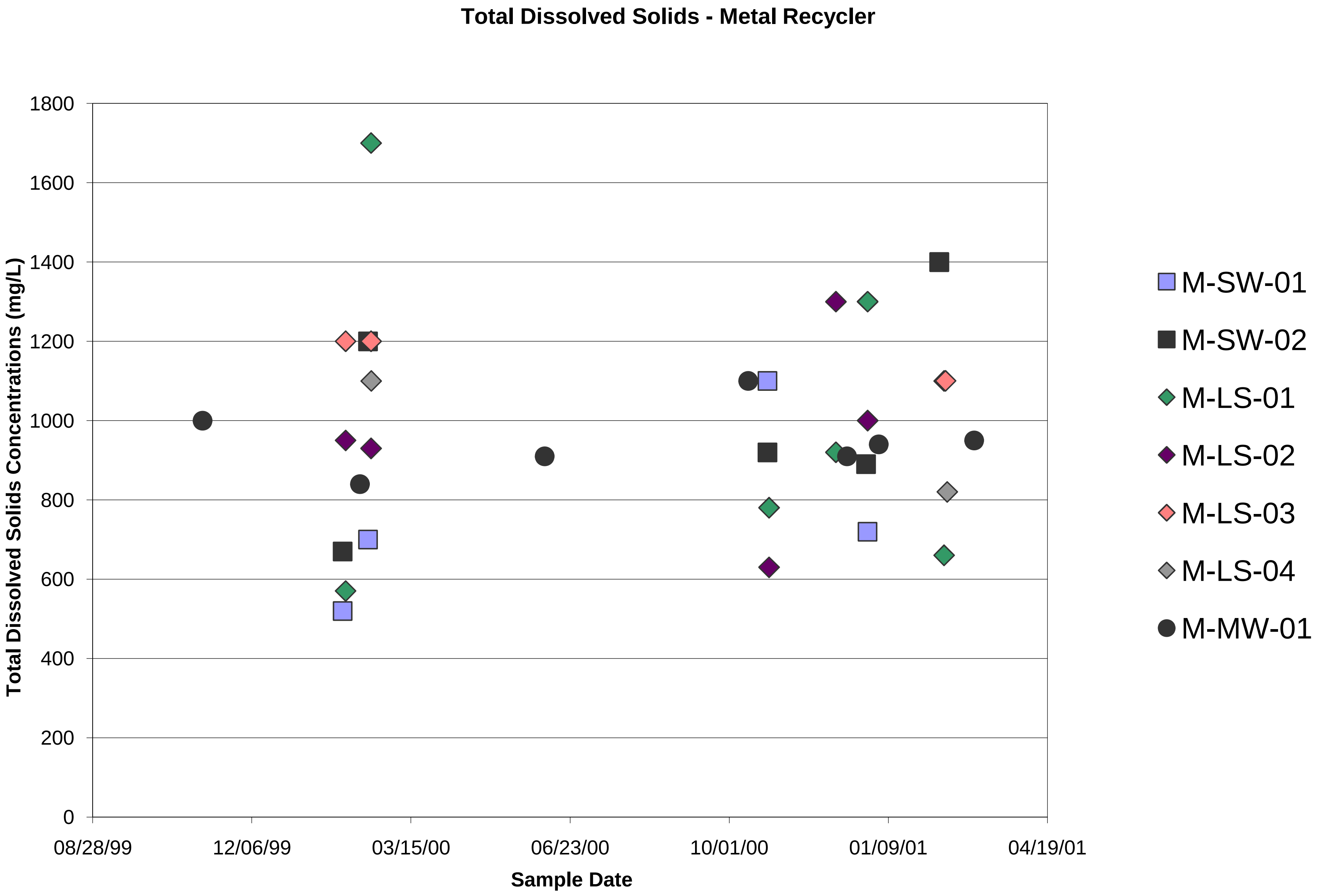

Acetone - IMAX
Acetone Concentrations (µg/L)
0
2
4
6
8
10
12
14
16
18
03/11/97
09/27/97
04/15/98
11/01/98
05/20/99
12/06/99
06/23/00
01/09/01
Sample Date
I-SW-01
I-SW-02
I-LS-01
I-LS-02
I-LS-03
I-MW-01
I-MW-02
I-LS-01 ND
I-LS-02 ND
I-LS-03 ND
I-MW-01 ND
I-MW-02 ND


Naphthalene - IMAX
Naphthalene Concentrations (µg/L)
11
10
9
8
7
6
5
4
3
2
1
0
03/11/97
09/27/97
04/15/98
11/01/98
05/20/99
12/06/99
06/23/00
01/09/01
Sample Date
I-MW-01
I-MW-02
I-SW-01 ND
I-SW-02 ND
I-LS-01 ND
I-LS-02 ND
I-LS-03 ND
I-MW-01 ND
I-MW-02 ND

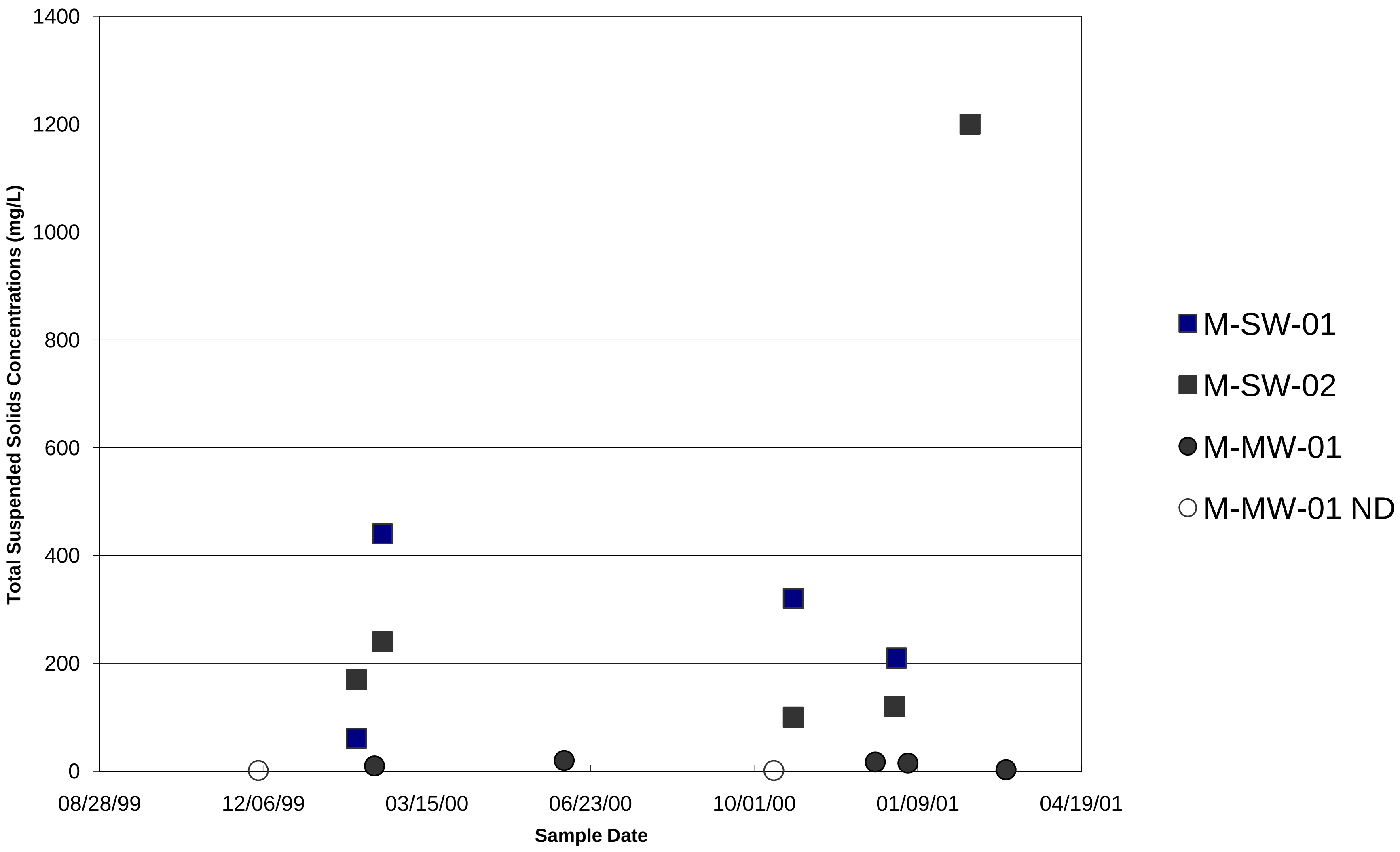

Nitrate - Metal Recycler
Nitrate Concentrations (mg/L)
18
16
14
12
10
8
6
4
2
0
08/28/99
12/06/99
03/15/00
06/23/00
10/01/00
01/09/01
04/19/01
Sample Date
M-SW-01
M-SW-02
M-LS-01
M-LS-02
M-LS-03
M-LS-04
M-MW-01
M-LS-03 ND
M-MW-01 ND

## Total Kjeldahl Nitrogen - Metal Recycler

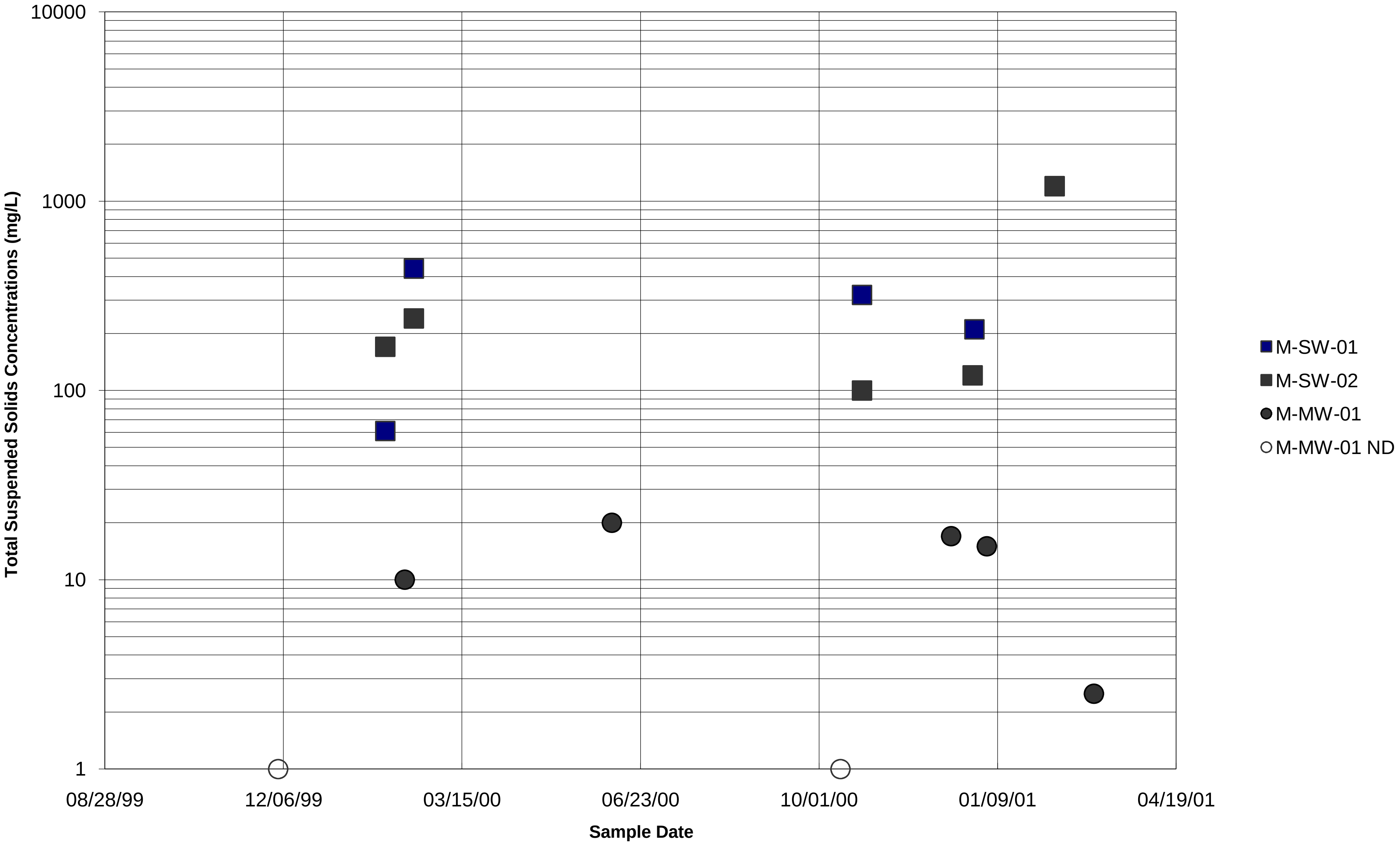


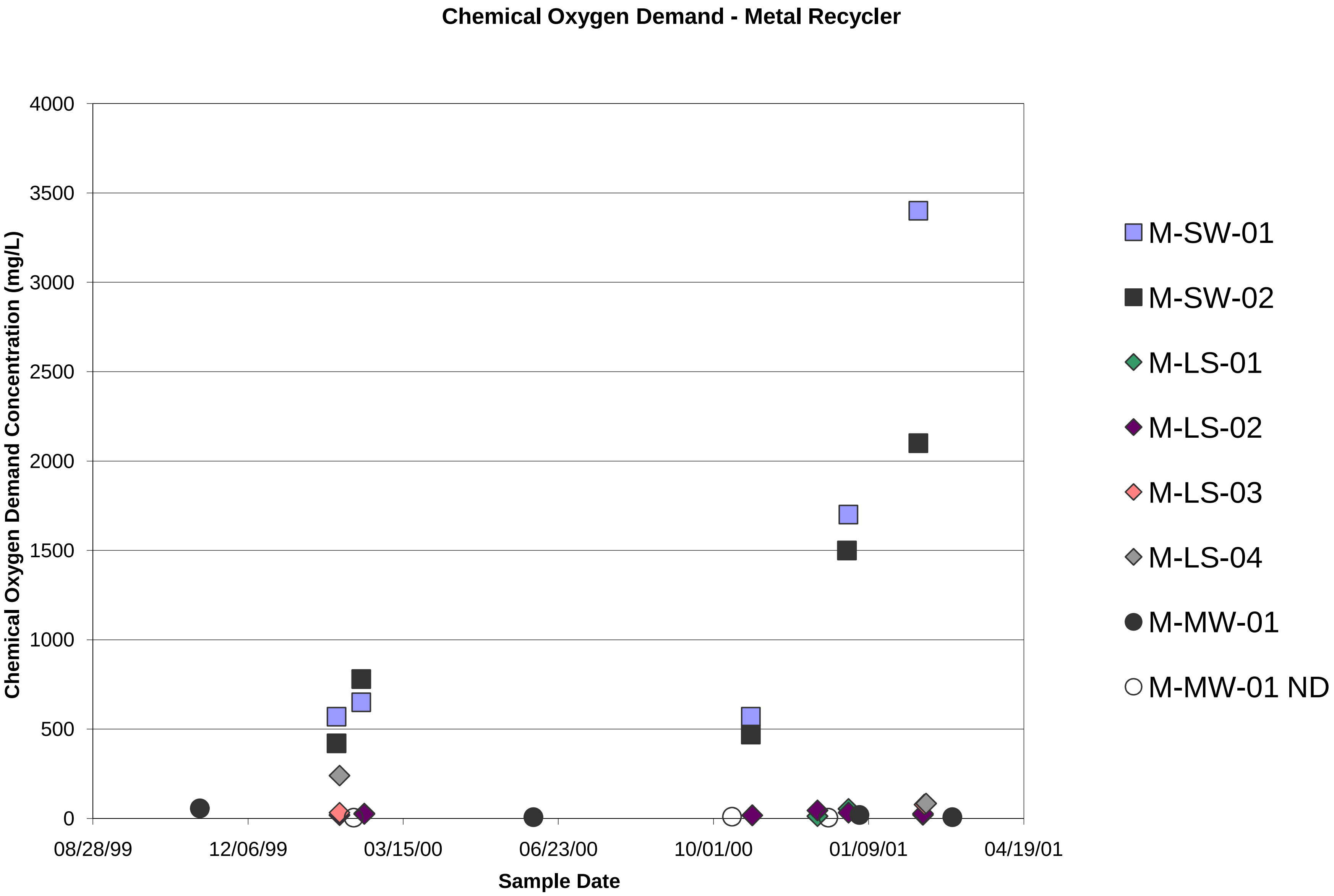

Total Dissolved Solids - Metal Recycler
Total Dissolved Solids Concentrations (mg/L)
1800
1600
1400
1200
1000
800
600
400
200
0
08/28/99
12/06/99
03/15/00
06/23/00
10/01/00
01/09/01
04/19/01
Sample Date
M-SW-01
M-SW-02
M-LS-01
M-LS-02
M-LS-03
M-LS-04
M-MW-01

# Total Suspended Solids - Metal Recycler

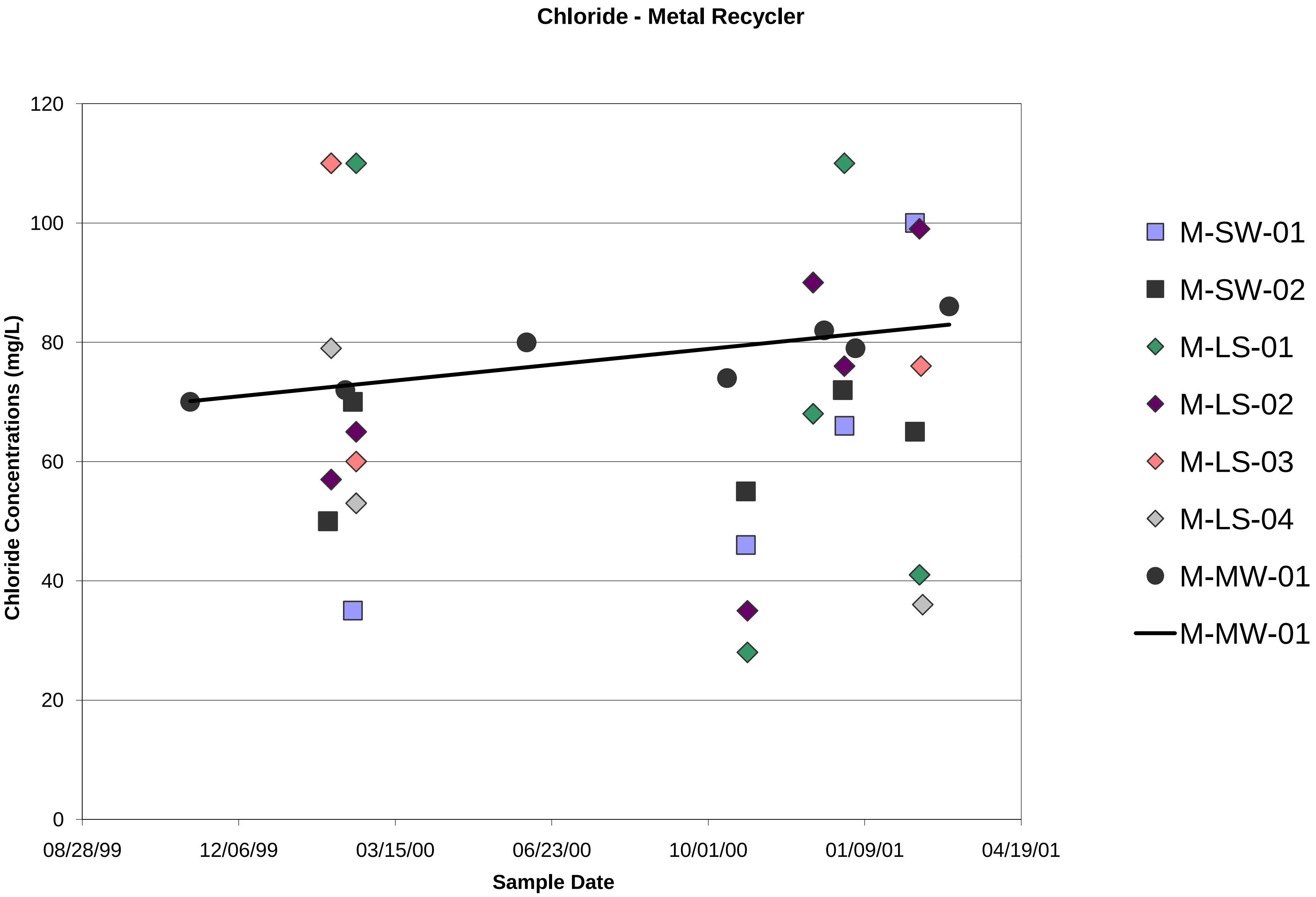


**Total Suspended Solids - Metal Recycler - Log Scale**

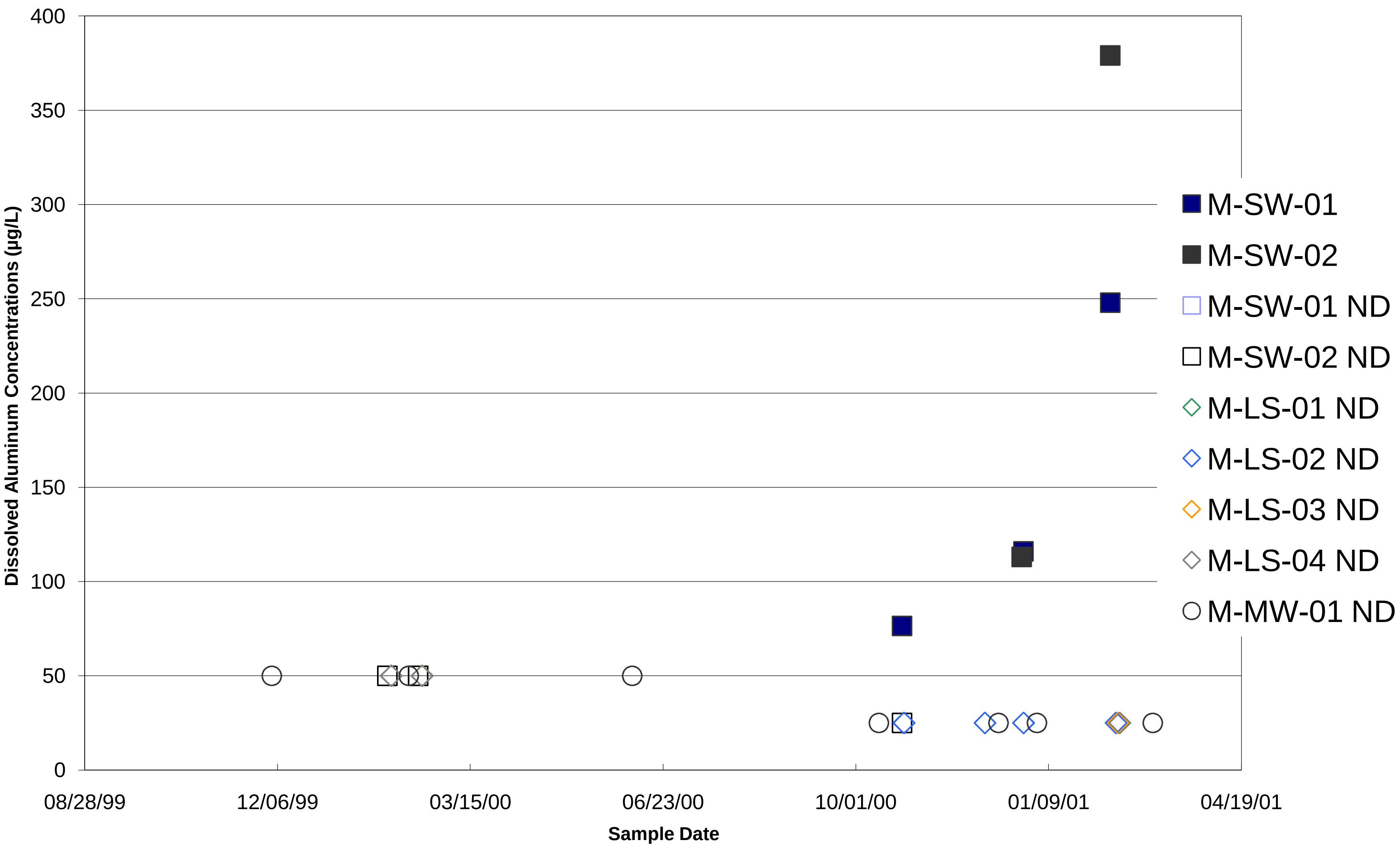




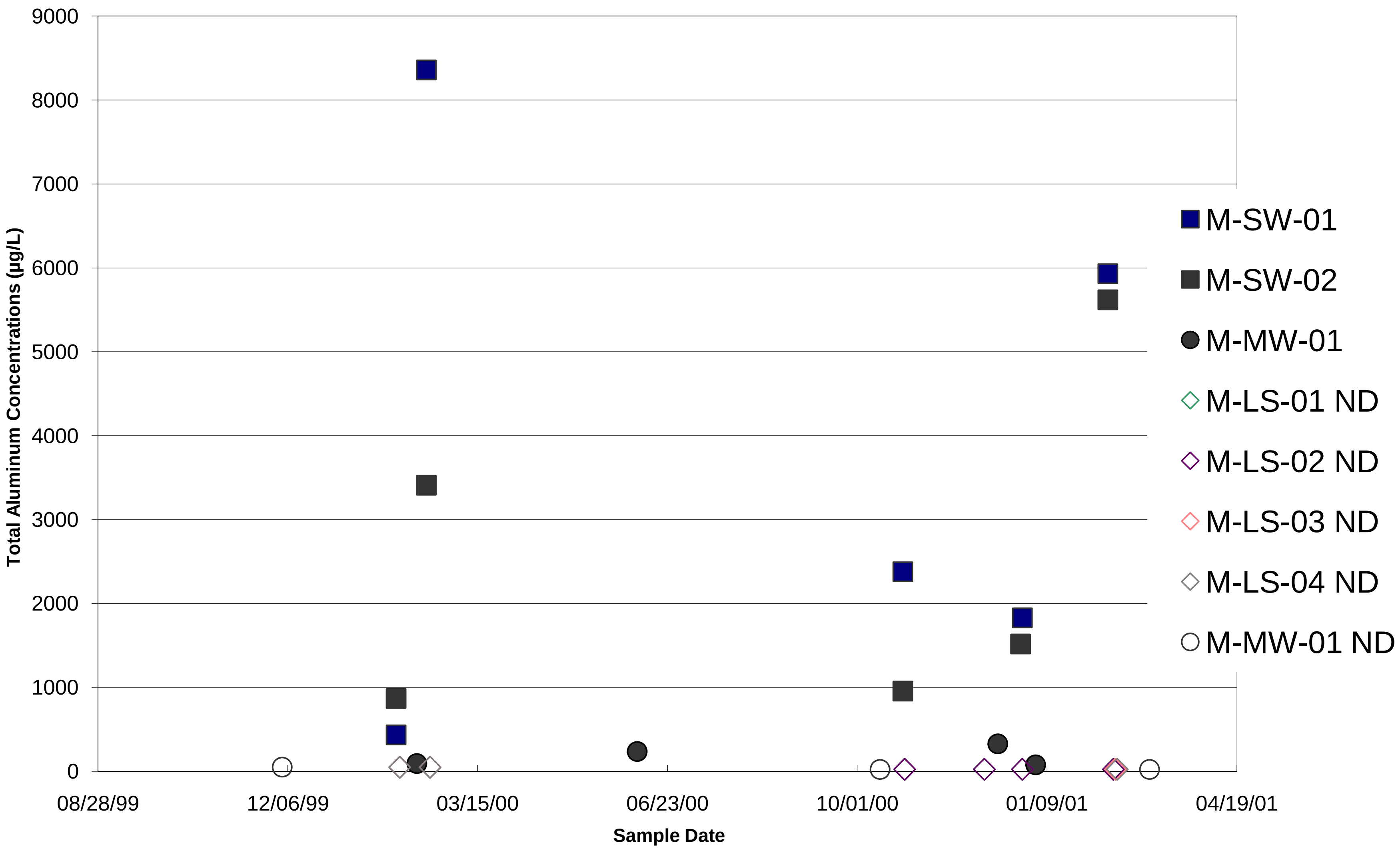
Chemical Oxygen Demand - Metal Recycler
Chemical Oxygen Demand Concentration (mg/L)
4000
3500
3000
2500
2000
1500
1000
500
0
08/28/99
12/06/99
03/15/00
06/23/00
10/01/00
01/09/01
04/19/01
Sample Date
M-SW-01
M-SW-02
M-LS-01
M-LS-02
M-LS-03
M-LS-04
M-MW-01
M-MW-01 ND

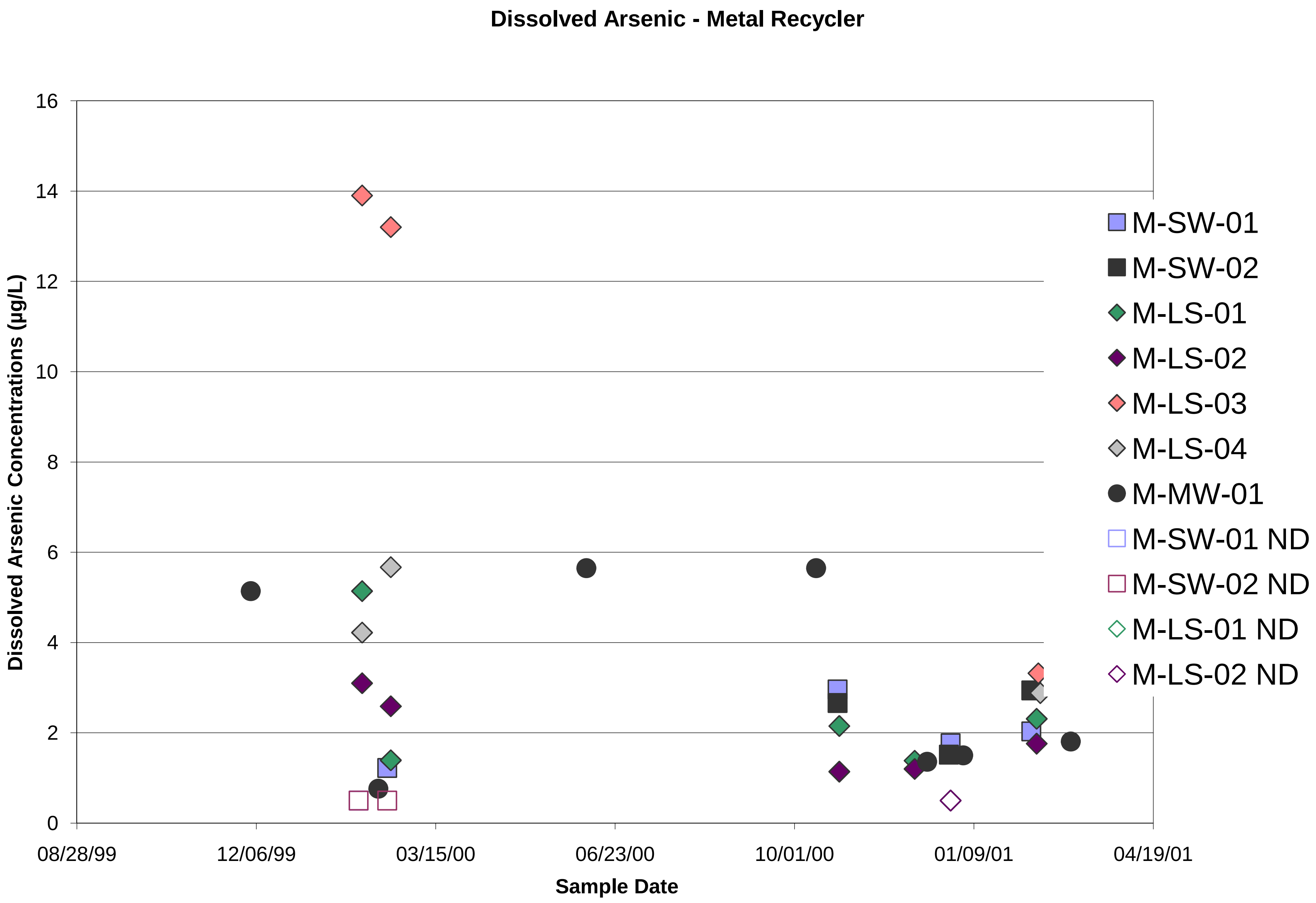

Chloride - Metal Recycler
Chloride Concentrations (mg/L)
120
100
80
60
40
20
0
08/28/99
12/06/99
03/15/00
06/23/00
10/01/00
01/09/01
04/19/01
Sample Date
M-SW-01
M-SW-02
M-LS-01
M-LS-02
M-LS-03
M-LS-04
M-MW-01
M-MW-01

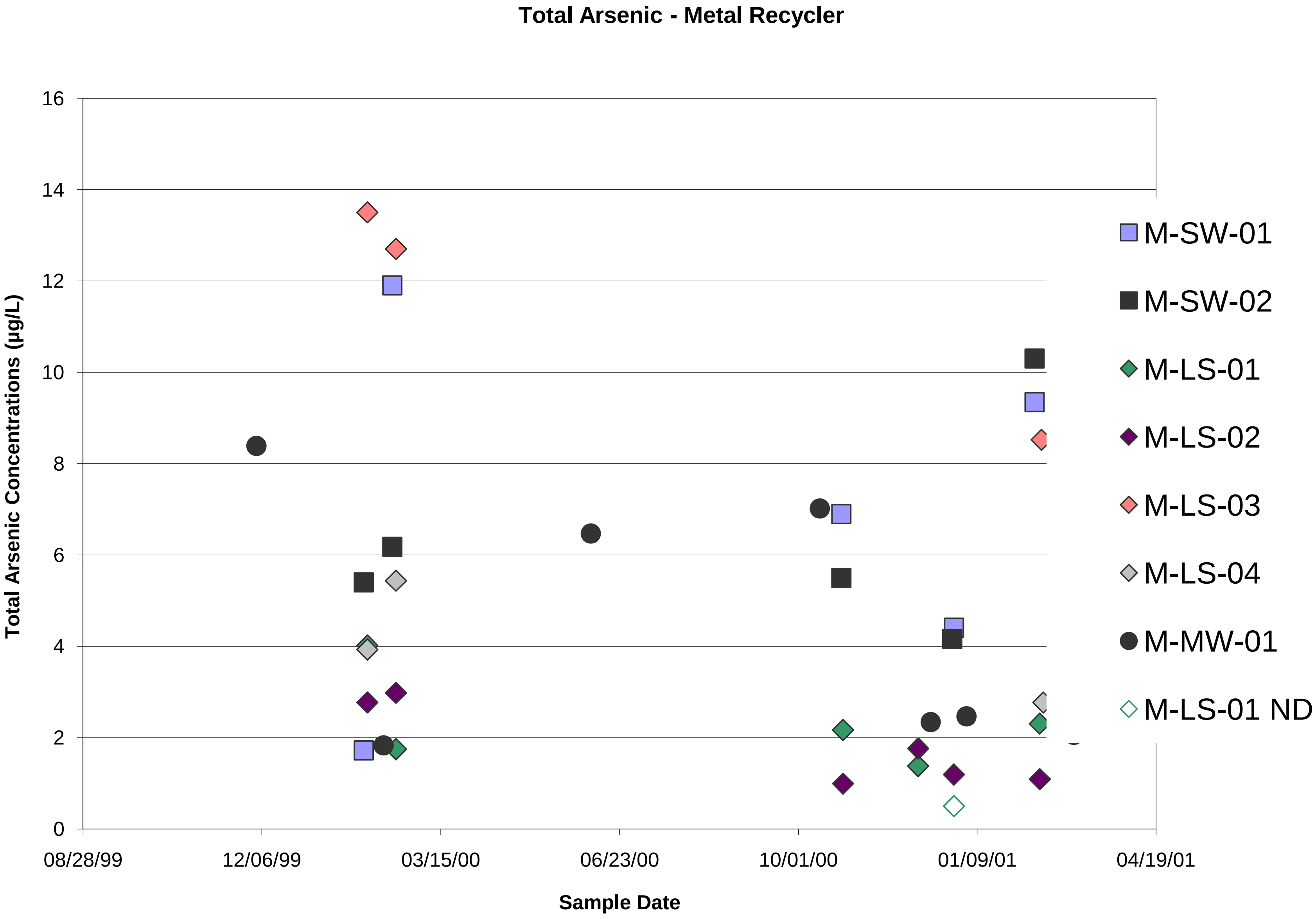
## Dissolved Aluminum - Metal Recycler

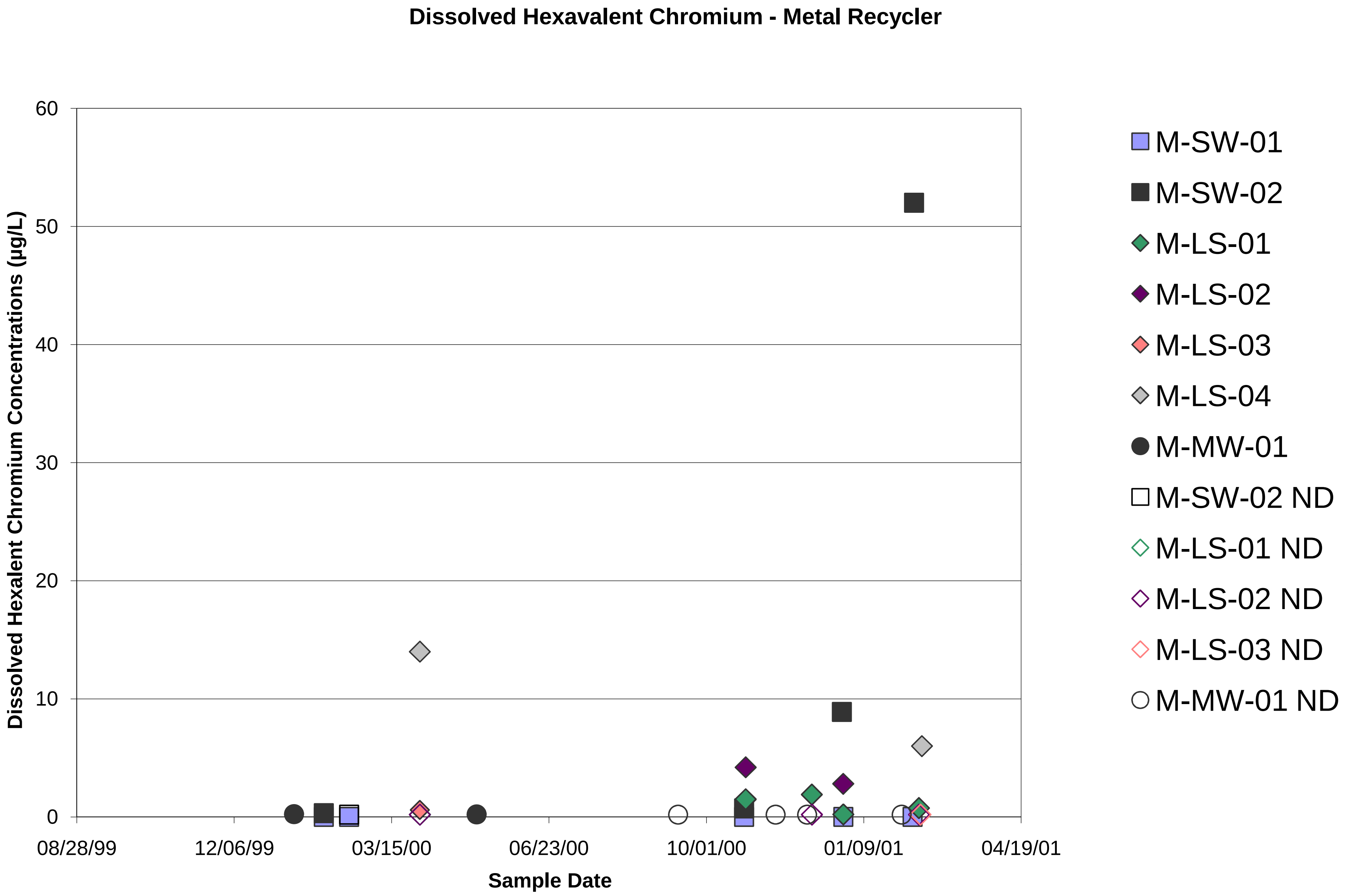


# Total Aluminum - Metal Recycler

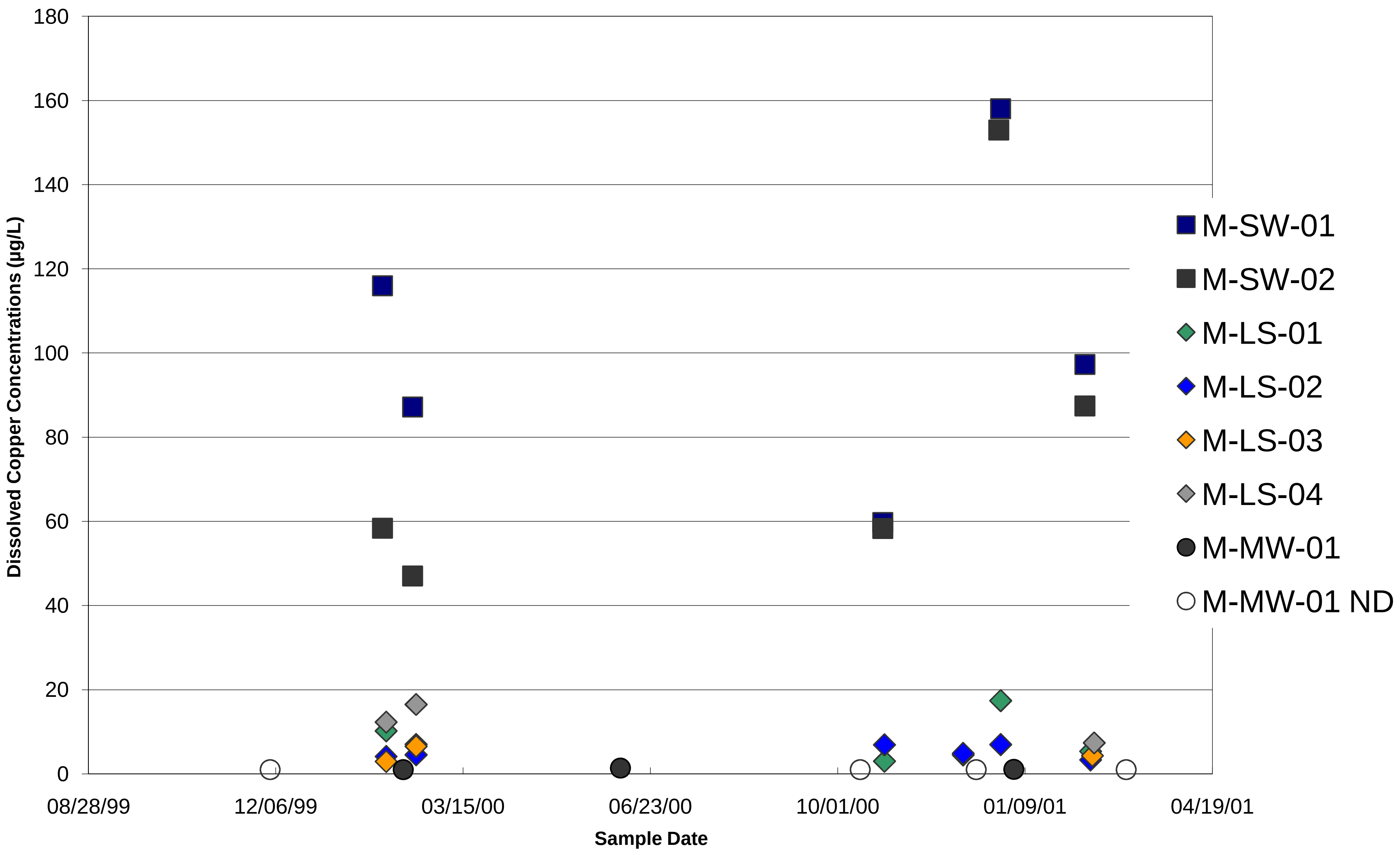



Dissolved Arsenic - Metal Recycler
Dissolved Arsenic Concentrations (µg/L)
16
14
12
10
8
6
4
2
0
08/28/99
12/06/99
03/15/00
06/23/00
10/01/00
01/09/01
04/19/01
Sample Date
M-SW-01
M-SW-02
M-LS-01
M-LS-02
M-LS-03
M-LS-04
M-MW-01
M-SW-01 ND
M-SW-02 ND
M-LS-01 ND
M-LS-02 ND

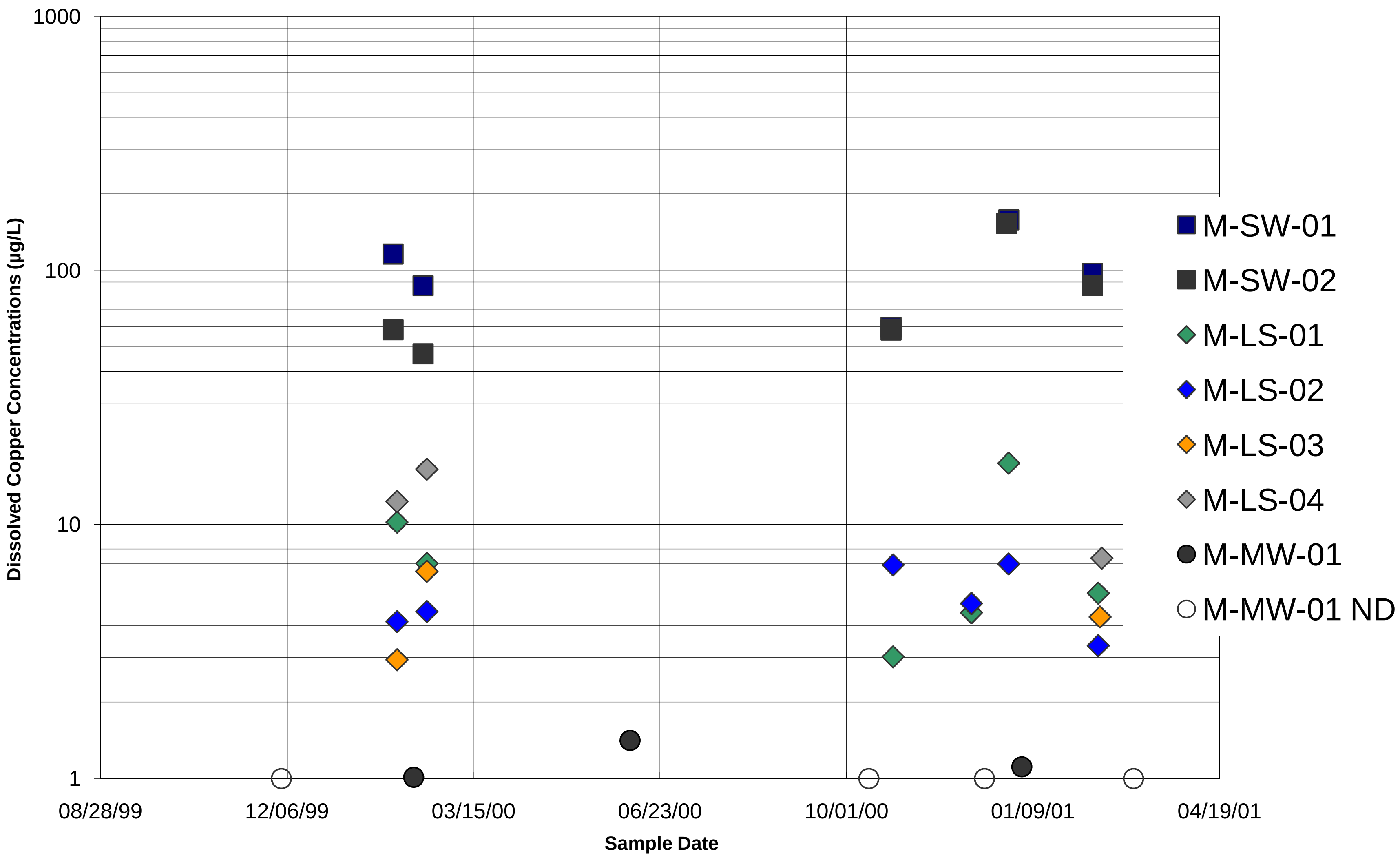

Total Arsenic - Metal Recycler
Total Arsenic Concentrations (µg/L)
16
14
12
10
8
6
4
2
0
08/28/99
12/06/99
03/15/00
06/23/00
10/01/00
01/09/01
04/19/01
Sample Date
M-SW-01
M-SW-02
M-LS-01
M-LS-02
M-LS-03
M-LS-04
M-MW-01
M-LS-01 ND

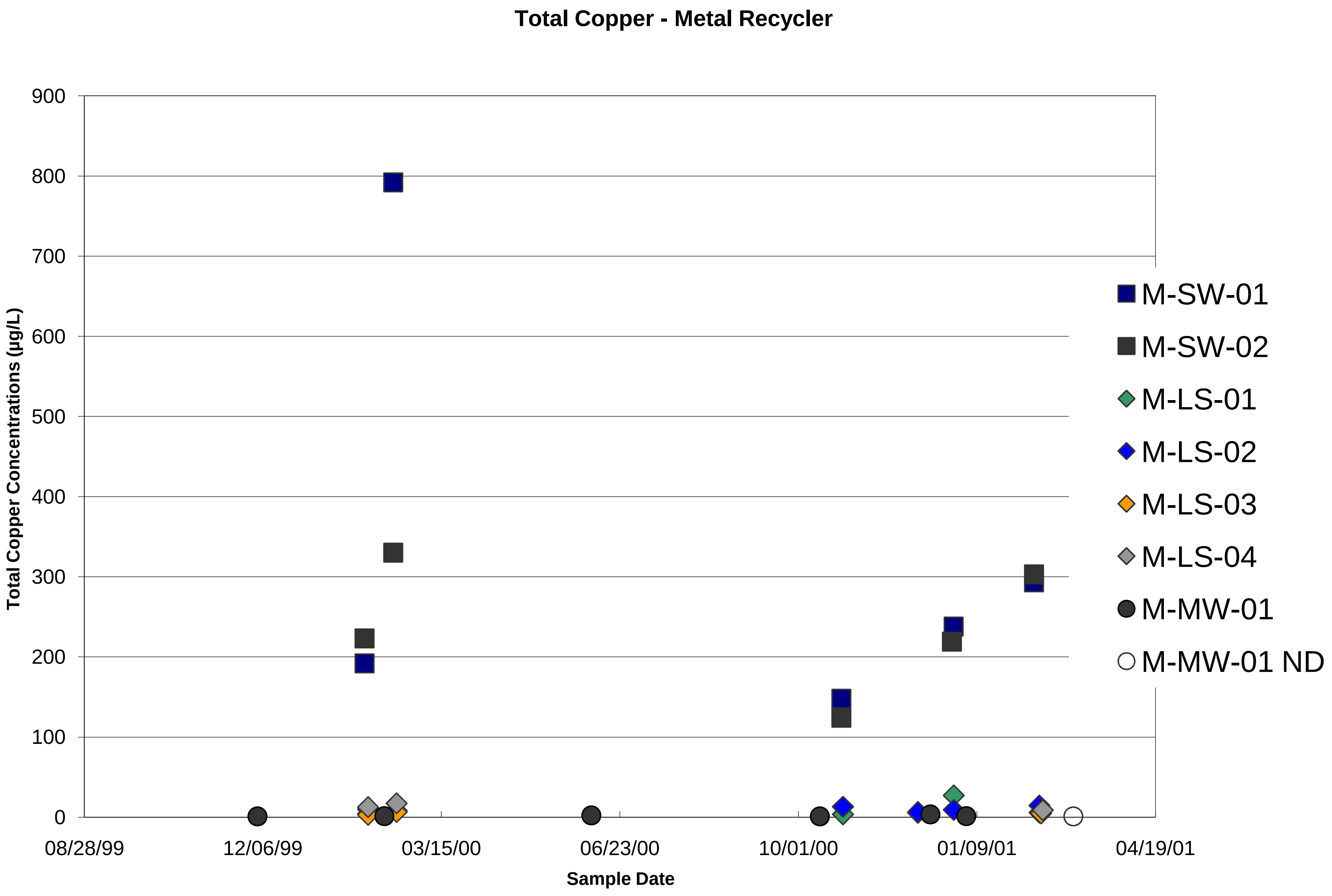

Dissolved Hexavalent Chromium - Metal Recycler
Dissolved Hexalent Chromium Concentrations (µg/L)
60
50
40
30
20
10
0
08/28/99
12/06/99
03/15/00
06/23/00
10/01/00
01/09/01
04/19/01
Sample Date
M-SW-01
M-SW-02
M-LS-01
M-LS-02
M-LS-03
M-LS-04
M-MW-01
M-SW-02 ND
M-LS-01 ND
M-LS-02 ND
M-LS-03 ND
M-MW-01 ND

## Dissolved Copper - Metal Recycler

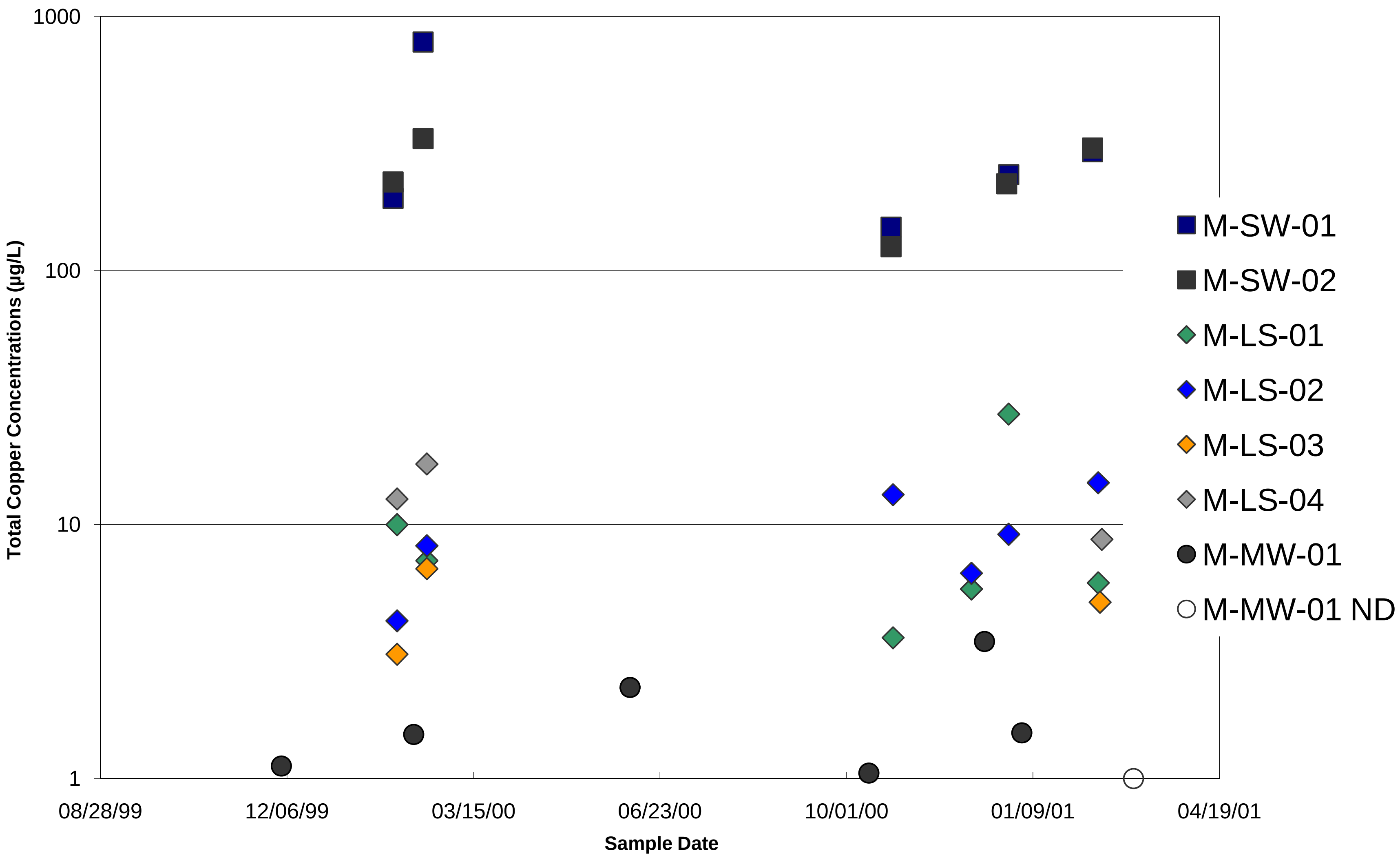


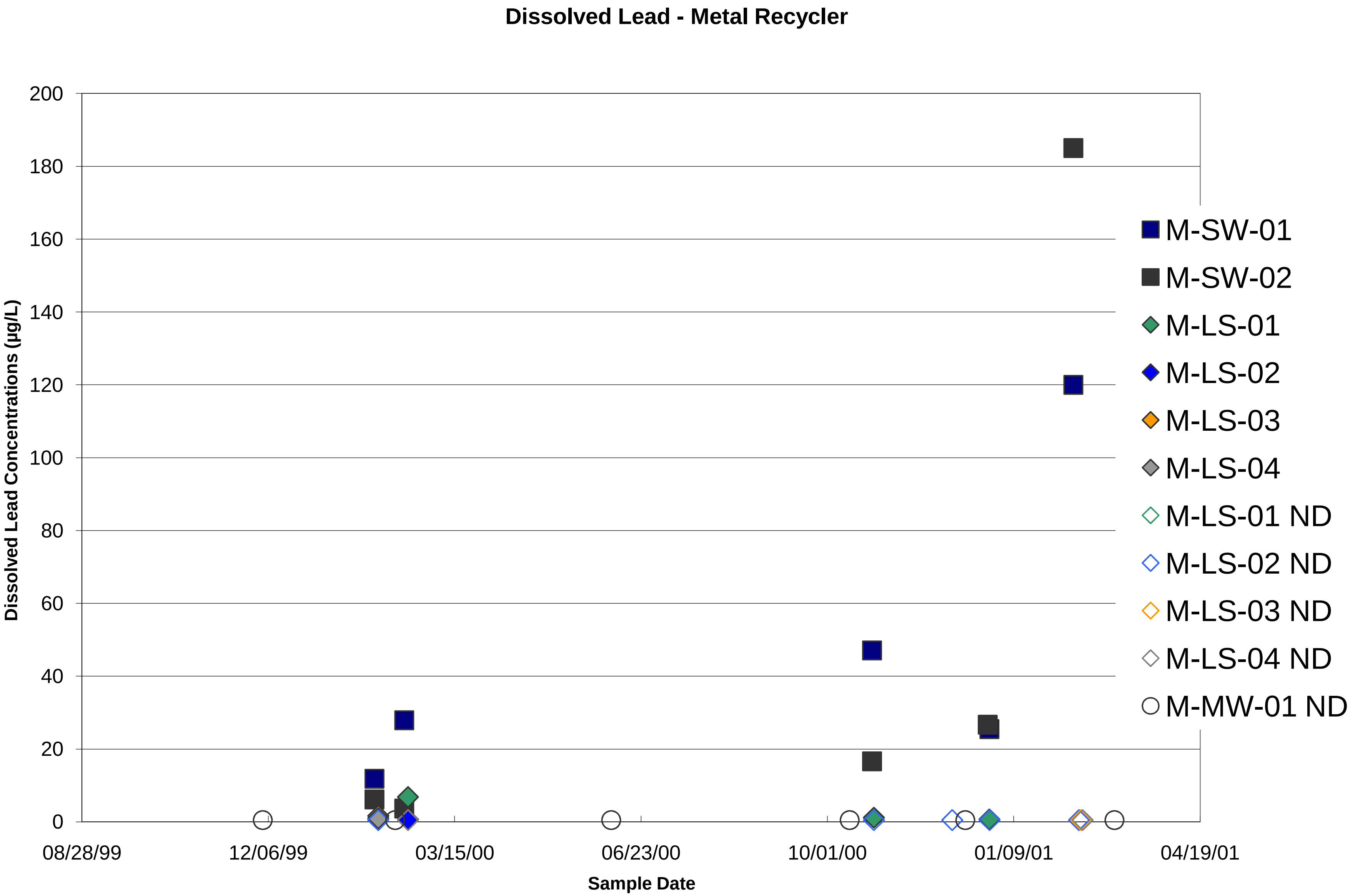
## Dissolved Copper - Metal Recycler



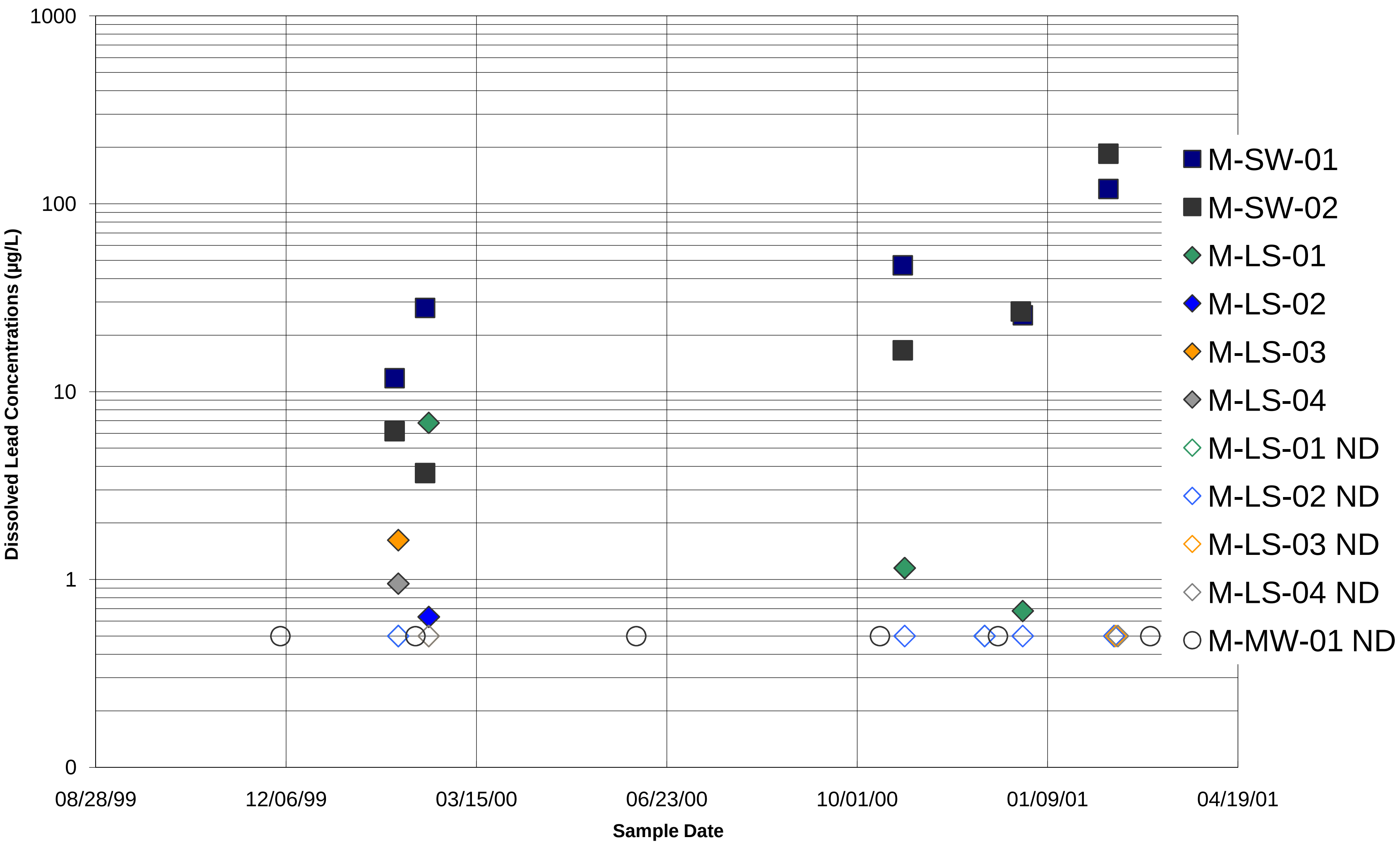

Total Copper - Metal Recycler
Total Copper Concentrations (µg/L)
900
800
700
600
500
400
300
200
100
0
08/28/99
12/06/99
03/15/00
06/23/00
10/01/00
01/09/01
04/19/01
Sample Date
M-SW-01
M-SW-02
M-LS-01
M-LS-02
M-LS-03
M-LS-04
M-MW-01
M-MW-01 ND

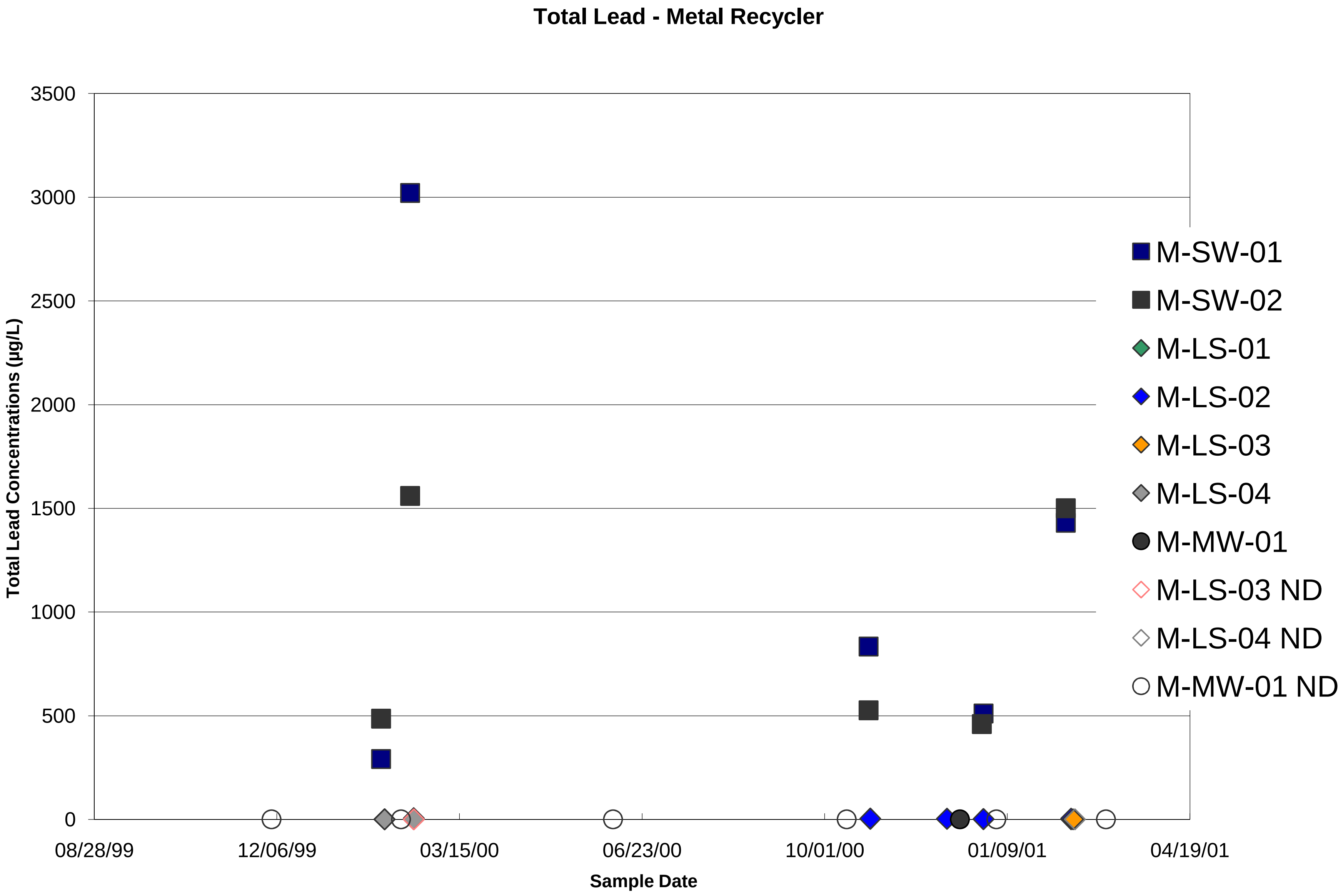
## Total Copper - Metal Recycler - Log Scale



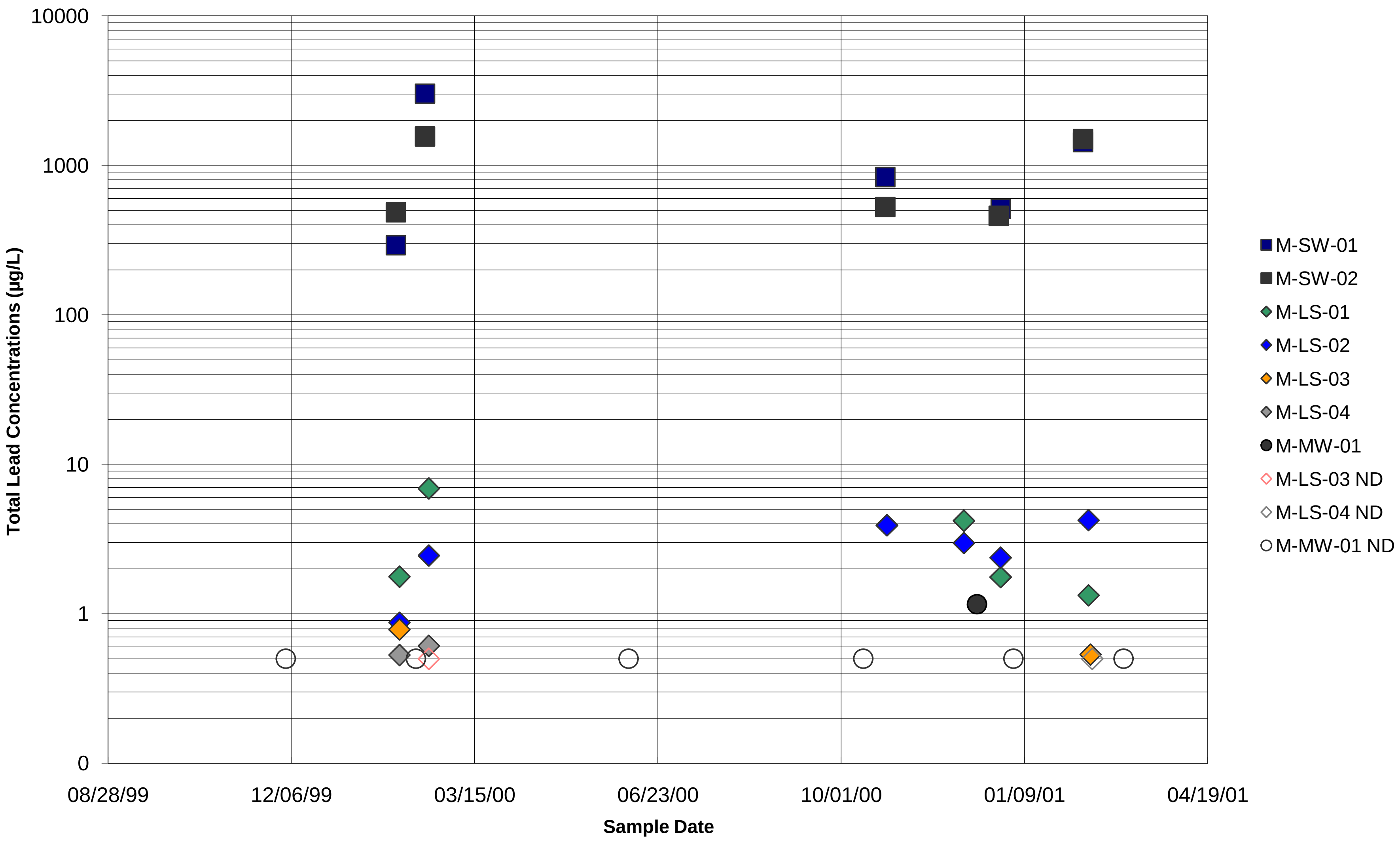

Dissolved Lead - Metal Recycler
Dissolved Lead Concentrations (µg/L)
200
180
160
140
120
100
80
60
40
20
0
08/28/99
12/06/99
03/15/00
06/23/00
10/01/00
01/09/01
04/19/01
Sample Date
M-SW-01
M-SW-02
M-LS-01
M-LS-02
M-LS-03
M-LS-04
M-LS-01 ND
M-LS-02 ND
M-LS-03 ND
M-LS-04 ND
M-MW-01 ND

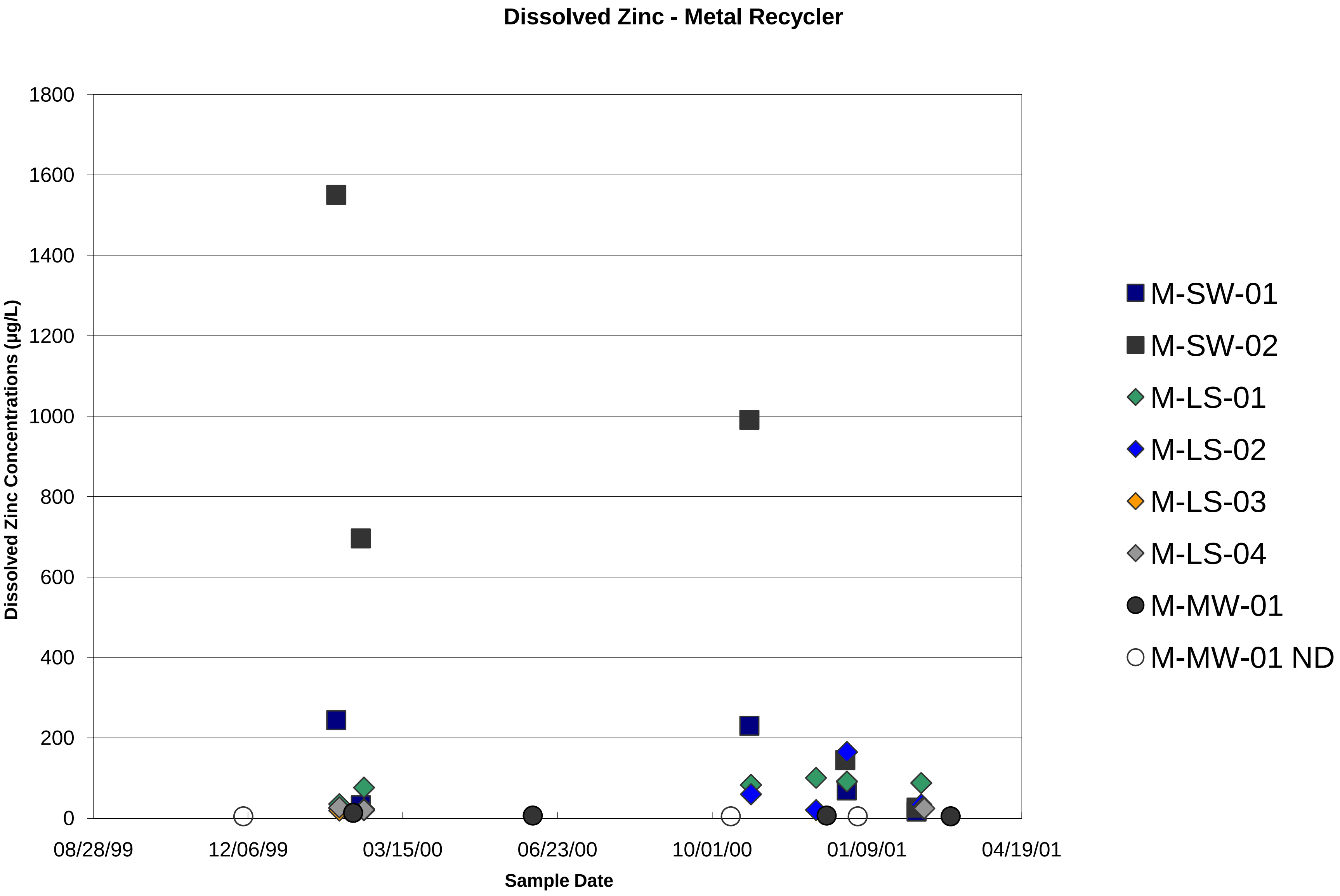
## Dissolved Lead - Metal Recycler - Log Scale



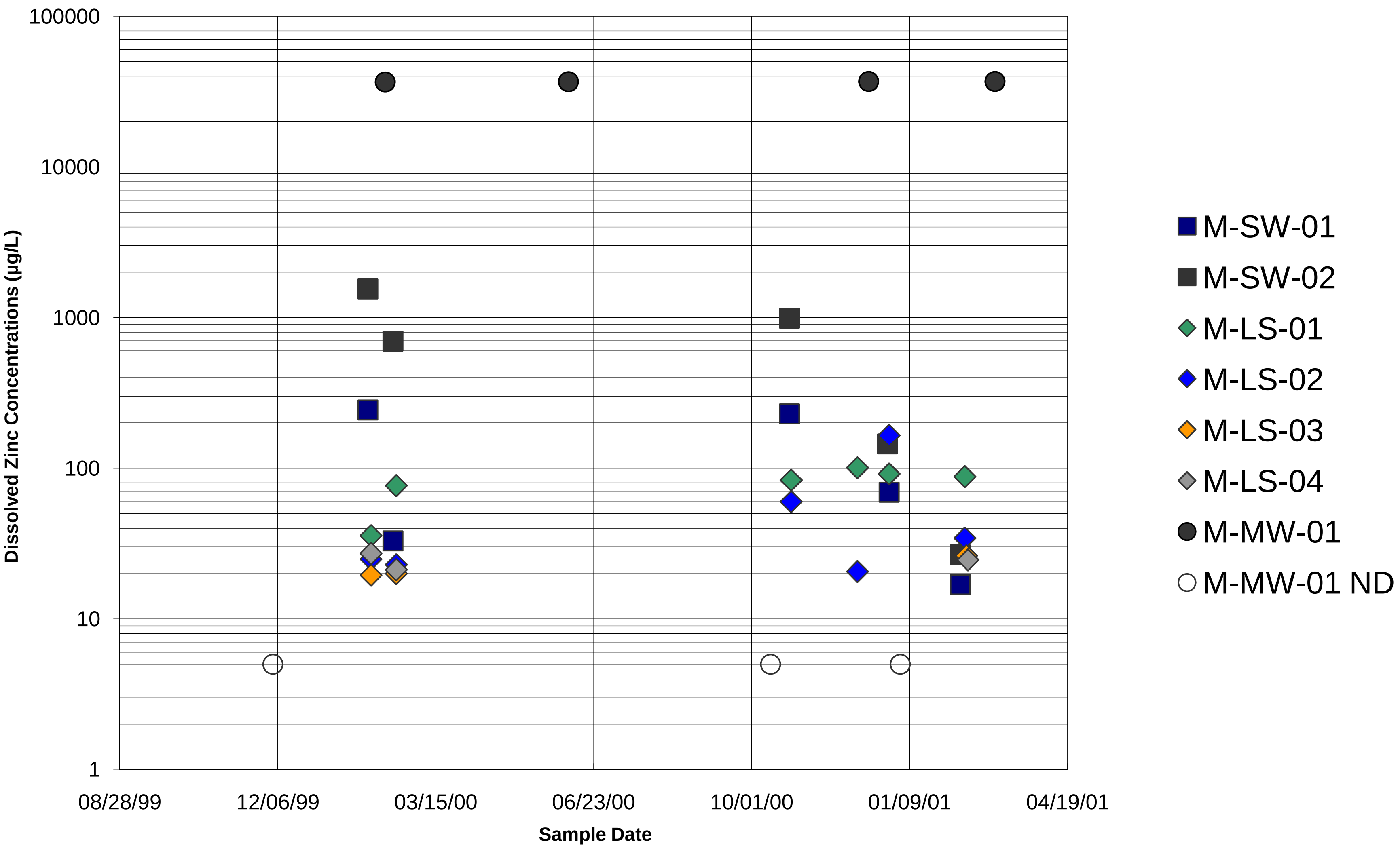

Total Lead - Metal Recycler
Total Lead Concentrations (µg/L)
3500
3000
2500
2000
1500
1000
500
0
08/28/99
12/06/99
03/15/00
06/23/00
10/01/00
01/09/01
04/19/01
Sample Date
M-SW-01
M-SW-02
M-LS-01
M-LS-02
M-LS-03
M-LS-04
M-MW-01
M-LS-03 ND
M-LS-04 ND
M-MW-01 ND

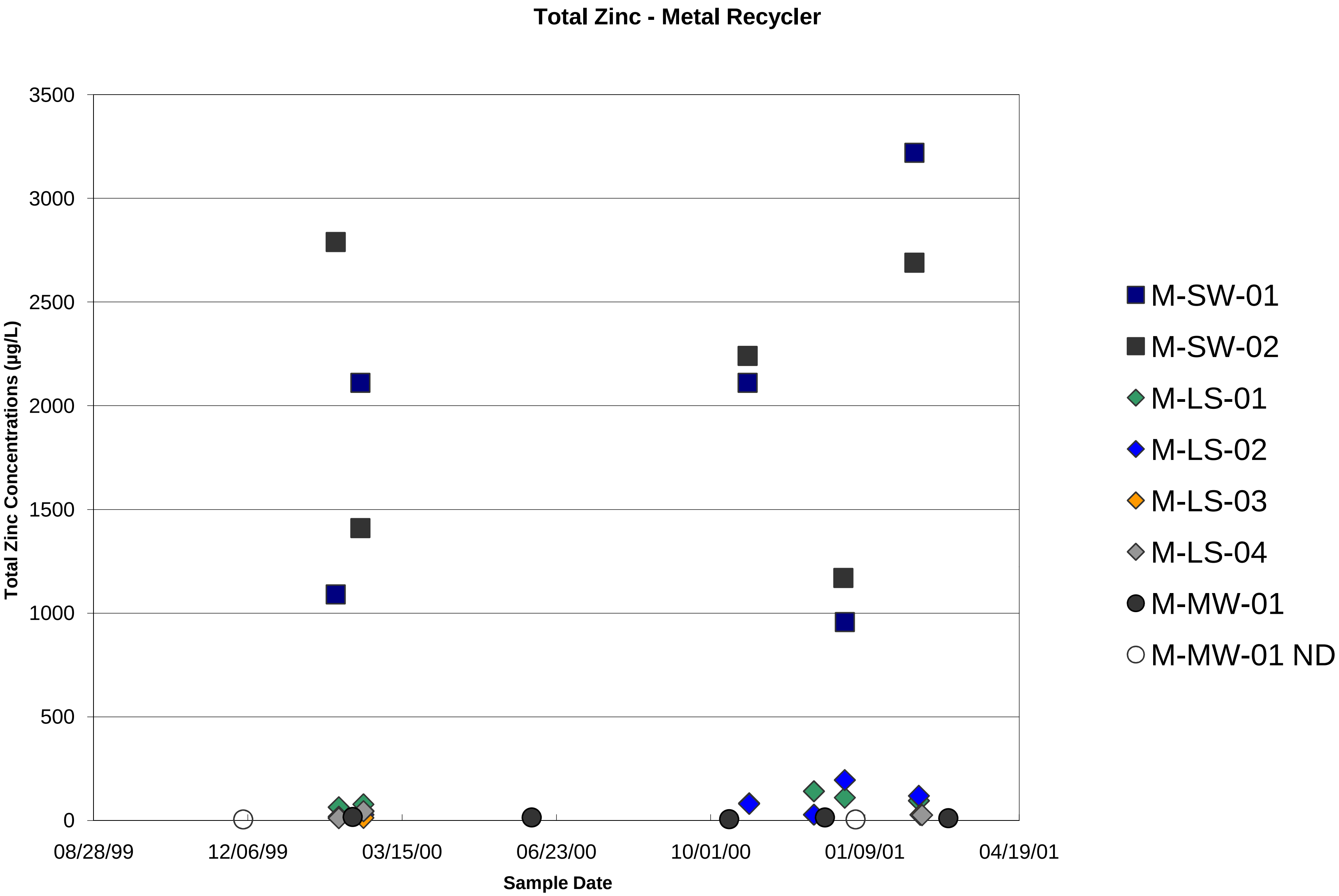
## Total Lead - Metal Recycler - Log Scale



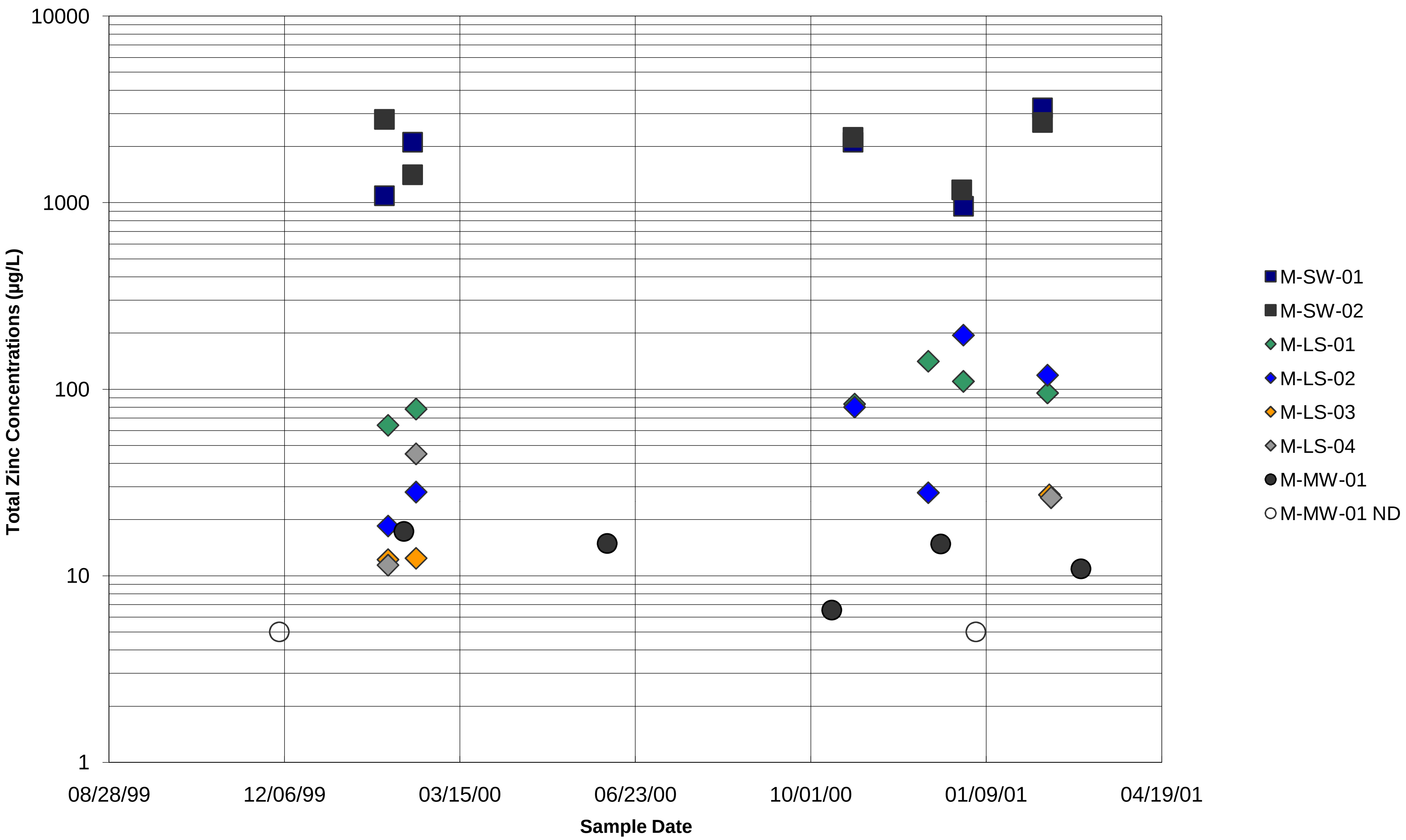

Dissolved Zinc - Metal Recycler
Dissolved Zinc Concentrations (µg/L)
1800
1600
1400
1200
1000
800
600
400
200
0
08/28/99
12/06/99
03/15/00
06/23/00
10/01/00
01/09/01
04/19/01
Sample Date
M-SW-01
M-SW-02
M-LS-01
M-LS-02
M-LS-03
M-LS-04
M-MW-01
M-MW-01 ND

## Dissolved Zinc - Metal Recycler - Log Scale

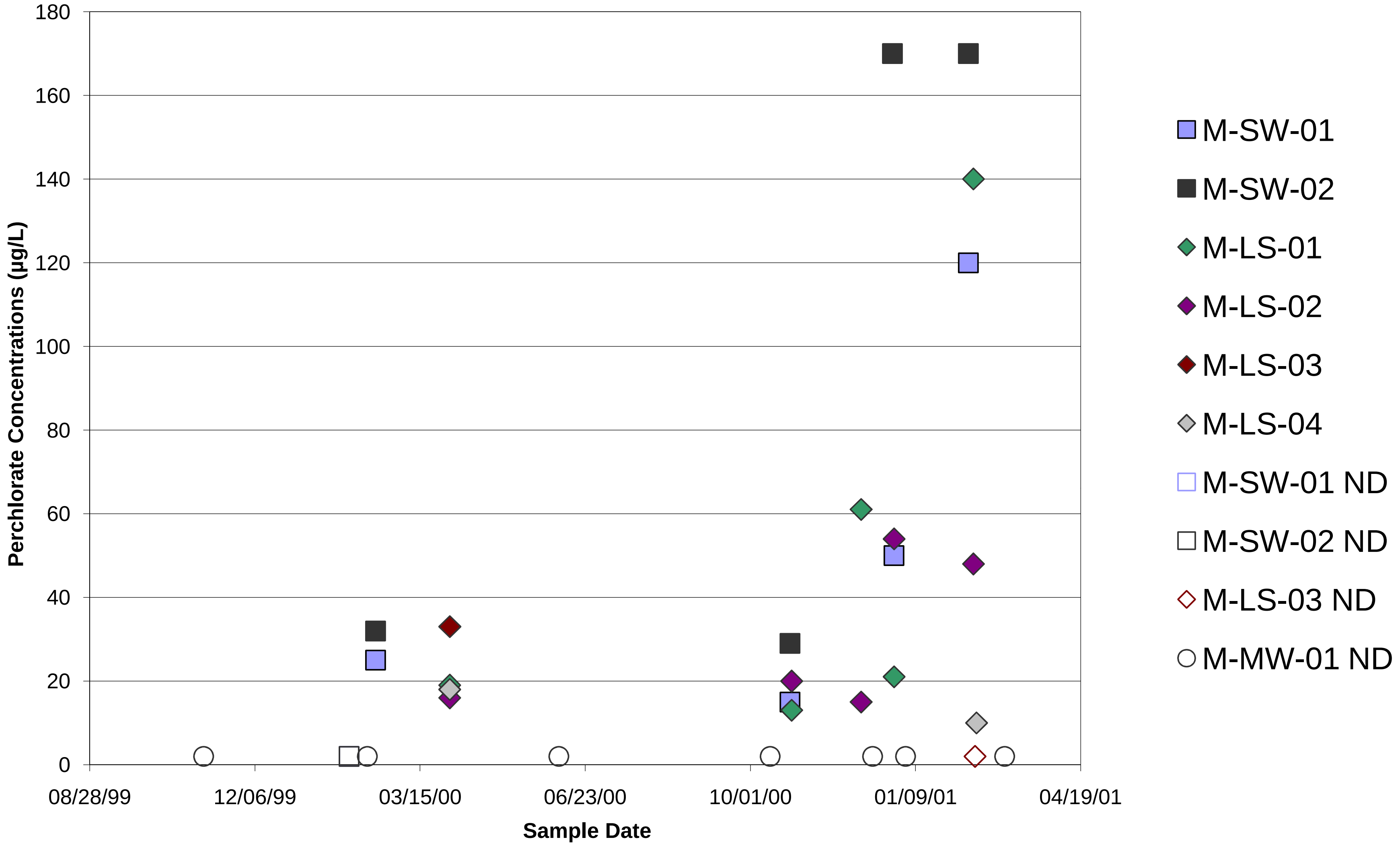



Total Zinc - Metal Recycler
Total Zinc Concentrations (µg/L)
3500
3000
2500
2000
1500
1000
500
0
08/28/99
12/06/99
03/15/00
06/23/00
10/01/00
01/09/01
04/19/01
Sample Date
M-SW-01
M-SW-02
M-LS-01
M-LS-02
M-LS-03
M-LS-04
M-MW-01
M-MW-01 ND

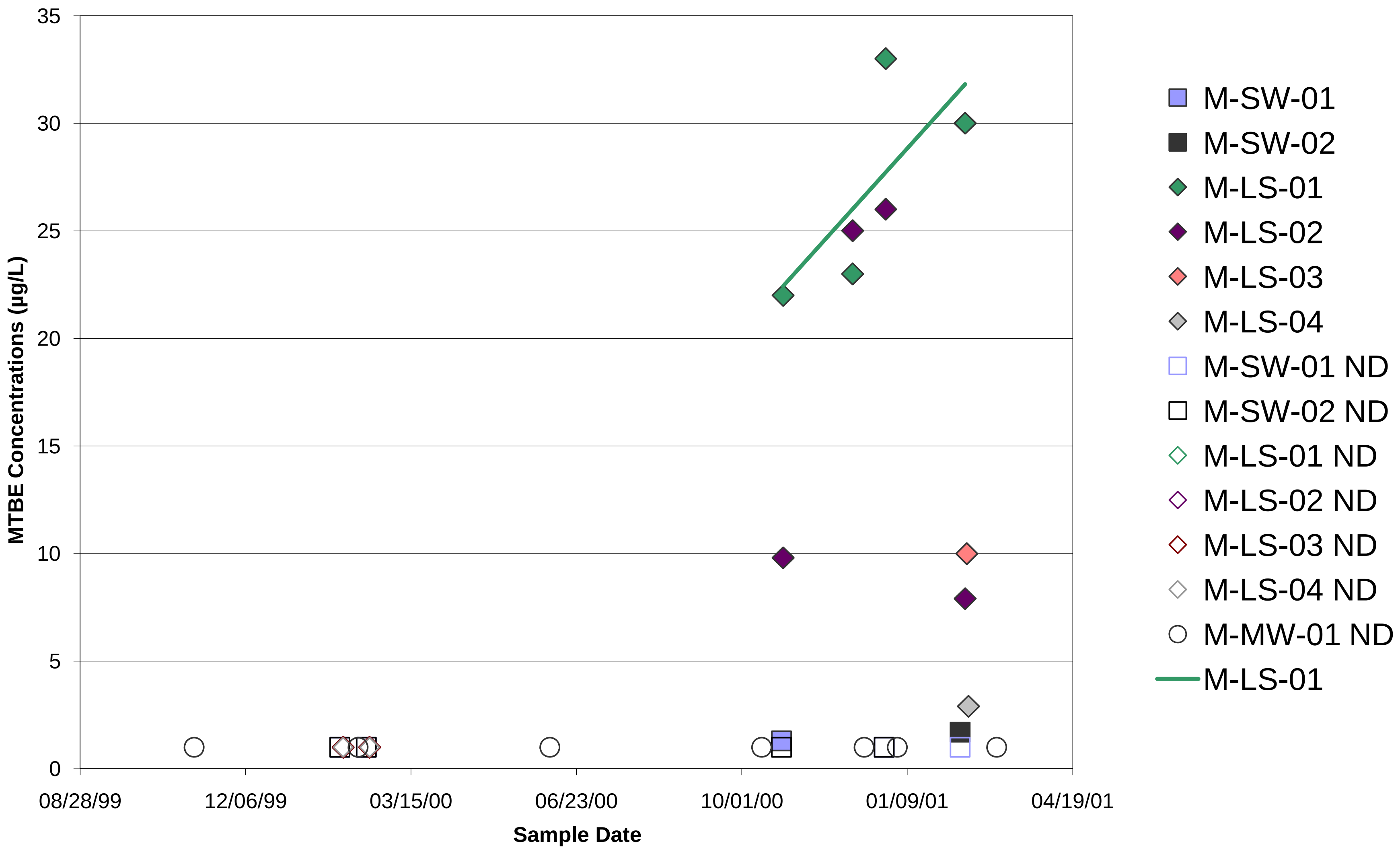
## Total Zinc - Metal Recycler - Log Scale



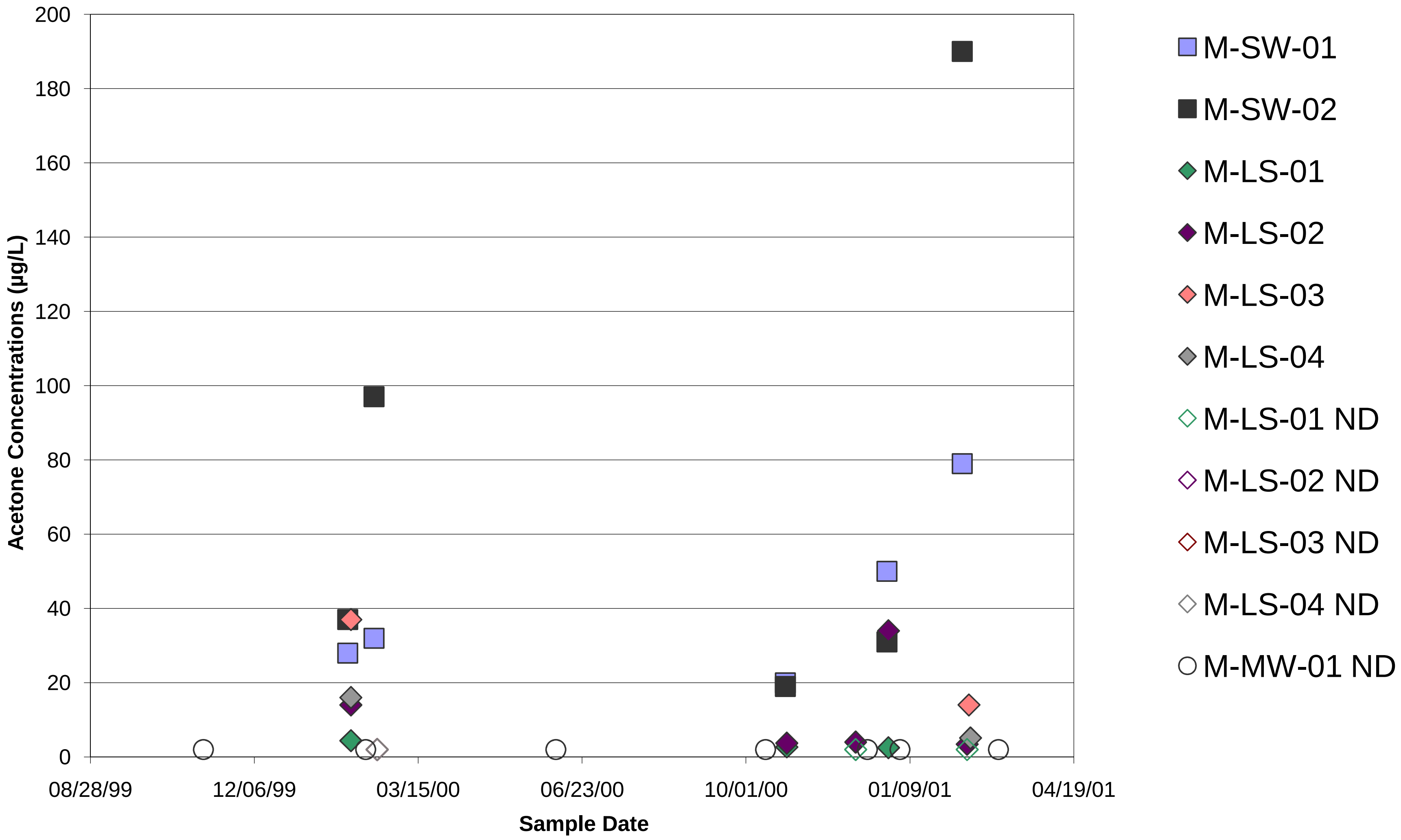
## Perchlorate - Metal Recycler

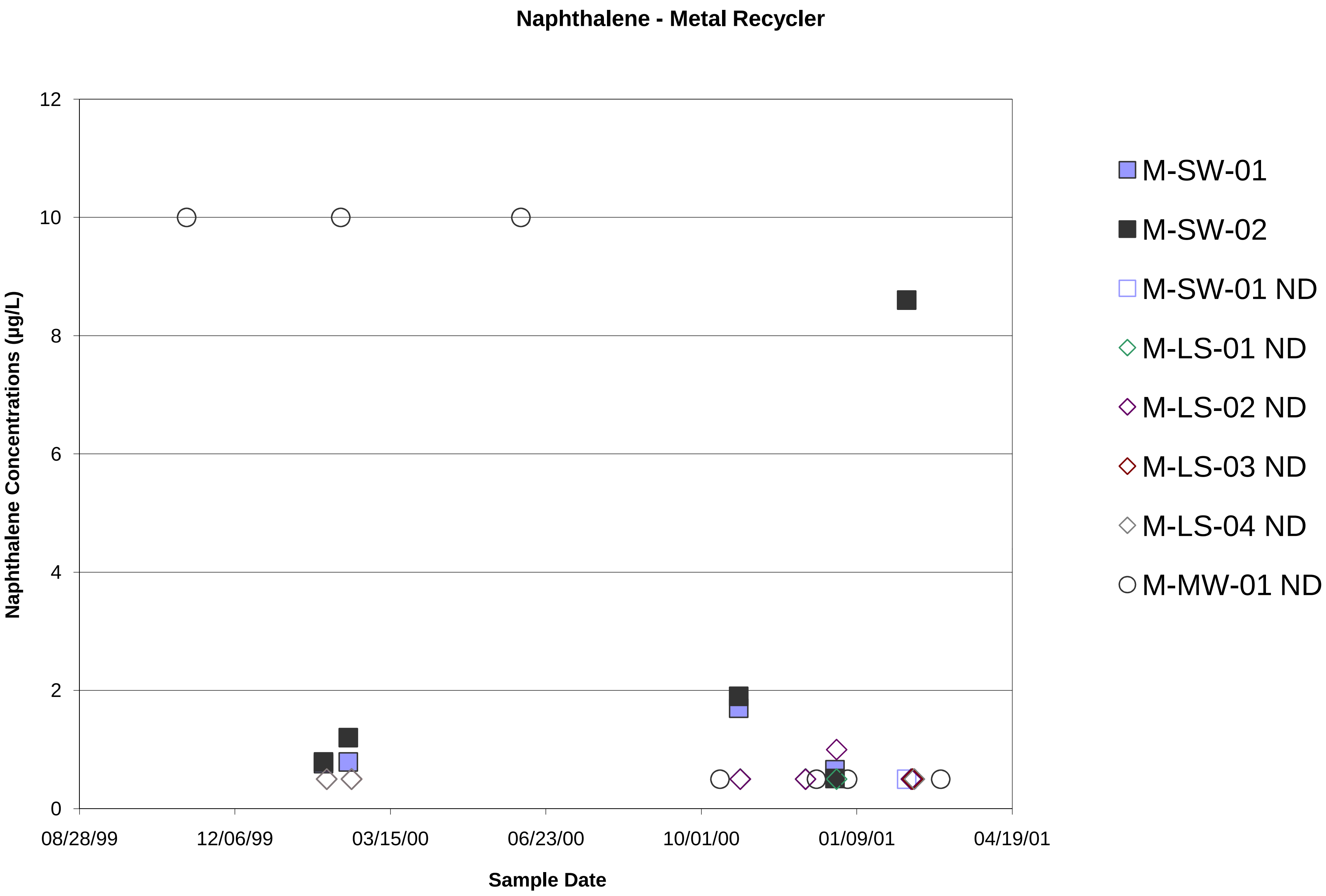


## MTBE - Metal Recycler



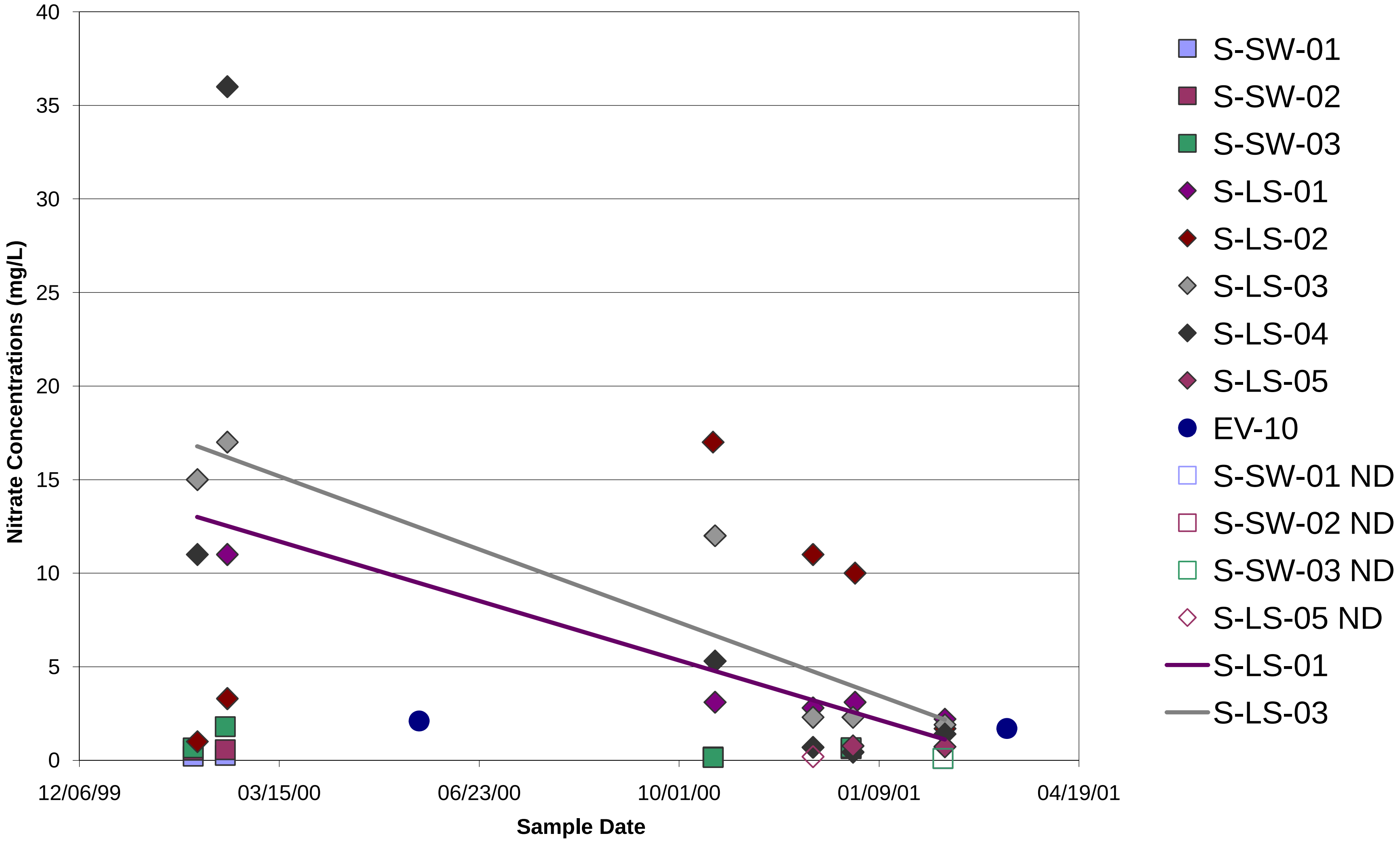
# Acetone - Metal Recycler

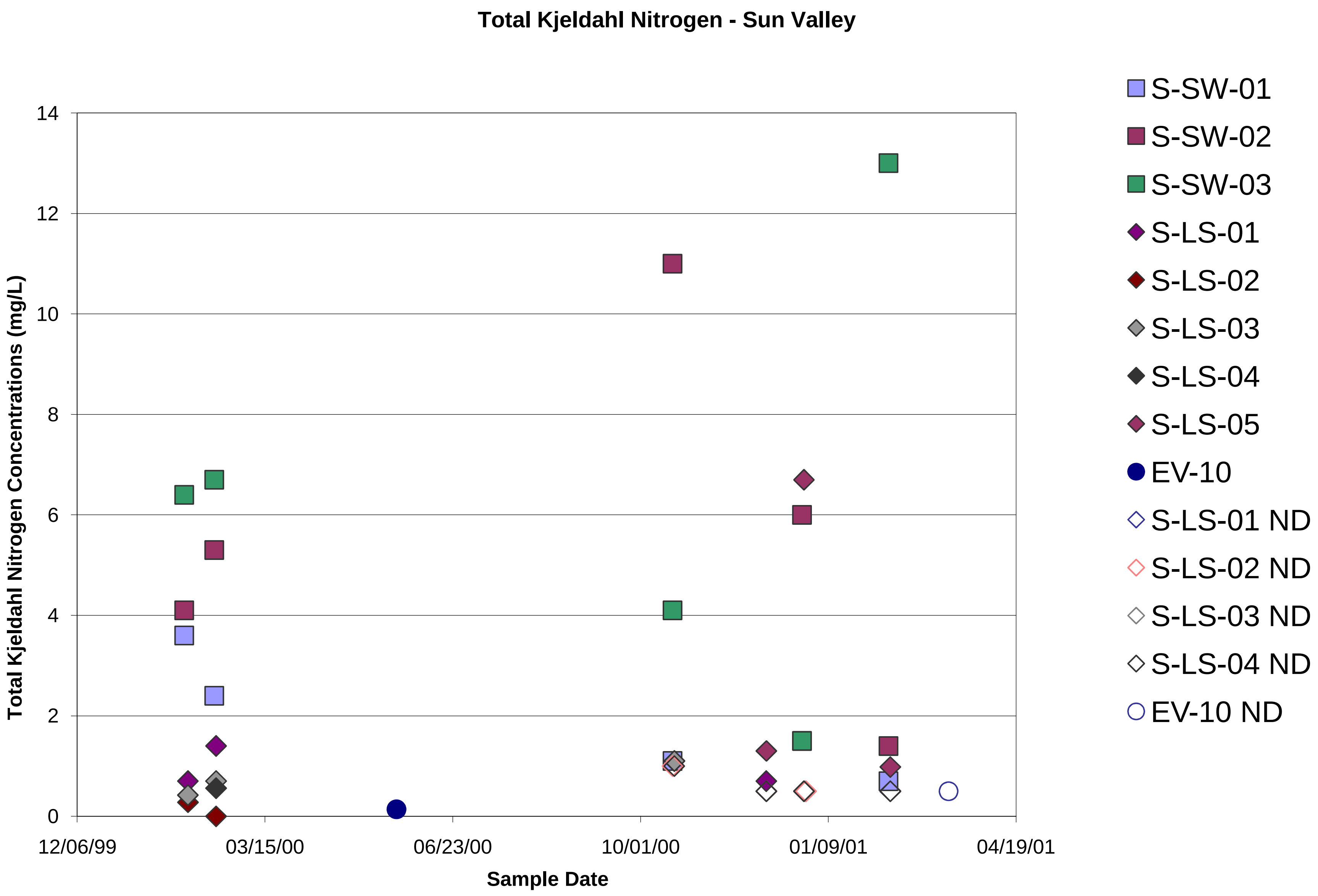




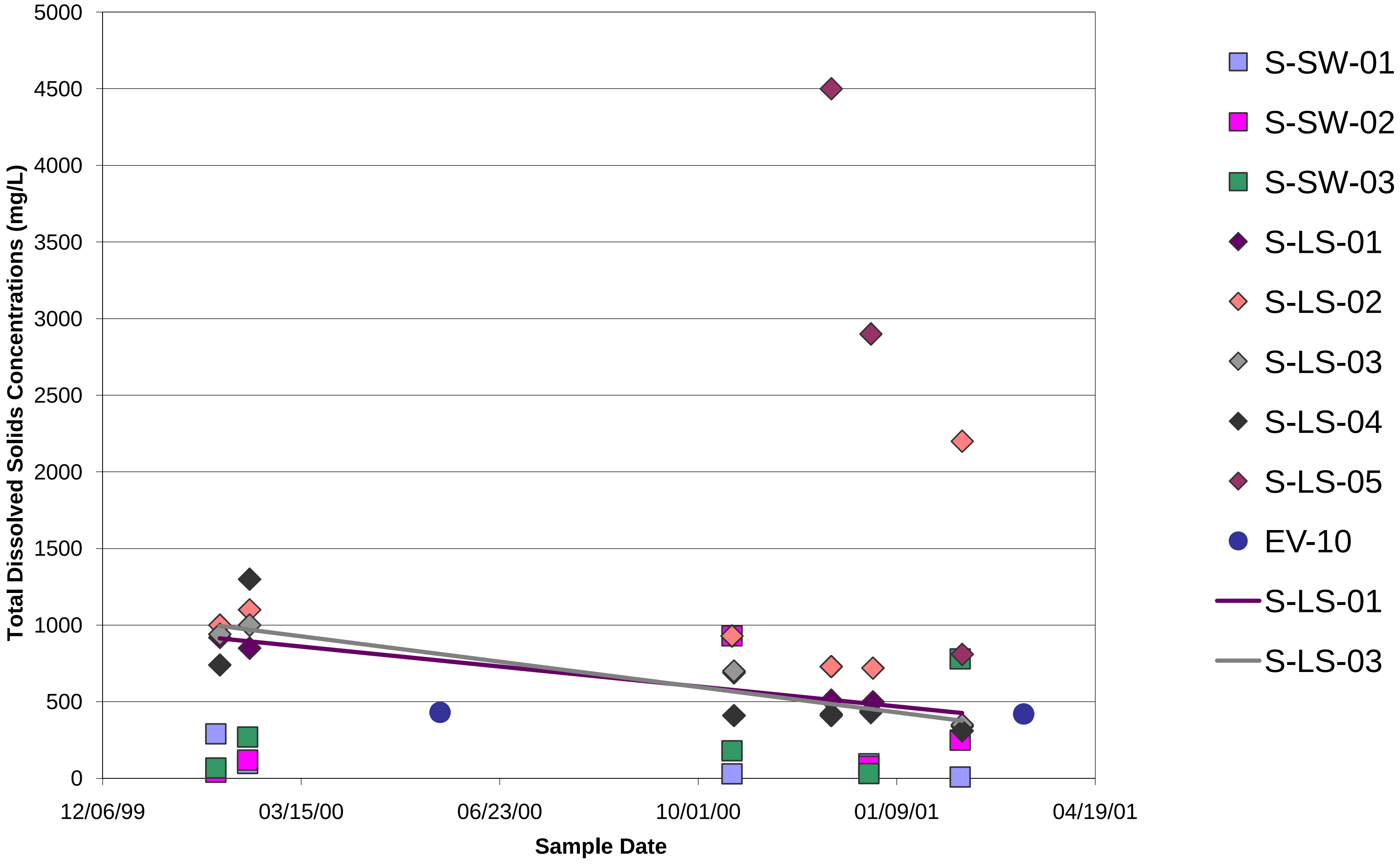
Naphthalene - Metal Recycler
Naphthalene Concentrations (µg/L)
0
2
4
6
8
10
12
08/28/99
12/06/99
03/15/00
06/23/00
10/01/00
01/09/01
04/19/01
Sample Date
M-SW-01
M-SW-02
M-SW-01 ND
M-LS-01 ND
M-LS-02 ND
M-LS-03 ND
M-LS-04 ND
M-MW-01 ND

# Nitrate - Sun Valley

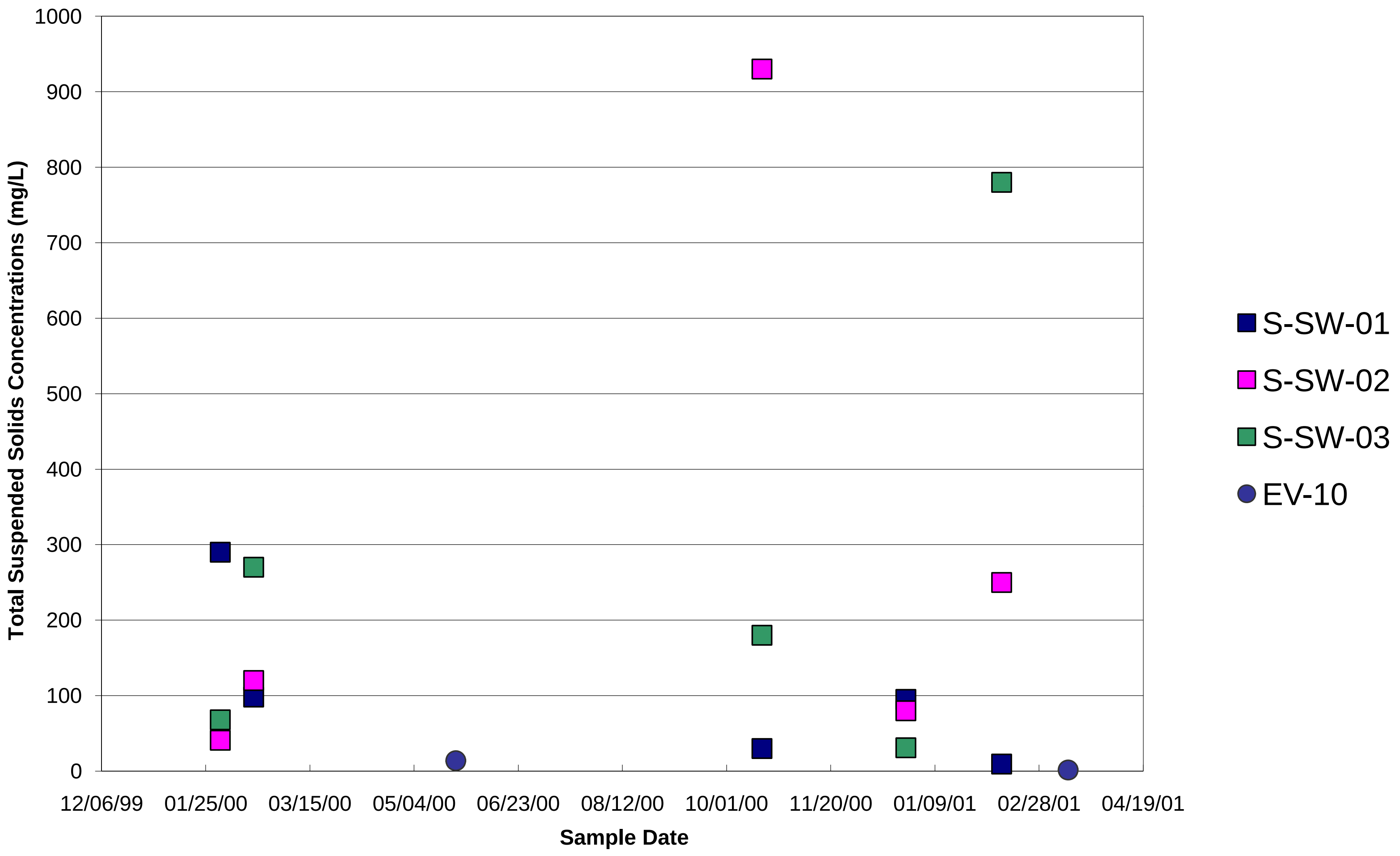



Total Kjeldahl Nitrogen - Sun Valley
Total Kjeldahl Nitrogen Concentrations (mg/L)
14
12
10
8
6
4
2
0
12/06/99
03/15/00
06/23/00
10/01/00
01/09/01
04/19/01
Sample Date
S-SW-01
S-SW-02
S-SW-03
S-LS-01
S-LS-02
S-LS-03
S-LS-04
S-LS-05
EV-10
S-LS-01 ND
S-LS-02 ND
S-LS-03 ND
S-LS-04 ND
EV-10 ND

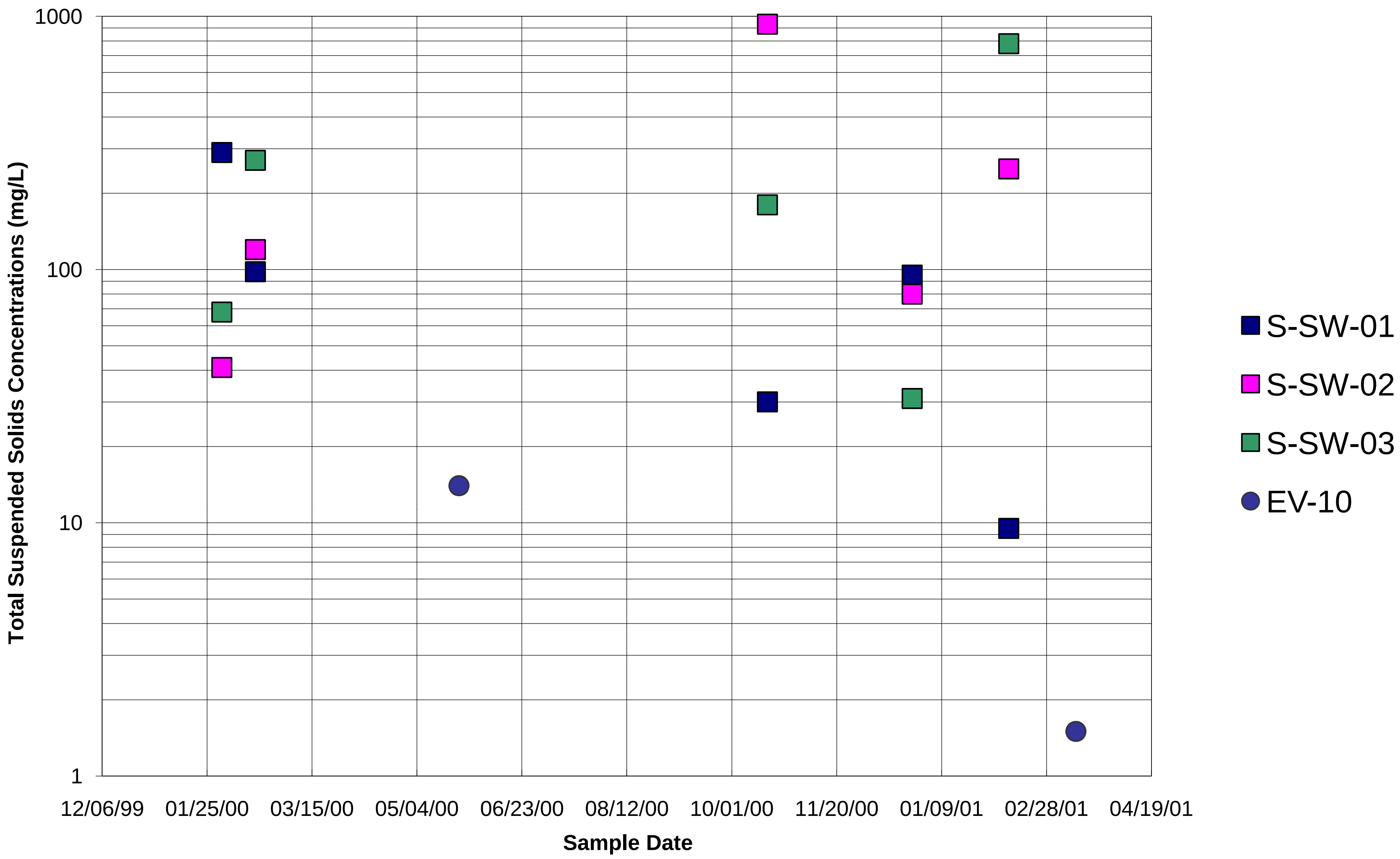
## Total Dissolved Solids - Sun Valley

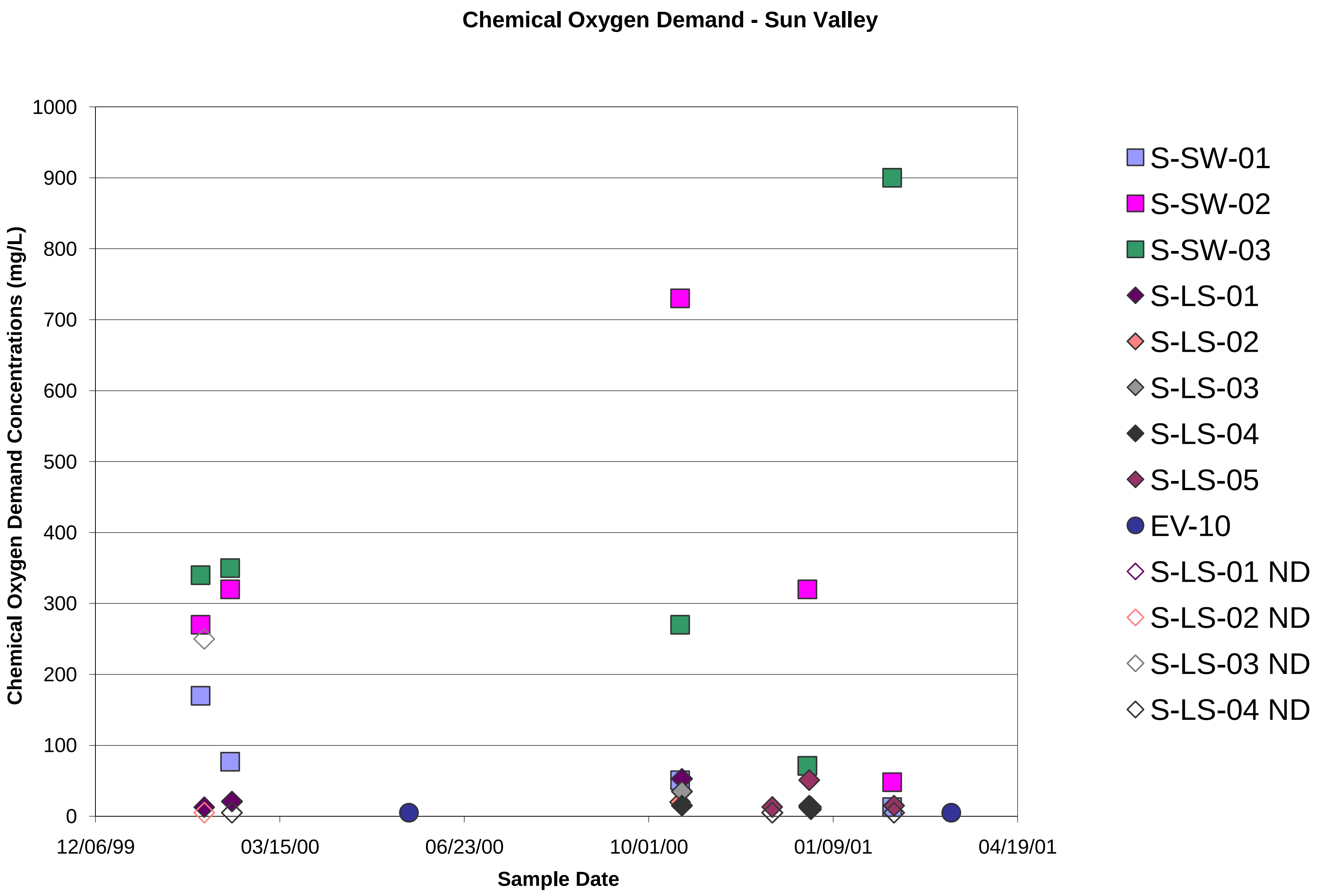


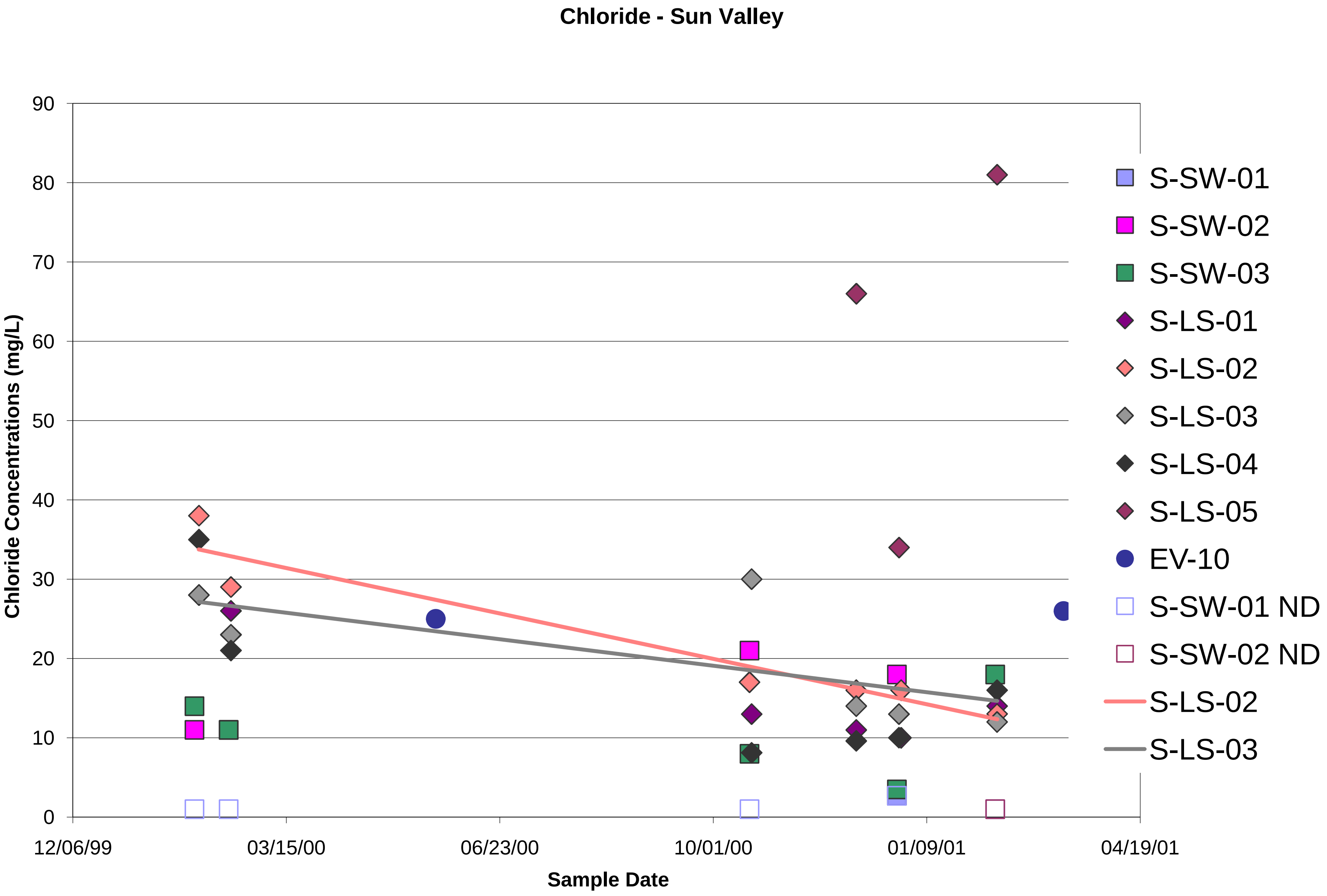
## Total Suspended Solids - Sun Valley



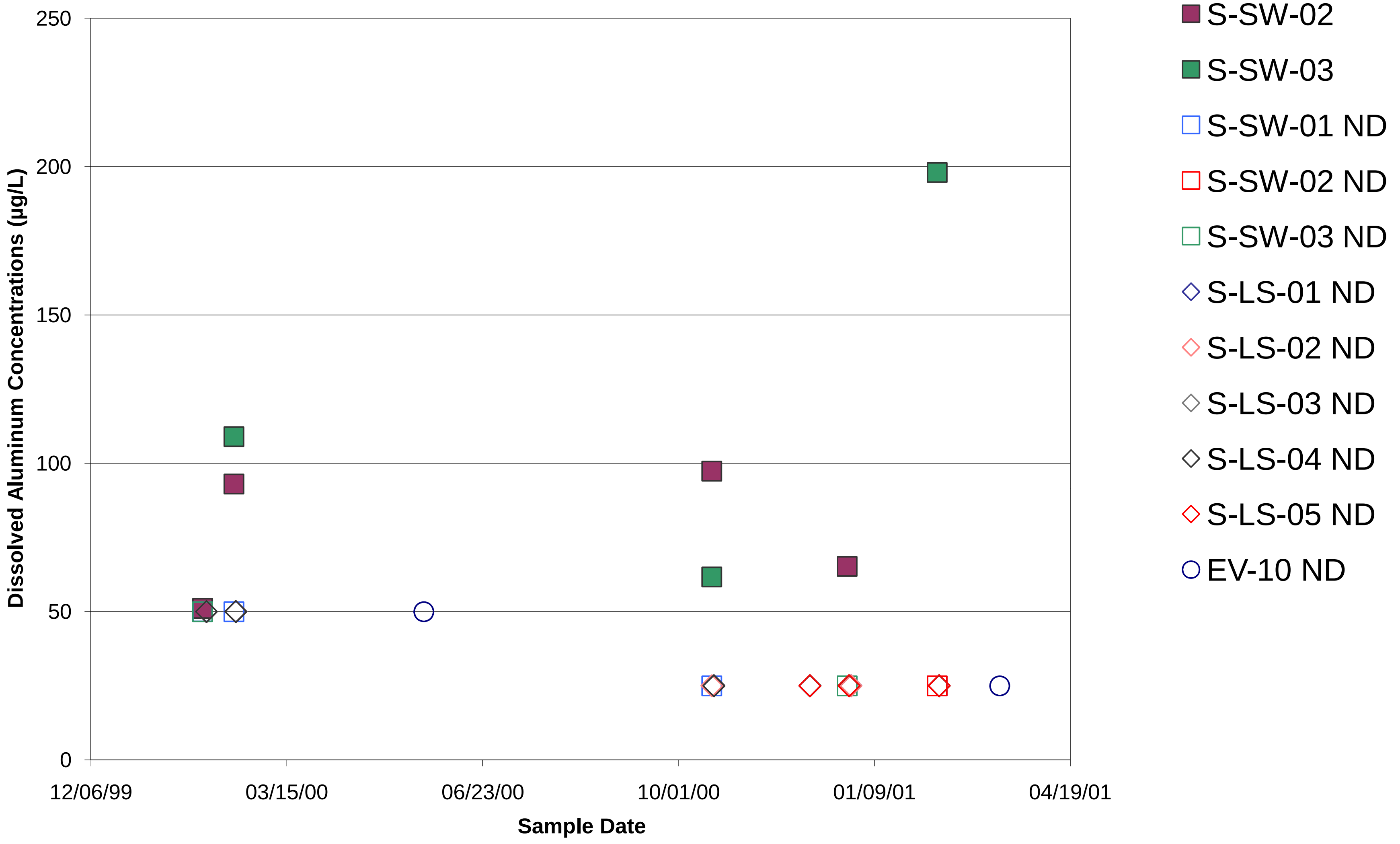
## Total Suspended Solids - Sun Valley - Log Scale



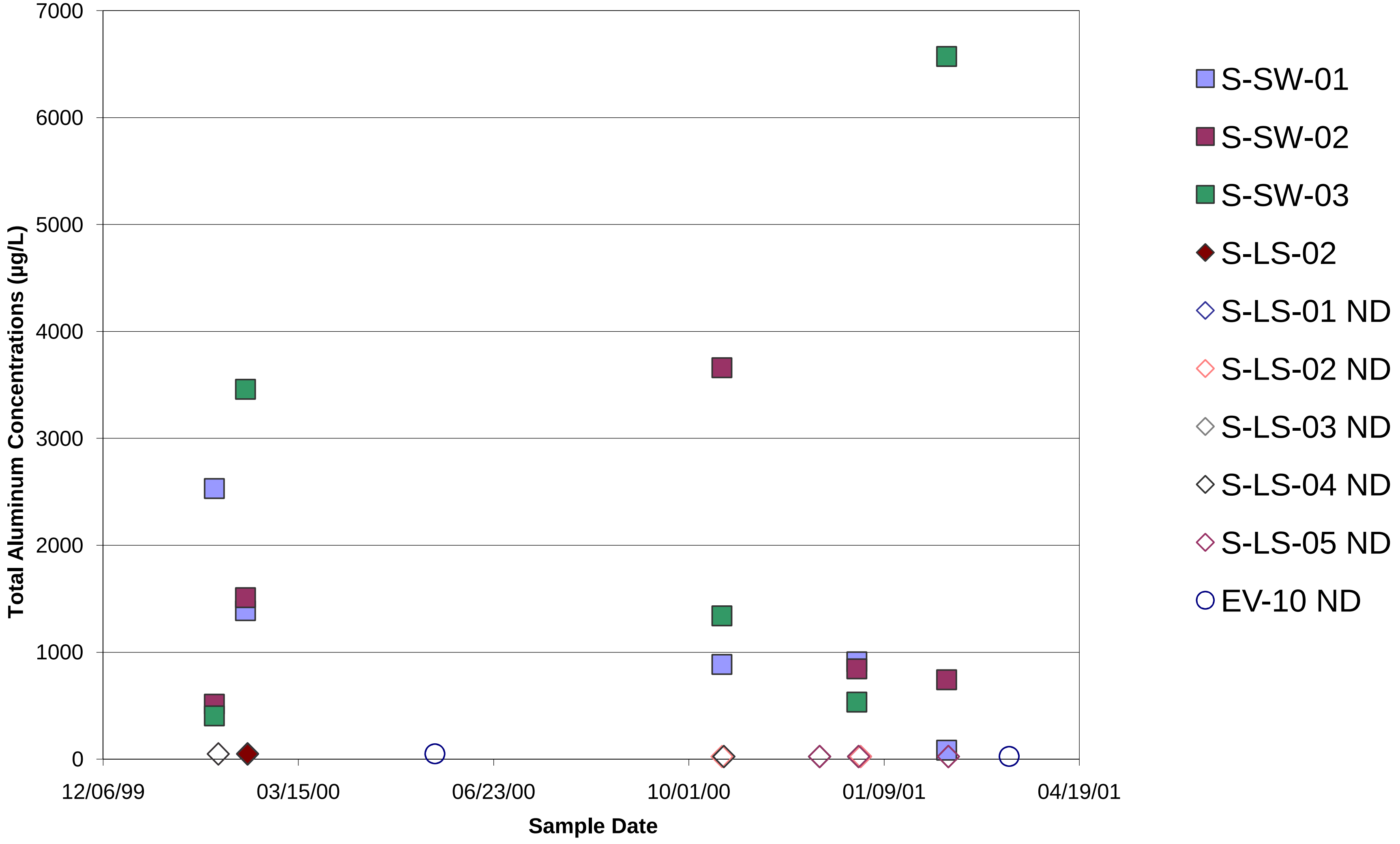

Chemical Oxygen Demand - Sun Valley
Chemical Oxygen Demand Concentrations (mg/L)
1000
900
800
700
600
500
400
300
200
100
0
12/06/99
03/15/00
06/23/00
10/01/00
01/09/01
04/19/01
Sample Date
S-SW-01
S-SW-02
S-SW-03
S-LS-01
S-LS-02
S-LS-03
S-LS-04
S-LS-05
EV-10
S-LS-01 ND
S-LS-02 ND
S-LS-03 ND
S-LS-04 ND

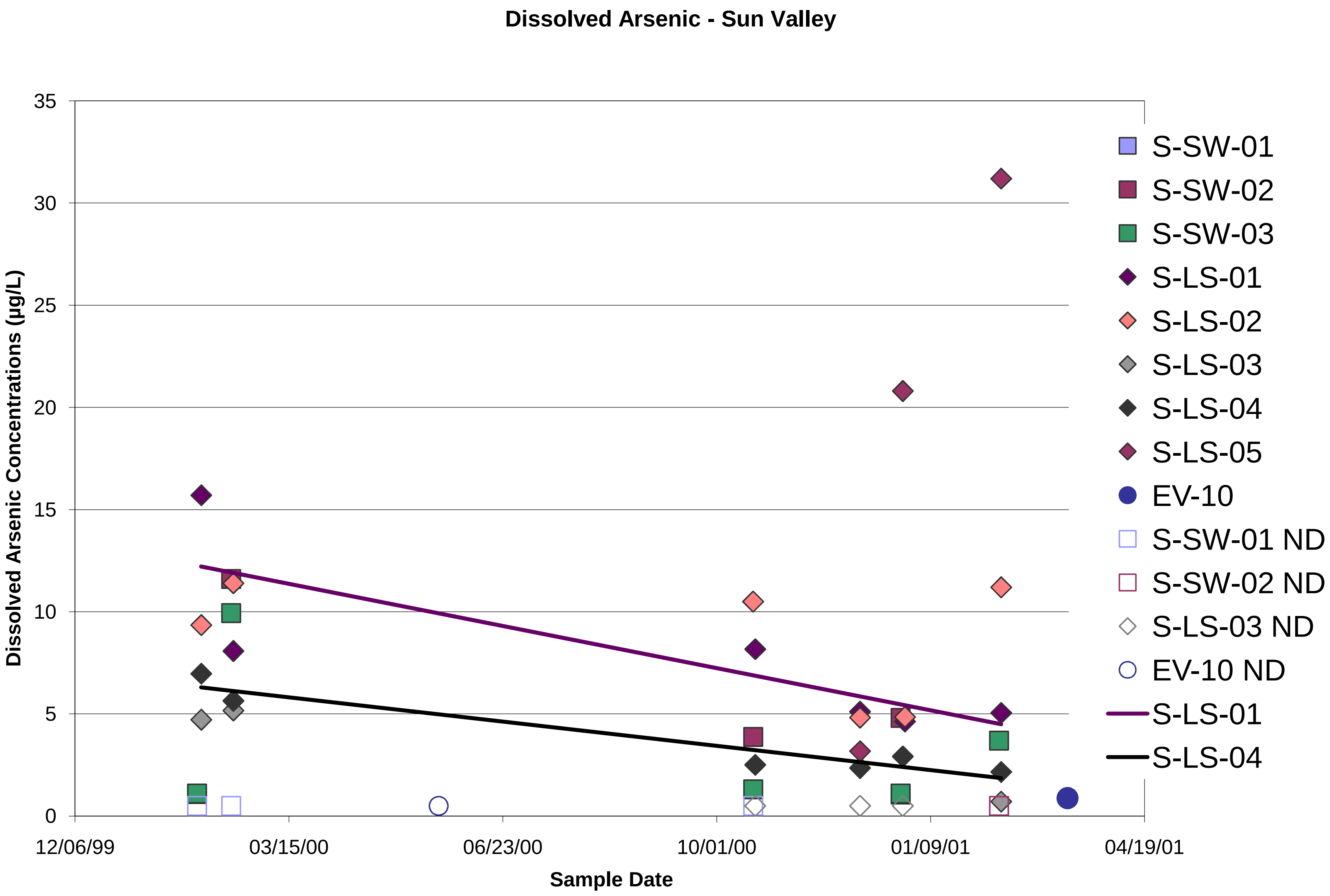
Chloride - Sun Valley
Chloride Concentrations (mg/L)
90
80
70
60
50
40
30
20
10
0
12/06/99
03/15/00
06/23/00
10/01/00
01/09/01
04/19/01
Sample Date
S-SW-01
S-SW-02
S-SW-03
S-LS-01
S-LS-02
S-LS-03
S-LS-04
S-LS-05
EV-10
S-SW-01 ND
S-SW-02 ND
S-LS-02
S-LS-03

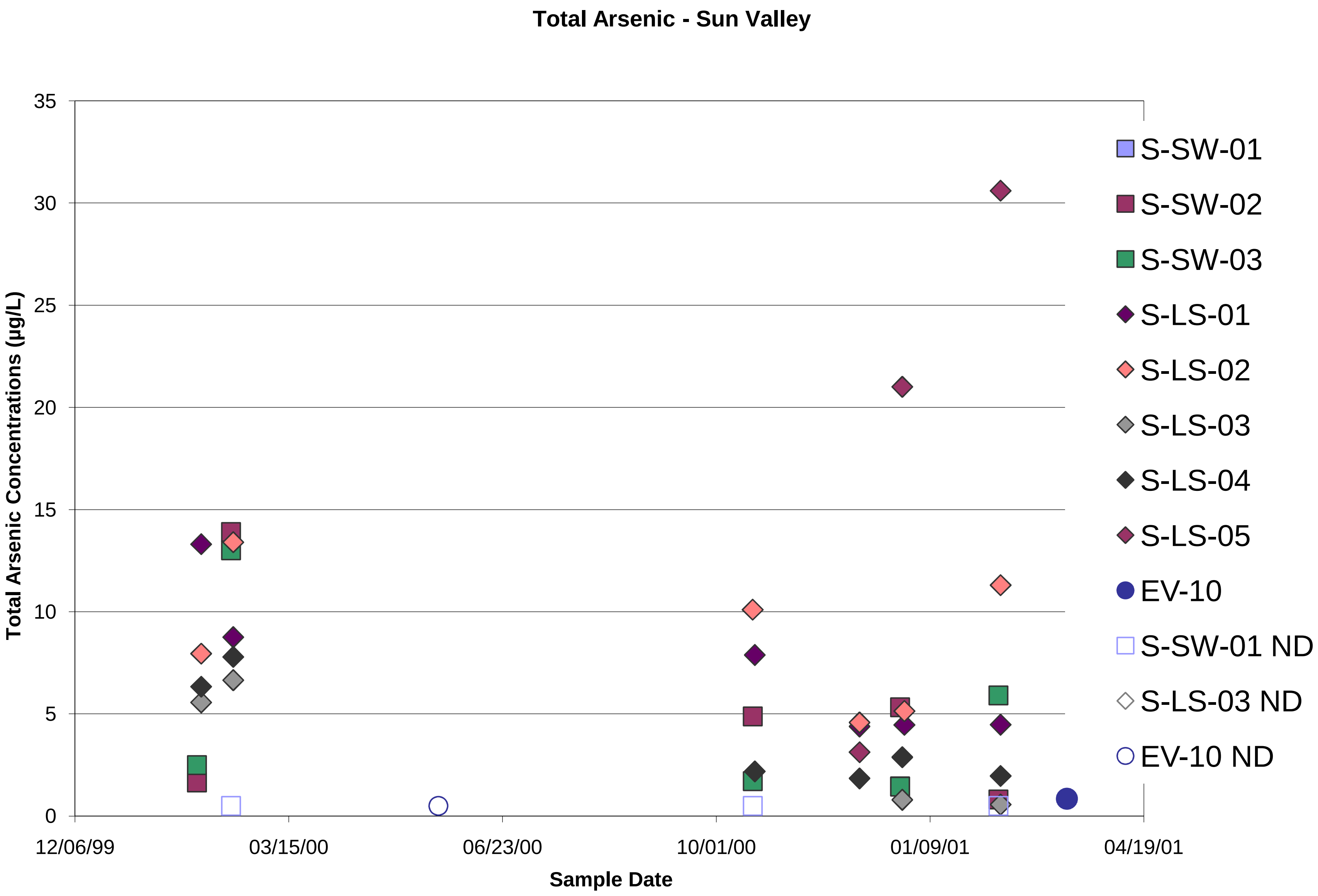
## Dissolved Aluminum - Sun Valley



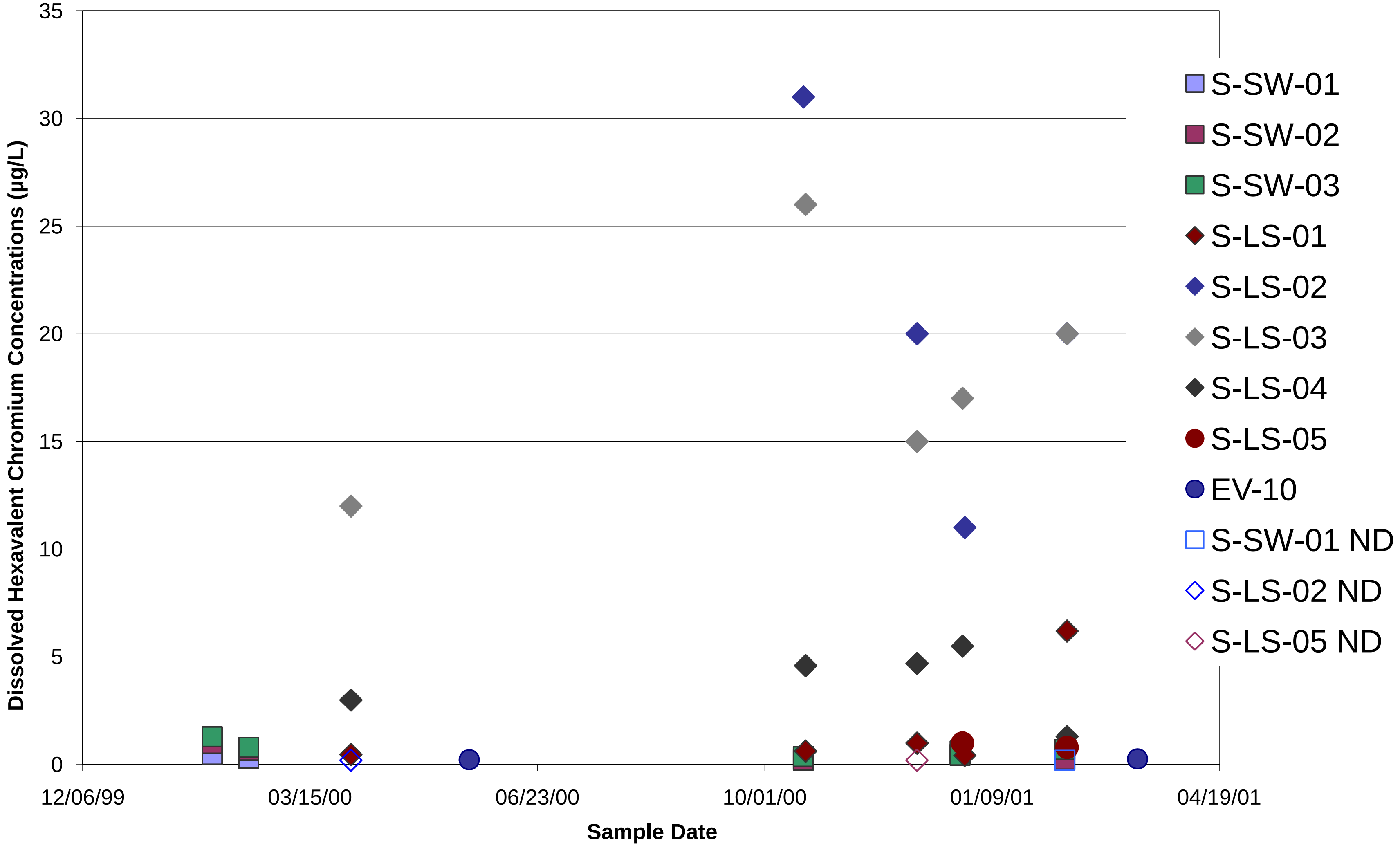
## Total Aluminum - Sun Valley



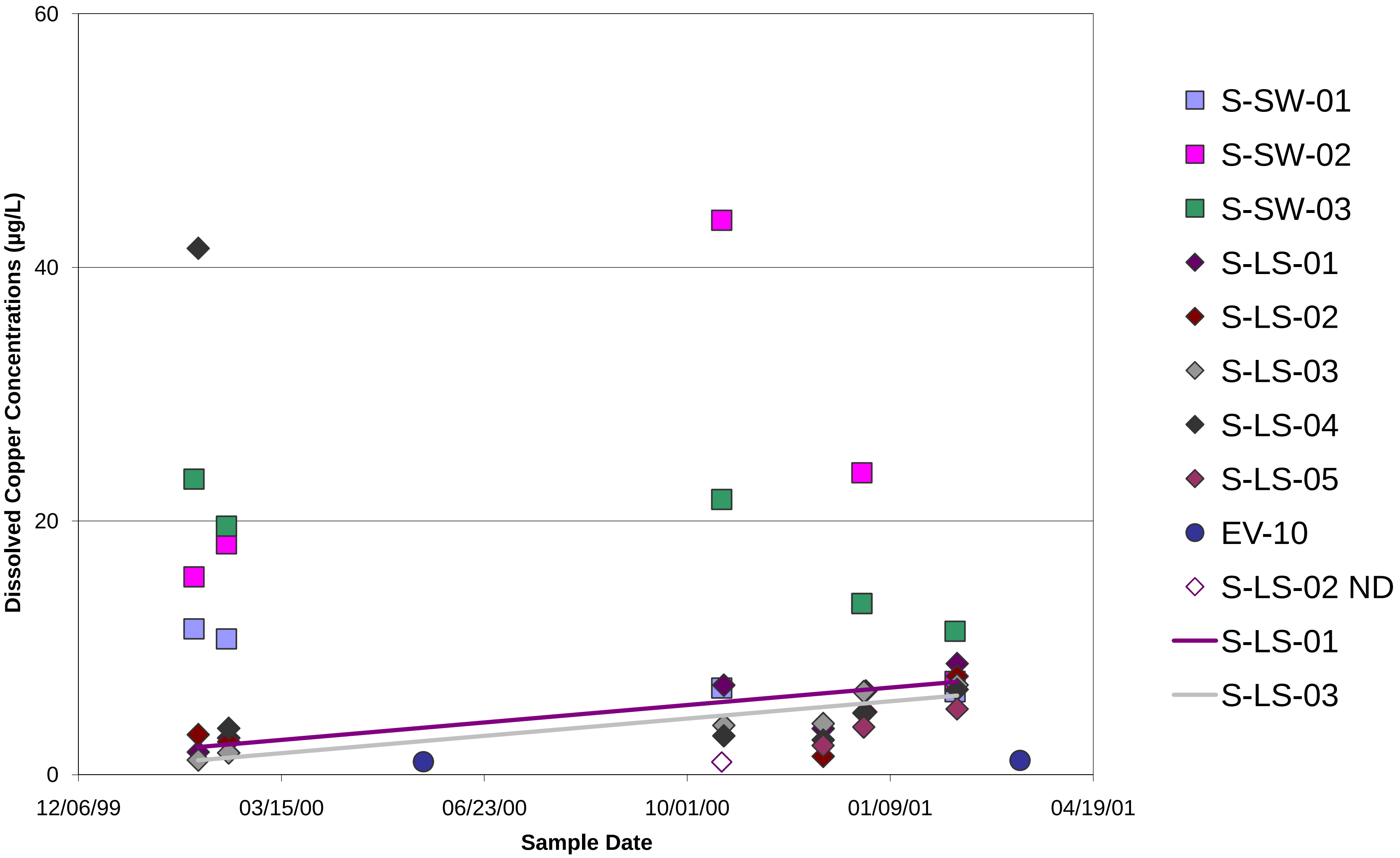

Dissolved Arsenic - Sun Valley
Dissolved Arsenic Concentrations (µg/L)
35
30
25
20
15
10
5
0
12/06/99
03/15/00
06/23/00
10/01/00
01/09/01
04/19/01
Sample Date
S-SW-01
S-SW-02
S-SW-03
S-LS-01
S-LS-02
S-LS-03
S-LS-04
S-LS-05
EV-10
S-SW-01 ND
S-SW-02 ND
S-LS-03 ND
EV-10 ND
S-LS-01
S-LS-04

Total Arsenic - Sun Valley
Total Arsenic Concentrations (µg/L)
35
30
25
20
15
10
5
0
12/06/99
03/15/00
06/23/00
10/01/00
01/09/01
04/19/01
Sample Date
S-SW-01
S-SW-02
S-SW-03
S-LS-01
S-LS-02
S-LS-03
S-LS-04
S-LS-05
EV-10
S-SW-01 ND
S-LS-03 ND
EV-10 ND

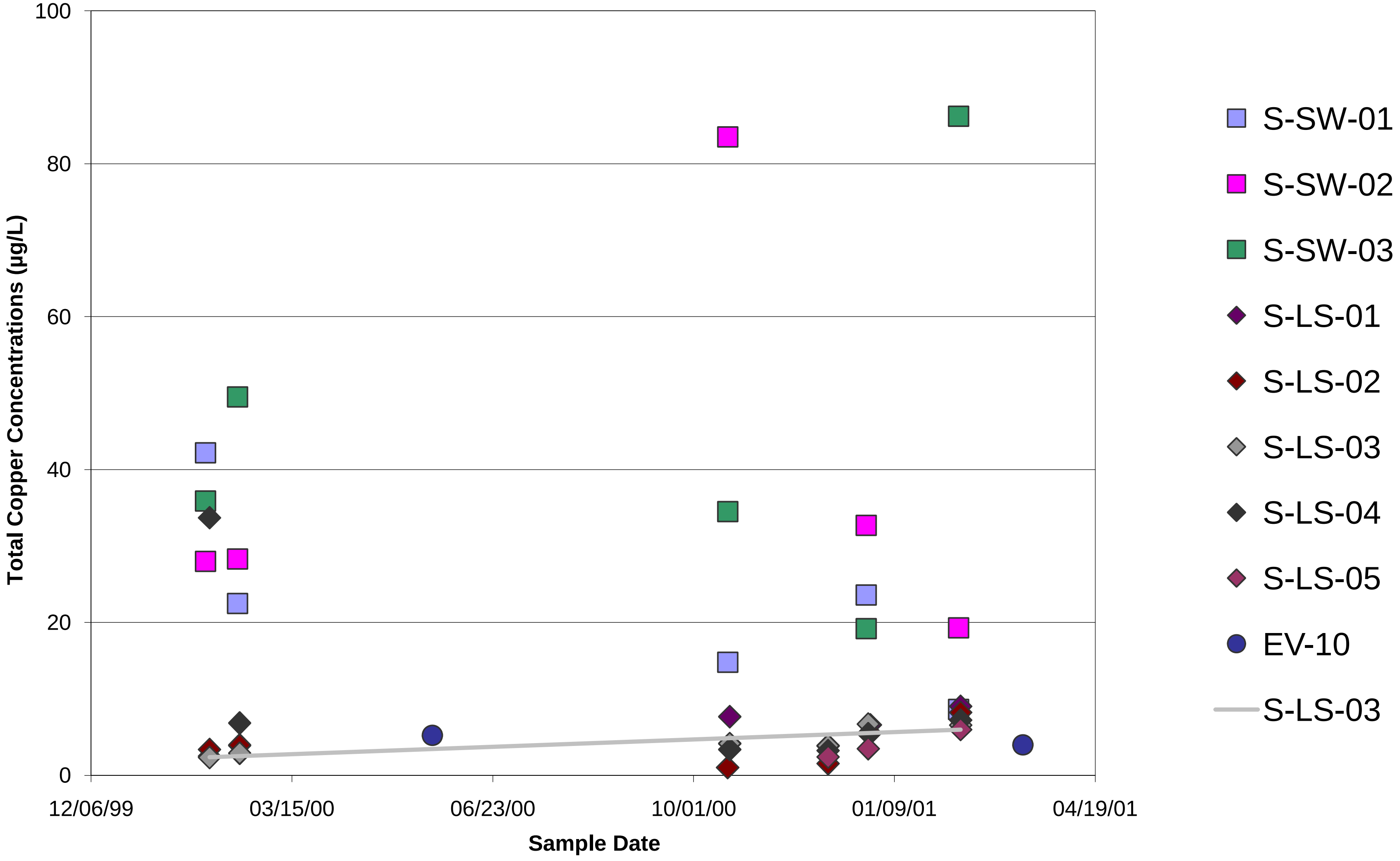
## Dissolved Hexavalent Chromium - Sun Valley

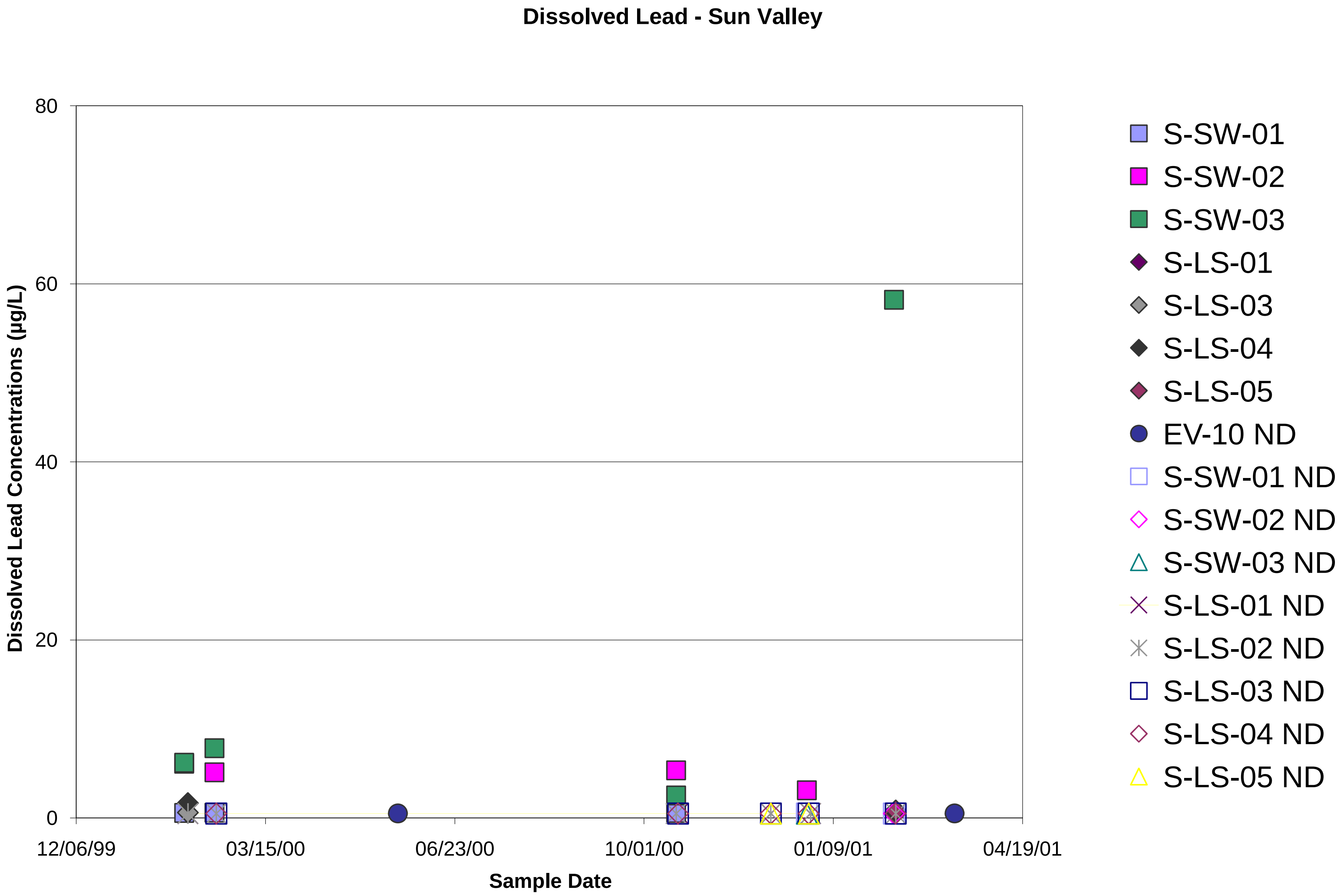


## Dissolved Copper - Sun Valley

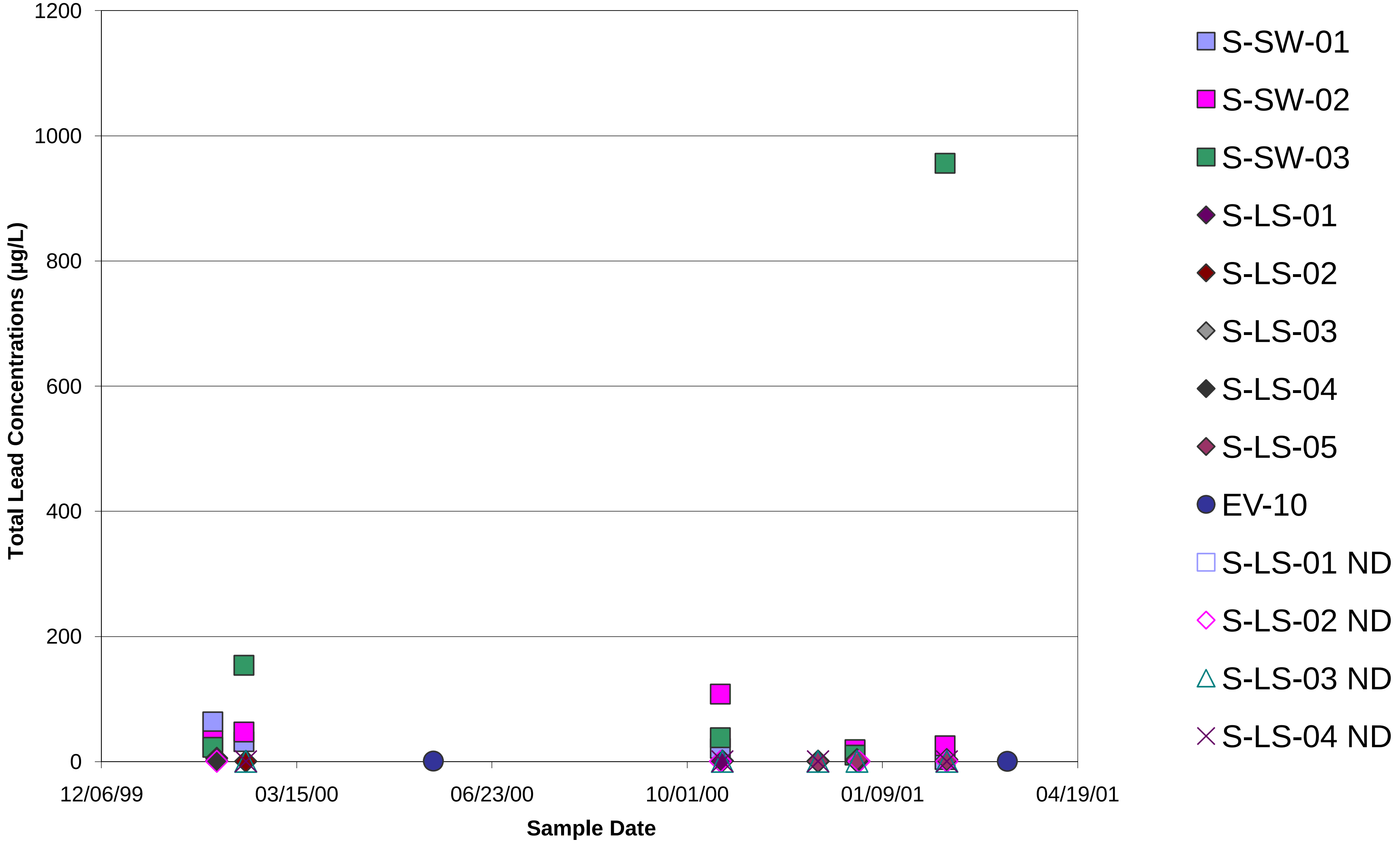


## Total Copper - Sun Valley

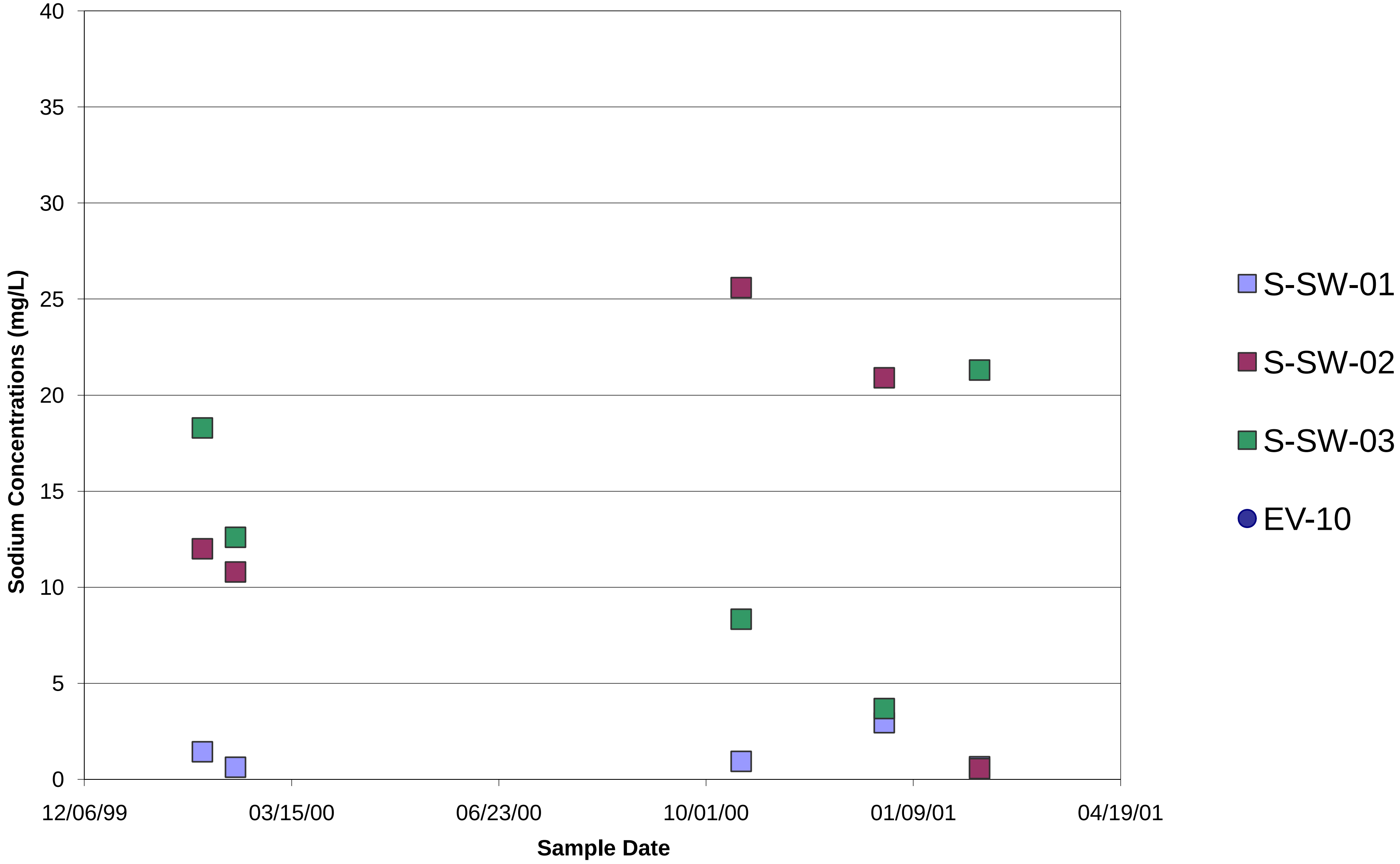


Dissolved Lead - Sun Valley
Dissolved Lead Concentrations (µg/L)
80
60
40
20
0
12/06/99
03/15/00
06/23/00
10/01/00
01/09/01
04/19/01
Sample Date
S-SW-01
S-SW-02
S-SW-03
S-LS-01
S-LS-03
S-LS-04
S-LS-05
EV-10 ND
S-SW-01 ND
S-SW-02 ND
S-SW-03 ND
S-LS-01 ND
S-LS-02 ND
S-LS-03 ND
S-LS-04 ND
S-LS-05 ND

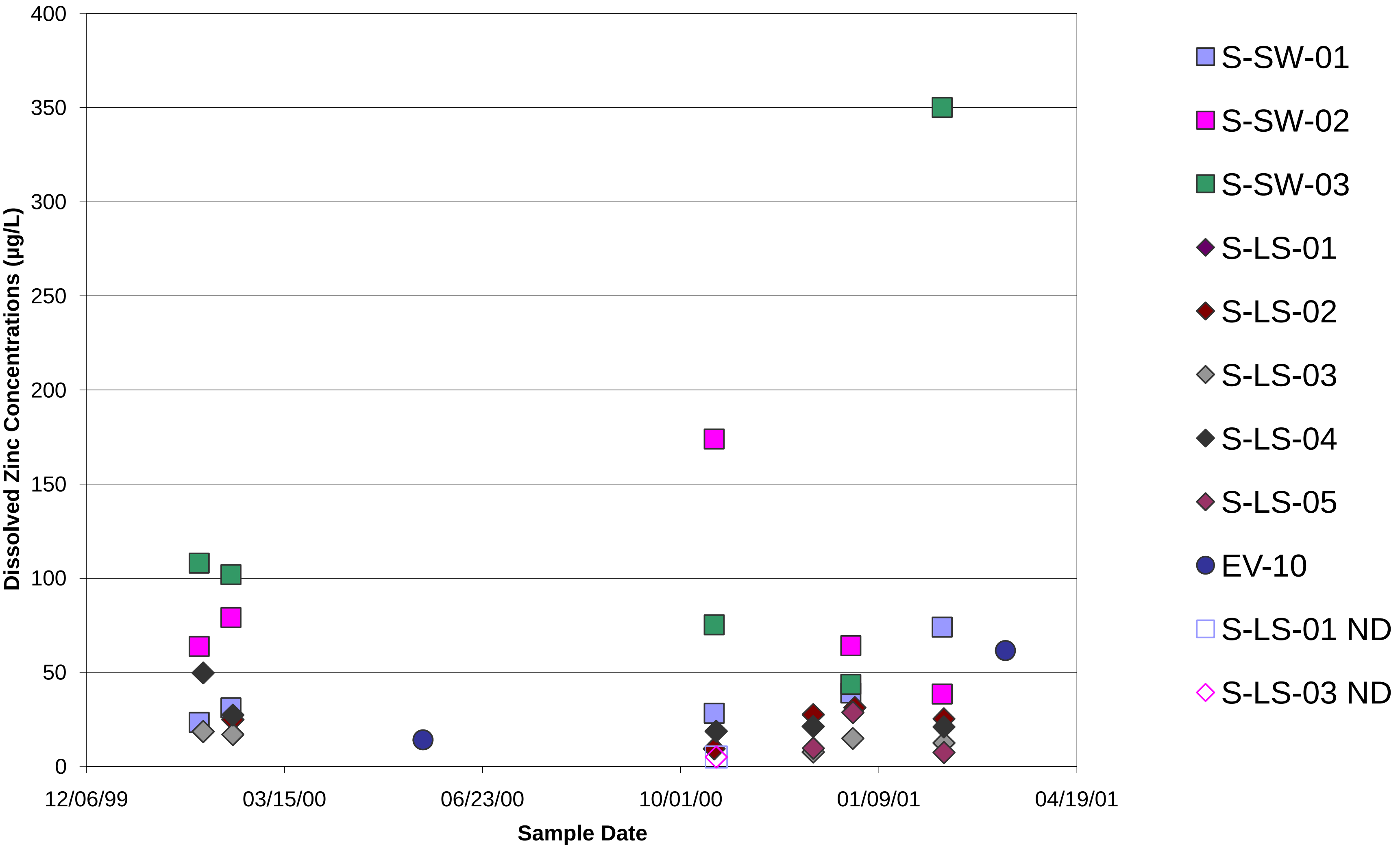
## Total Lead - Sun Valley



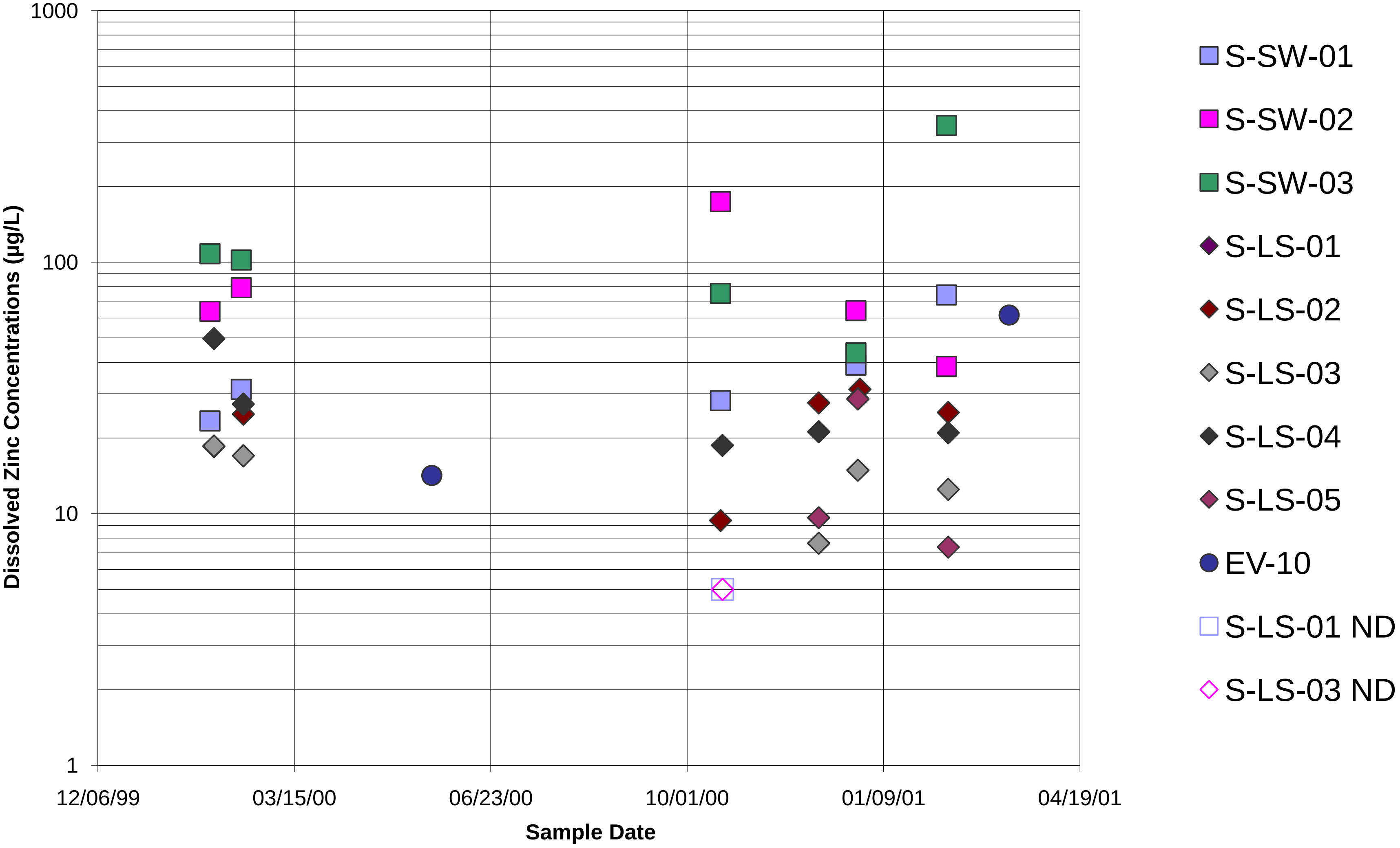
## Sodium - Sun Valley



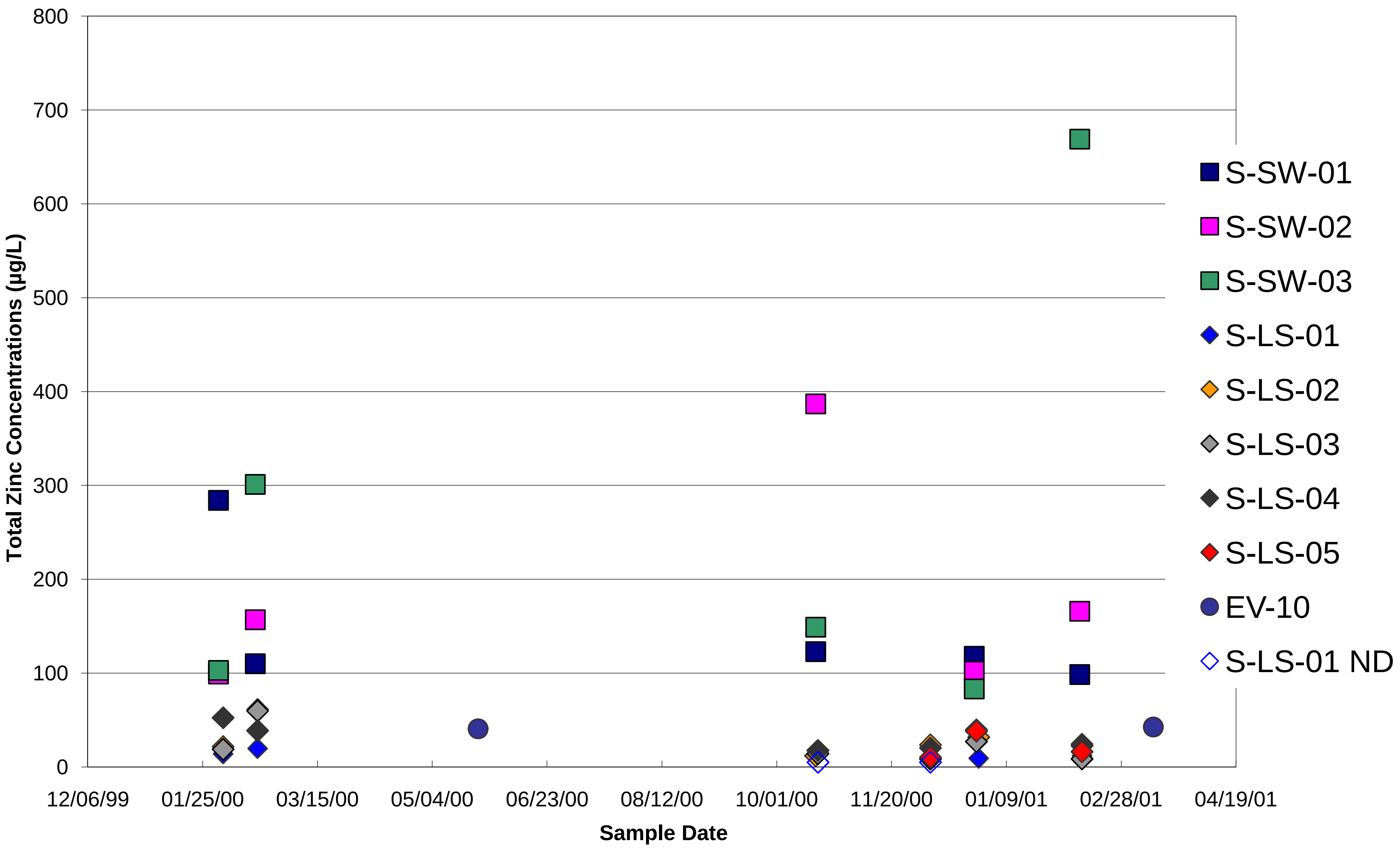
## Dissolved Zinc - Sun Valley

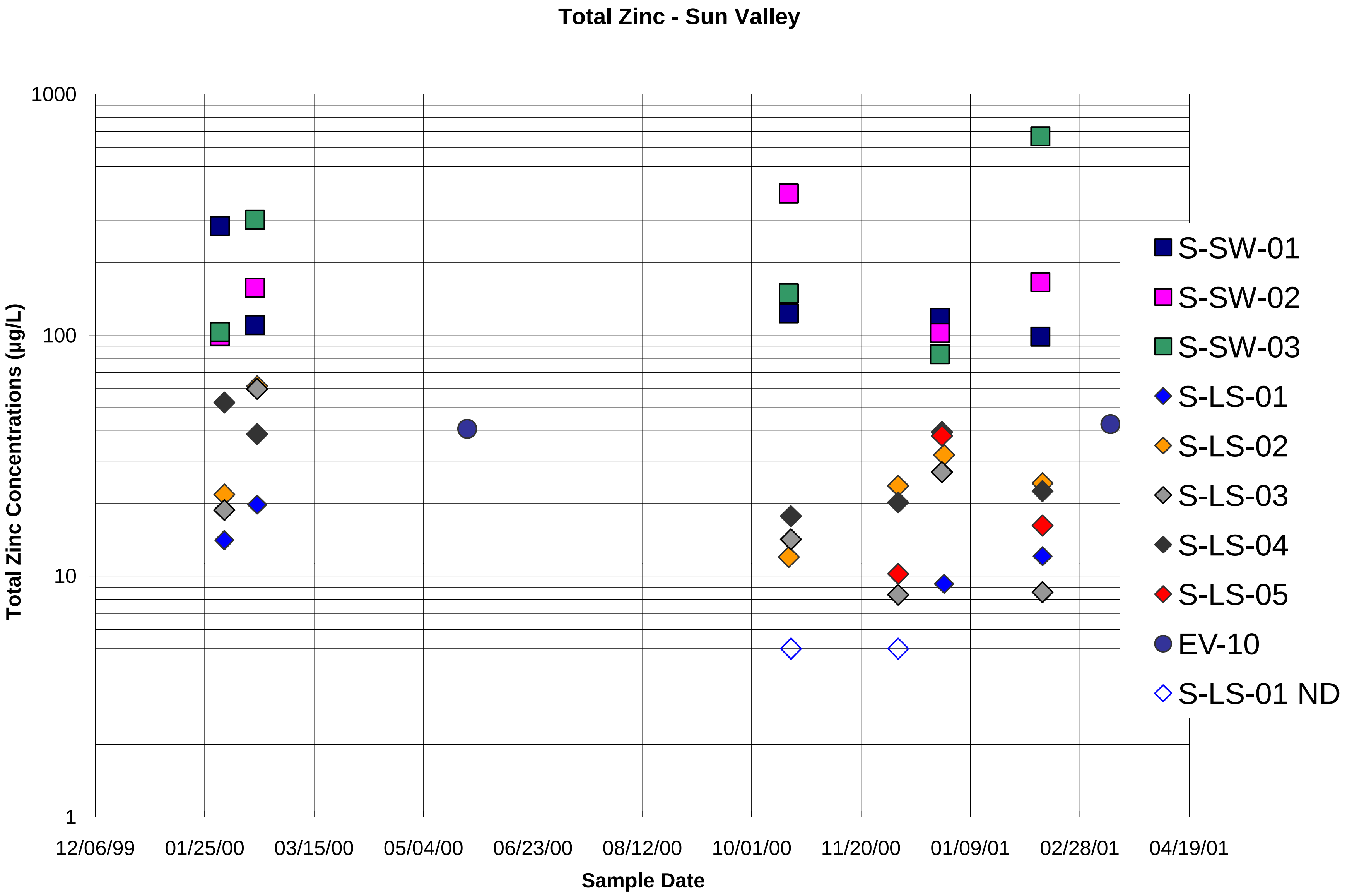


## Dissolved Zinc - Sun Valley

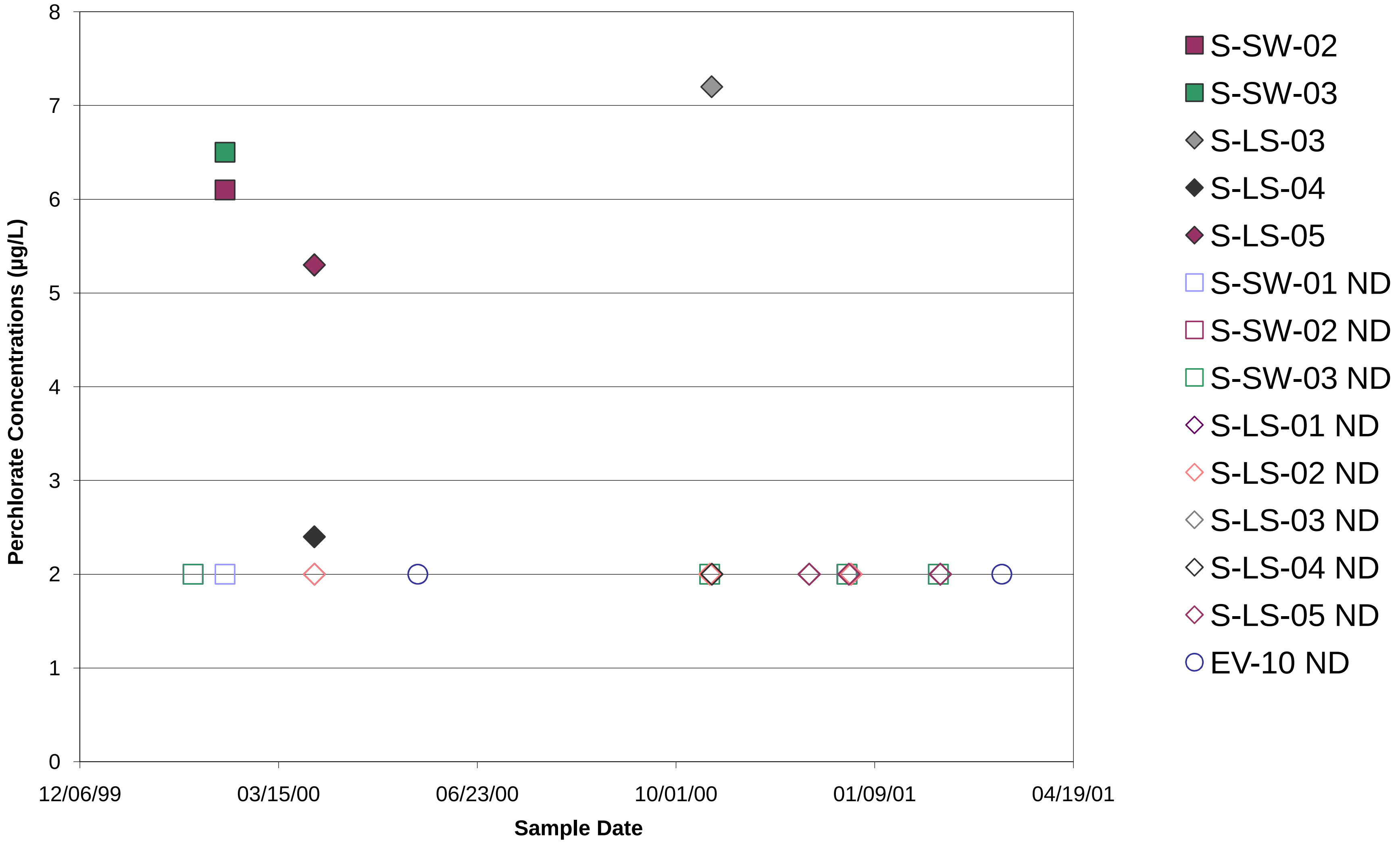


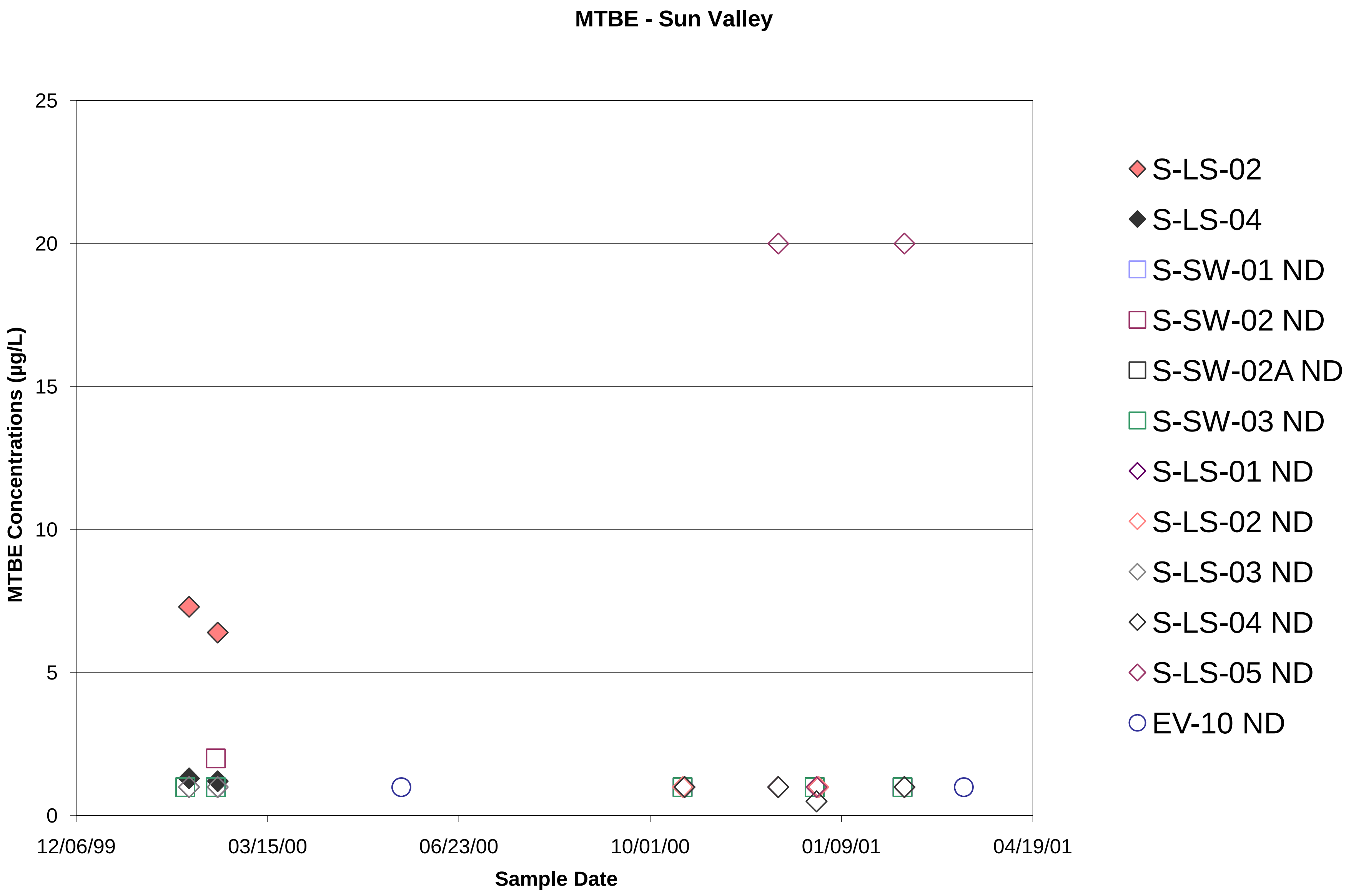
## Total Zinc - Sun Valley



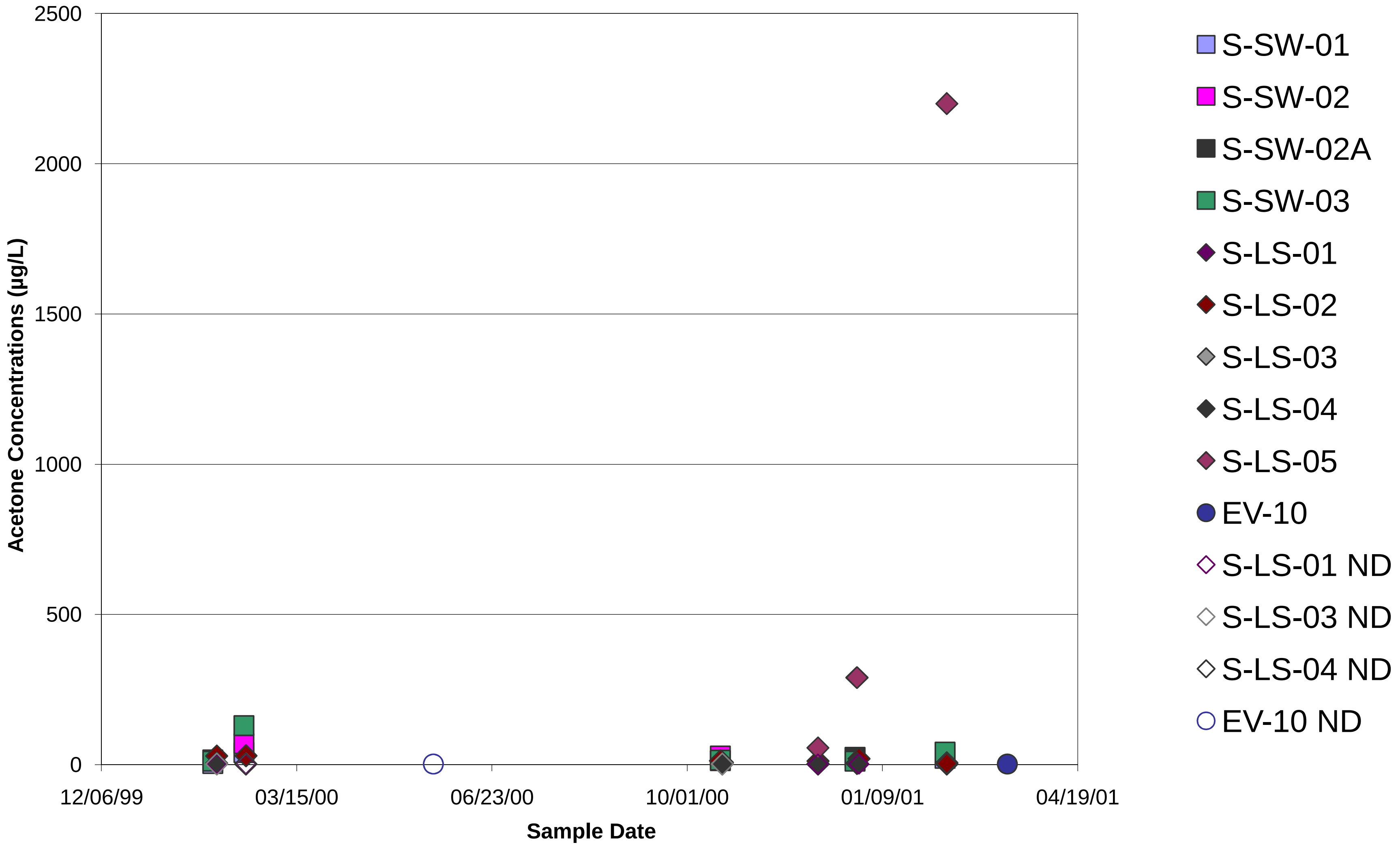
Total Zinc - Sun Valley
Total Zinc Concentrations (µg/L)
1000
100
10
1
12/06/99
01/25/00
03/15/00
05/04/00
06/23/00
08/12/00
10/01/00
11/20/00
01/09/01
02/28/01
04/19/01
Sample Date
S-SW-01
S-SW-02
S-SW-03
S-LS-01
S-LS-02
S-LS-03
S-LS-04
S-LS-05
EV-10
S-LS-01 ND

## Perchlorate - Sun Valley

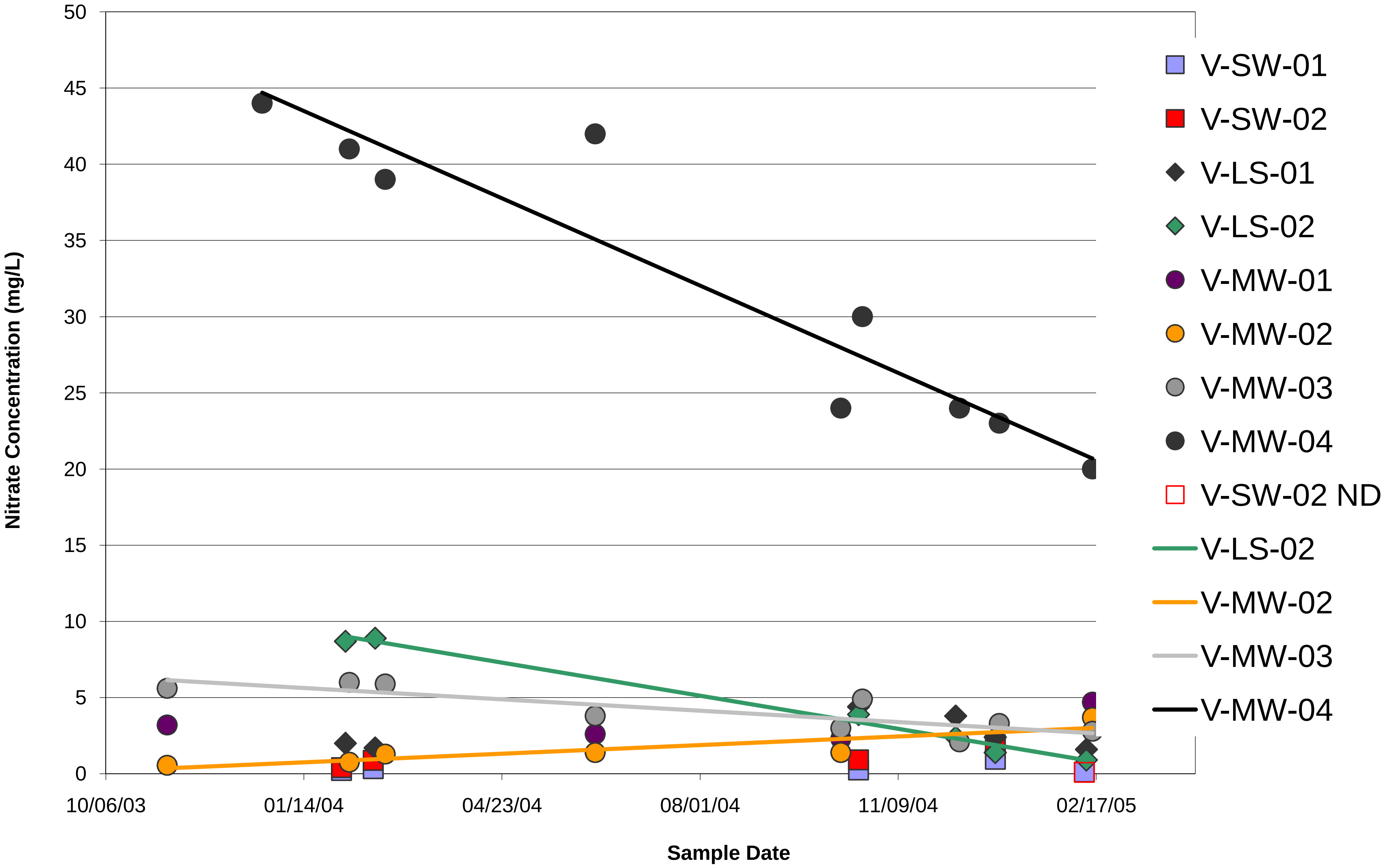


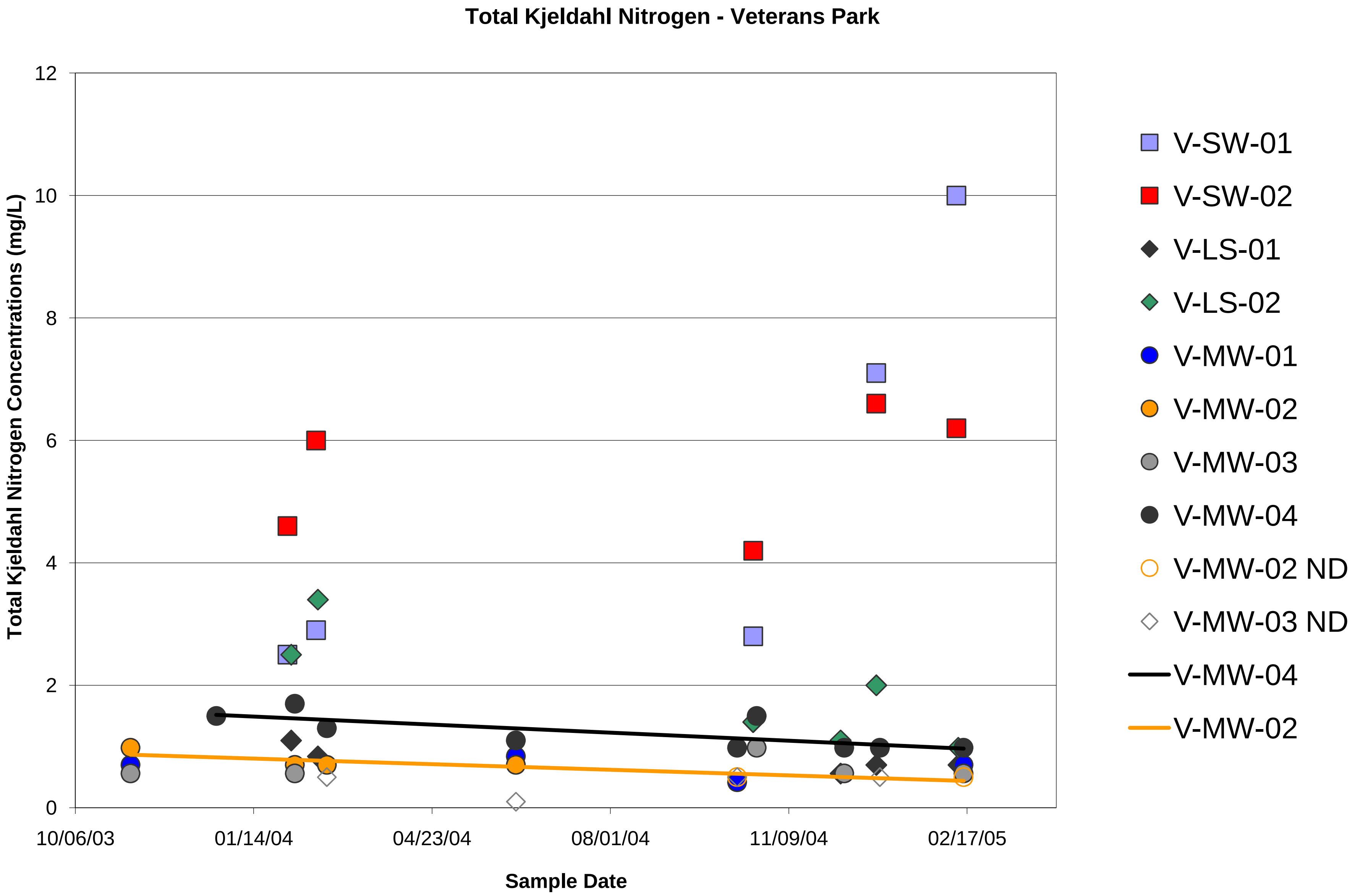

MTBE - Sun Valley
MTBE Concentrations (µg/L)
25
20
15
10
5
0
12/06/99
03/15/00
06/23/00
10/01/00
01/09/01
04/19/01
Sample Date
S-LS-02
S-LS-04
S-SW-01 ND
S-SW-02 ND
S-SW-02A ND
S-SW-03 ND
S-LS-01 ND
S-LS-02 ND
S-LS-03 ND
S-LS-04 ND
S-LS-05 ND
EV-10 ND

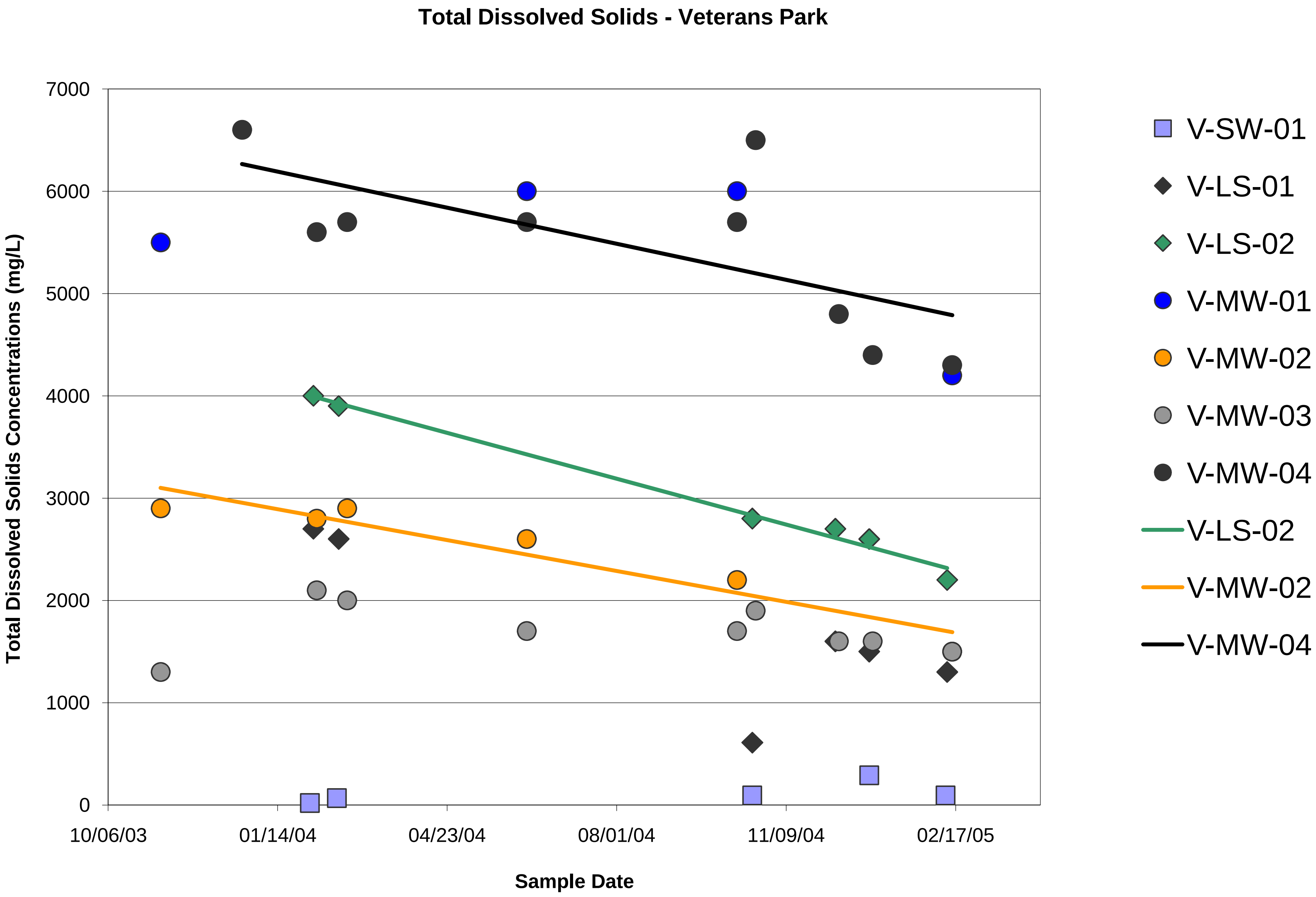
## Acetone - Sun Valley

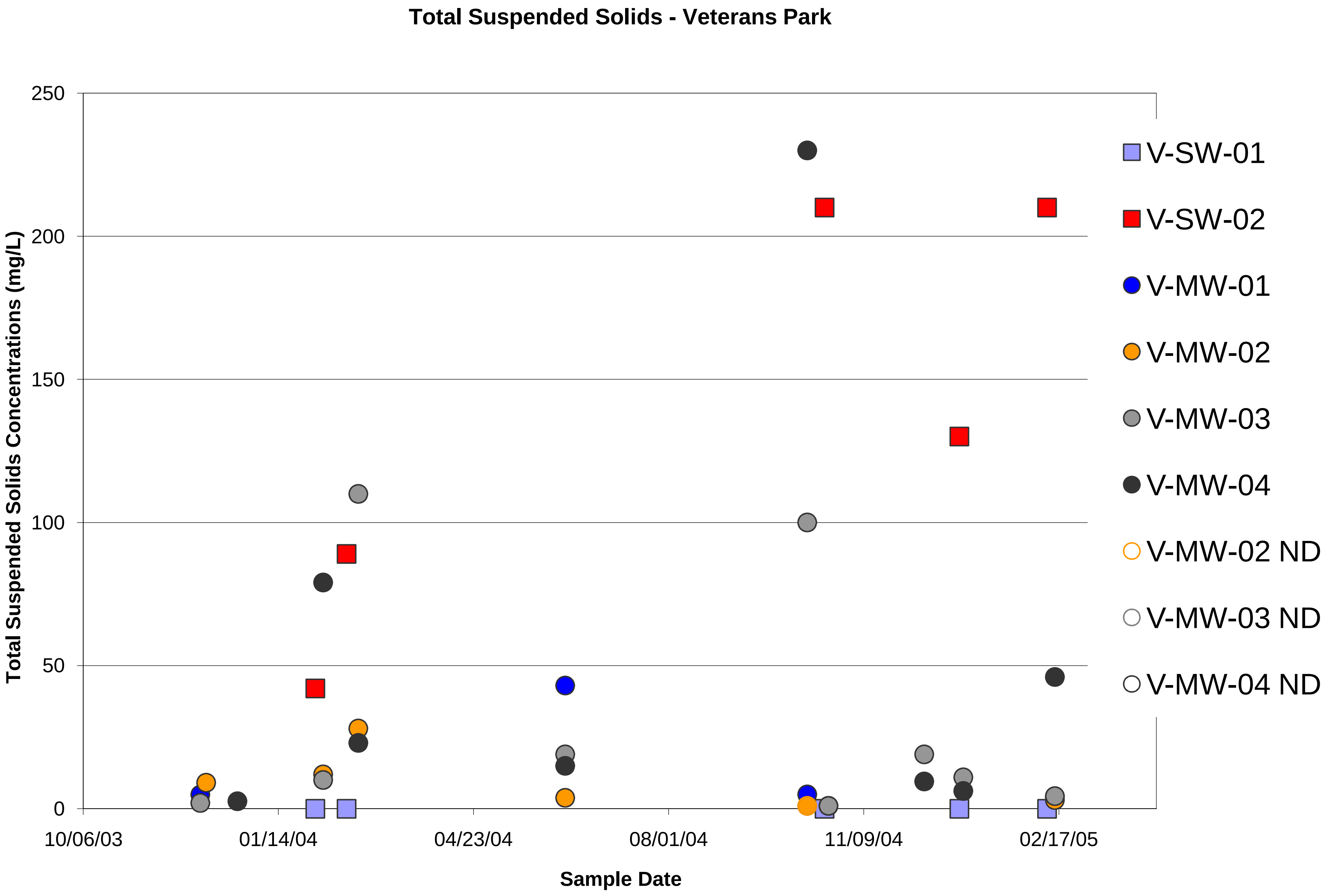


## Nitrate - Veterans Park

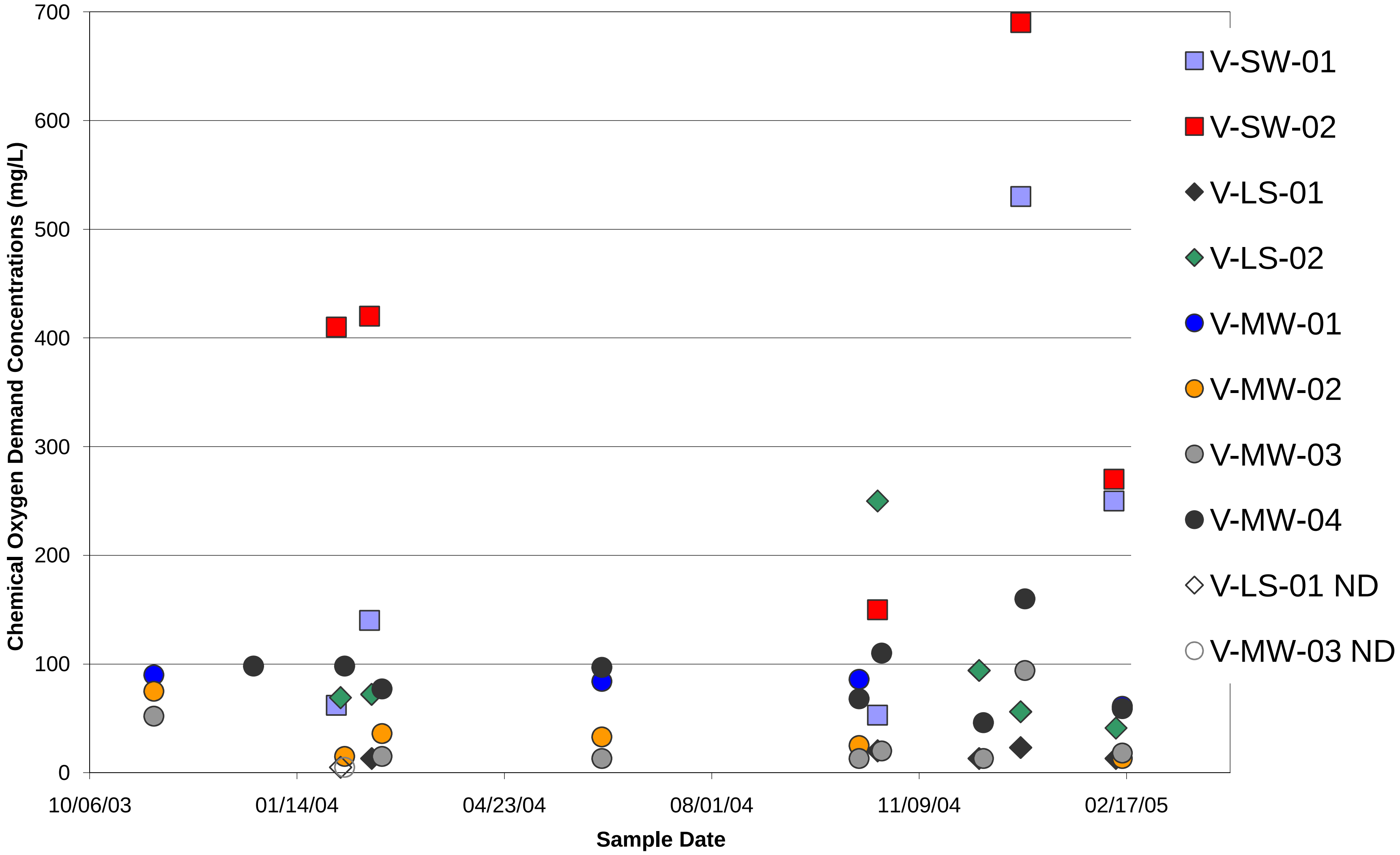


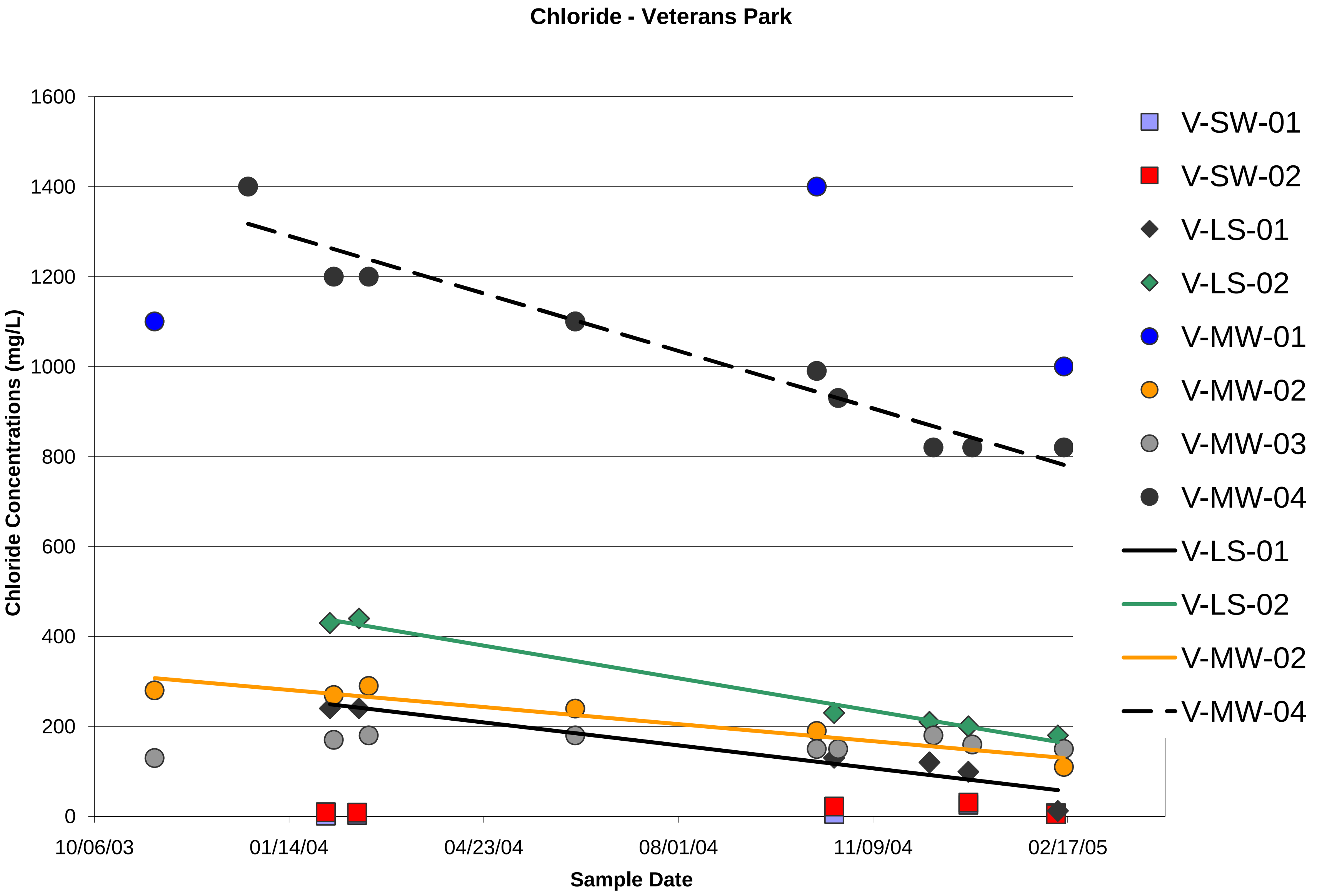

Total Kjeldahl Nitrogen - Veterans Park
Total Kjeldahl Nitrogen Concentrations (mg/L)
12
10
8
6
4
2
0
10/06/03
01/14/04
04/23/04
08/01/04
11/09/04
02/17/05
Sample Date
V-SW-01
V-SW-02
V-LS-01
V-LS-02
V-MW-01
V-MW-02
V-MW-03
V-MW-04
V-MW-02 ND
V-MW-03 ND
V-MW-04
V-MW-02

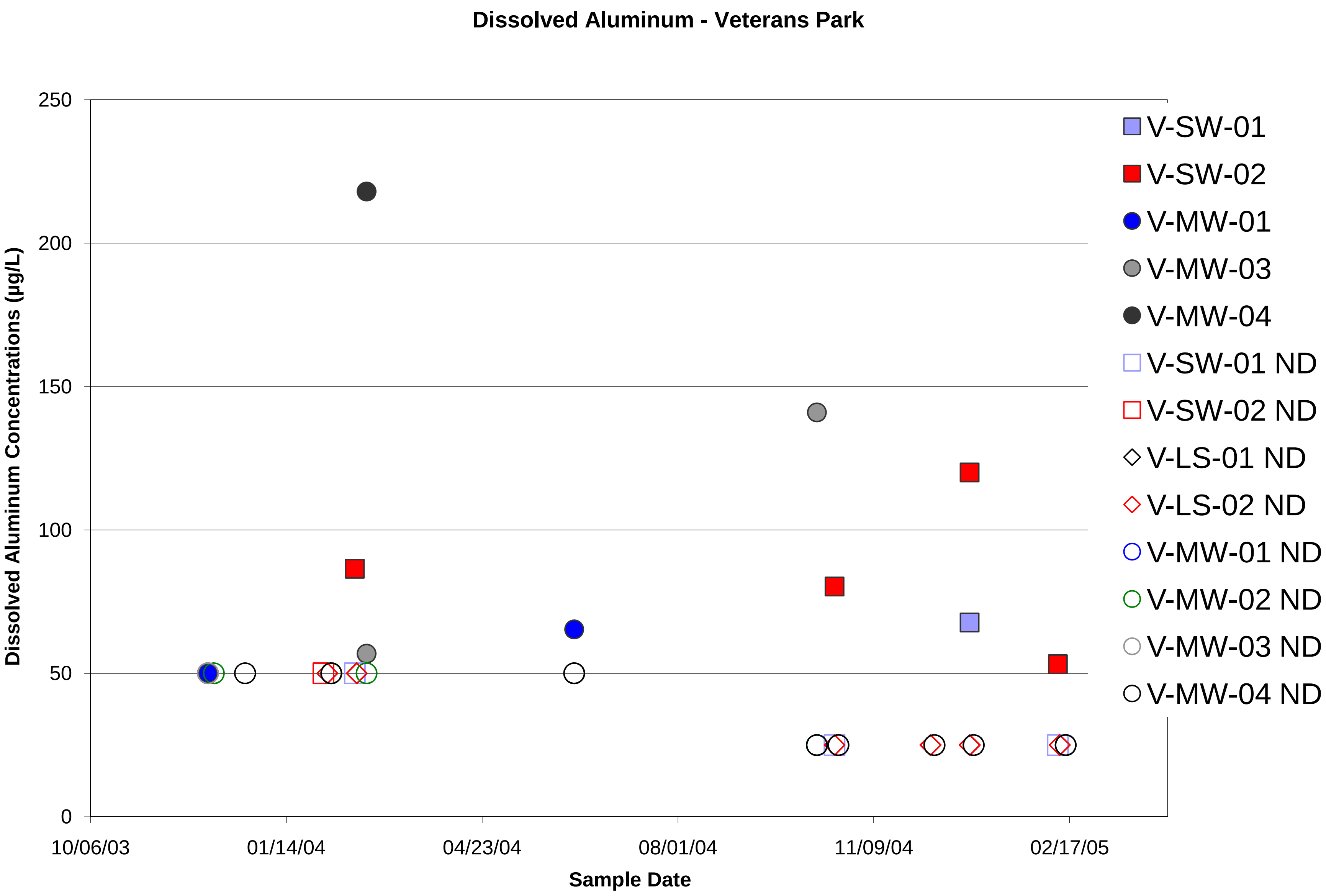

Total Dissolved Solids - Veterans Park
Total Dissolved Solids Concentrations (mg/L)
7000
6000
5000
4000
3000
2000
1000
0
10/06/03
01/14/04
04/23/04
08/01/04
11/09/04
02/17/05
Sample Date
V-SW-01
V-LS-01
V-LS-02
V-MW-01
V-MW-02
V-MW-03
V-MW-04
V-LS-02
V-MW-02
V-MW-04

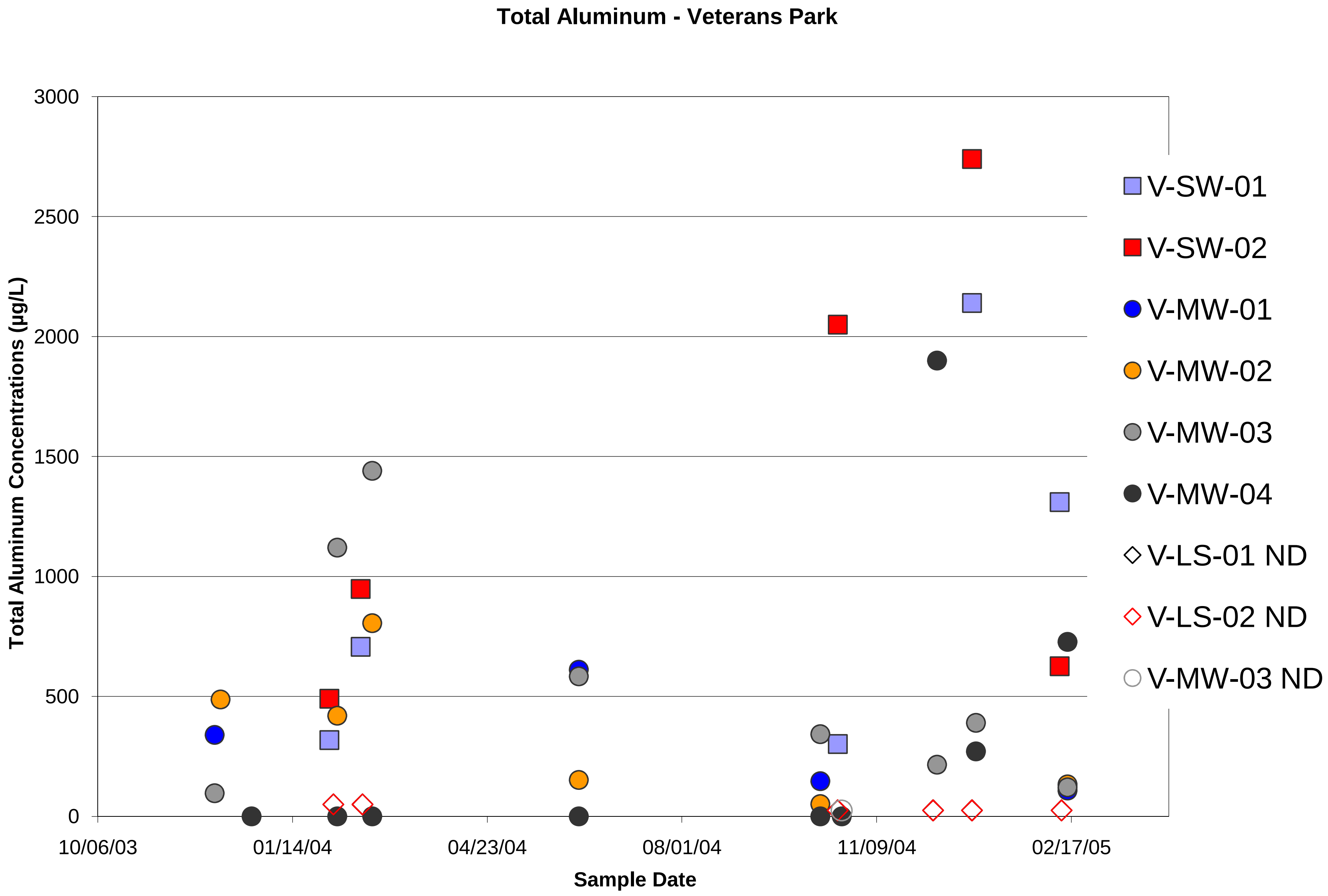

Total Suspended Solids - Veterans Park
Total Suspended Solids Concentrations (mg/L)
250
200
150
100
50
0
10/06/03
01/14/04
04/23/04
08/01/04
11/09/04
02/17/05
Sample Date
V-SW-01
V-SW-02
V-MW-01
V-MW-02
V-MW-03
V-MW-04
V-MW-02 ND
V-MW-03 ND
V-MW-04 ND

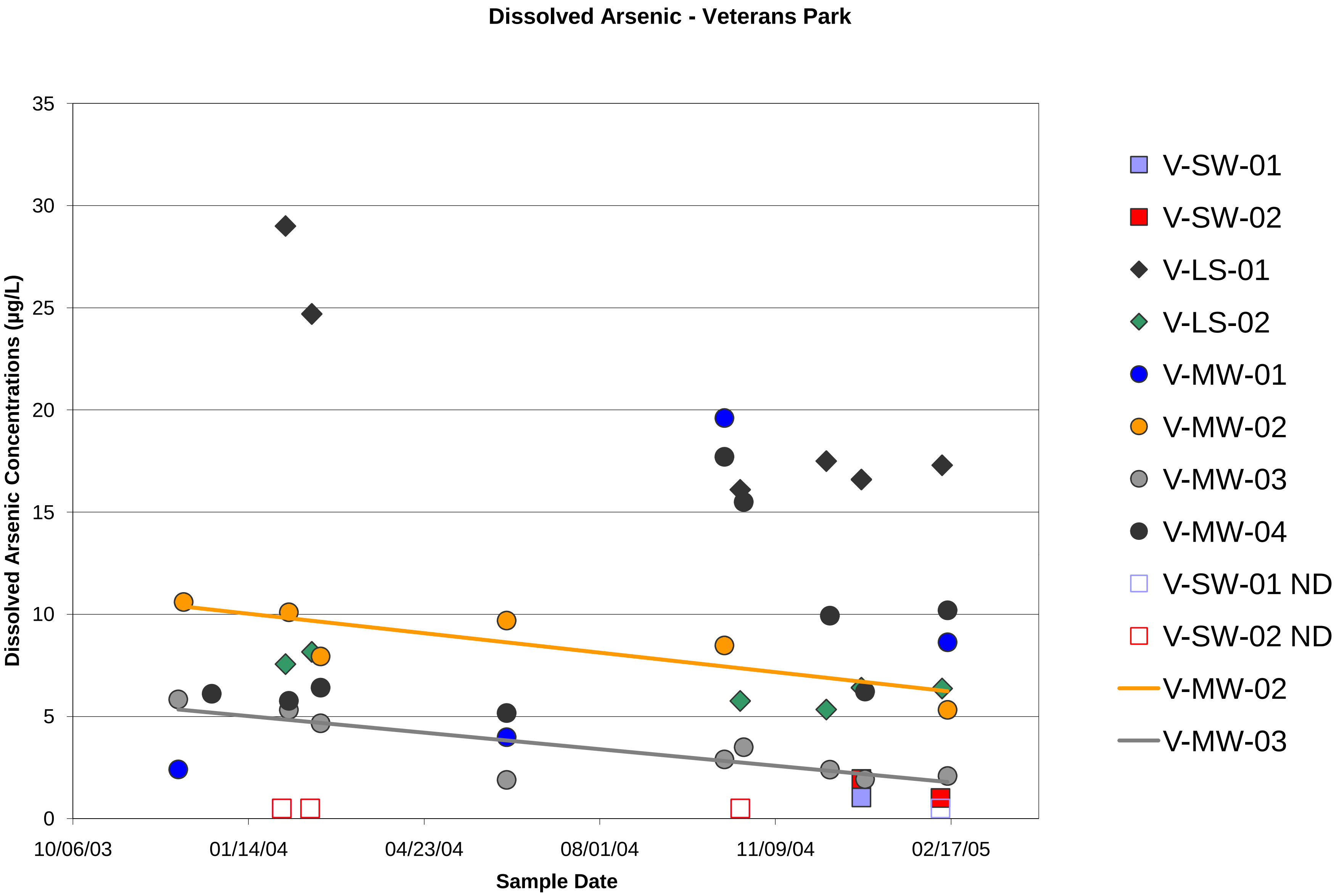
# Chemical Oxygen Demand - Veterans Park

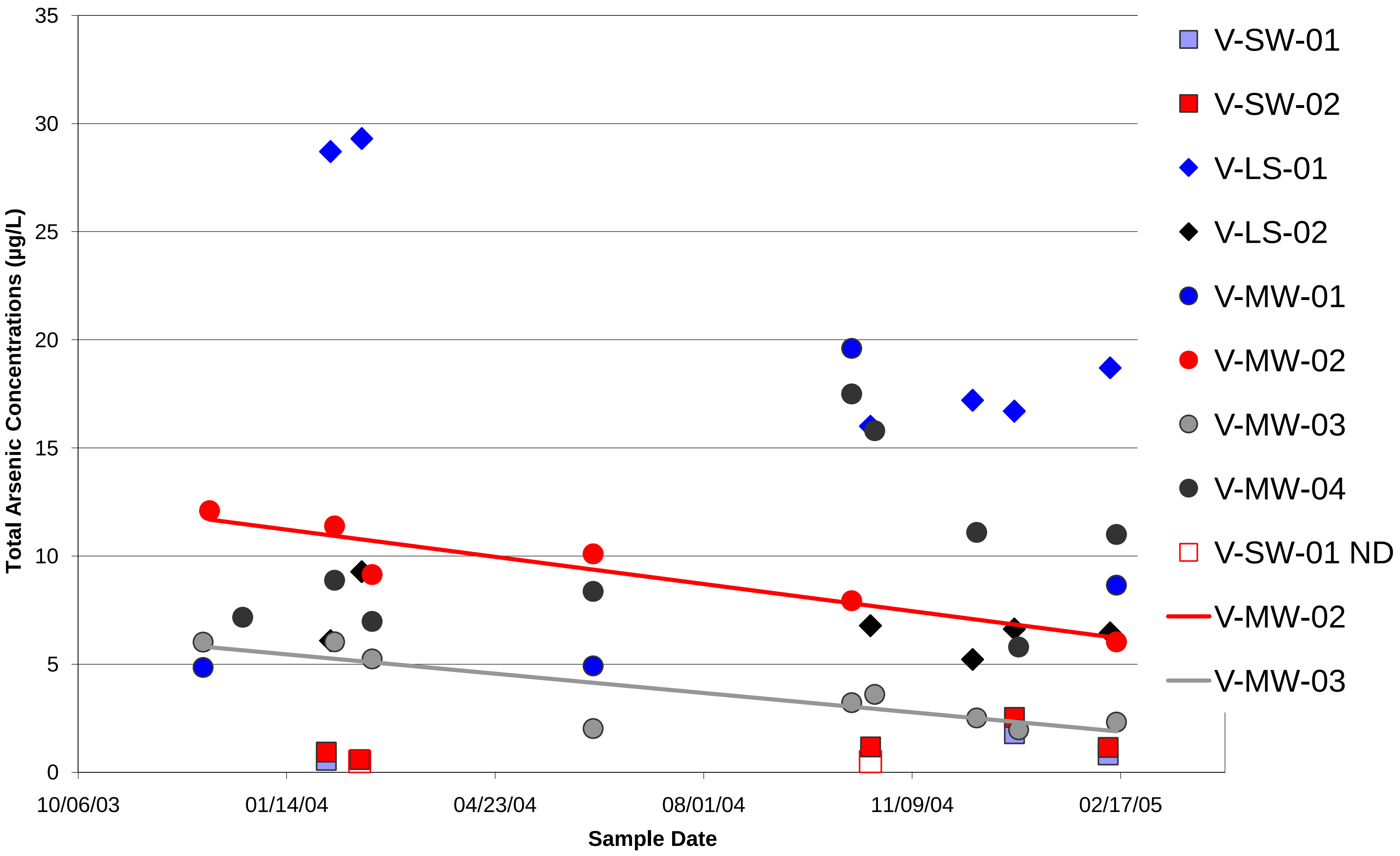



Chloride - Veterans Park
Chloride Concentrations (mg/L)
1600
1400
1200
1000
800
600
400
200
0
10/06/03
01/14/04
04/23/04
08/01/04
11/09/04
02/17/05
Sample Date
V-SW-01
V-SW-02
V-LS-01
V-LS-02
V-MW-01
V-MW-02
V-MW-03
V-MW-04
V-LS-01
V-LS-02
V-MW-02
V-MW-04

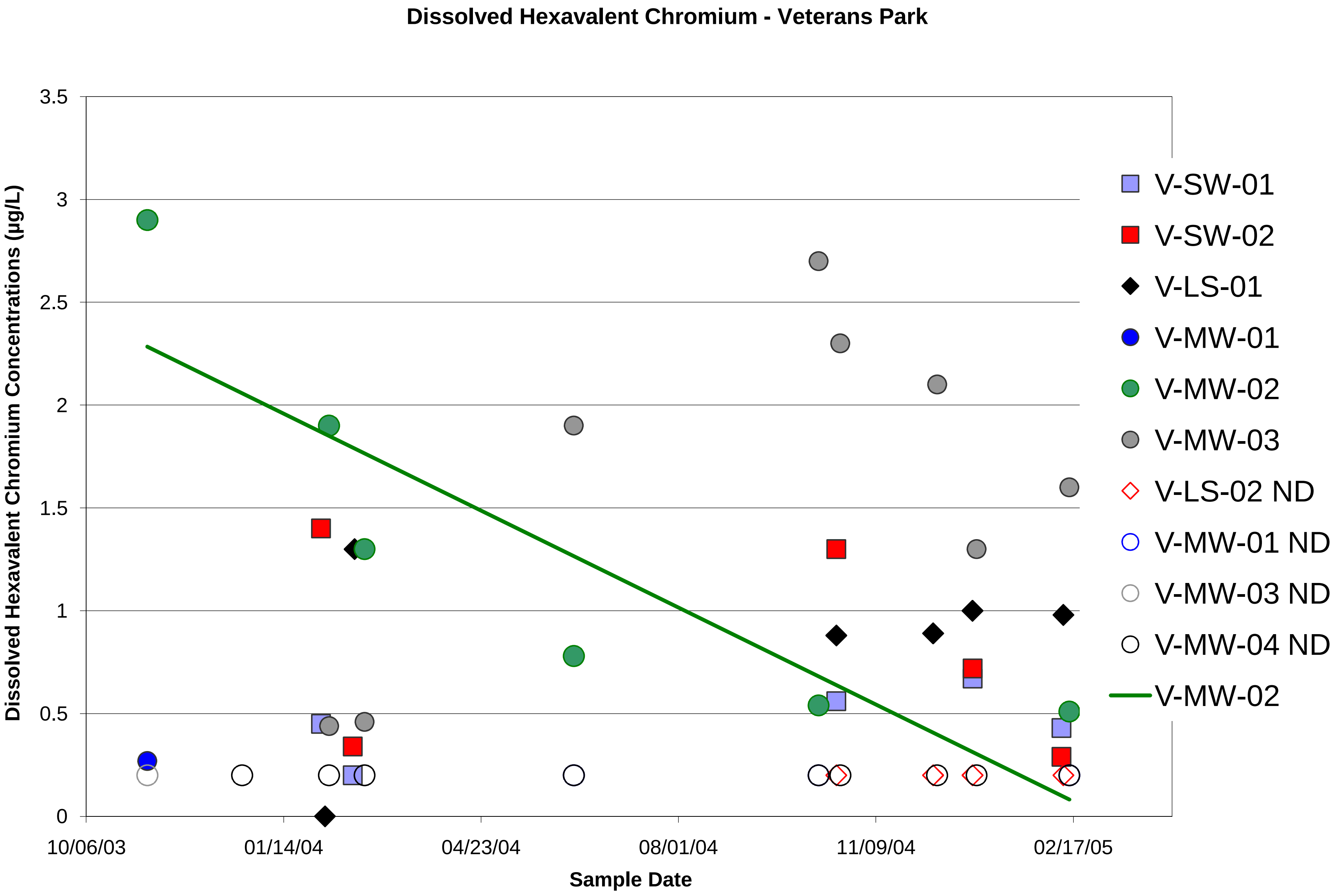

Dissolved Aluminum - Veterans Park
Dissolved Aluminum Concentrations (µg/L)
250
200
150
100
50
0
10/06/03
01/14/04
04/23/04
08/01/04
11/09/04
02/17/05
Sample Date
V-SW-01
V-SW-02
V-MW-01
V-MW-03
V-MW-04
V-SW-01 ND
V-SW-02 ND
V-LS-01 ND
V-LS-02 ND
V-MW-01 ND
V-MW-02 ND
V-MW-03 ND
V-MW-04 ND

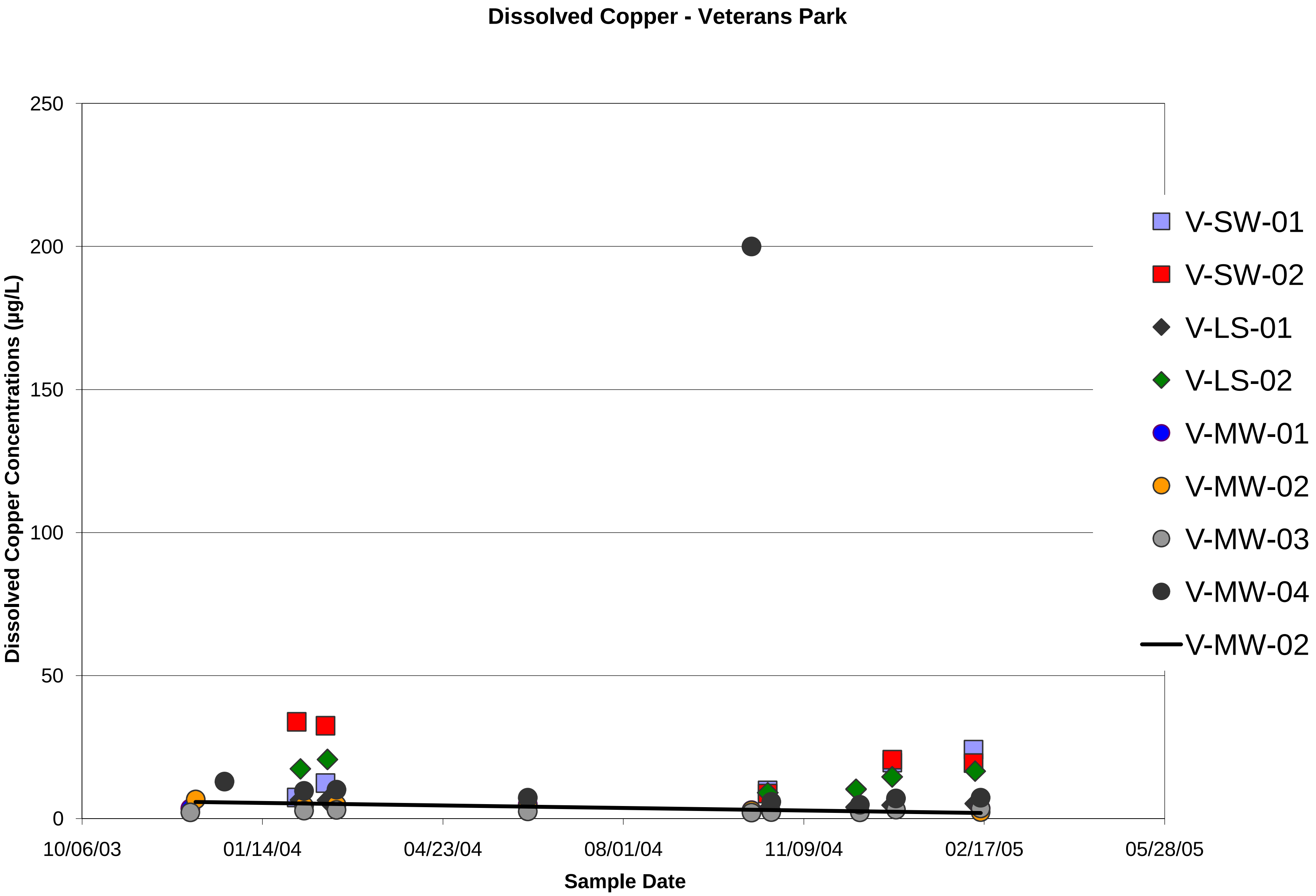

Total Aluminum - Veterans Park
Total Aluminum Concentrations (µg/L)
3000
2500
2000
1500
1000
500
0
10/06/03
01/14/04
04/23/04
08/01/04
11/09/04
02/17/05
Sample Date
V-SW-01
V-SW-02
V-MW-01
V-MW-02
V-MW-03
V-MW-04
V-LS-01 ND
V-LS-02 ND
V-MW-03 ND

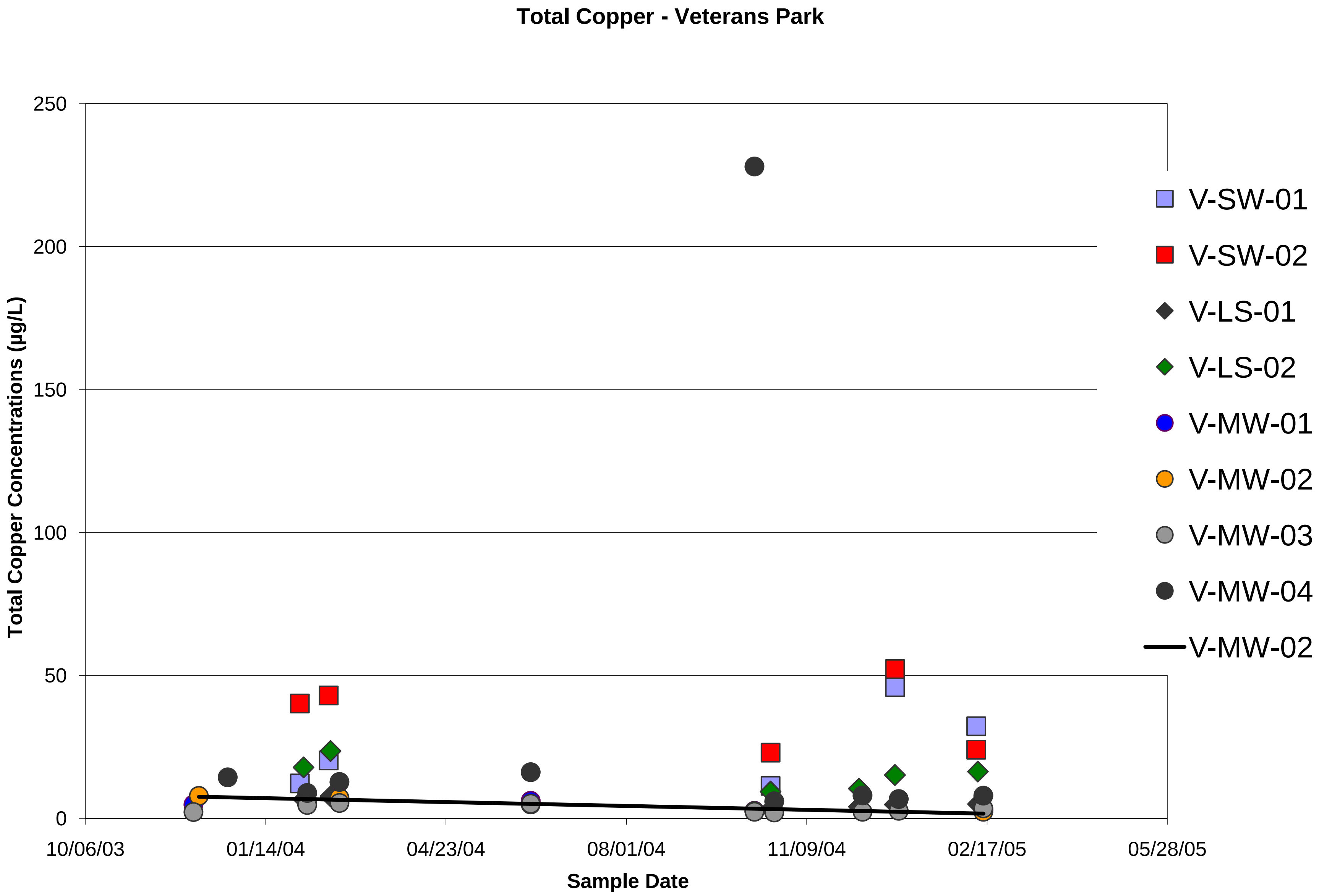
Dissolved Arsenic - Veterans Park
Dissolved Arsenic Concentrations (µg/L)
35
30
25
20
15
10
5
0
10/06/03
01/14/04
04/23/04
08/01/04
11/09/04
02/17/05
Sample Date
V-SW-01
V-SW-02
V-LS-01
V-LS-02
V-MW-01
V-MW-02
V-MW-03
V-MW-04
V-SW-01 ND
V-SW-02 ND
V-MW-02
V-MW-03

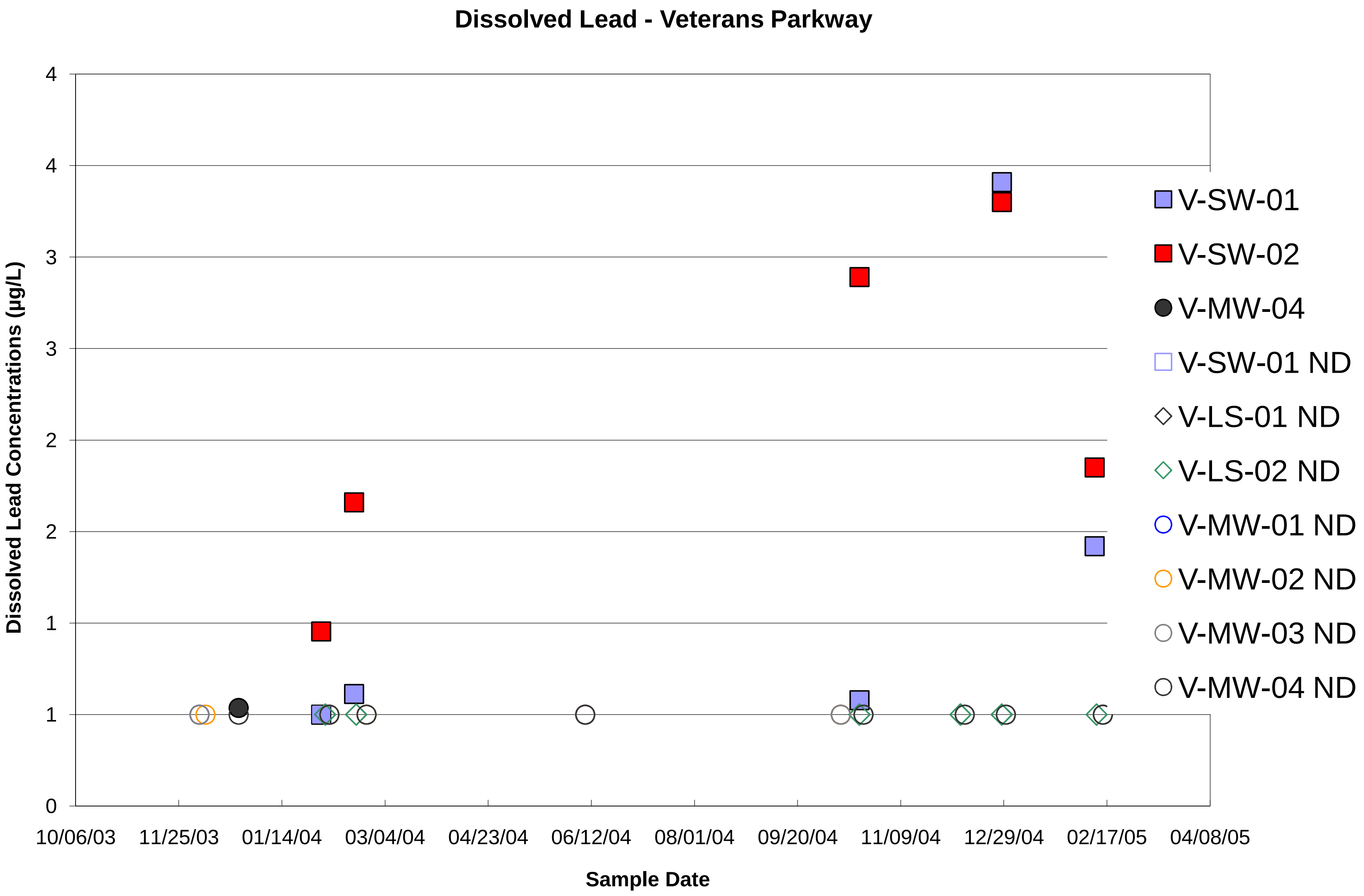


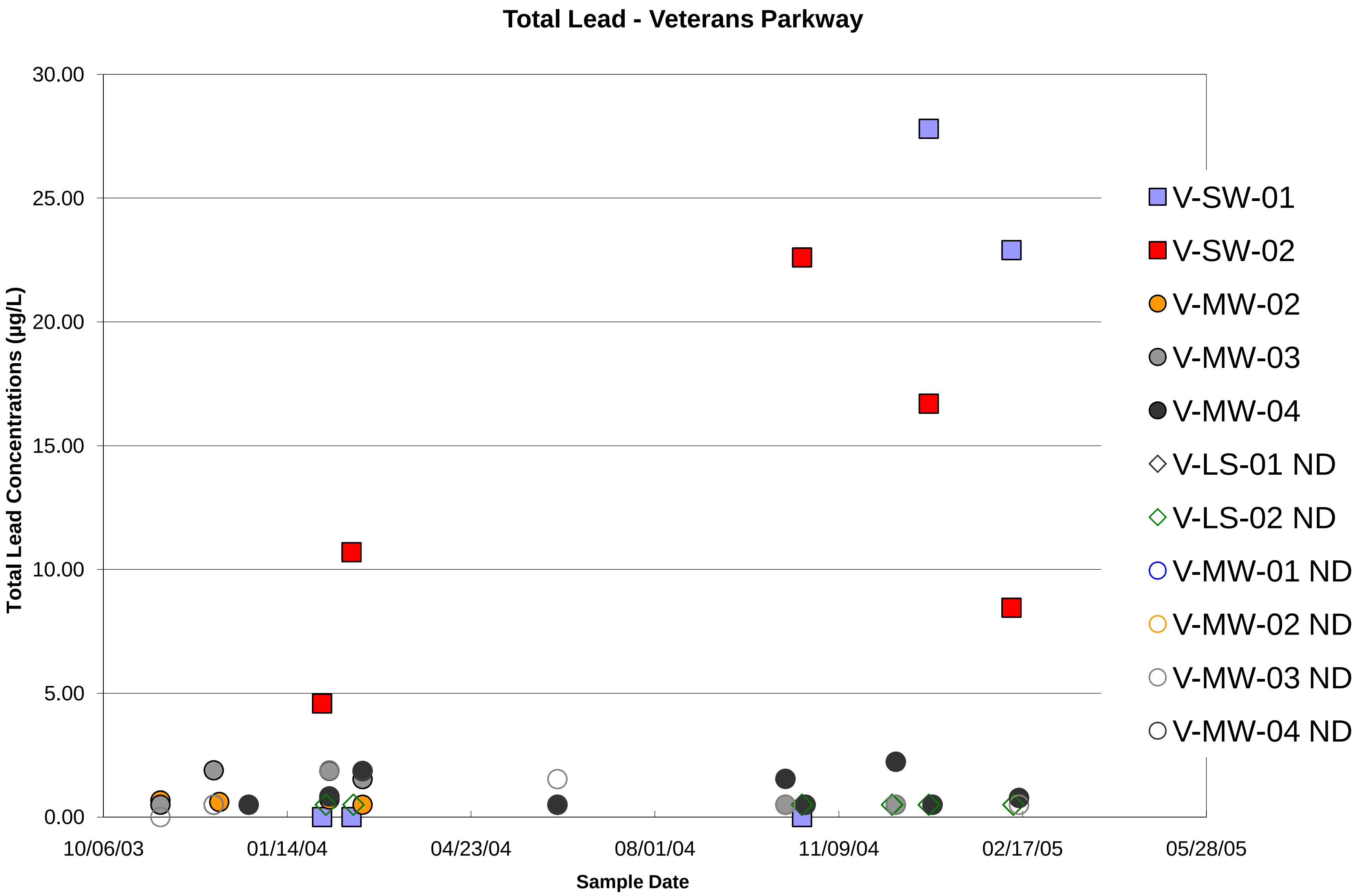
Total Arsenic - Veterans Park

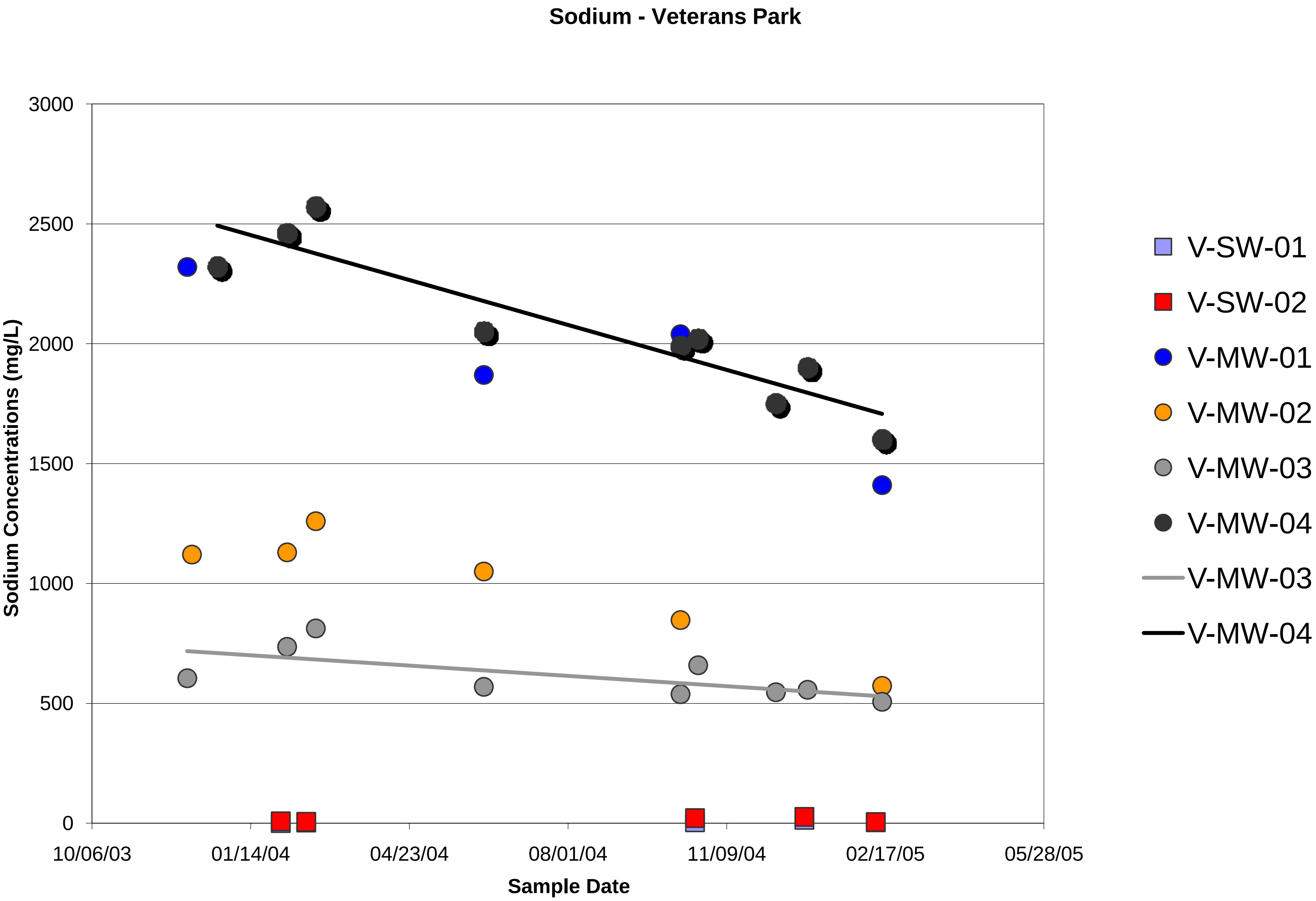
Dissolved Hexavalent Chromium - Veterans Park
Dissolved Hexavalent Chromium Concentrations (µg/L)
0
0.5
1
1.5
2
2.5
3
3.5
10/06/03
01/14/04
04/23/04
08/01/04
11/09/04
02/17/05
Sample Date
V-SW-01
V-SW-02
V-LS-01
V-MW-01
V-MW-02
V-MW-03
V-LS-02 ND
V-MW-01 ND
V-MW-03 ND
V-MW-04 ND
V-MW-02

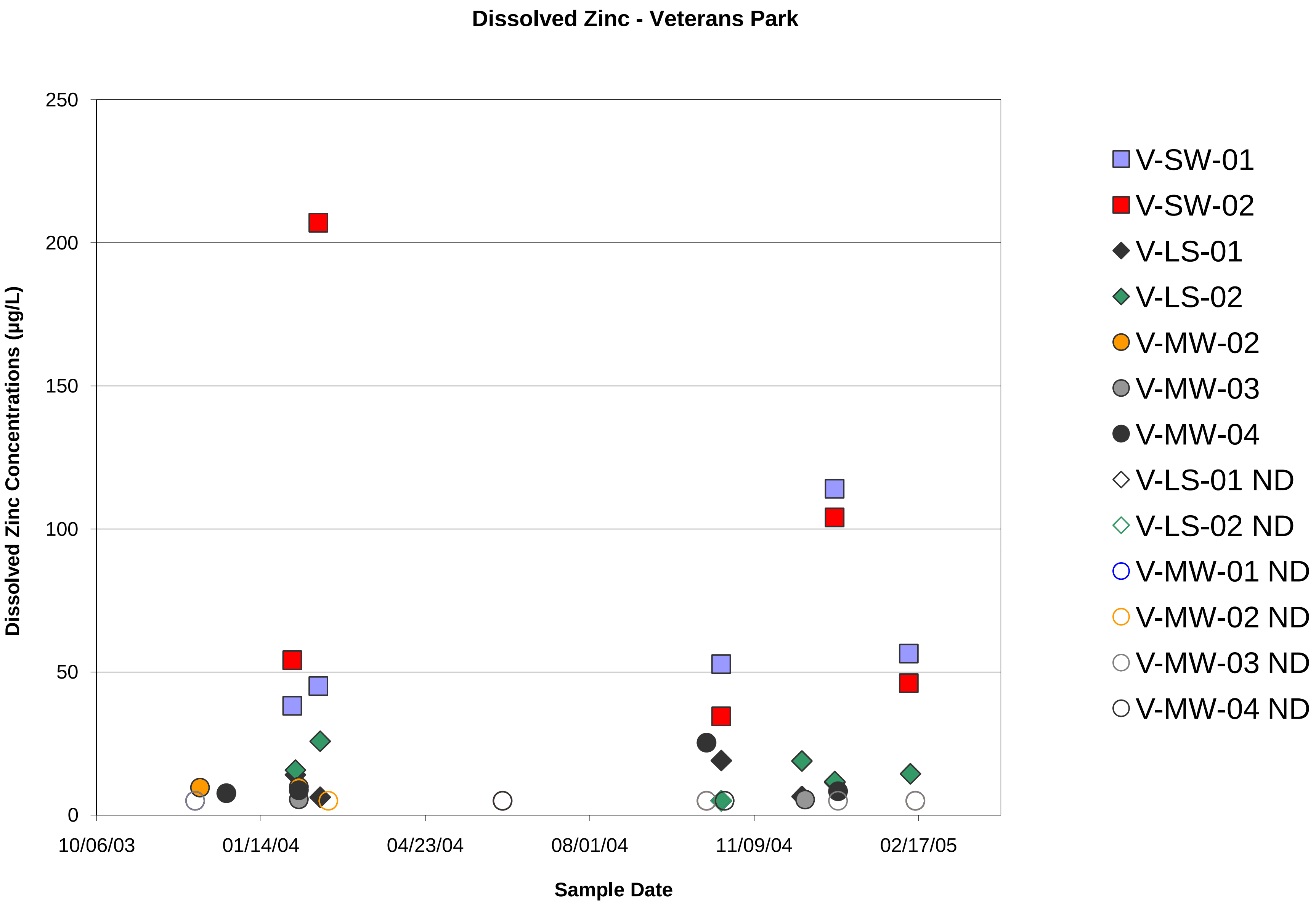

Dissolved Copper - Veterans Park
Dissolved Copper Concentrations (µg/L)
250
200
150
100
50
0
10/06/03
01/14/04
04/23/04
08/01/04
11/09/04
02/17/05
05/28/05
Sample Date
V-SW-01
V-SW-02
V-LS-01
V-LS-02
V-MW-01
V-MW-02
V-MW-03
V-MW-04
V-MW-02

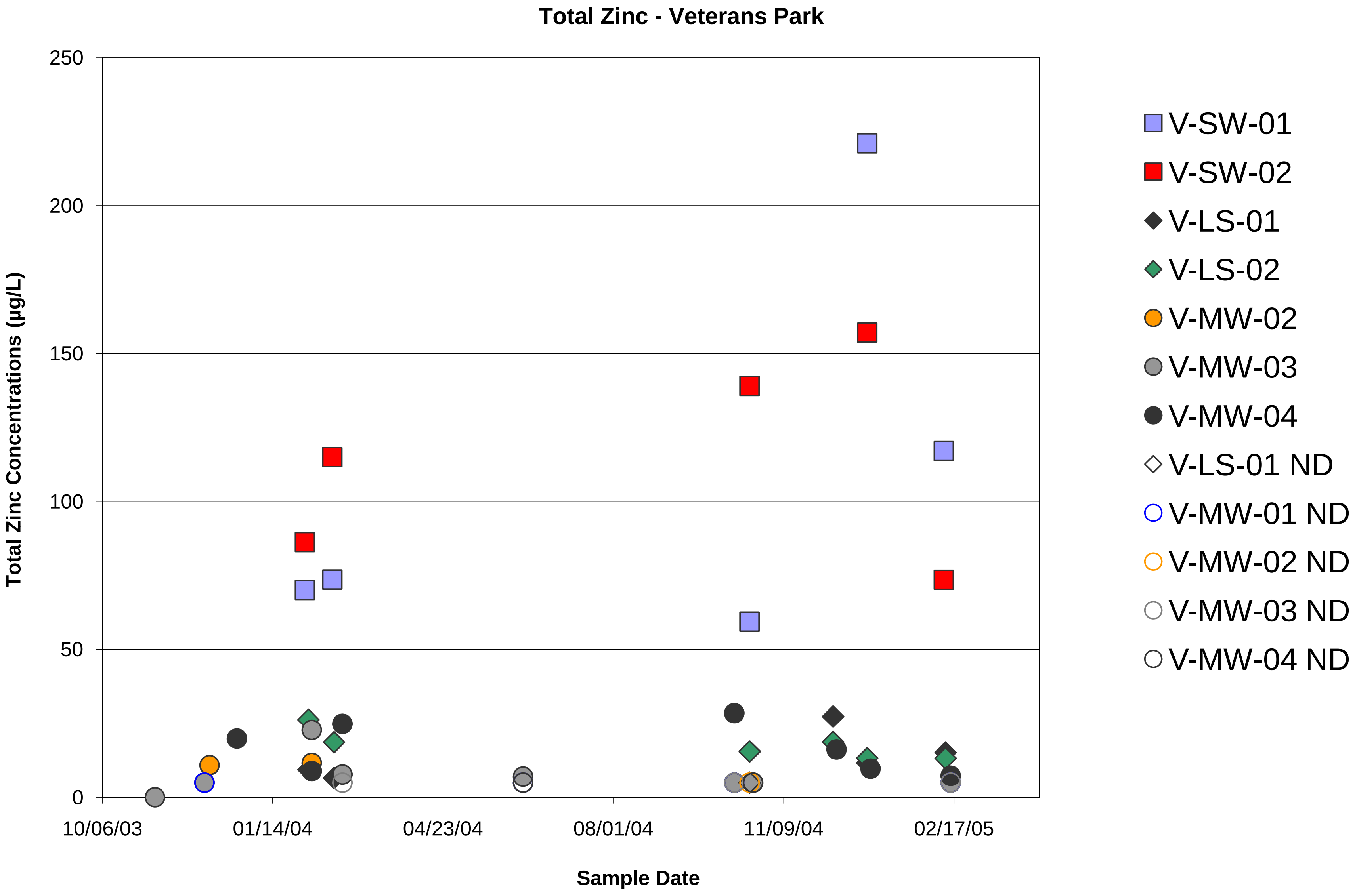

Total Copper - Veterans Park
Total Copper Concentrations (µg/L)
250
200
150
100
50
0
10/06/03
01/14/04
04/23/04
08/01/04
11/09/04
02/17/05
05/28/05
Sample Date
V-SW-01
V-SW-02
V-LS-01
V-LS-02
V-MW-01
V-MW-02
V-MW-03
V-MW-04
V-MW-02

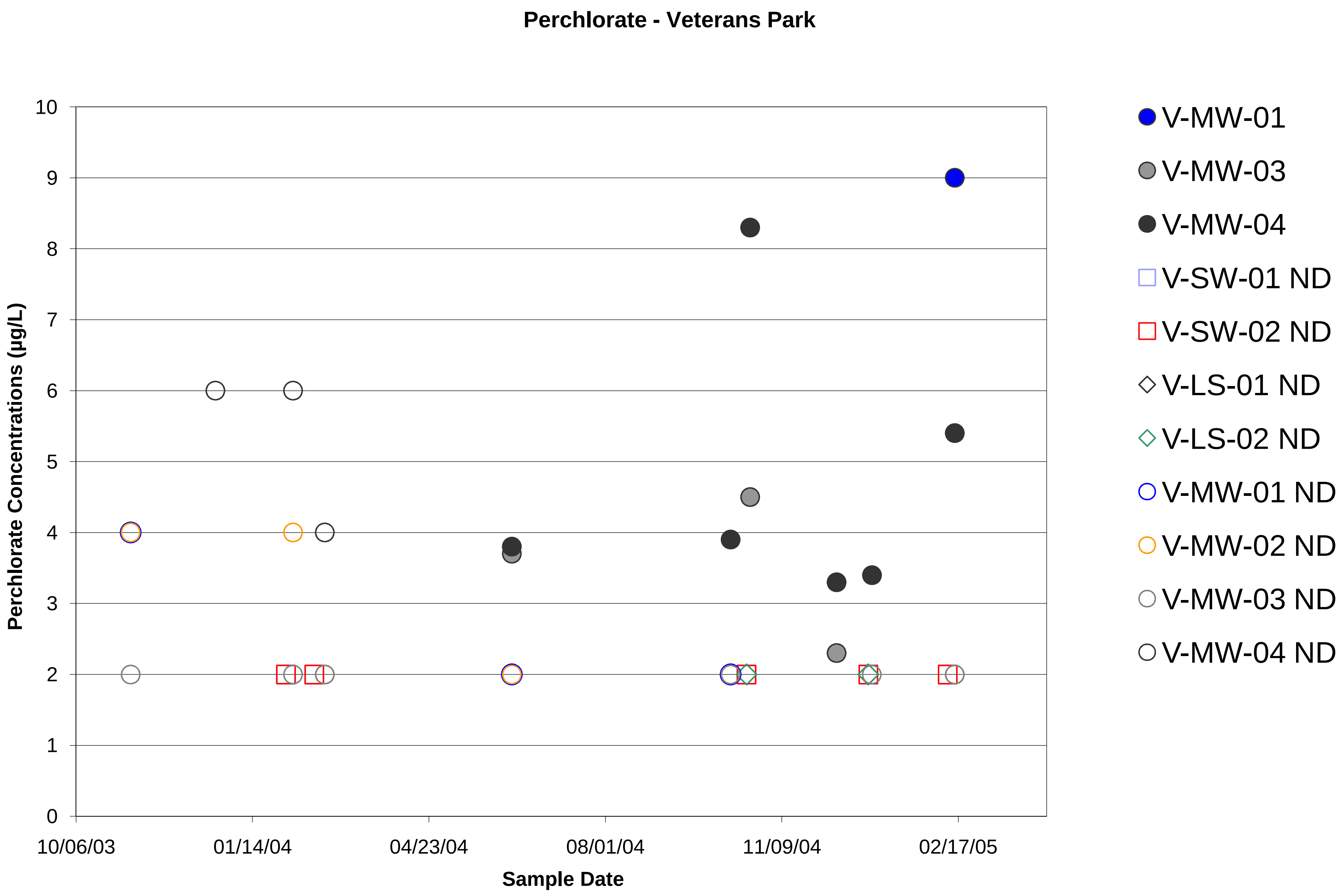

Dissolved Lead - Veterans Parkway
Dissolved Lead Concentrations (µg/L)
4
4
3
3
2
2
1
1
0
10/06/03
11/25/03
01/14/04
03/04/04
04/23/04
06/12/04
08/01/04
09/20/04
11/09/04
12/29/04
02/17/05
04/08/05
Sample Date
V-SW-01
V-SW-02
V-MW-04
V-SW-01 ND
V-LS-01 ND
V-LS-02 ND
V-MW-01 ND
V-MW-02 ND
V-MW-03 ND
V-MW-04 ND

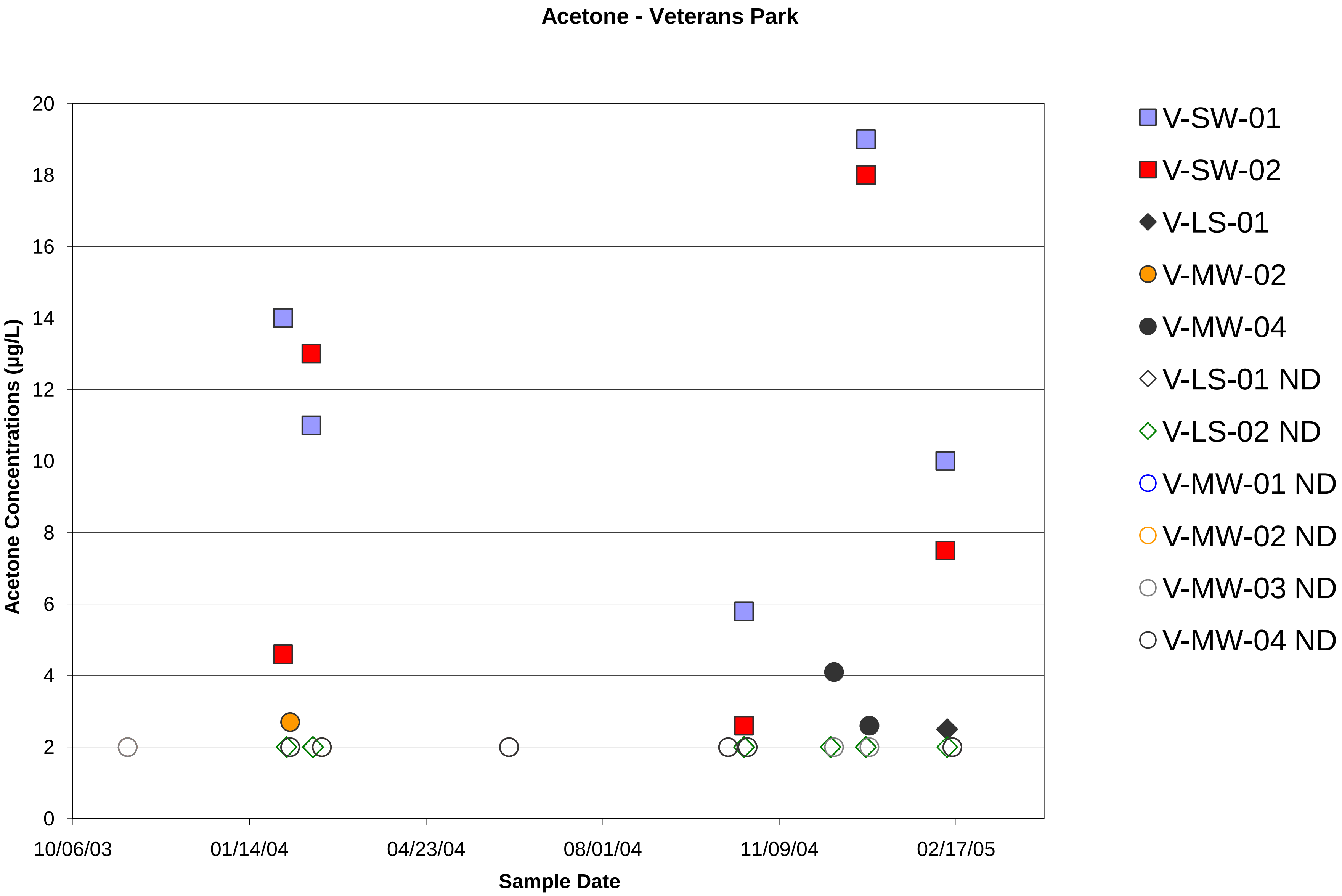

Total Lead - Veterans Parkway
Total Lead Concentrations (µg/L)
30.00
25.00
20.00
15.00
10.00
5.00
0.00
10/06/03
01/14/04
04/23/04
08/01/04
11/09/04
02/17/05
05/28/05
Sample Date
V-SW-01
V-SW-02
V-MW-02
V-MW-03
V-MW-04
V-LS-01 ND
V-LS-02 ND
V-MW-01 ND
V-MW-02 ND
V-MW-03 ND
V-MW-04 ND

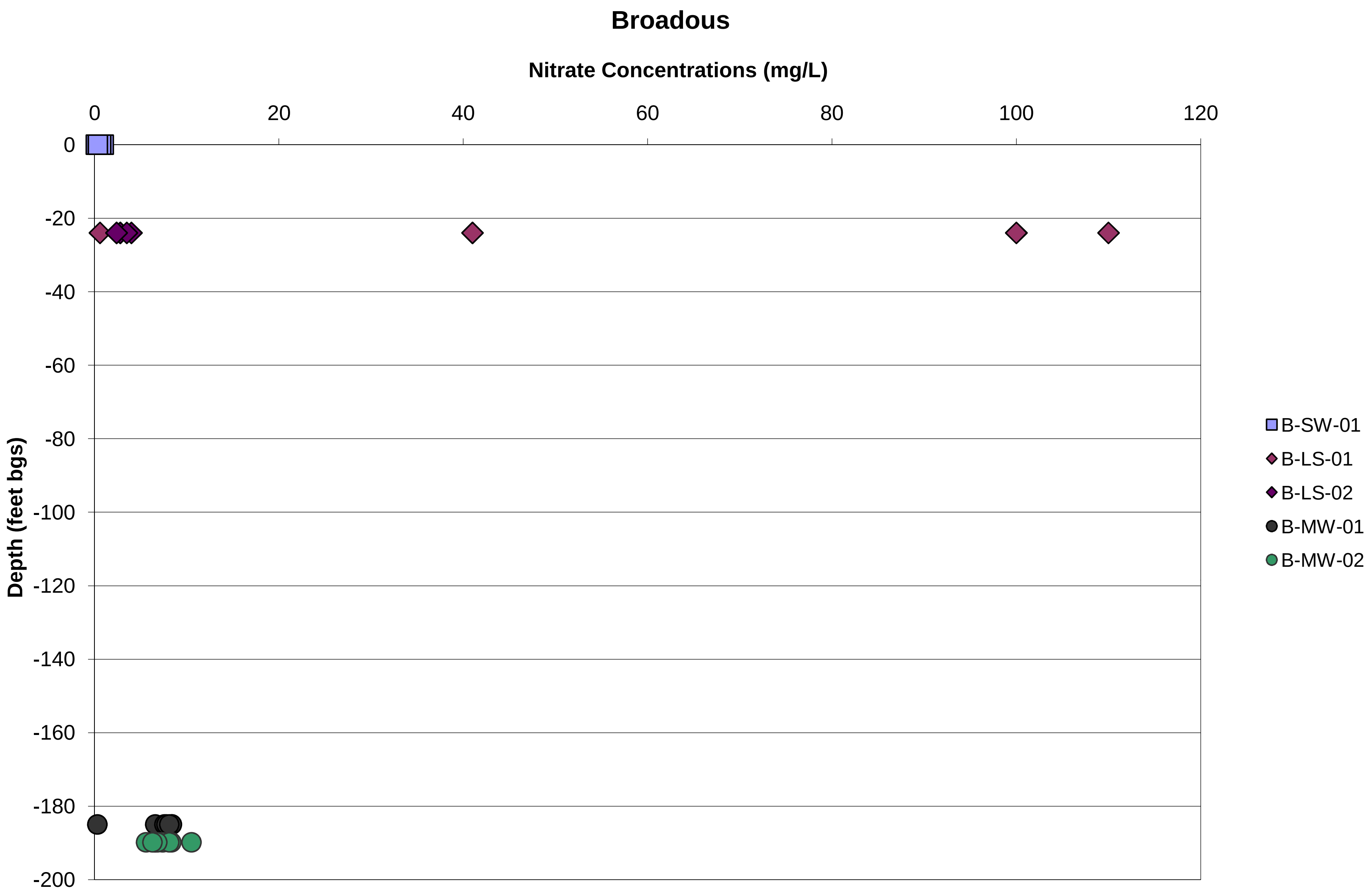

Sodium - Veterans Park
Sodium Concentrations (mg/L)
3000
2500
2000
1500
1000
500
0
10/06/03
01/14/04
04/23/04
08/01/04
11/09/04
02/17/05
05/28/05
Sample Date
V-SW-01
V-SW-02
V-MW-01
V-MW-02
V-MW-03
V-MW-04
V-MW-03
V-MW-04

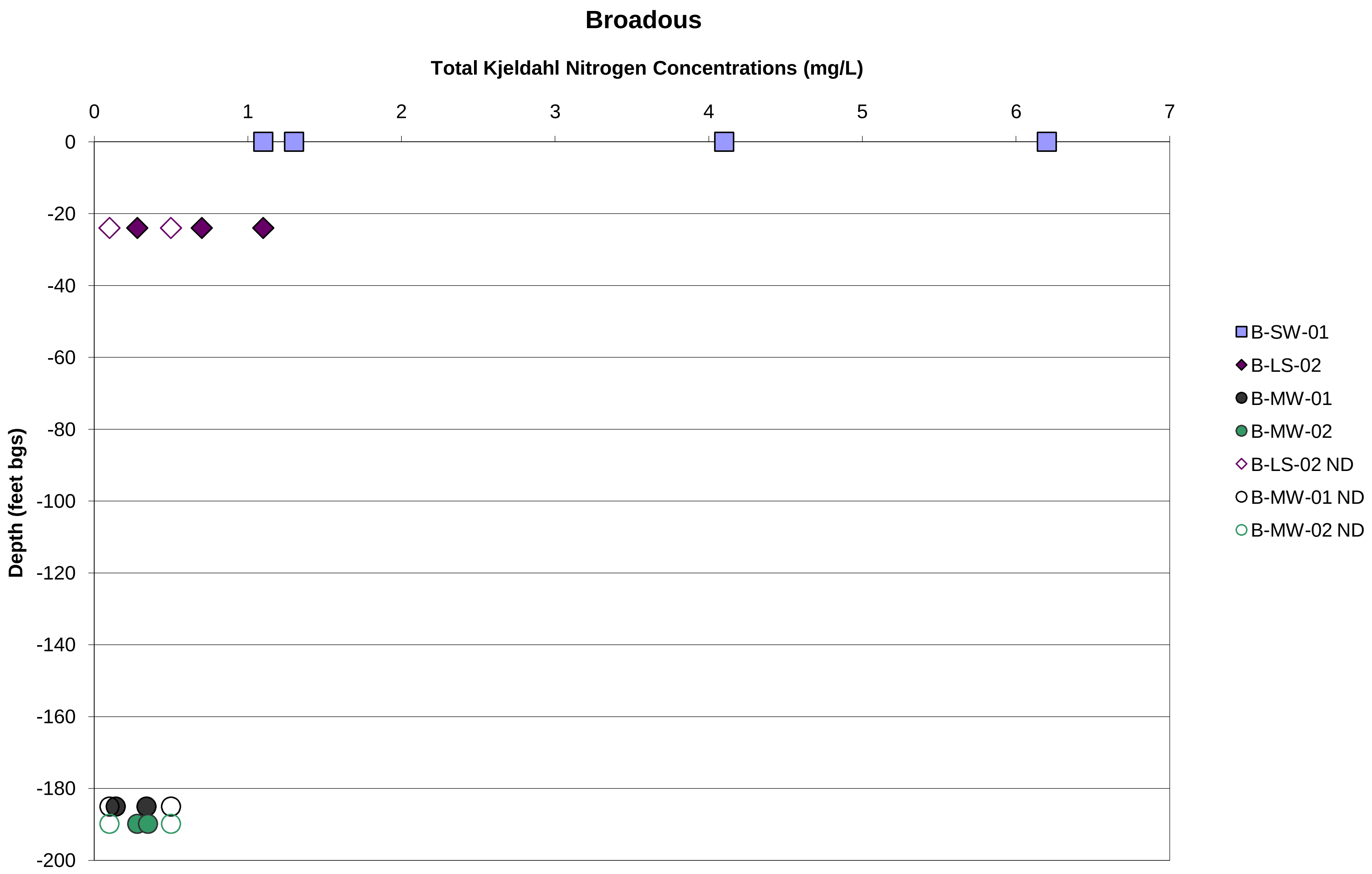

Dissolved Zinc - Veterans Park
Dissolved Zinc Concentrations (µg/L)
250
200
150
100
50
0
10/06/03
01/14/04
04/23/04
08/01/04
11/09/04
02/17/05
Sample Date
V-SW-01
V-SW-02
V-LS-01
V-LS-02
V-MW-02
V-MW-03
V-MW-04
V-LS-01 ND
V-LS-02 ND
V-MW-01 ND
V-MW-02 ND
V-MW-03 ND
V-MW-04 ND

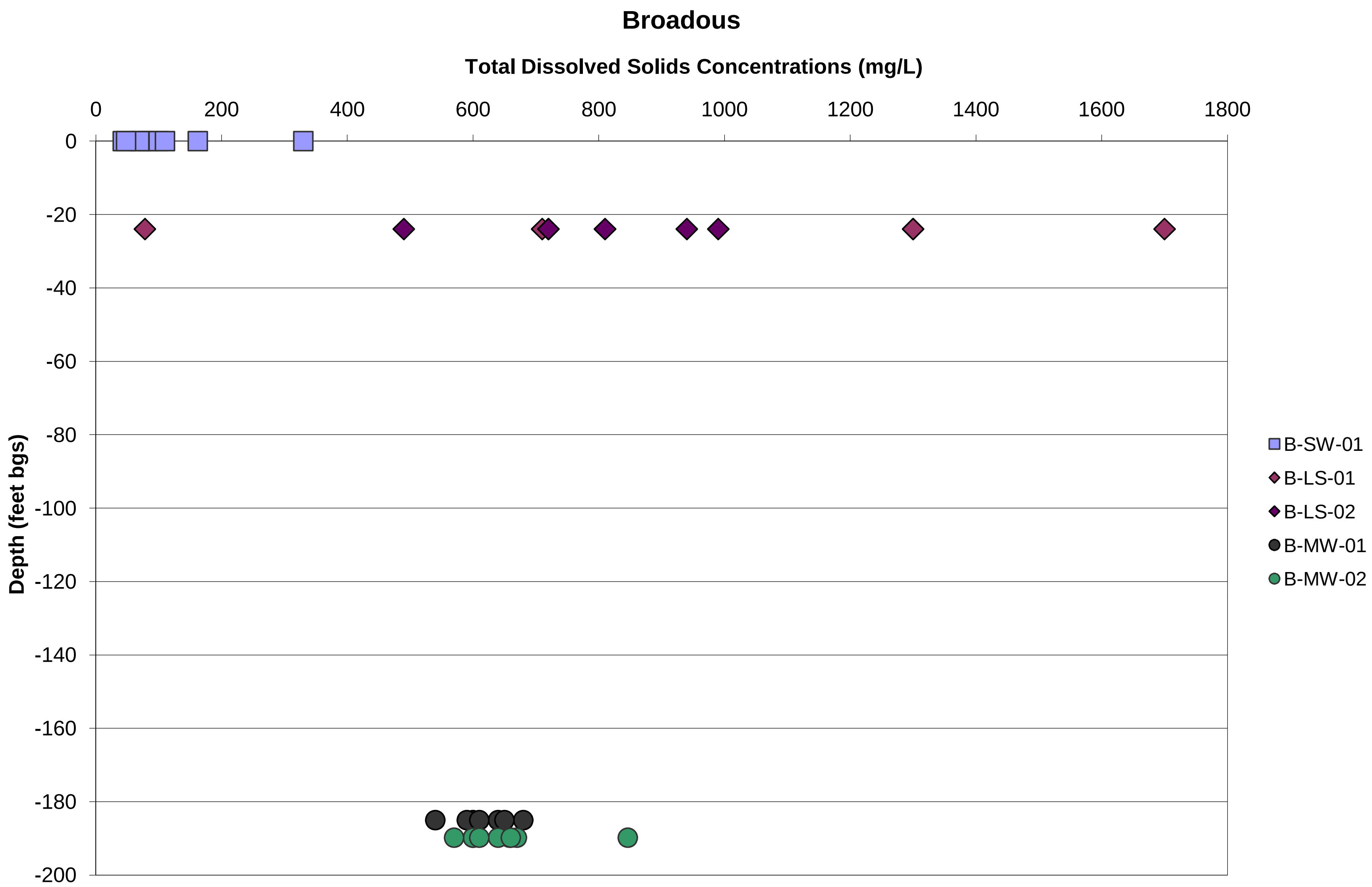

Total Zinc - Veterans Park
Total Zinc Concentrations (µg/L)
250
200
150
100
50
0
10/06/03
01/14/04
04/23/04
08/01/04
11/09/04
02/17/05
Sample Date
V-SW-01
V-SW-02
V-LS-01
V-LS-02
V-MW-02
V-MW-03
V-MW-04
V-LS-01 ND
V-MW-01 ND
V-MW-02 ND
V-MW-03 ND
V-MW-04 ND

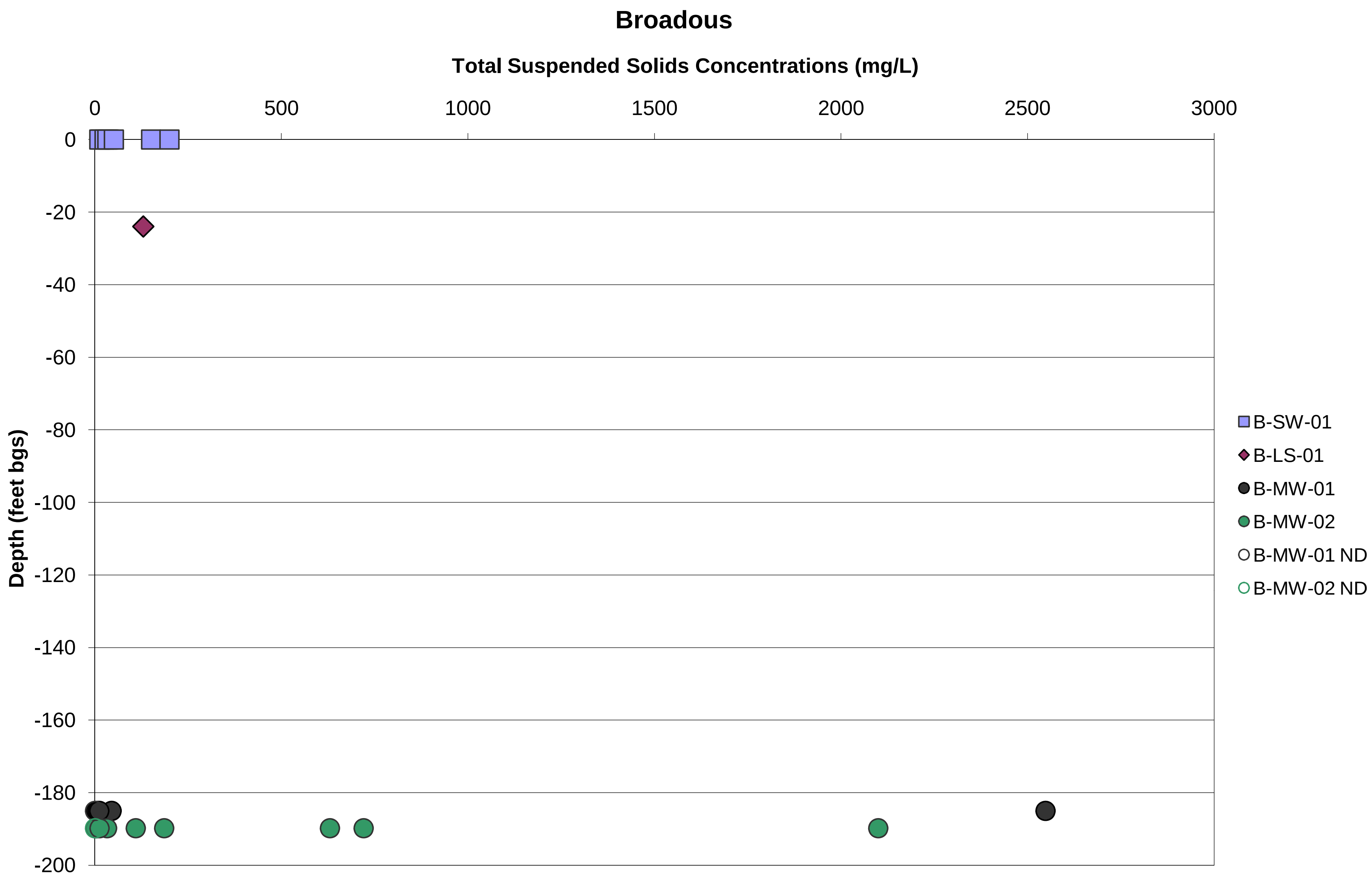

Perchlorate - Veterans Park
Perchlorate Concentrations (µg/L)
10
9
8
7
6
5
4
3
2
1
0
10/06/03
01/14/04
04/23/04
08/01/04
11/09/04
02/17/05
Sample Date
V-MW-01
V-MW-03
V-MW-04
V-SW-01 ND
V-SW-02 ND
V-LS-01 ND
V-LS-02 ND
V-MW-01 ND
V-MW-02 ND
V-MW-03 ND
V-MW-04 ND


Acetone - Veterans Park
Acetone Concentrations (µg/L)
0
2
4
6
8
10
12
14
16
18
20
10/06/03
01/14/04
04/23/04
08/01/04
11/09/04
02/17/05
Sample Date
V-SW-01
V-SW-02
V-LS-01
V-MW-02
V-MW-04
V-LS-01 ND
V-LS-02 ND
V-MW-01 ND
V-MW-02 ND
V-MW-03 ND
V-MW-04 ND

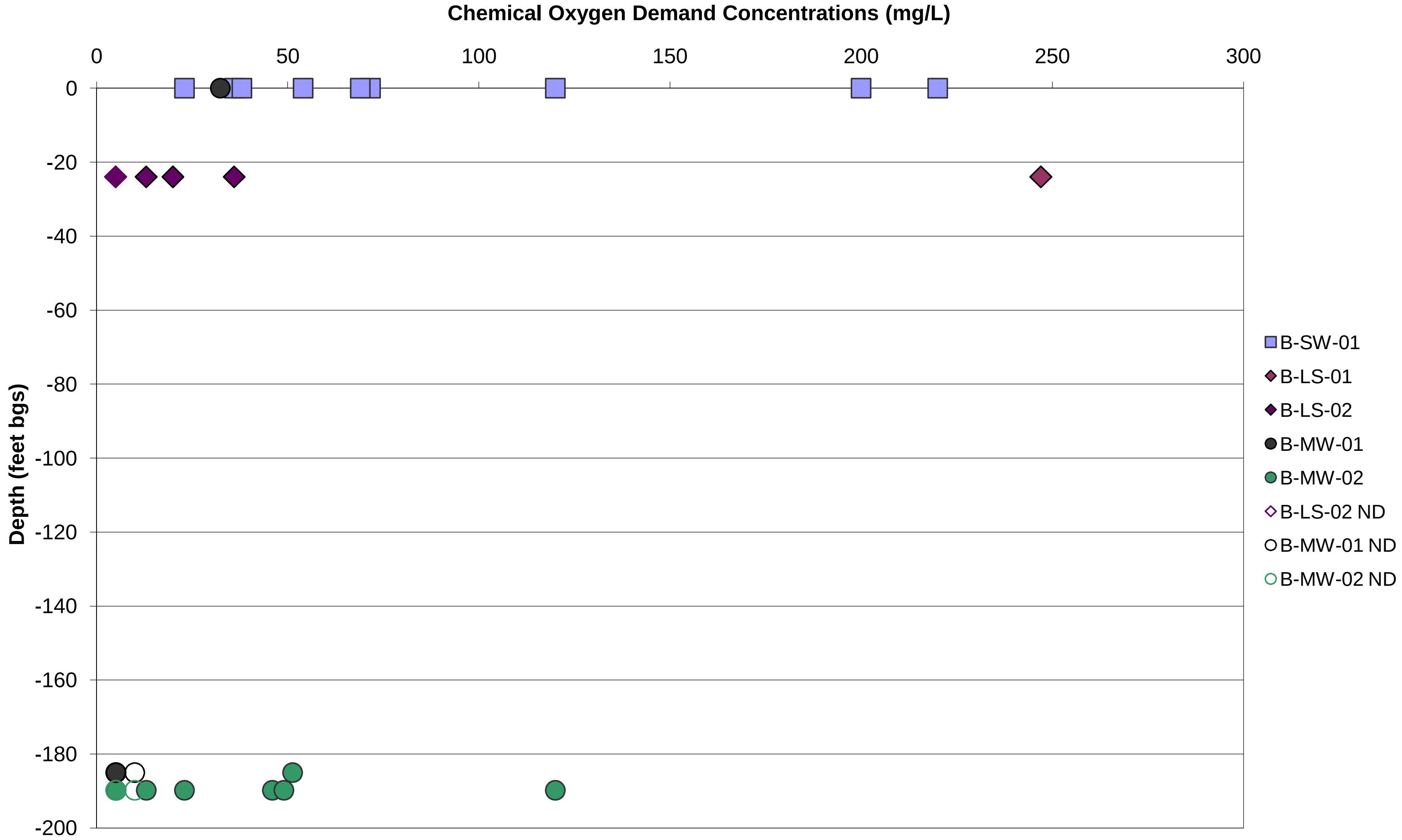

Broadous
Nitrate Concentrations (mg/L)
0
20
40
60
80
100
120
Depth (feet bgs)
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
B-SW-01
B-LS-01
B-LS-02
B-MW-01
B-MW-02

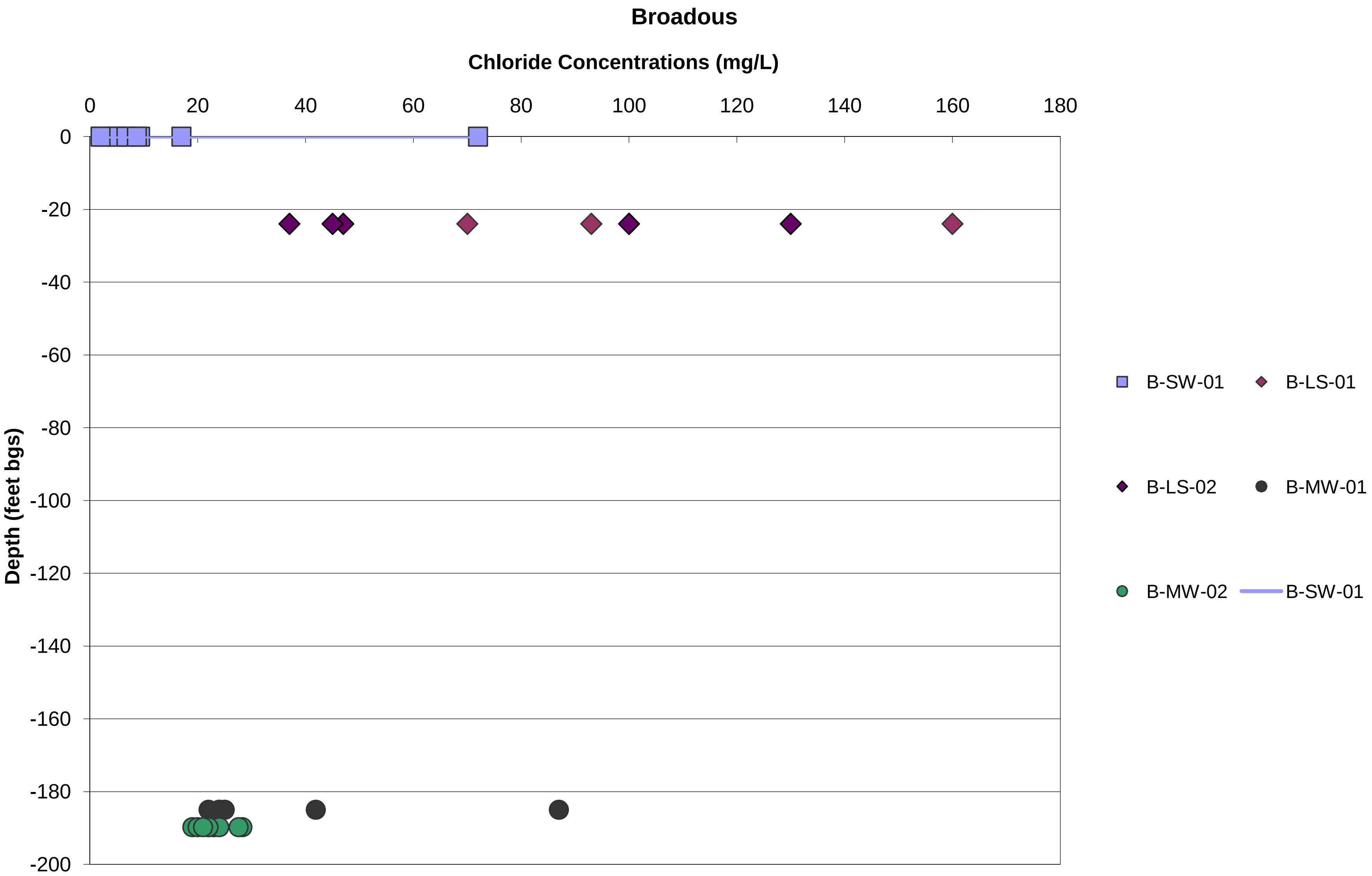

Broadous
Total Kjeldahl Nitrogen Concentrations (mg/L)
0
1
2
3
4
5
6
7
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
Depth (feet bgs)
B-SW-01
B-LS-02
B-MW-01
B-MW-02
B-LS-02 ND
B-MW-01 ND
B-MW-02 ND


Broadous
Total Dissolved Solids Concentrations (mg/L)
0
200
400
600
800
1000
1200
1400
1600
1800
Depth (feet bgs)
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
B-SW-01
B-LS-01
B-LS-02
B-MW-01
B-MW-02

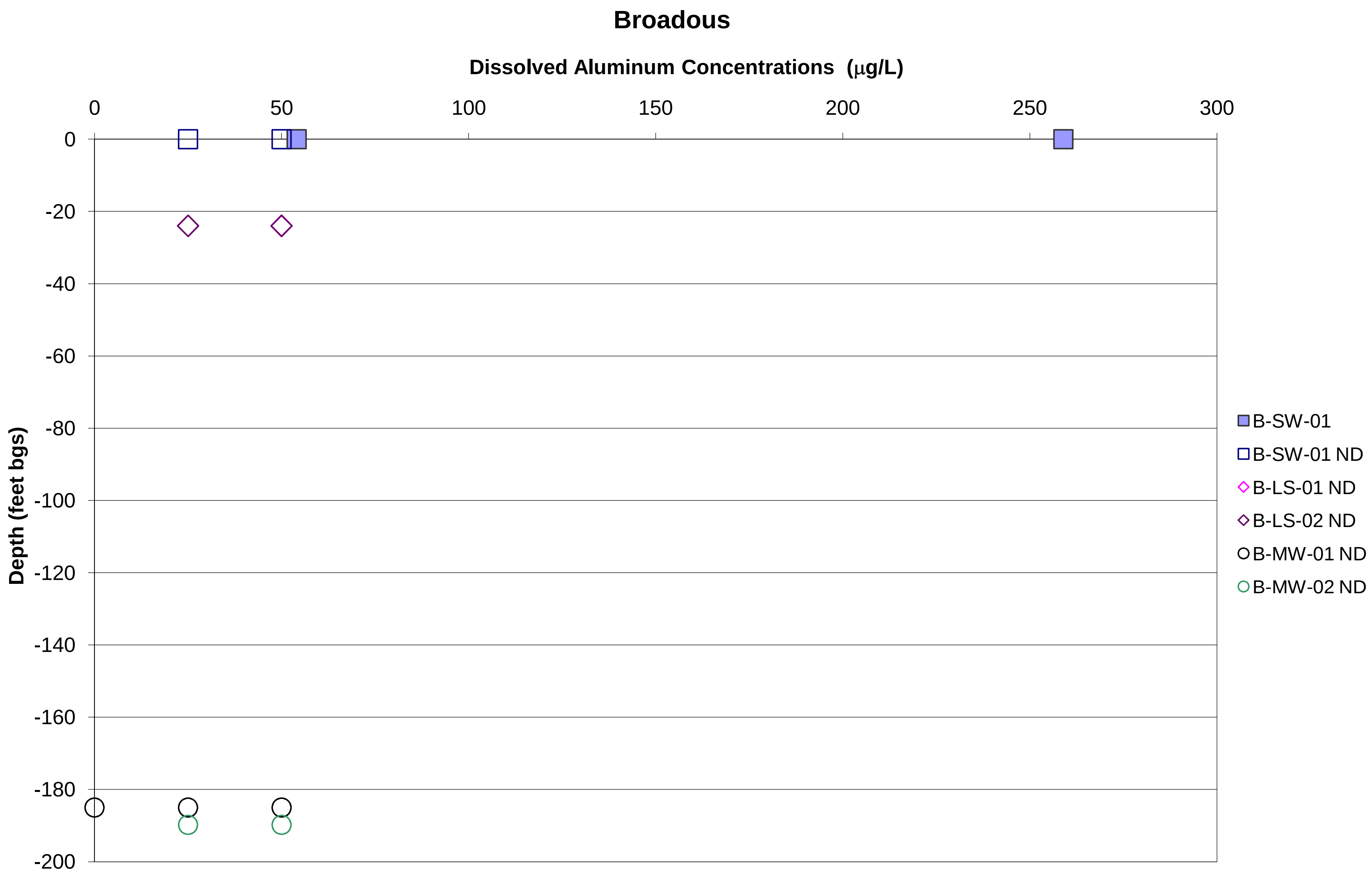

Broadous
Total Suspended Solids Concentrations (mg/L)
0
500
1000
1500
2000
2500
3000
Depth (feet bgs)
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
B-SW-01
B-LS-01
B-MW-01
B-MW-02
B-MW-01 ND
B-MW-02 ND

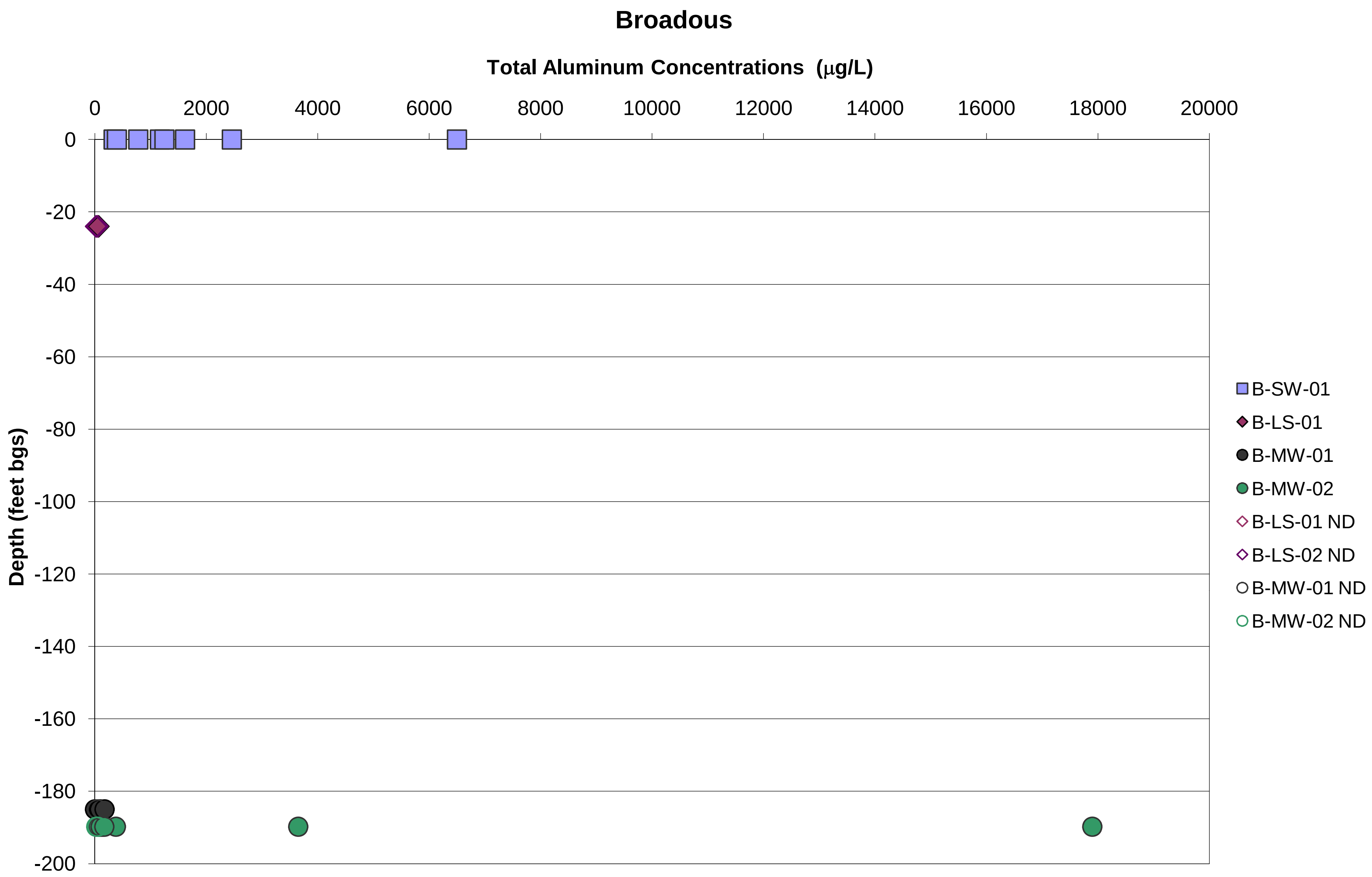
# Broadous


Chemical Oxygen Demand Concentrations (mg/L)
0
50
100
150
200
250
300
Depth (feet bgs)
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
B-SW-01
B-LS-01
B-LS-02
B-MW-01
B-MW-02
B-LS-02 ND
B-MW-01 ND
B-MW-02 ND

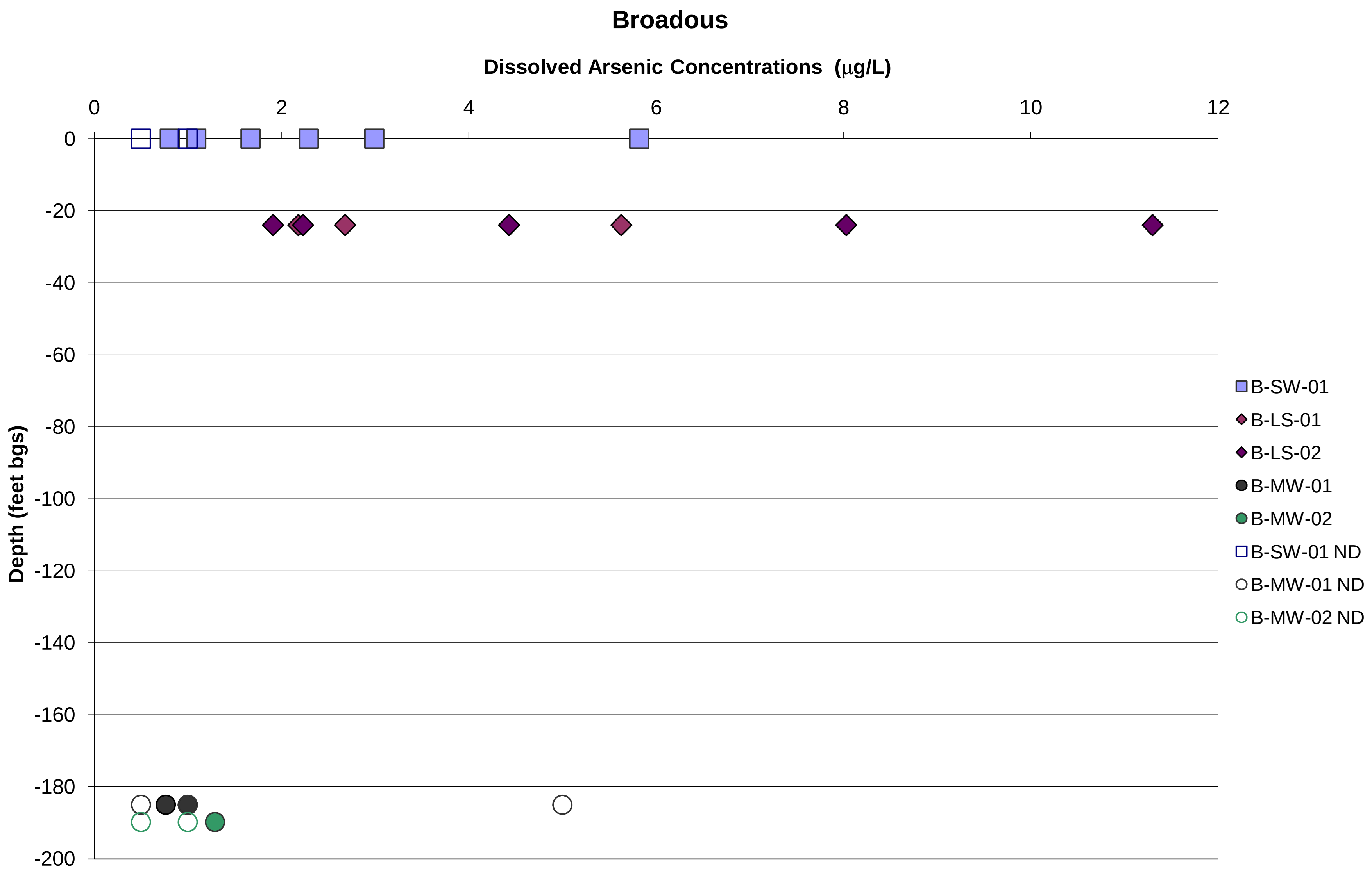


Broadous
Chloride Concentrations (mg/L)
0
20
40
60
80
100
120
140
160
180
Depth (feet bgs)
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
B-SW-01
B-LS-01
B-LS-02
B-MW-01
B-MW-02
B-SW-01

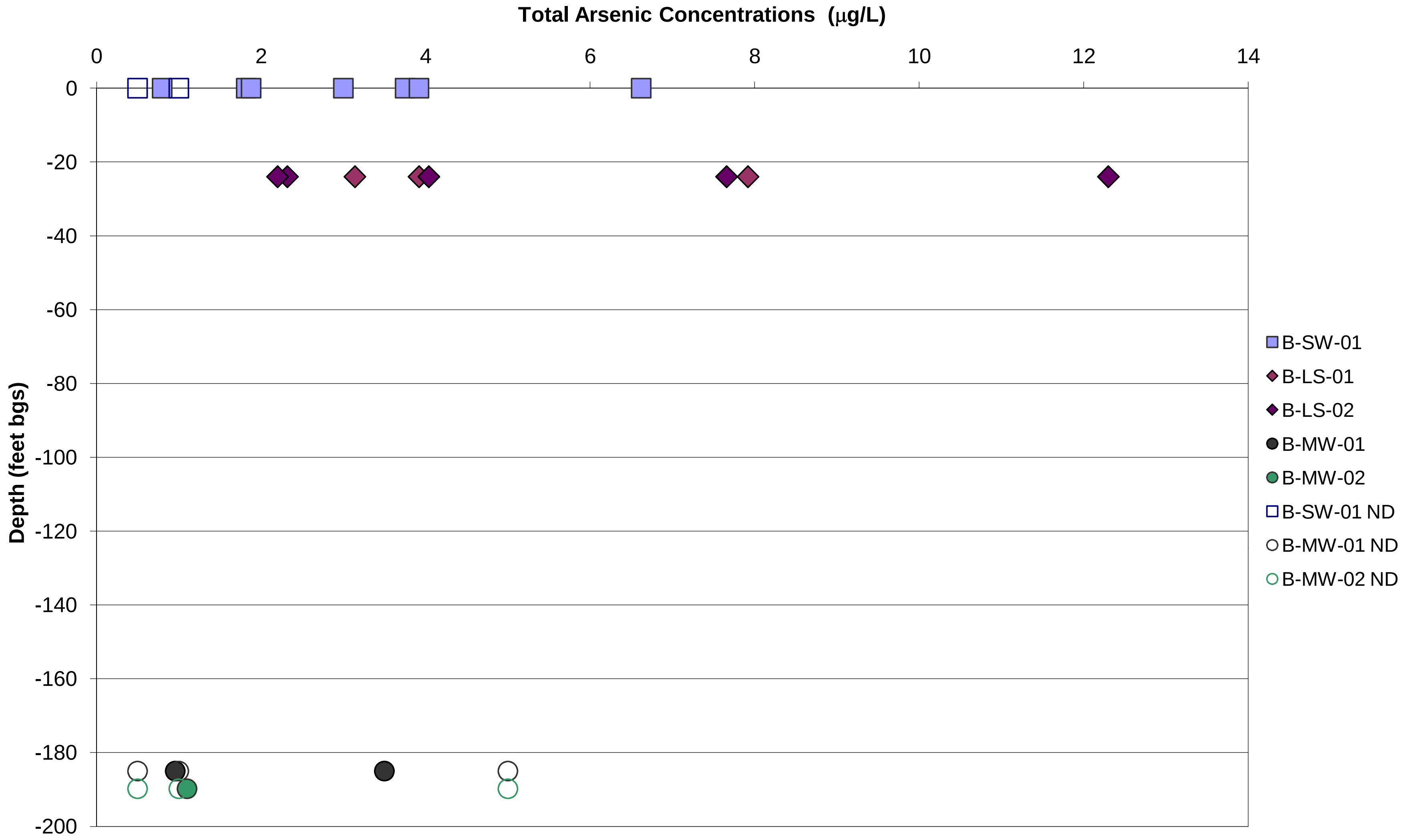
Broadous
Dissolved Aluminum Concentrations (μg/L)
0
50
100
150
200
250
300
Depth (feet bgs)
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
B-SW-01
B-SW-01 ND
B-LS-01 ND
B-LS-02 ND
B-MW-01 ND
B-MW-02 ND

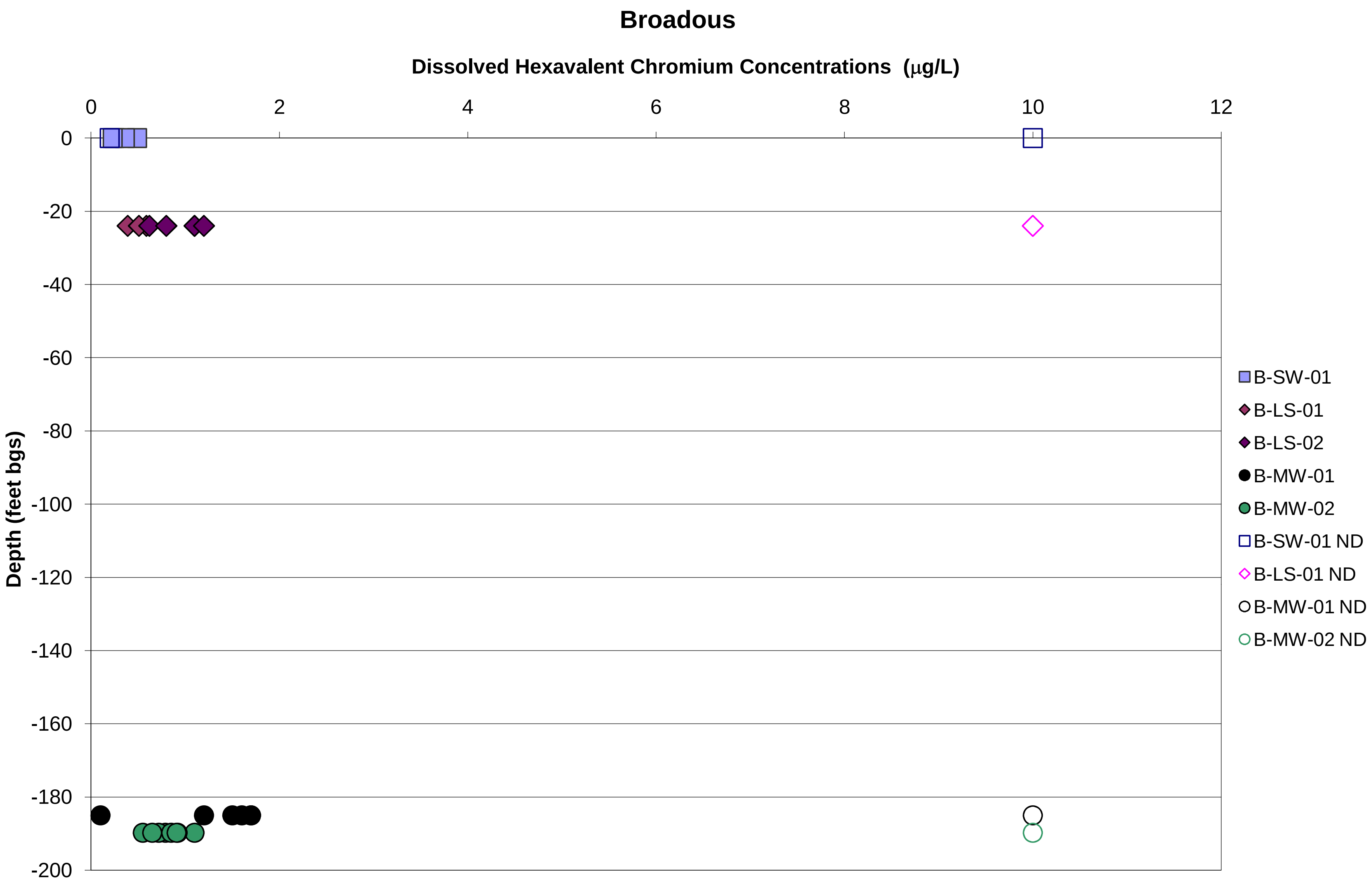


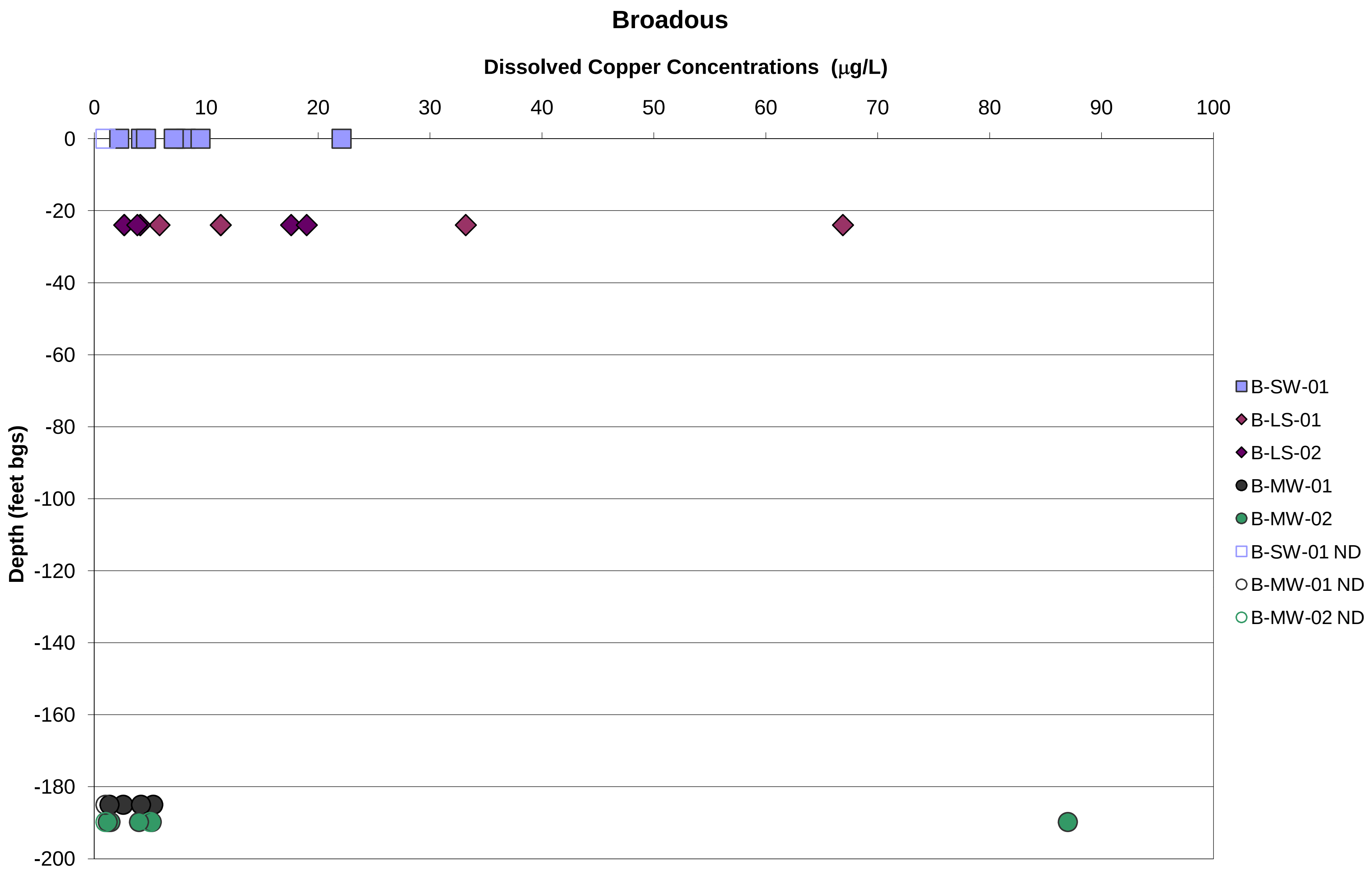
Broadous
Total Aluminum Concentrations (µg/L)
0
2000
4000
6000
8000
10000
12000
14000
16000
18000
20000
Depth (feet bgs)
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
B-SW-01
B-LS-01
B-MW-01
B-MW-02
B-LS-01 ND
B-LS-02 ND
B-MW-01 ND
B-MW-02 ND

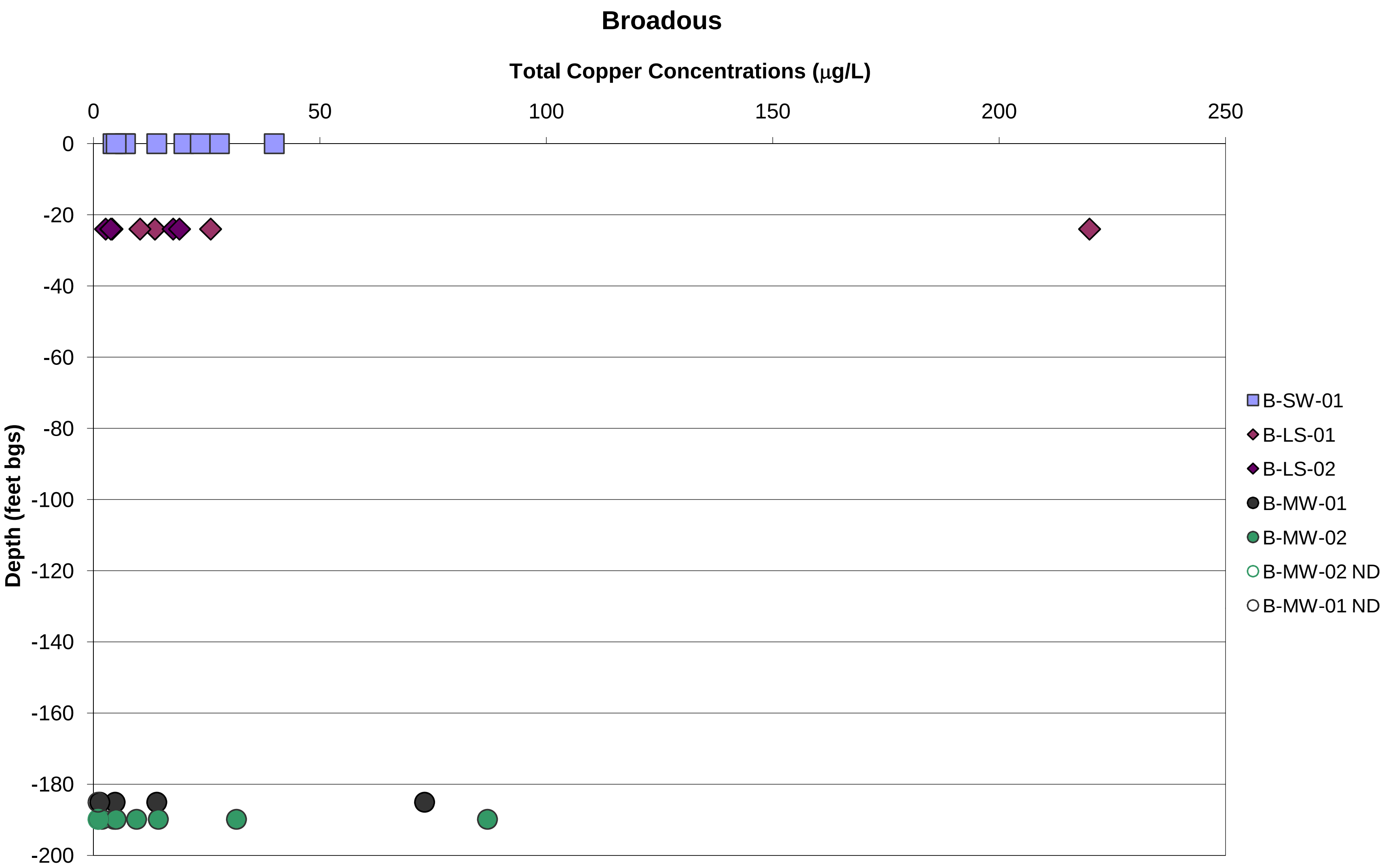

Broadous
Dissolved Arsenic Concentrations (µg/L)
0
2
4
6
8
10
12
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
Depth (feet bgs)
B-SW-01
B-LS-01
B-LS-02
B-MW-01
B-MW-02
B-SW-01 ND
B-MW-01 ND
B-MW-02 ND

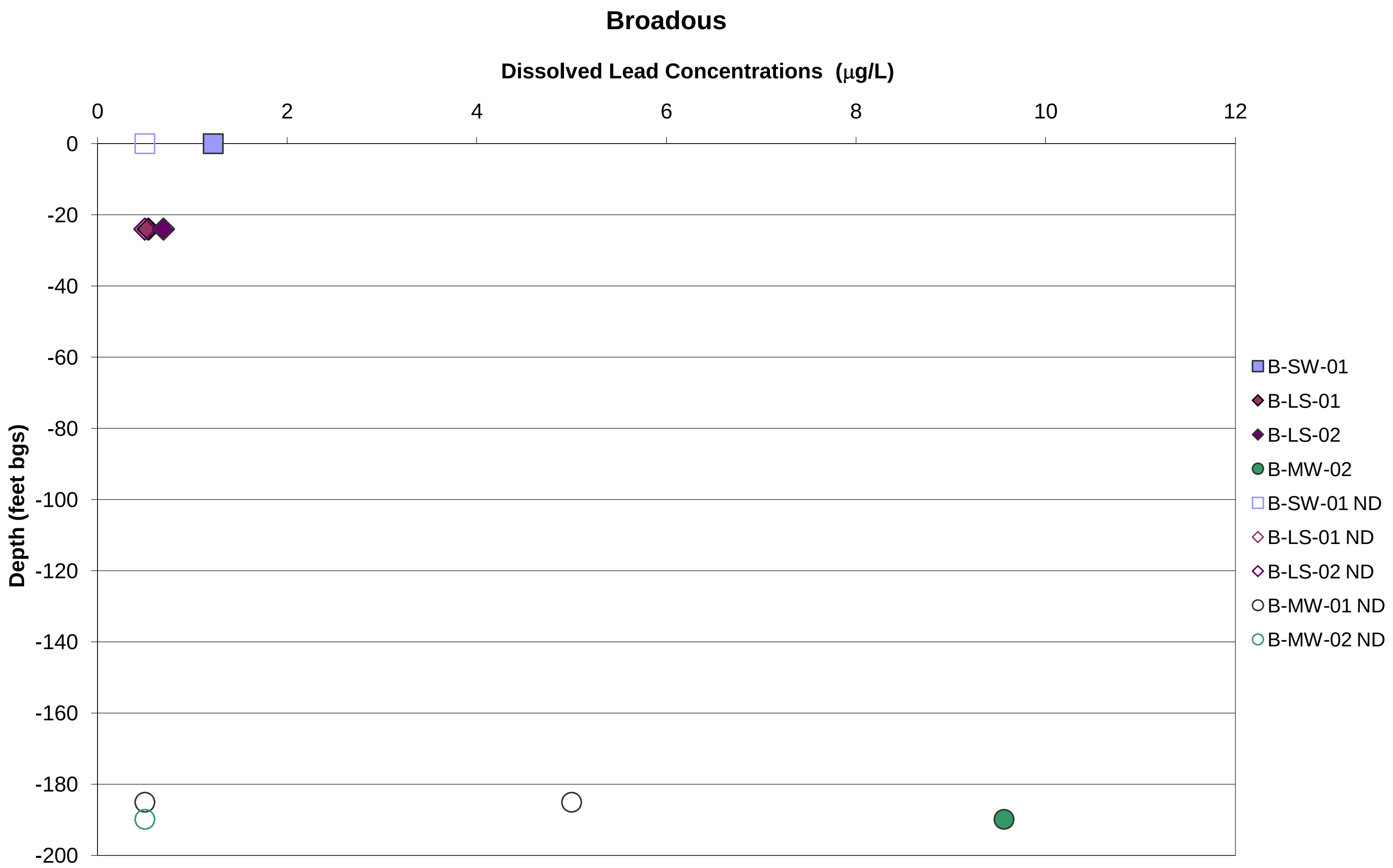
# Broadous


Total Arsenic Concentrations (µg/L)
0
2
4
6
8
10
12
14
Depth (feet bgs)
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
B-SW-01
B-LS-01
B-LS-02
B-MW-01
B-MW-02
B-SW-01 ND
B-MW-01 ND
B-MW-02 ND

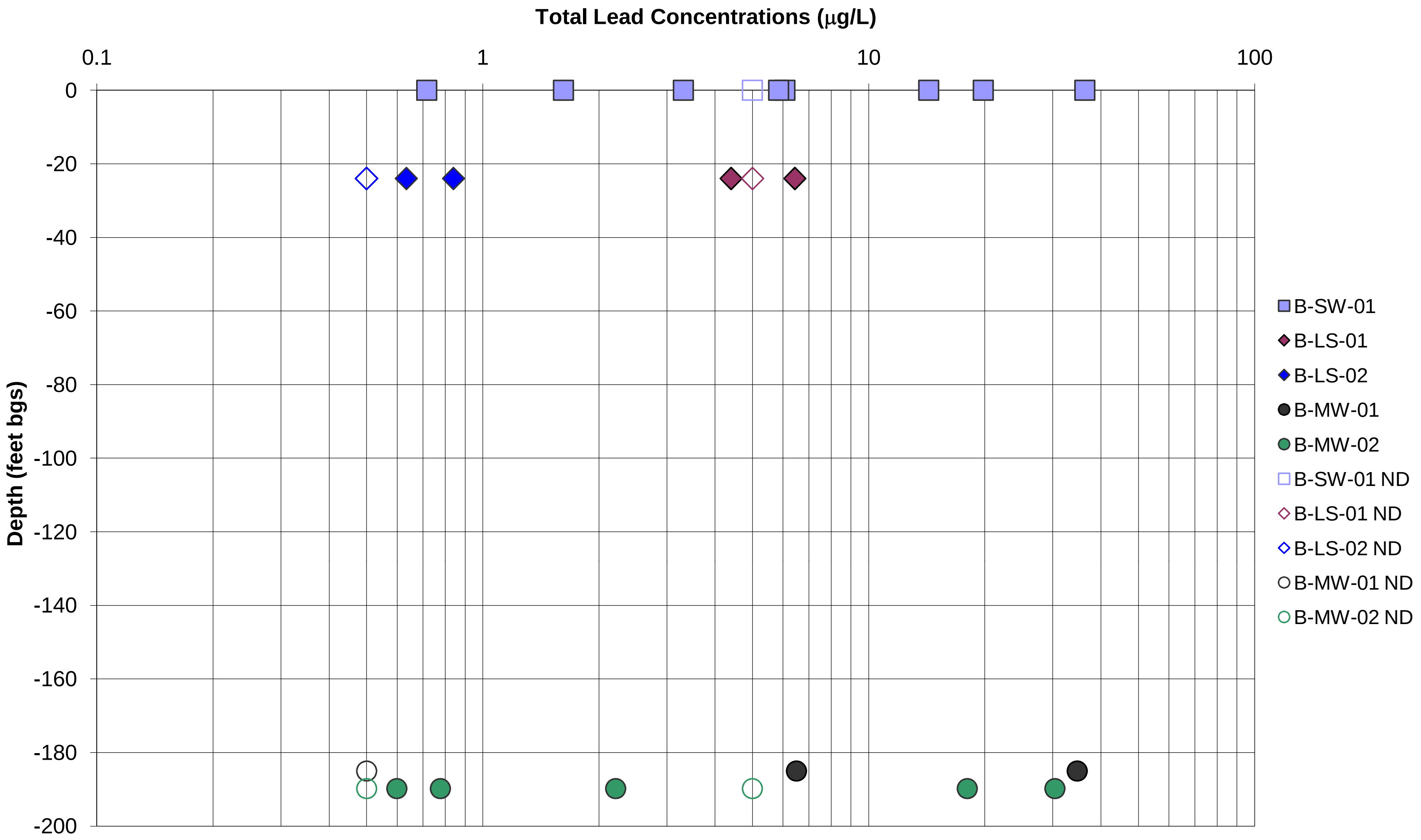

Broadous
Dissolved Hexavalent Chromium Concentrations (µg/L)
0
2
4
6
8
10
12
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
Depth (feet bgs)
B-SW-01
B-LS-01
B-LS-02
B-MW-01
B-MW-02
B-SW-01 ND
B-LS-01 ND
B-MW-01 ND
B-MW-02 ND

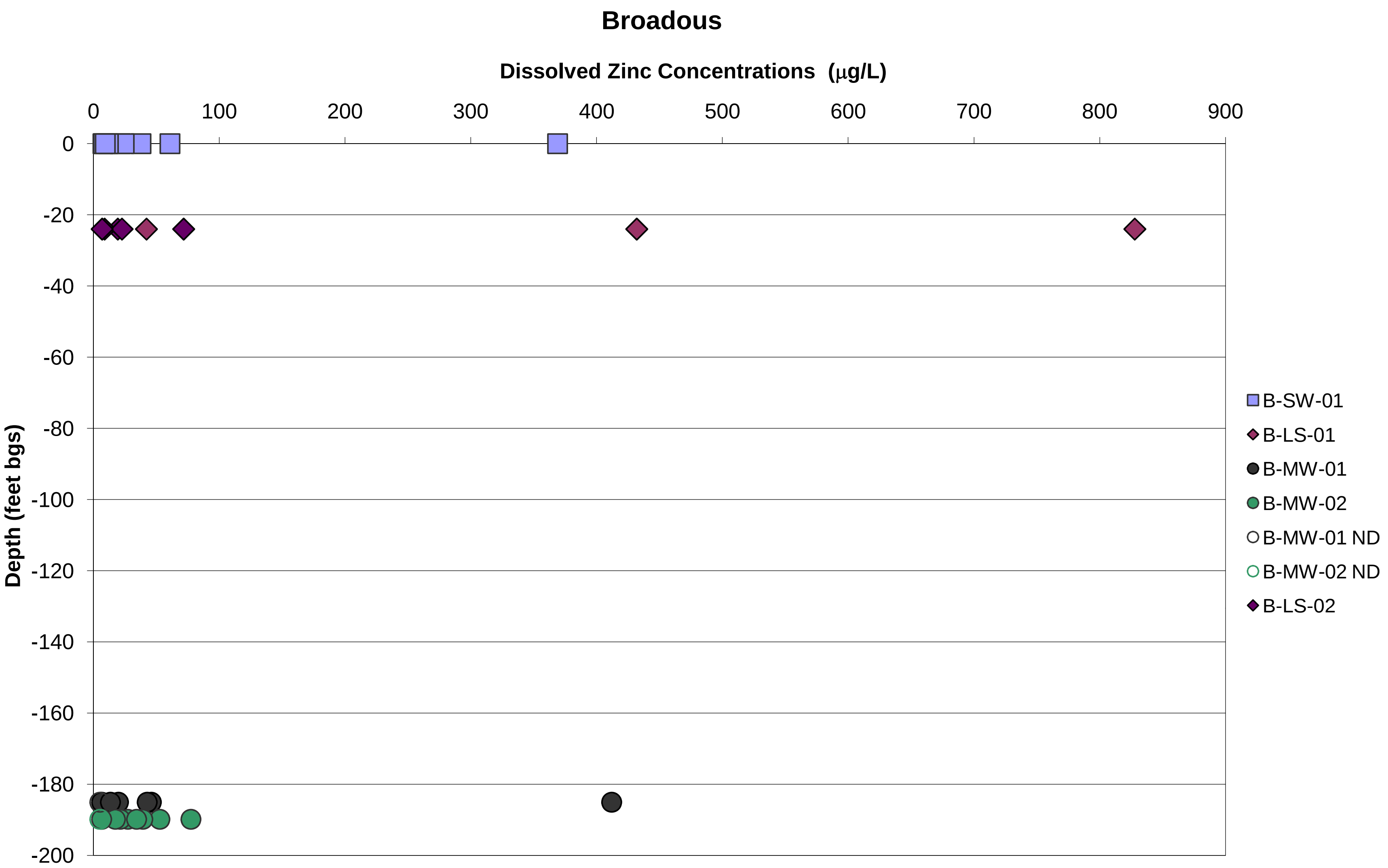

Broadous
Dissolved Copper Concentrations (µg/L)
0
10
20
30
40
50
60
70
80
90
100
Depth (feet bgs)
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
B-SW-01
B-LS-01
B-LS-02
B-MW-01
B-MW-02
B-SW-01 ND
B-MW-01 ND
B-MW-02 ND

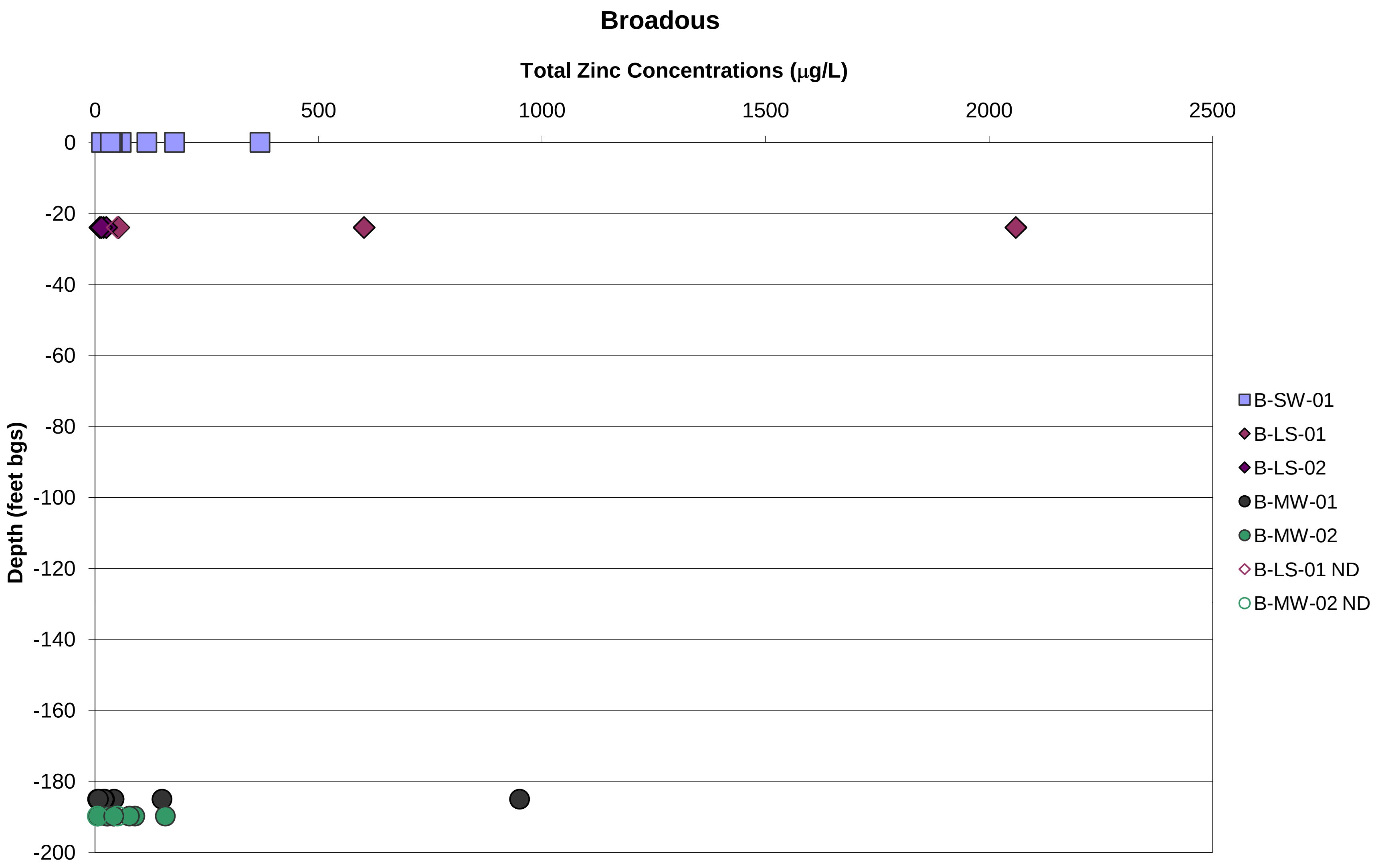

Broadous
Total Copper Concentrations (μg/L)
0
50
100
150
200
250
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
Depth (feet bgs)
B-SW-01
B-LS-01
B-LS-02
B-MW-01
B-MW-02
B-MW-02 ND
B-MW-01 ND

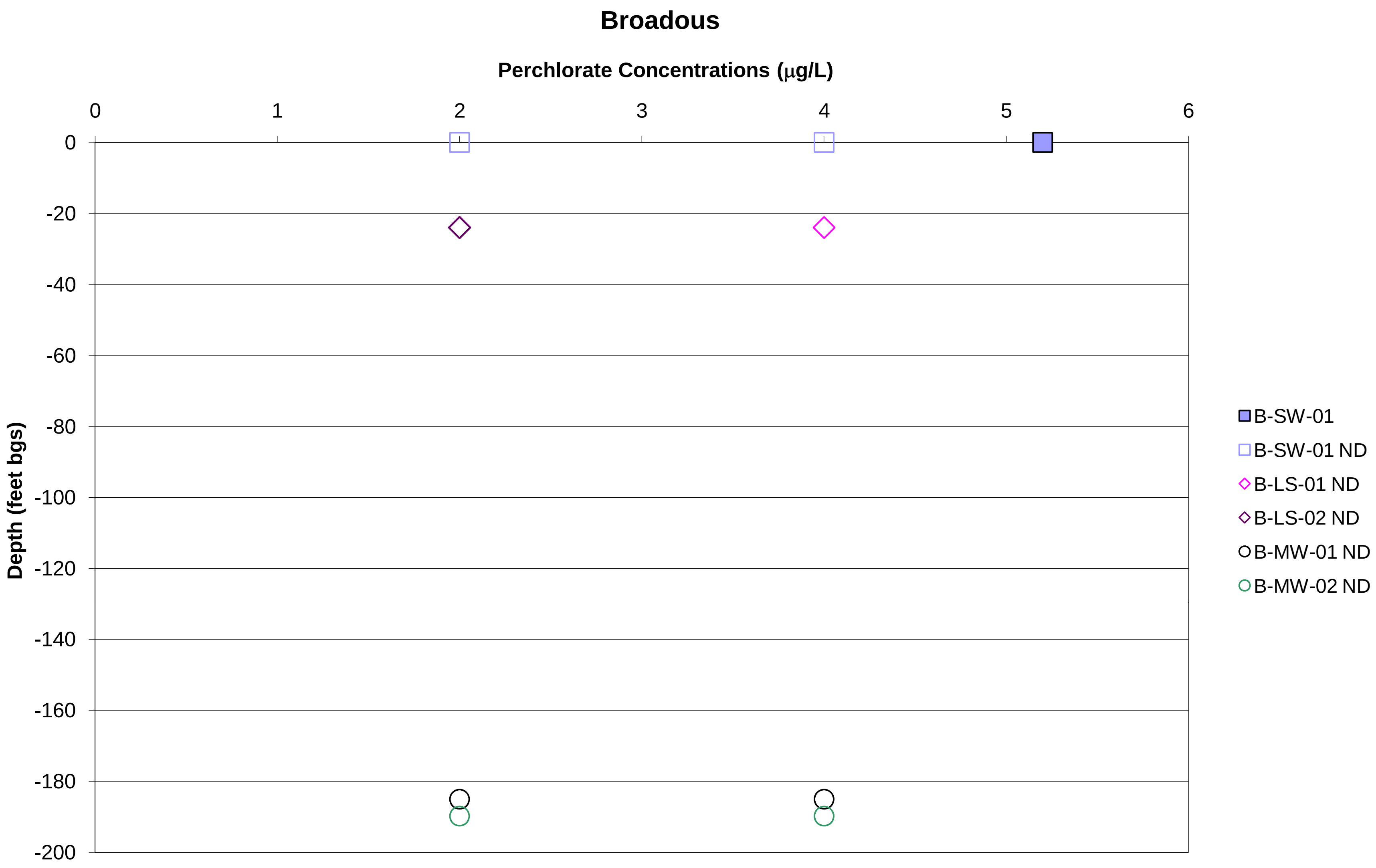

Broadous
Dissolved Lead Concentrations (µg/L)
0
2
4
6
8
10
12
Depth (feet bgs)
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
B-SW-01
B-LS-01
B-LS-02
B-MW-02
B-SW-01 ND
B-LS-01 ND
B-LS-02 ND
B-MW-01 ND
B-MW-02 ND

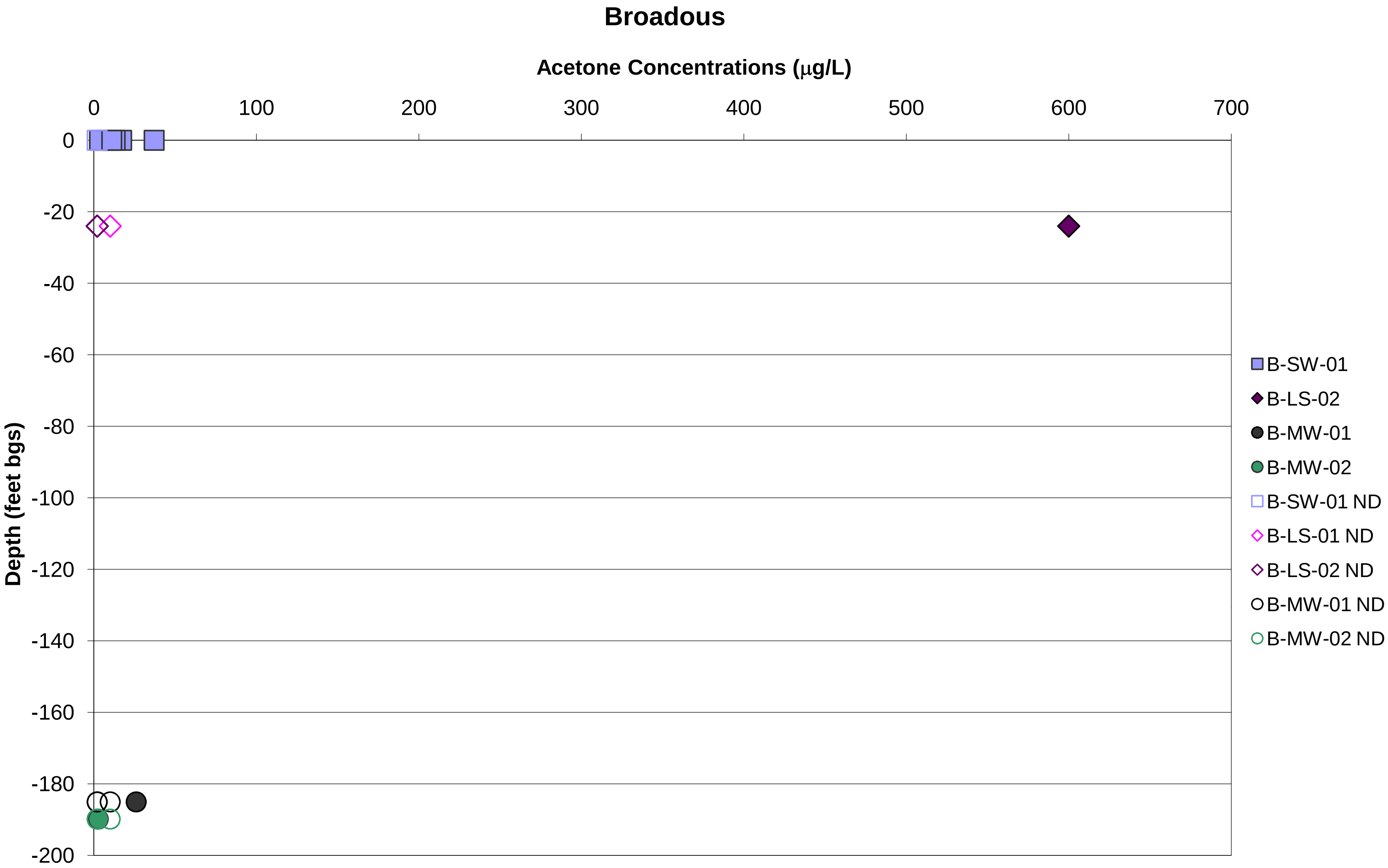
# Broadous

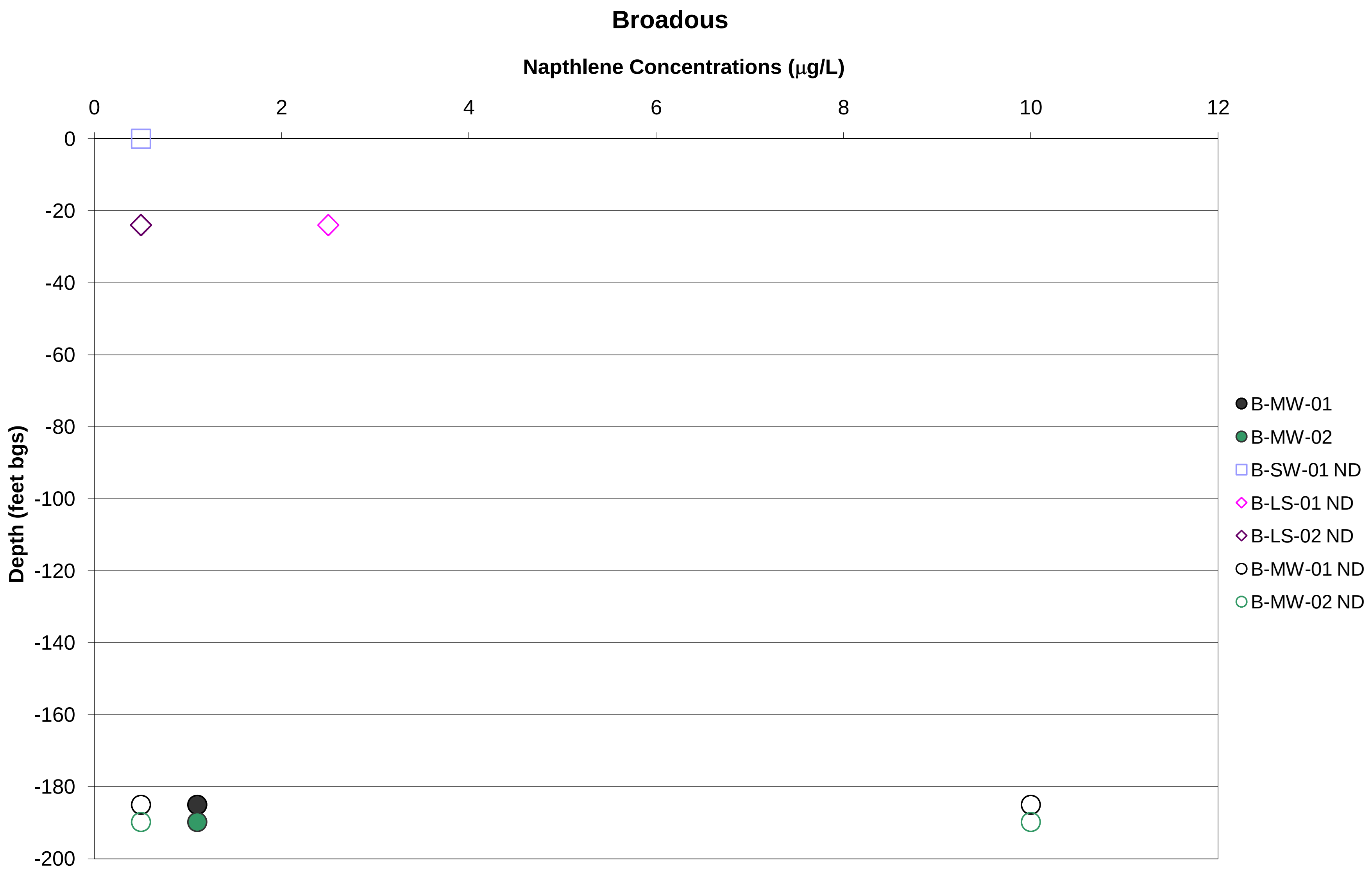

Total Lead Concentrations (µg/L)
0.1
1
10
100
Depth (feet bgs)
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
B-SW-01
B-LS-01
B-LS-02
B-MW-01
B-MW-02
B-SW-01 ND
B-LS-01 ND
B-LS-02 ND
B-MW-01 ND
B-MW-02 ND

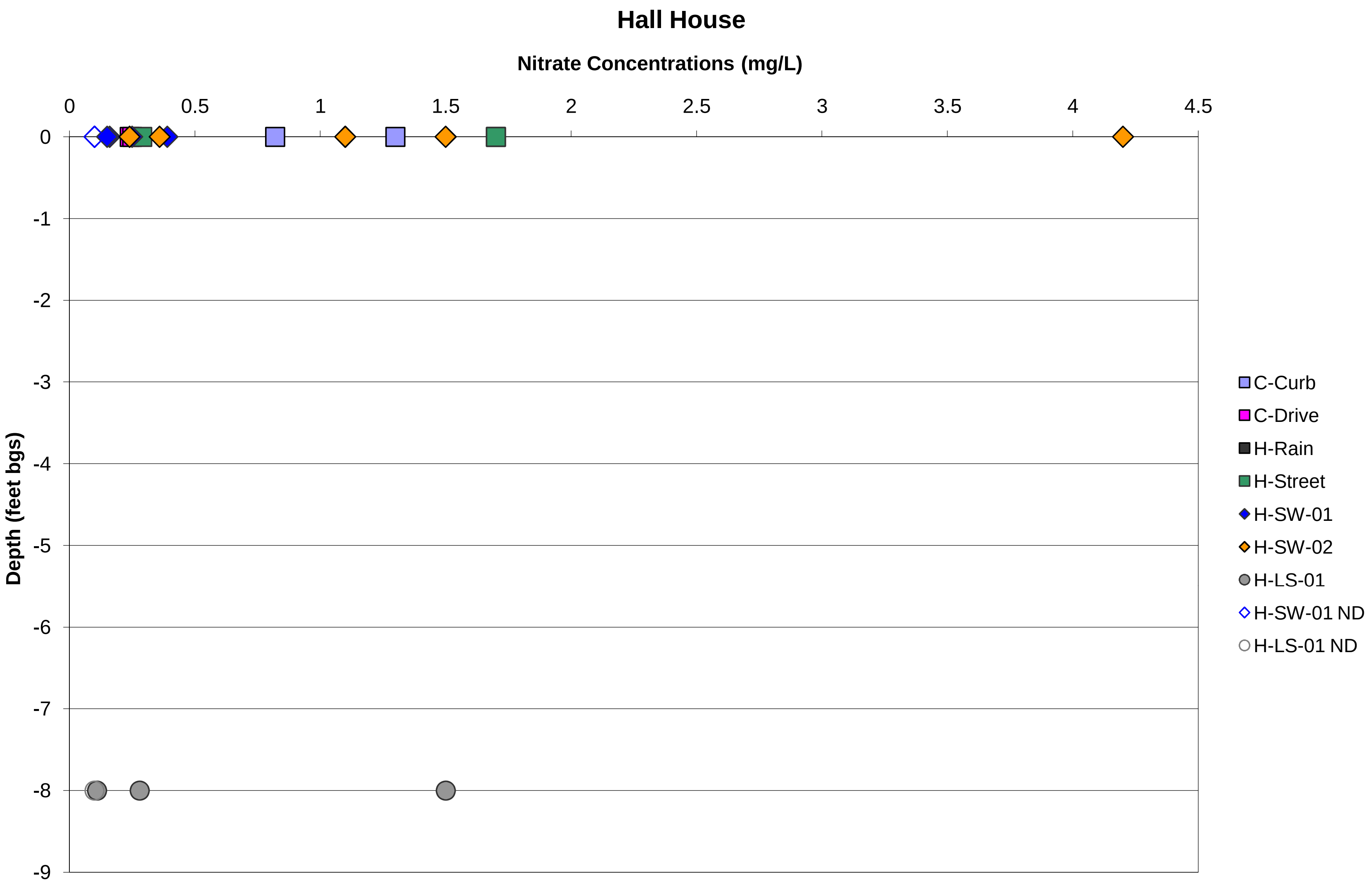

Broadous
Dissolved Zinc Concentrations (µg/L)
0
100
200
300
400
500
600
700
800
900
Depth (feet bgs)
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
B-SW-01
B-LS-01
B-MW-01
B-MW-02
B-MW-01 ND
B-MW-02 ND
B-LS-02

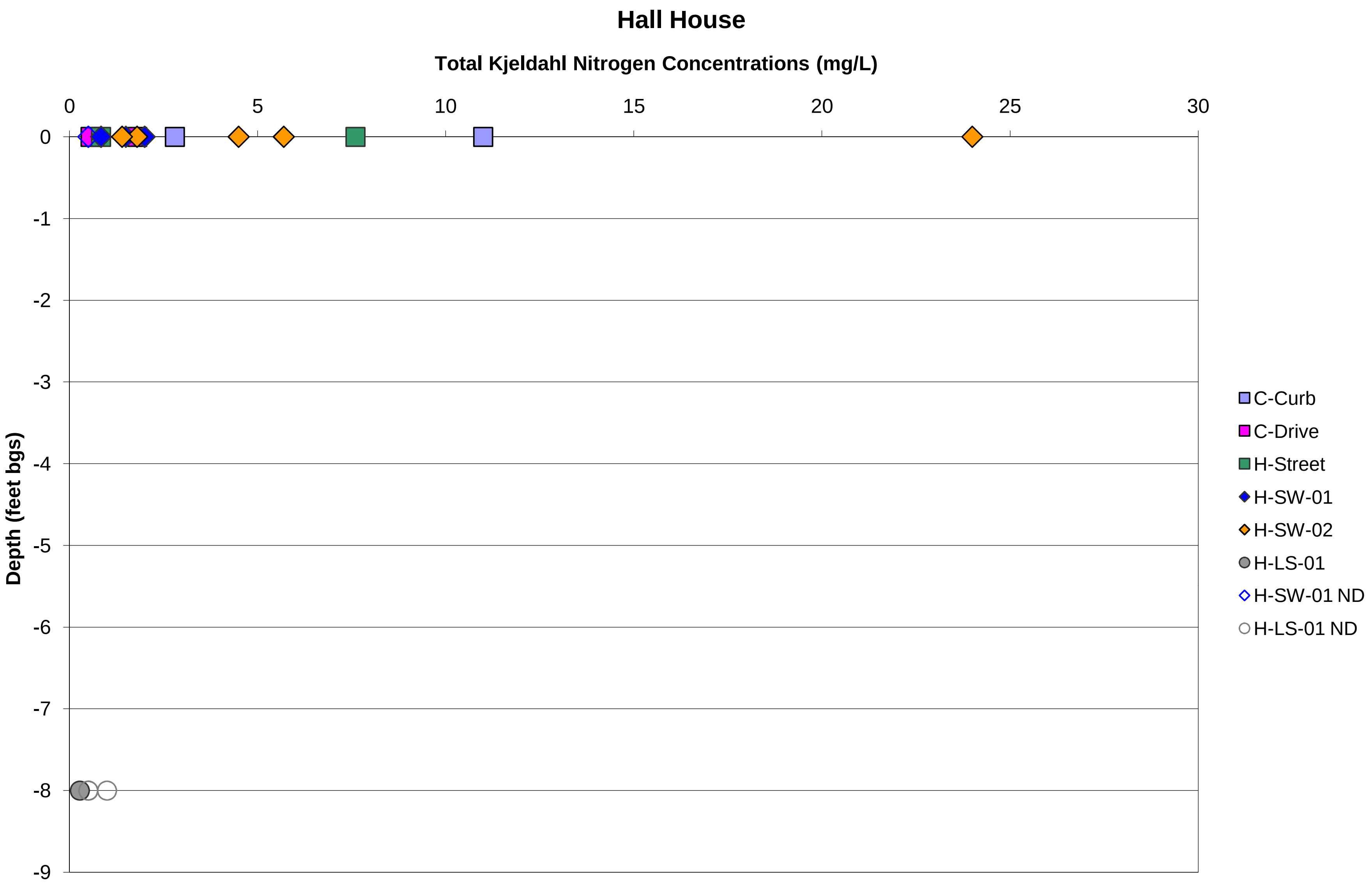

Broadous
Total Zinc Concentrations (µg/L)
0
500
1000
1500
2000
2500
Depth (feet bgs)
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
B-SW-01
B-LS-01
B-LS-02
B-MW-01
B-MW-02
B-LS-01 ND
B-MW-02 ND

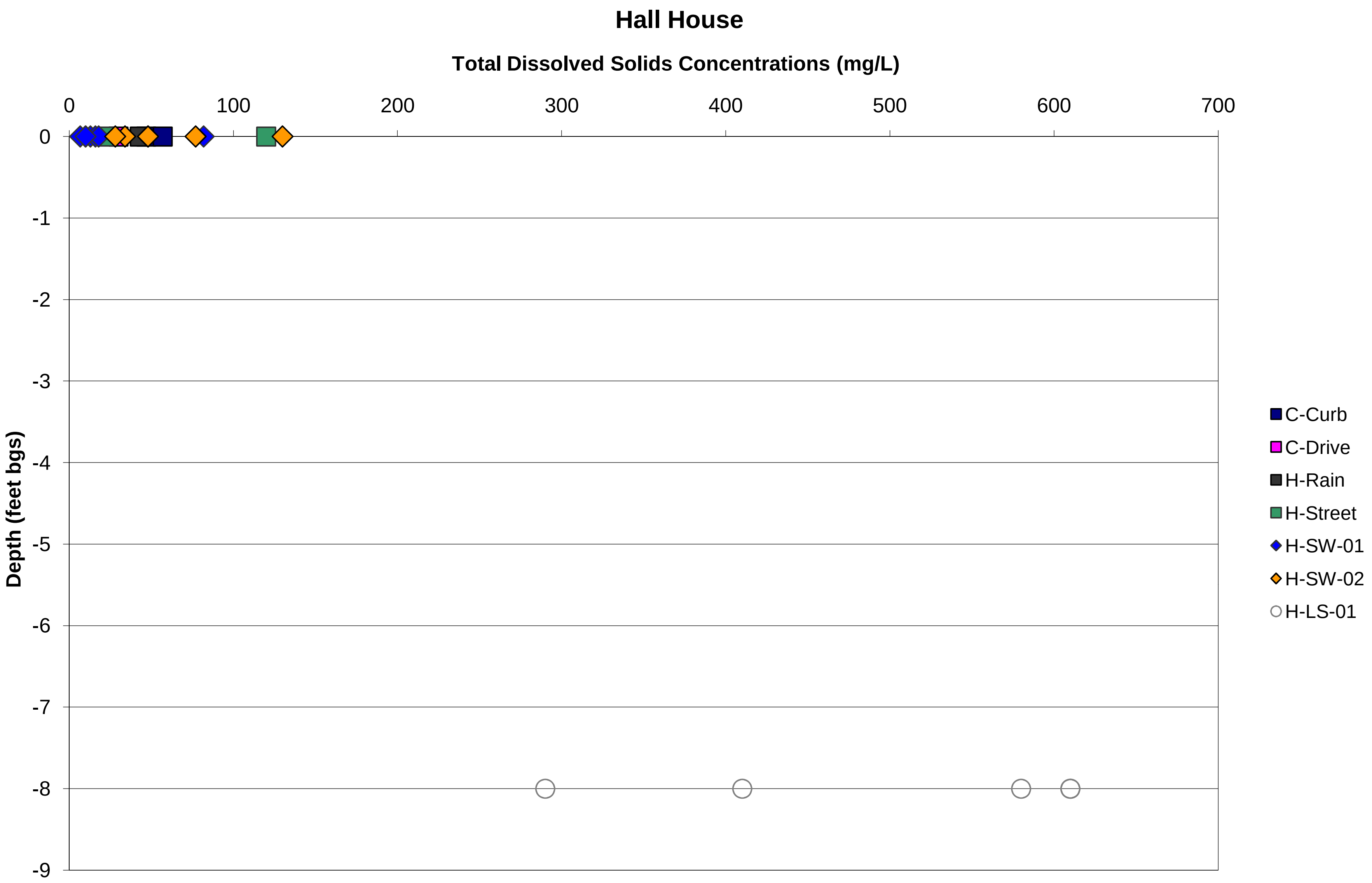
Broadous
Perchlorate Concentrations (µg/L)
0
1
2
3
4
5
6
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
Depth (feet bgs)
B-SW-01
B-SW-01 ND
B-LS-01 ND
B-LS-02 ND
B-MW-01 ND
B-MW-02 ND

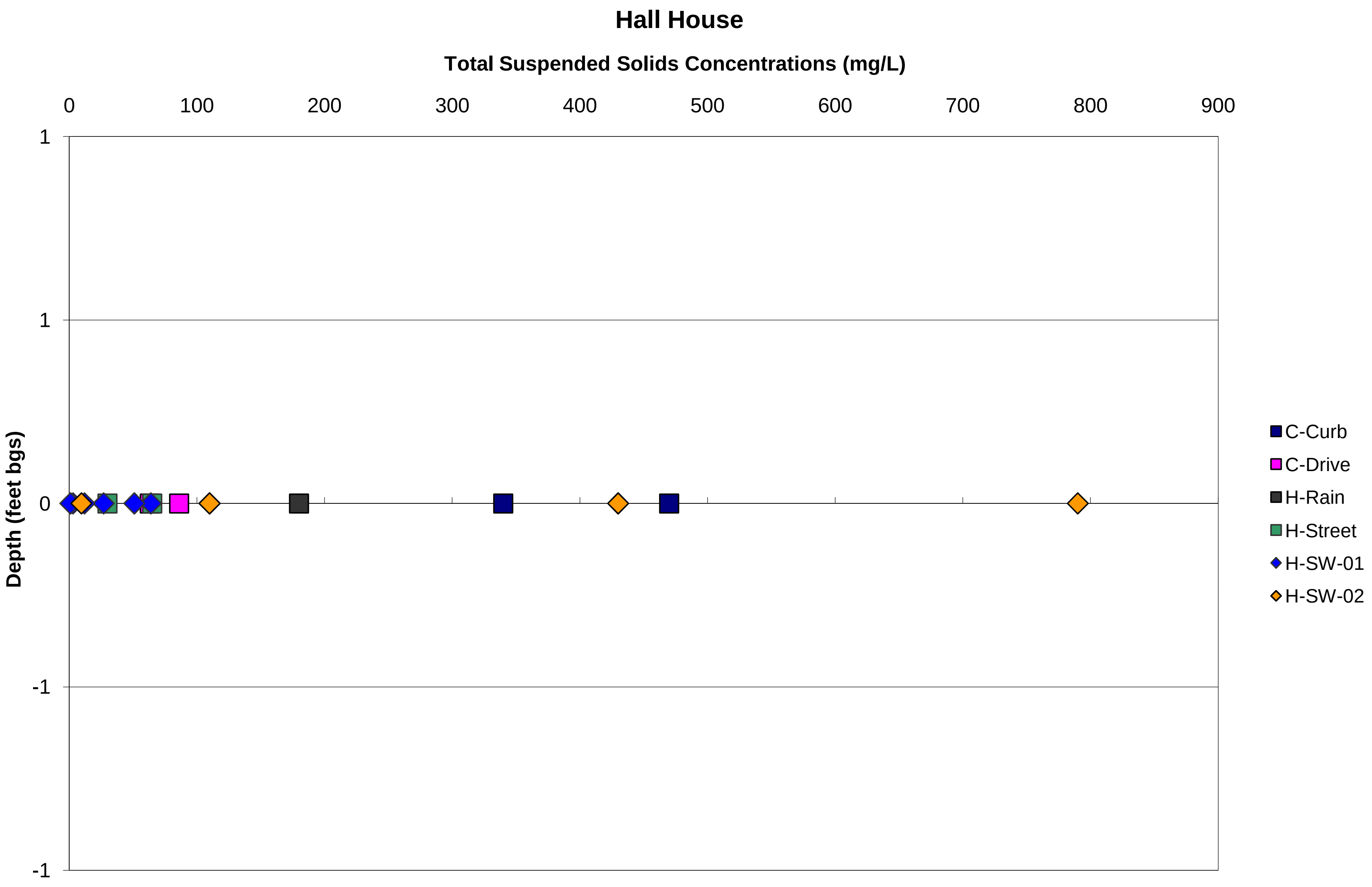

Broadous
Acetone Concentrations (µg/L)
0
100
200
300
400
500
600
700
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
Depth (feet bgs)
B-SW-01
B-LS-02
B-MW-01
B-MW-02
B-SW-01 ND
B-LS-01 ND
B-LS-02 ND
B-MW-01 ND
B-MW-02 ND

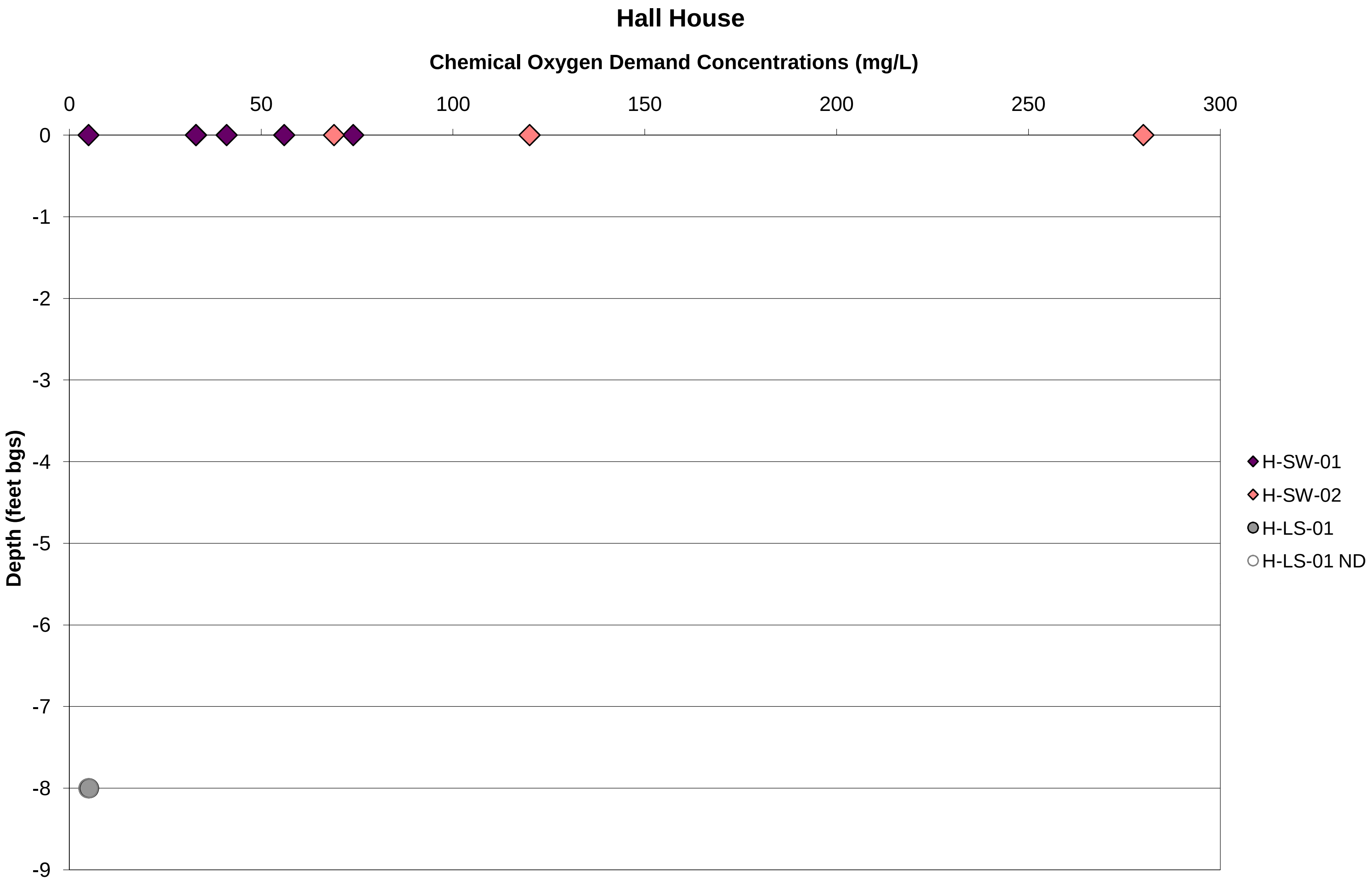
Broadous
Napthlene Concentrations (µg/L)
0
2
4
6
8
10
12
0
-20
-40
-60
-80
-100
-120
-140
-160
-180
-200
Depth (feet bgs)
● B-MW-01
● B-MW-02
□ B-SW-01 ND
◇ B-LS-01 ND
◇ B-LS-02 ND
○ B-MW-01 ND
○ B-MW-02 ND

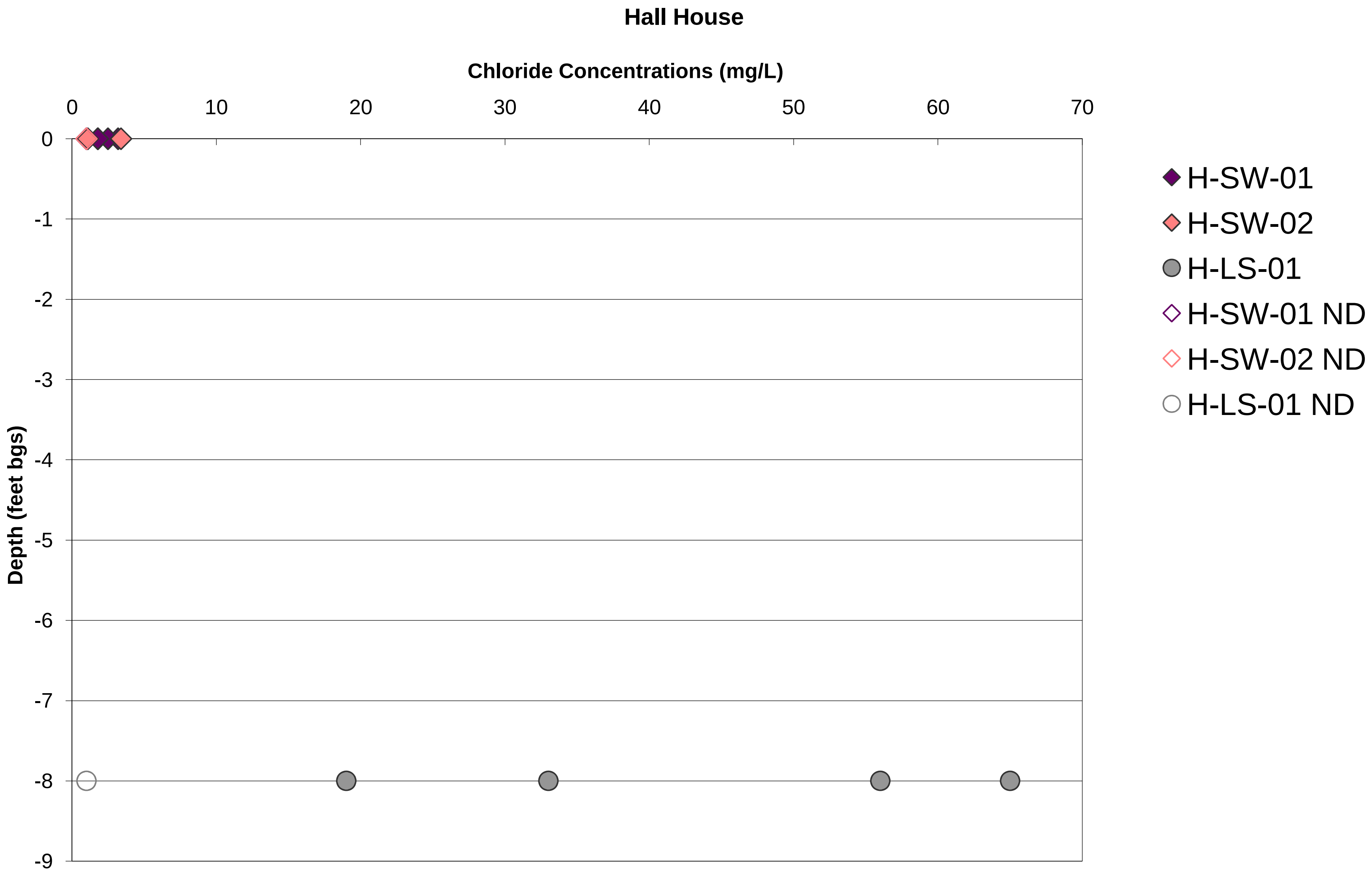

Hall House
Nitrate Concentrations (mg/L)
0
0.5
1
1.5
2
2.5
3
3.5
4
4.5
Depth (feet bgs)
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
C-Curb
C-Drive
H-Rain
H-Street
H-SW-01
H-SW-02
H-LS-01
H-SW-01 ND
H-LS-01 ND

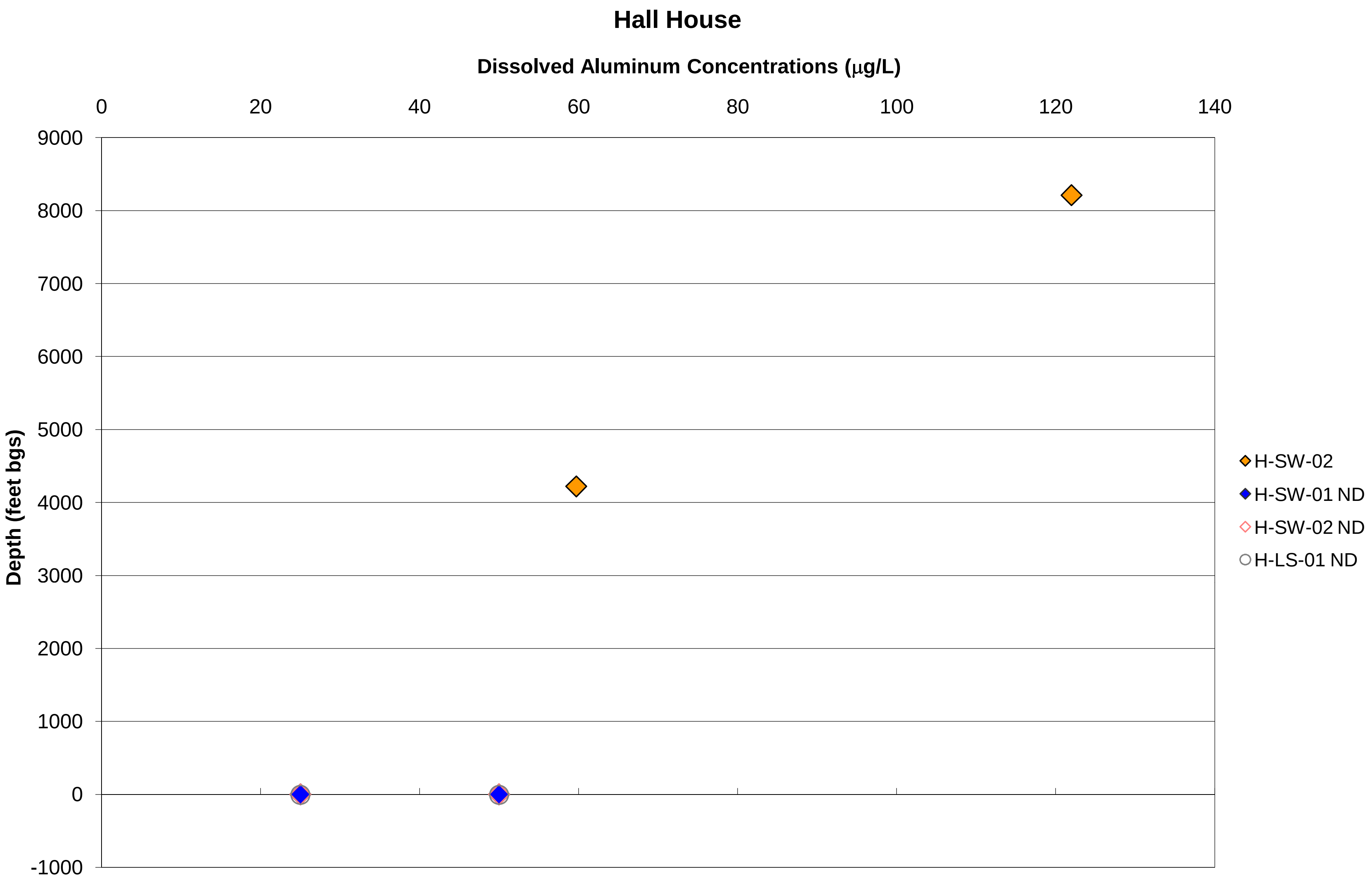

Hall House
Total Kjeldahl Nitrogen Concentrations (mg/L)
0
5
10
15
20
25
30
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
Depth (feet bgs)
C-Curb
C-Drive
H-Street
H-SW-01
H-SW-02
H-LS-01
H-SW-01 ND
H-LS-01 ND

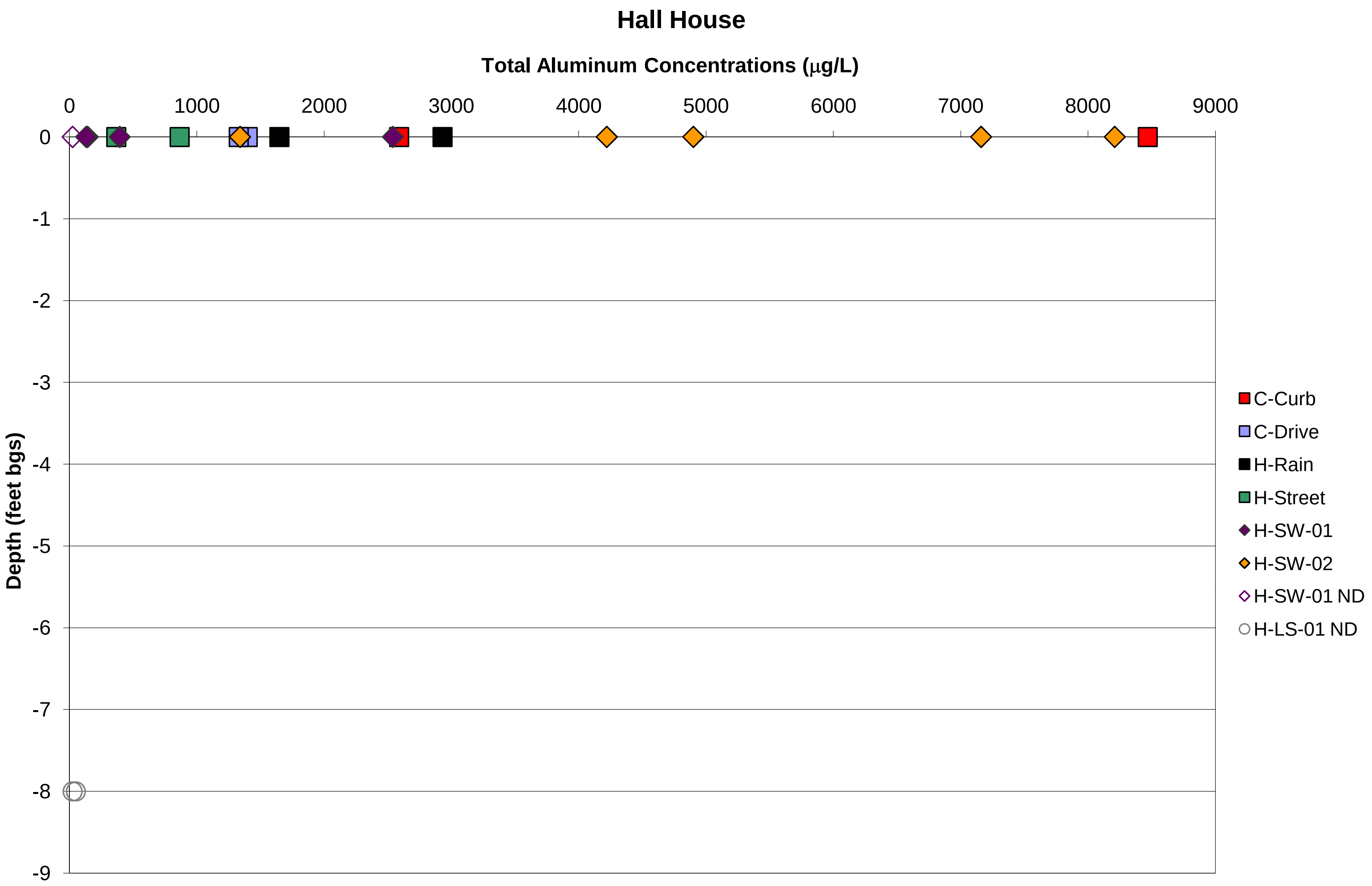

Hall House
Total Dissolved Solids Concentrations (mg/L)
0
100
200
300
400
500
600
700
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
Depth (feet bgs)
C-Curb
C-Drive
H-Rain
H-Street
H-SW-01
H-SW-02
H-LS-01

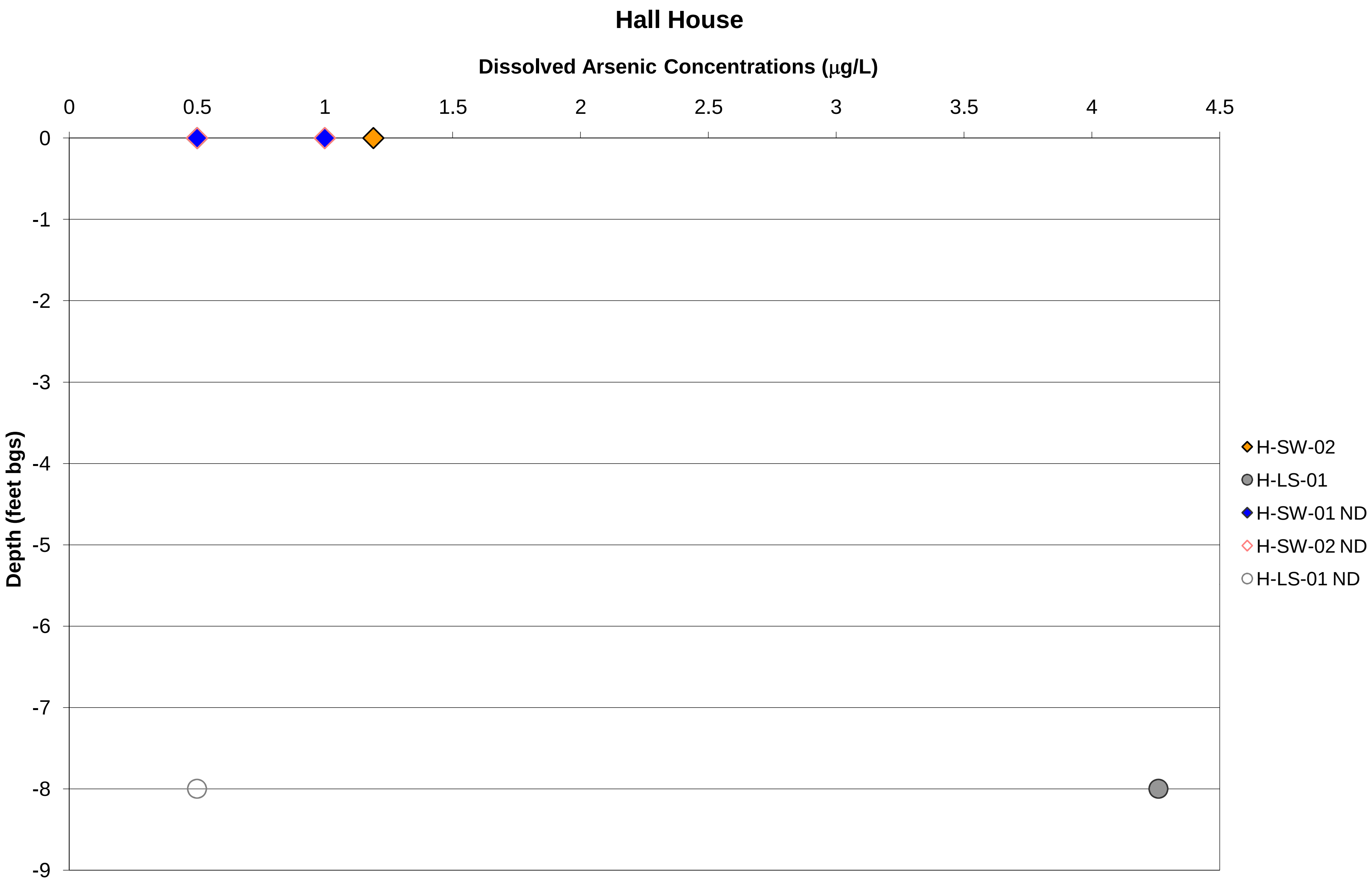

Hall House
Total Suspended Solids Concentrations (mg/L)
0
100
200
300
400
500
600
700
800
900
1
1
0
-1
-1
Depth (feet bgs)
C-Curb
C-Drive
H-Rain
H-Street
H-SW-01
H-SW-02

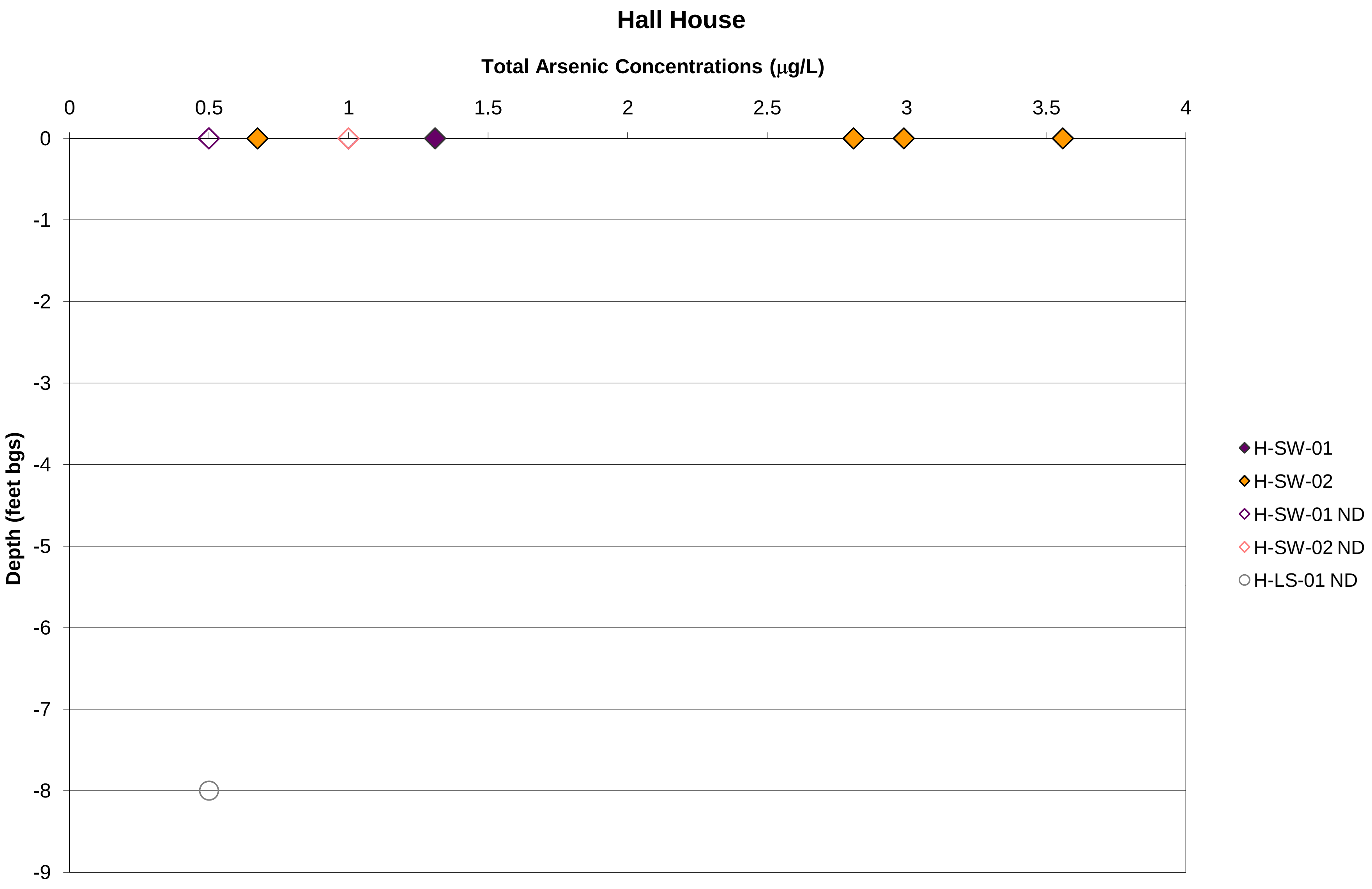

Hall House
Chemical Oxygen Demand Concentrations (mg/L)
0
50
100
150
200
250
300
Depth (feet bgs)
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
◆ H-SW-01
◆ H-SW-02
● H-LS-01
○ H-LS-01 ND

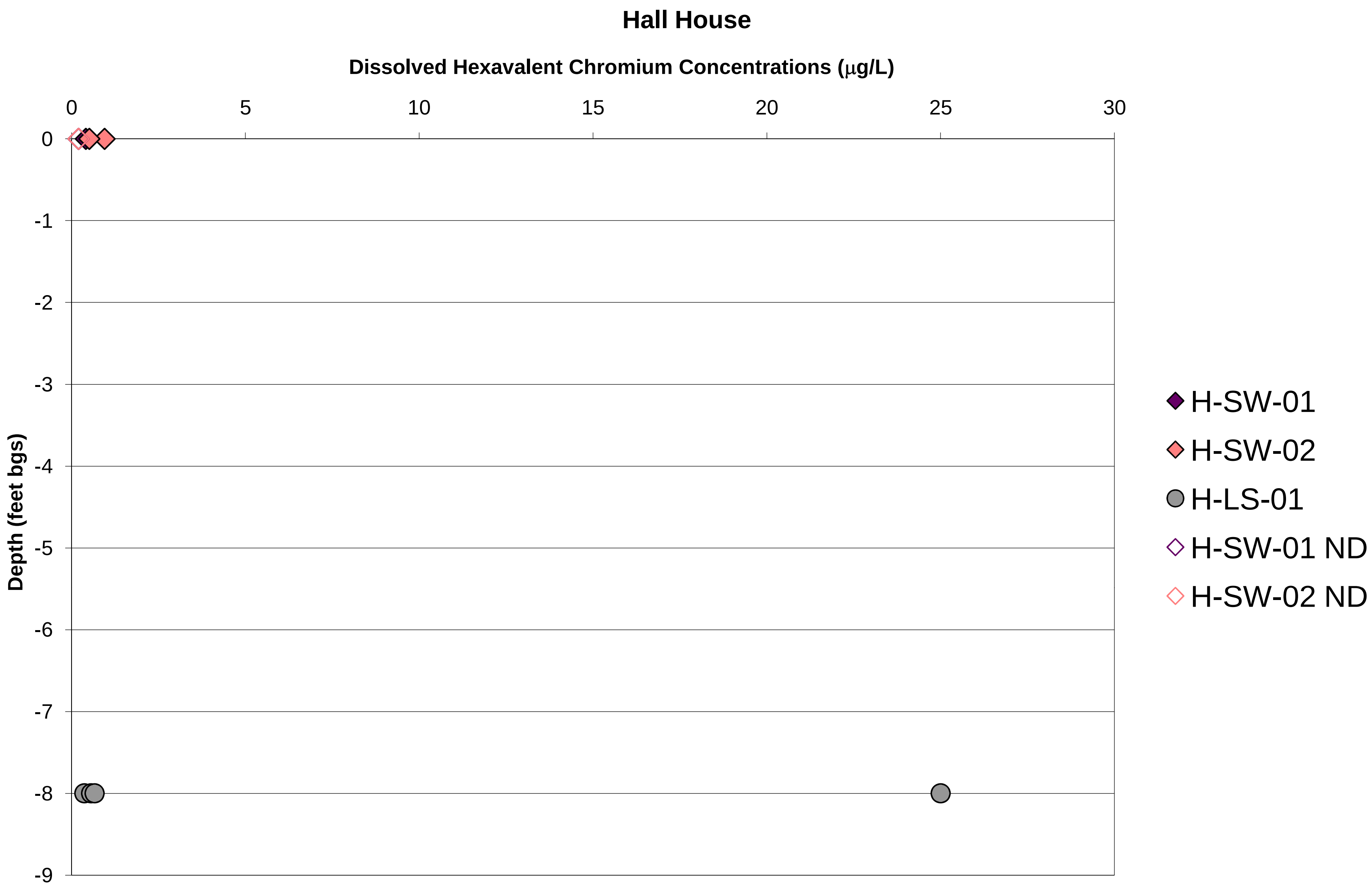

Hall House
Chloride Concentrations (mg/L)
0
10
20
30
40
50
60
70
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
Depth (feet bgs)
H-SW-01
H-SW-02
H-LS-01
H-SW-01 ND
H-SW-02 ND
H-LS-01 ND

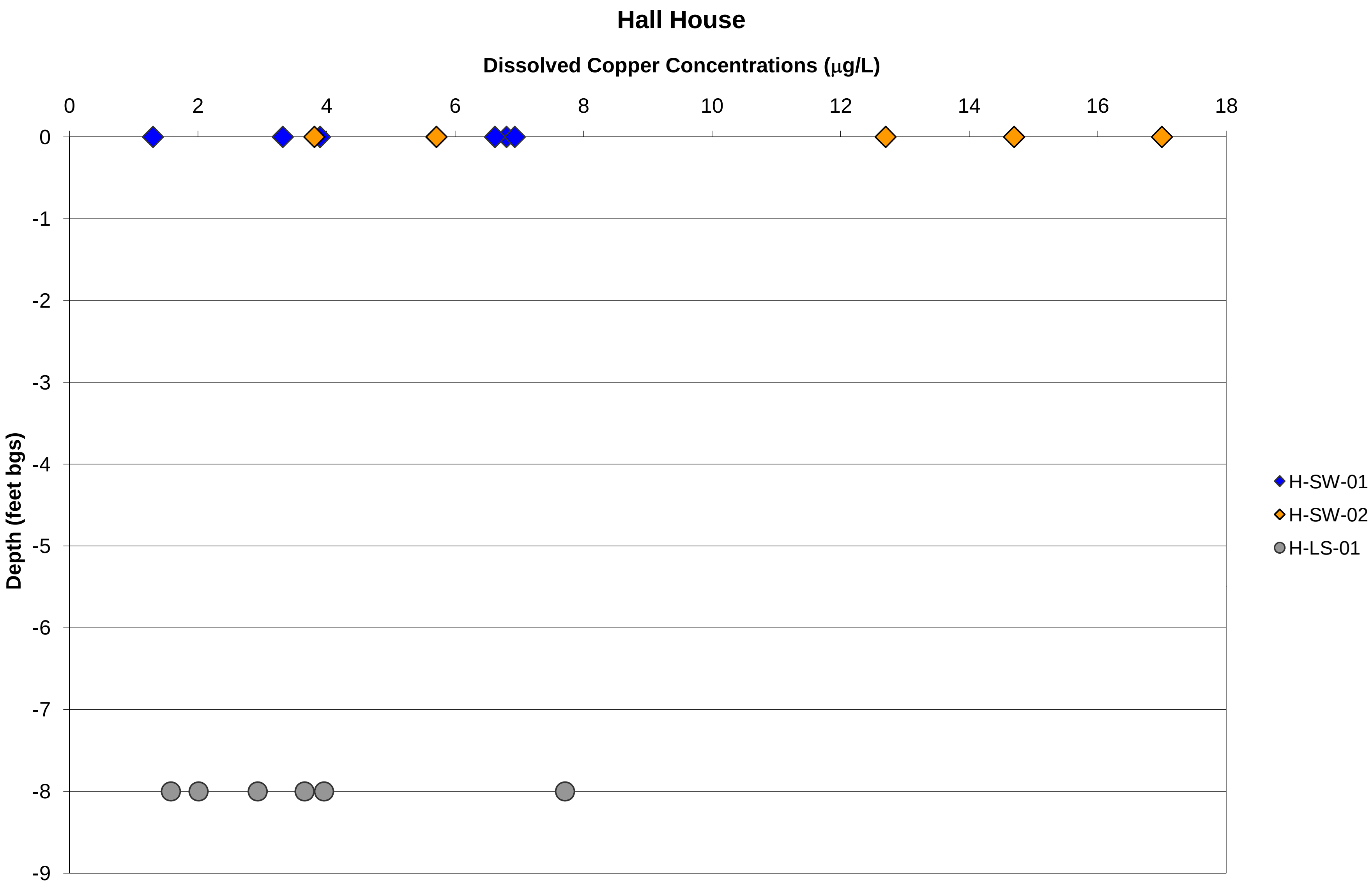

Hall House
Dissolved Aluminum Concentrations (µg/L)
0
20
40
60
80
100
120
140
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
-1000
Depth (feet bgs)
H-SW-02
H-SW-01 ND
H-SW-02 ND
H-LS-01 ND

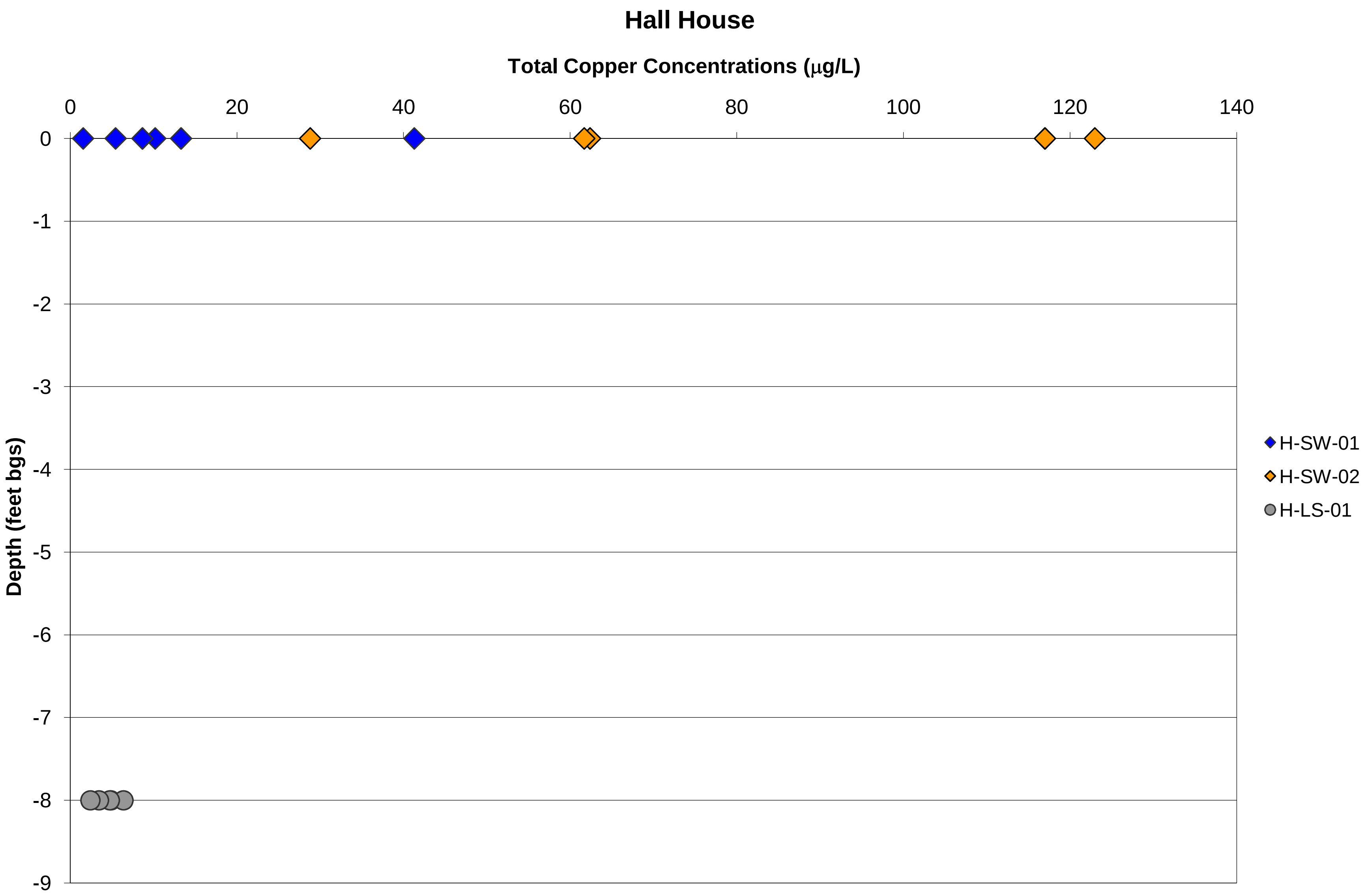

Hall House
Total Aluminum Concentrations (µg/L)
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
Depth (feet bgs)
C-Curb
C-Drive
H-Rain
H-Street
H-SW-01
H-SW-02
H-SW-01 ND
H-LS-01 ND

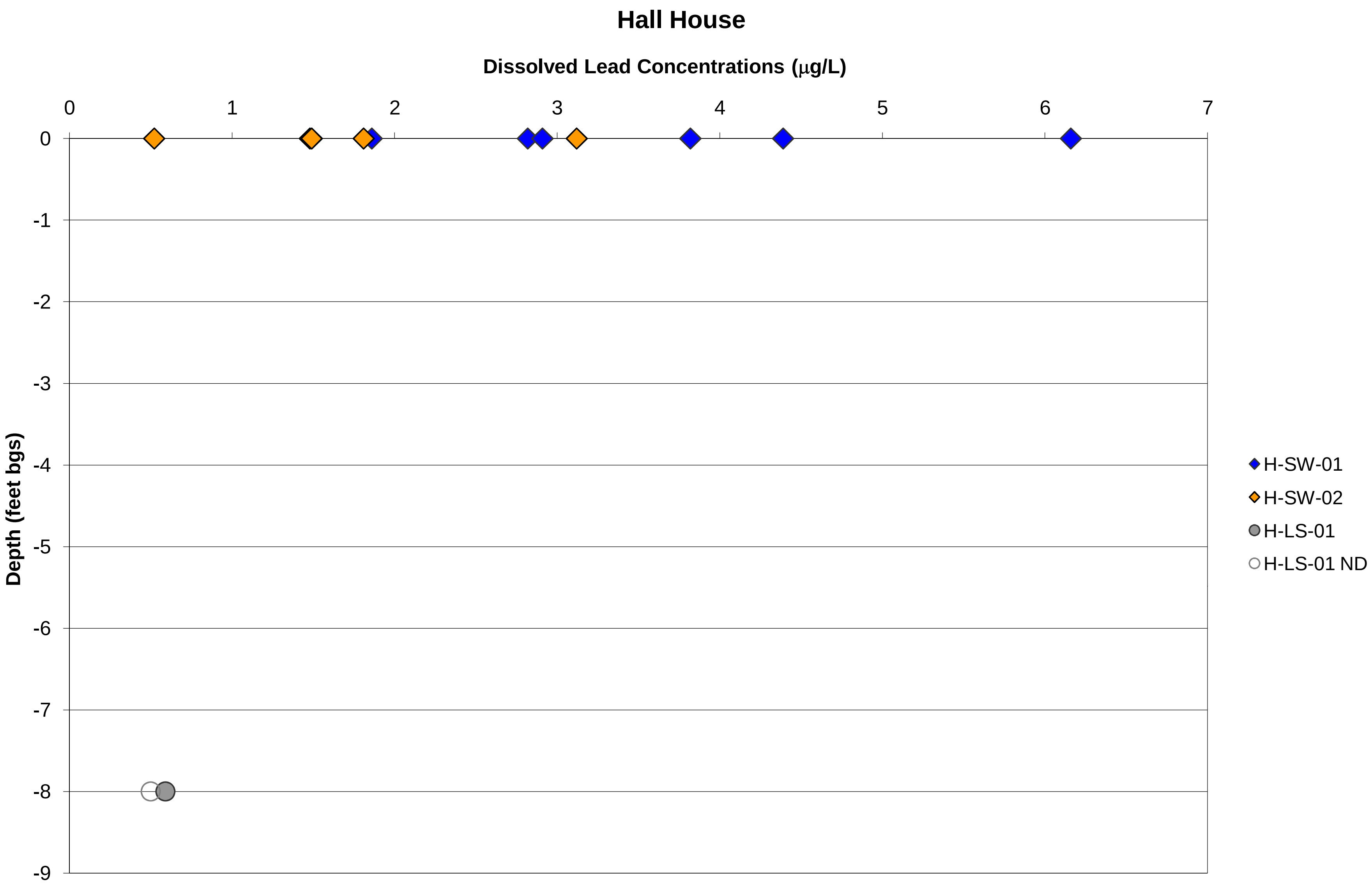

Hall House
Dissolved Arsenic Concentrations (µg/L)
0
0.5
1
1.5
2
2.5
3
3.5
4
4.5
Depth (feet bgs)
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
H-SW-02
H-LS-01
H-SW-01 ND
H-SW-02 ND
H-LS-01 ND

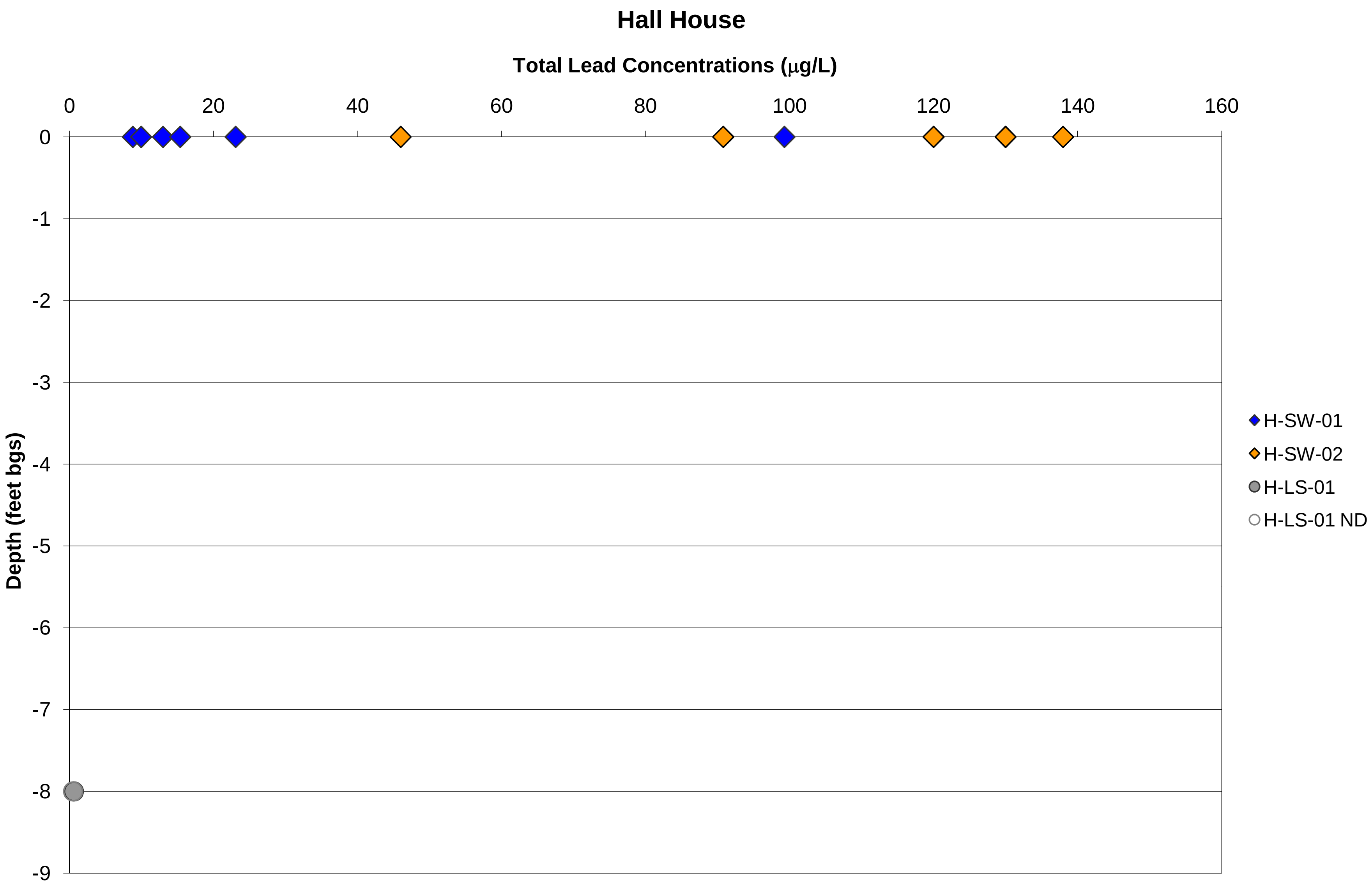

Hall House
Total Arsenic Concentrations (μg/L)
0
0.5
1
1.5
2
2.5
3
3.5
4
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
Depth (feet bgs)
◆ H-SW-01
◆ H-SW-02
◇ H-SW-01 ND
◇ H-SW-02 ND
○ H-LS-01 ND

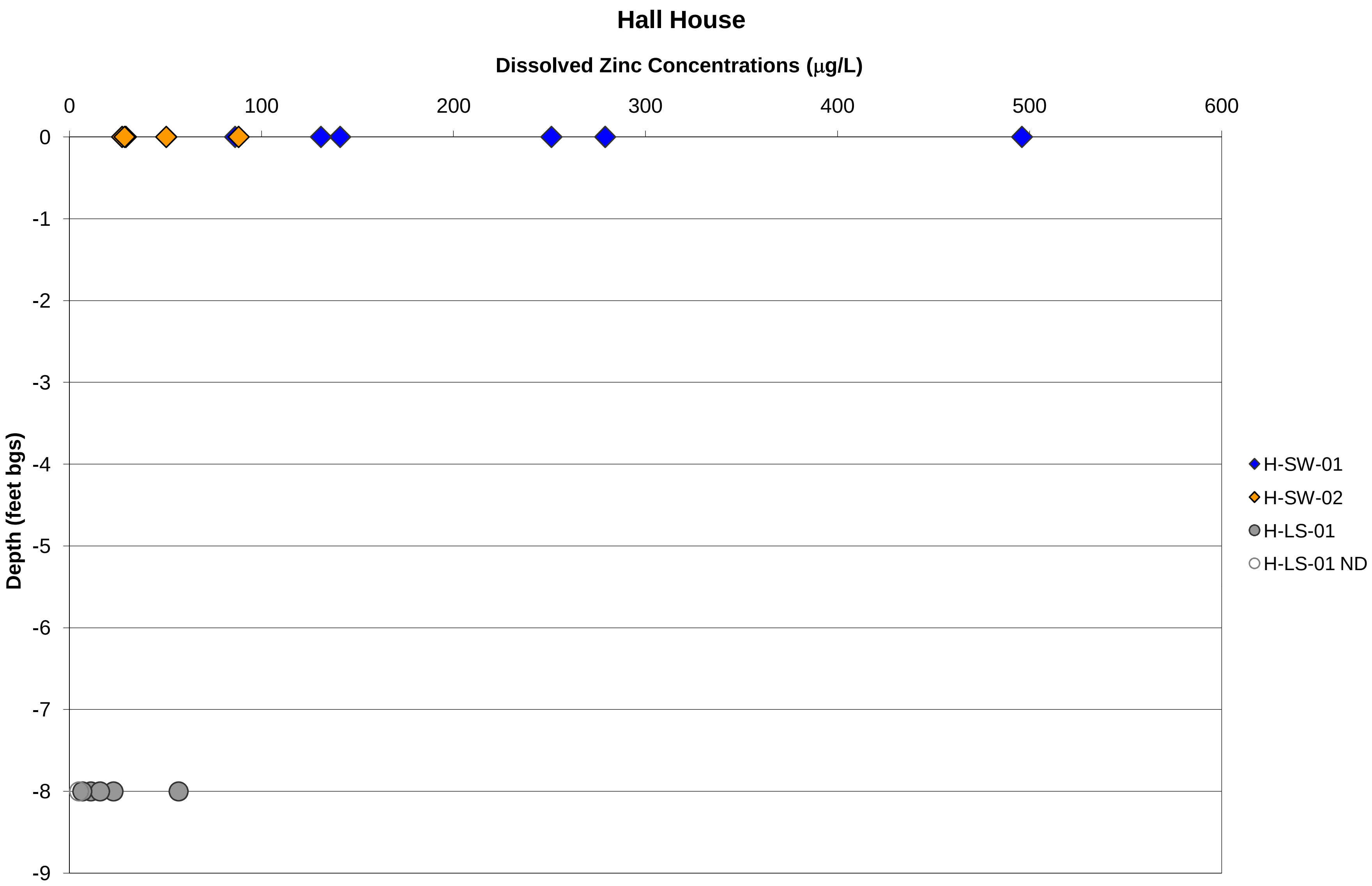

Hall House
Dissolved Hexavalent Chromium Concentrations (μg/L)
0
5
10
15
20
25
30
Depth (feet bgs)
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
H-SW-01
H-SW-02
H-LS-01
H-SW-01 ND
H-SW-02 ND

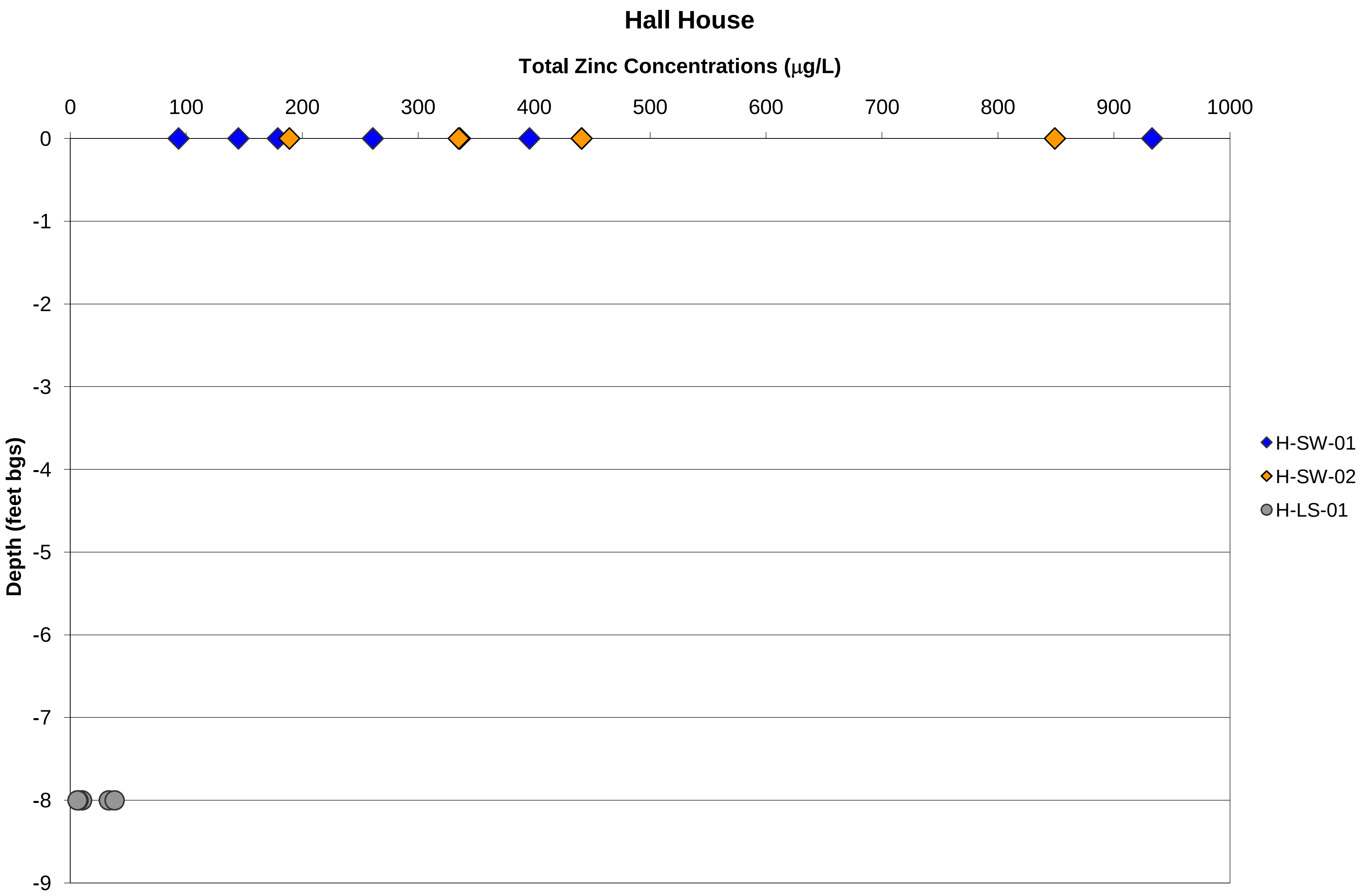

Hall House
Dissolved Copper Concentrations (µg/L)
0
2
4
6
8
10
12
14
16
18
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
Depth (feet bgs)
H-SW-01
H-SW-02
H-LS-01

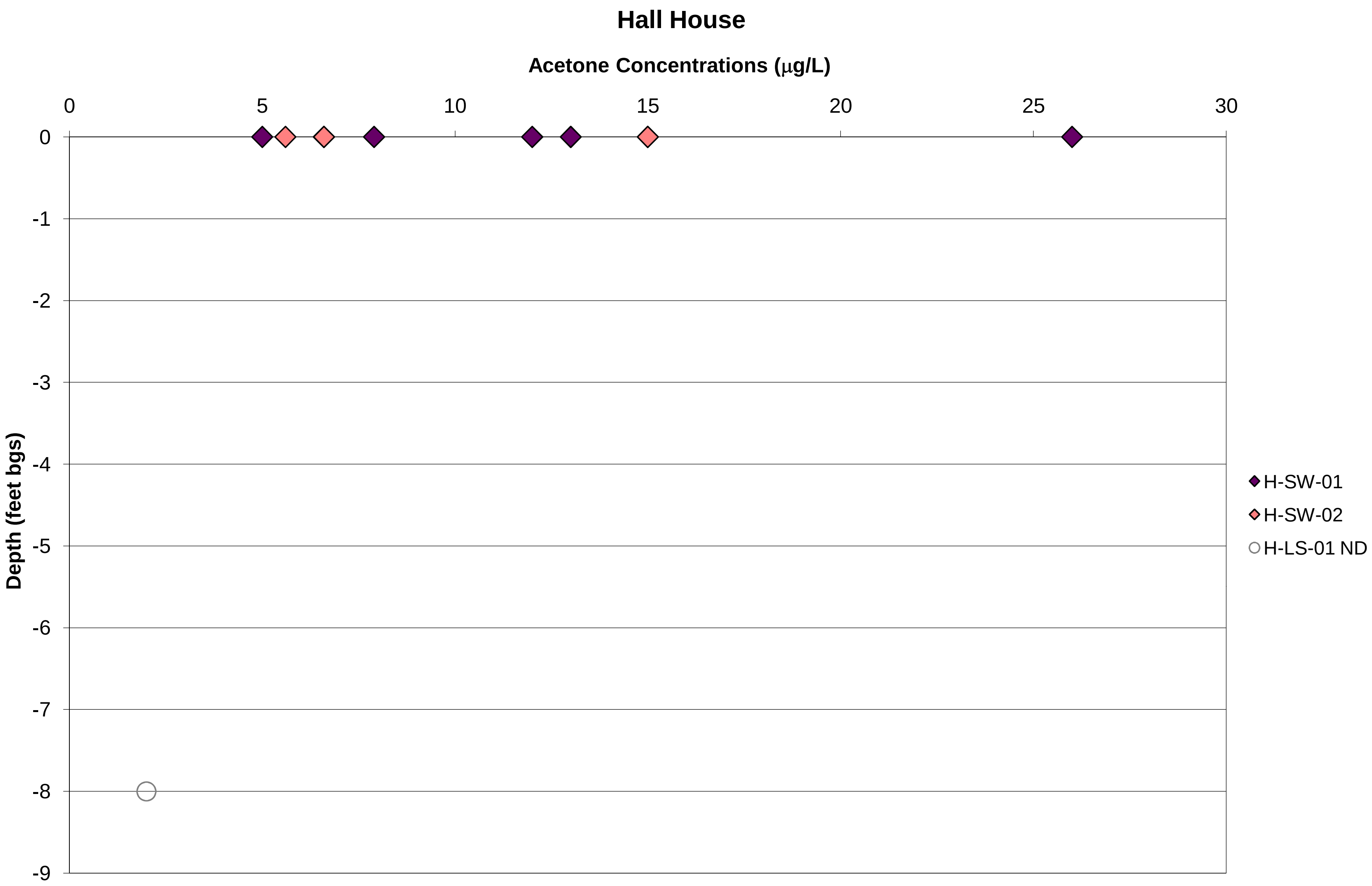

Hall House
Total Copper Concentrations (µg/L)
0
20
40
60
80
100
120
140
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
Depth (feet bgs)
H-SW-01
H-SW-02
H-LS-01

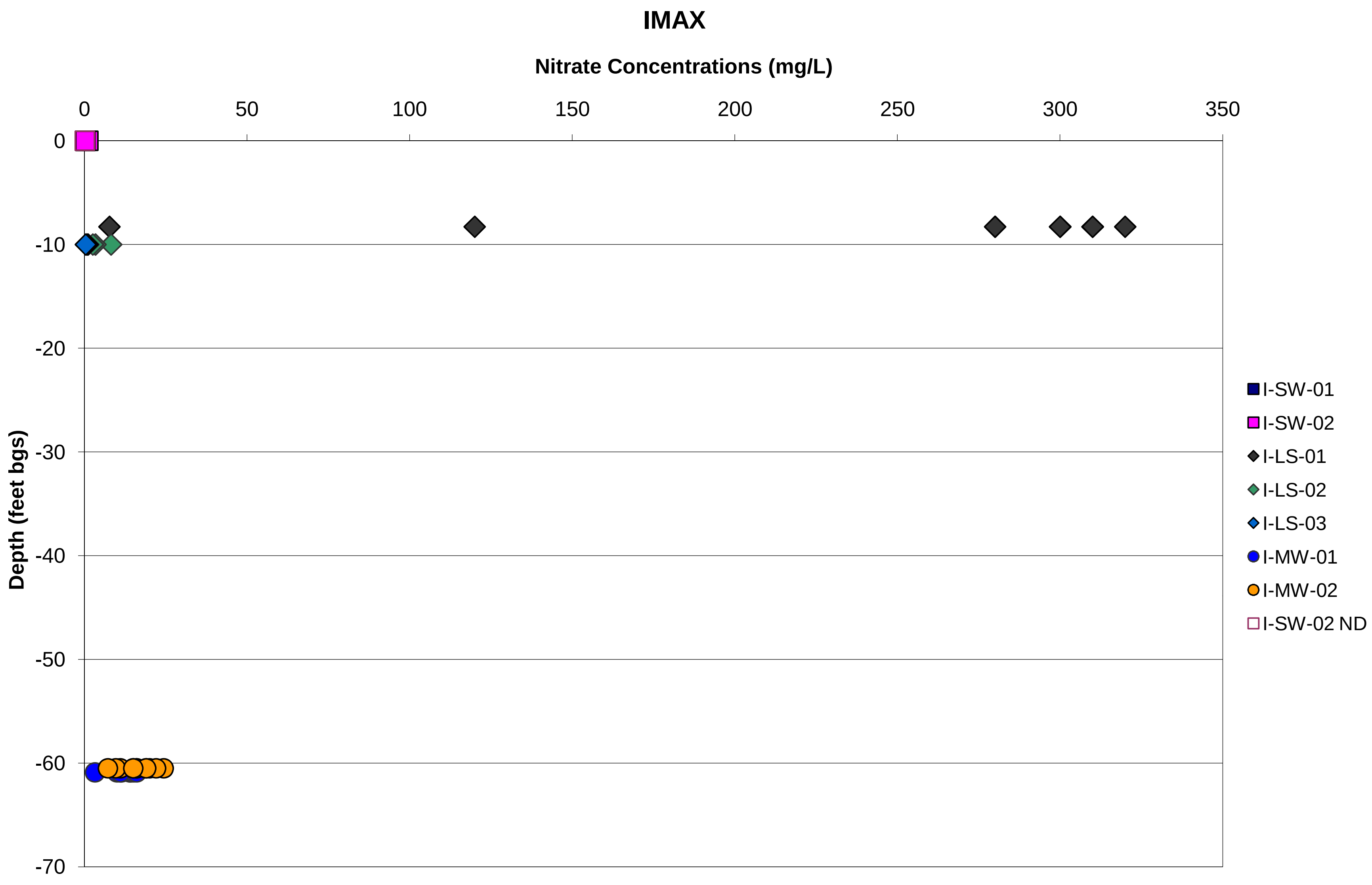

Hall House
Dissolved Lead Concentrations (µg/L)
0
1
2
3
4
5
6
7
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
Depth (feet bgs)
H-SW-01
H-SW-02
H-LS-01
H-LS-01 ND

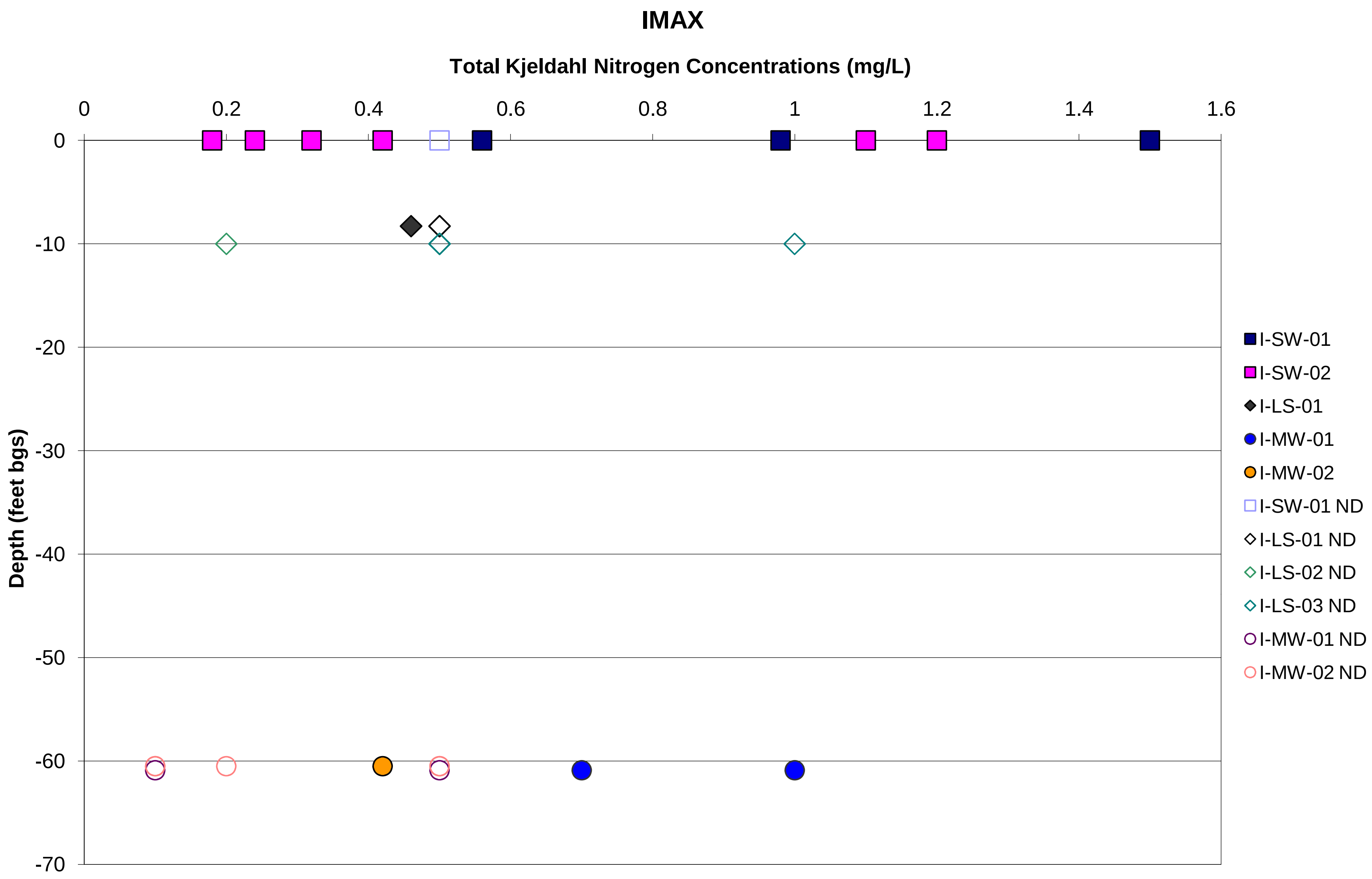

Hall House
Total Lead Concentrations (µg/L)
0
20
40
60
80
100
120
140
160
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
Depth (feet bgs)
H-SW-01
H-SW-02
H-LS-01
H-LS-01 ND

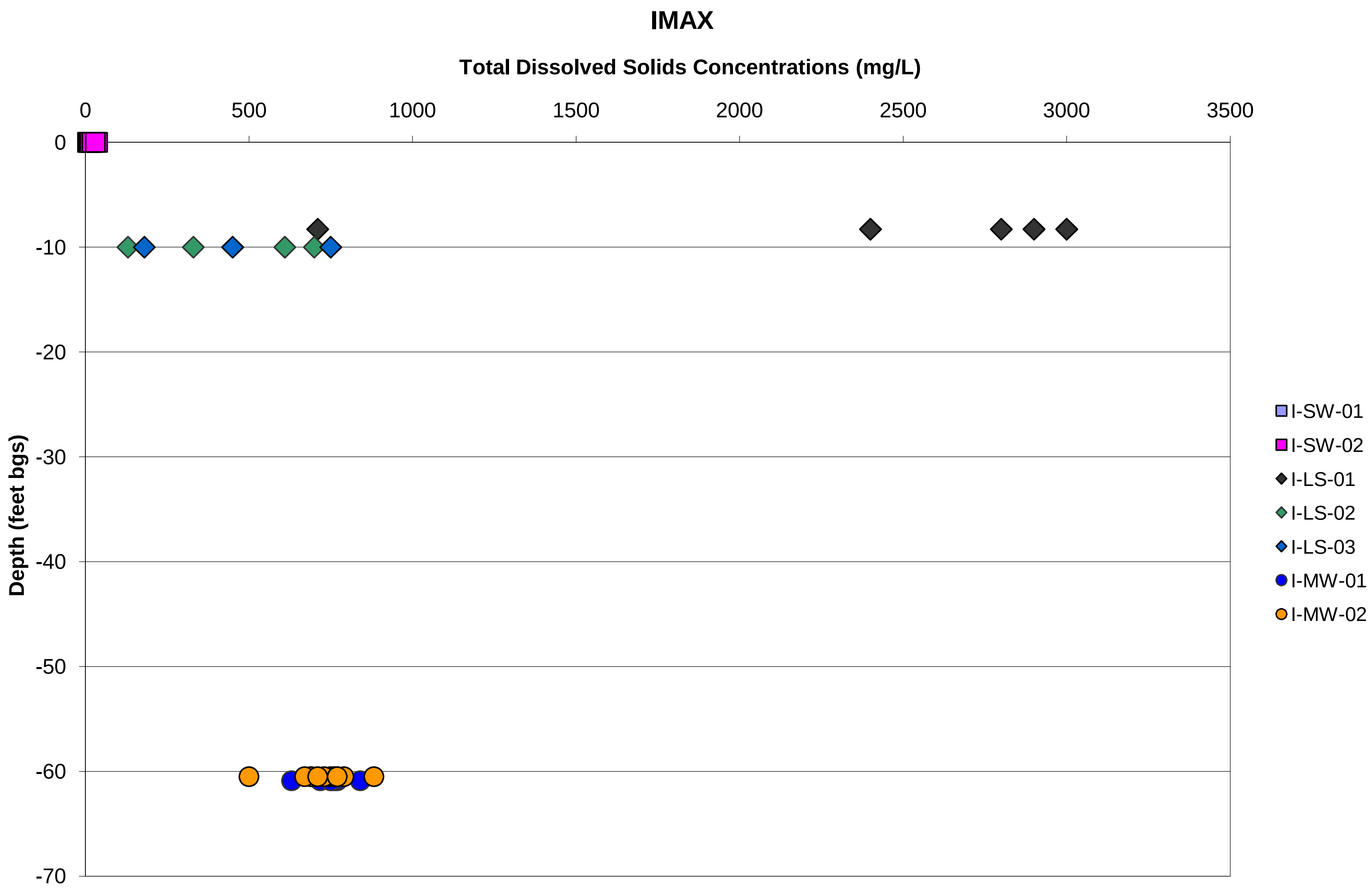

Hall House
Dissolved Zinc Concentrations (µg/L)
0
100
200
300
400
500
600
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
Depth (feet bgs)
H-SW-01
H-SW-02
H-LS-01
H-LS-01 ND


Hall House
Total Zinc Concentrations (µg/L)
0
100
200
300
400
500
600
700
800
900
1000
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
Depth (feet bgs)
H-SW-01
H-SW-02
H-LS-01


Hall House
Acetone Concentrations (µg/L)
0
5
10
15
20
25
30
0
-1
-2
-3
-4
-5
-6
-7
-8
-9
Depth (feet bgs)
H-SW-01
H-SW-02
H-LS-01 ND

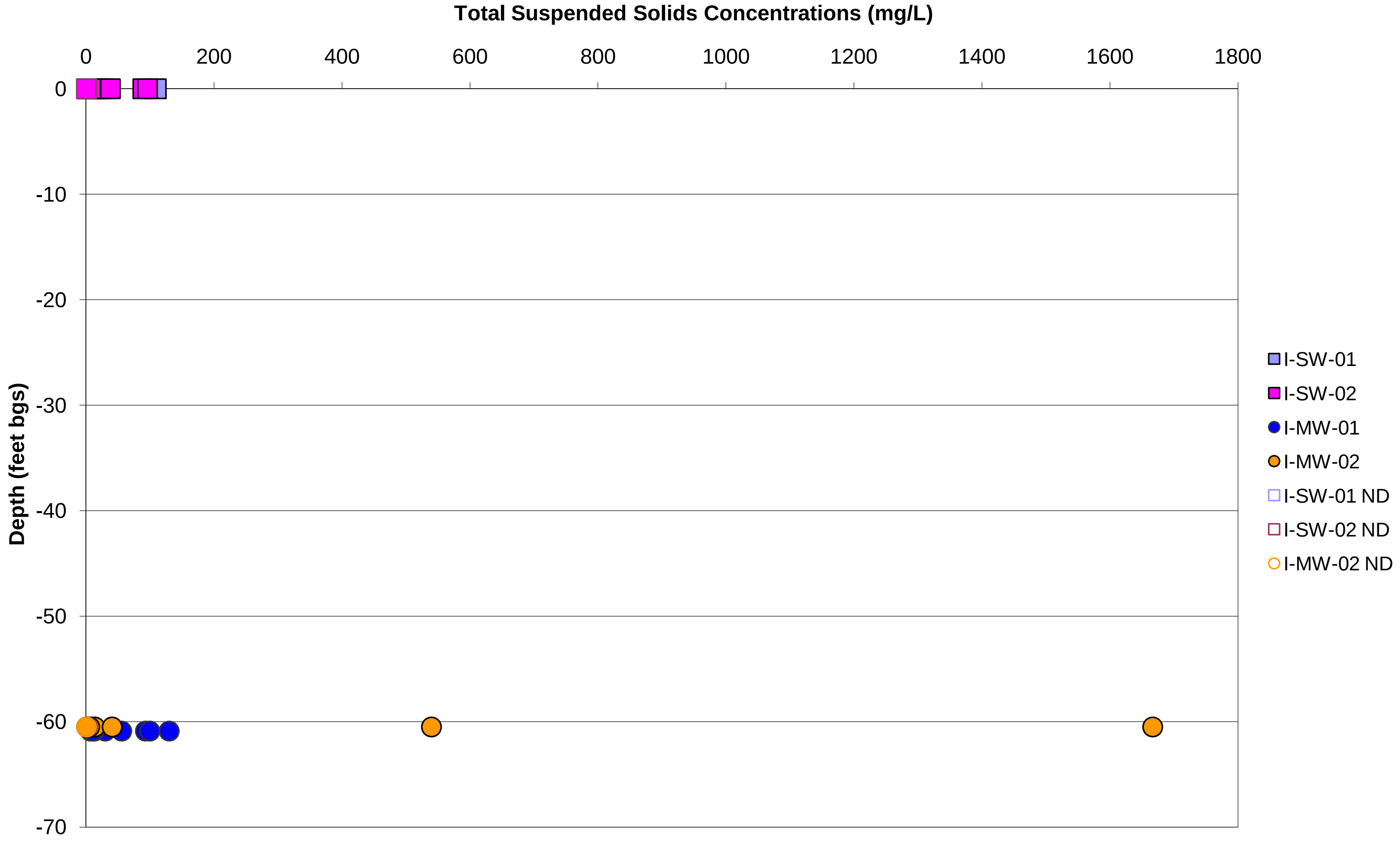

IMAX
Nitrate Concentrations (mg/L)
0
50
100
150
200
250
300
350
Depth (feet bgs)
0
-10
-20
-30
-40
-50
-60
-70
I-SW-01
I-SW-02
I-LS-01
I-LS-02
I-LS-03
I-MW-01
I-MW-02
I-SW-02 ND

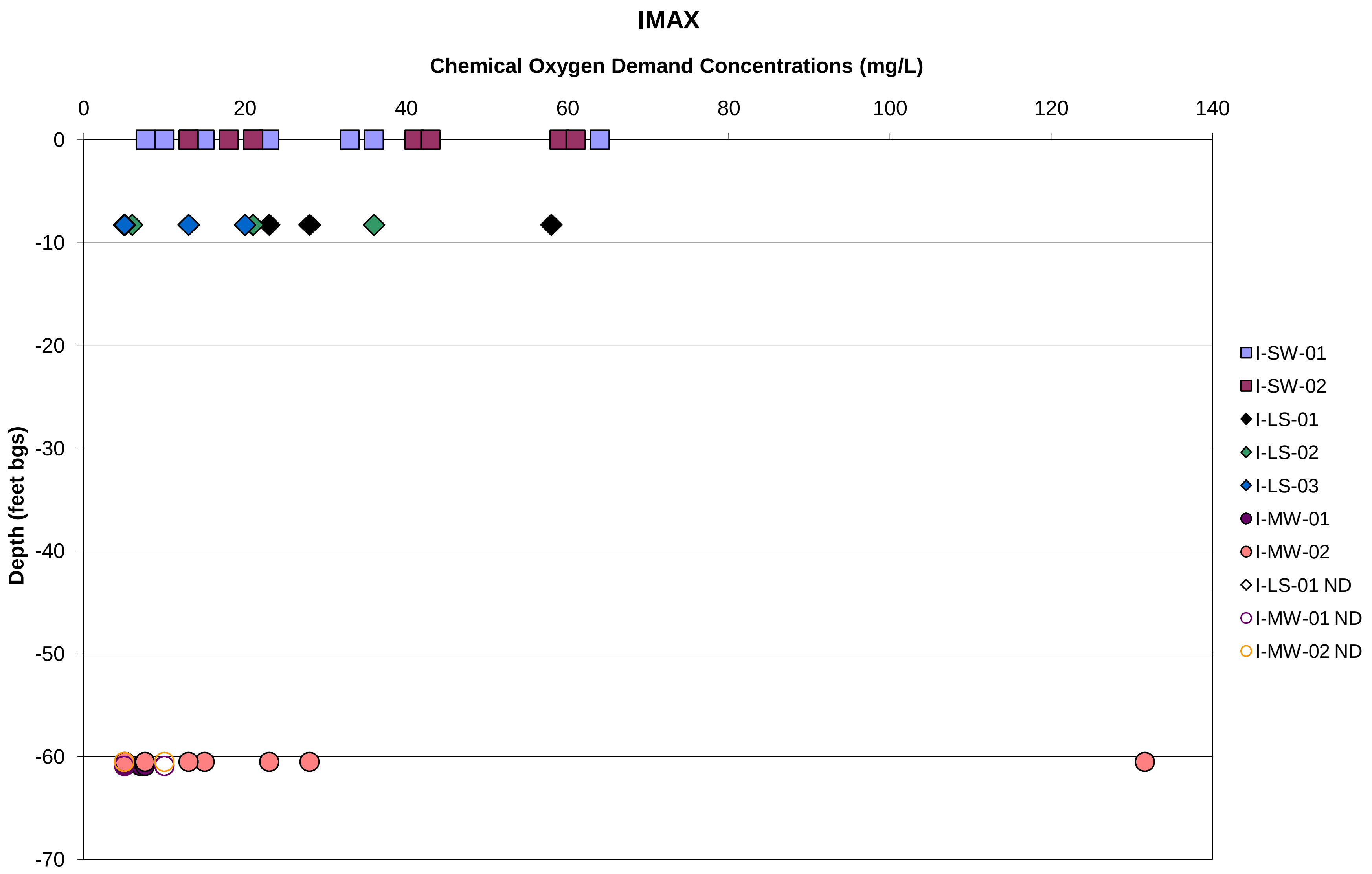

IMAX
Total Kjeldahl Nitrogen Concentrations (mg/L)
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
Depth (feet bgs)
0
-10
-20
-30
-40
-50
-60
-70
I-SW-01
I-SW-02
I-LS-01
I-MW-01
I-MW-02
I-SW-01 ND
I-LS-01 ND
I-LS-02 ND
I-LS-03 ND
I-MW-01 ND
I-MW-02 ND

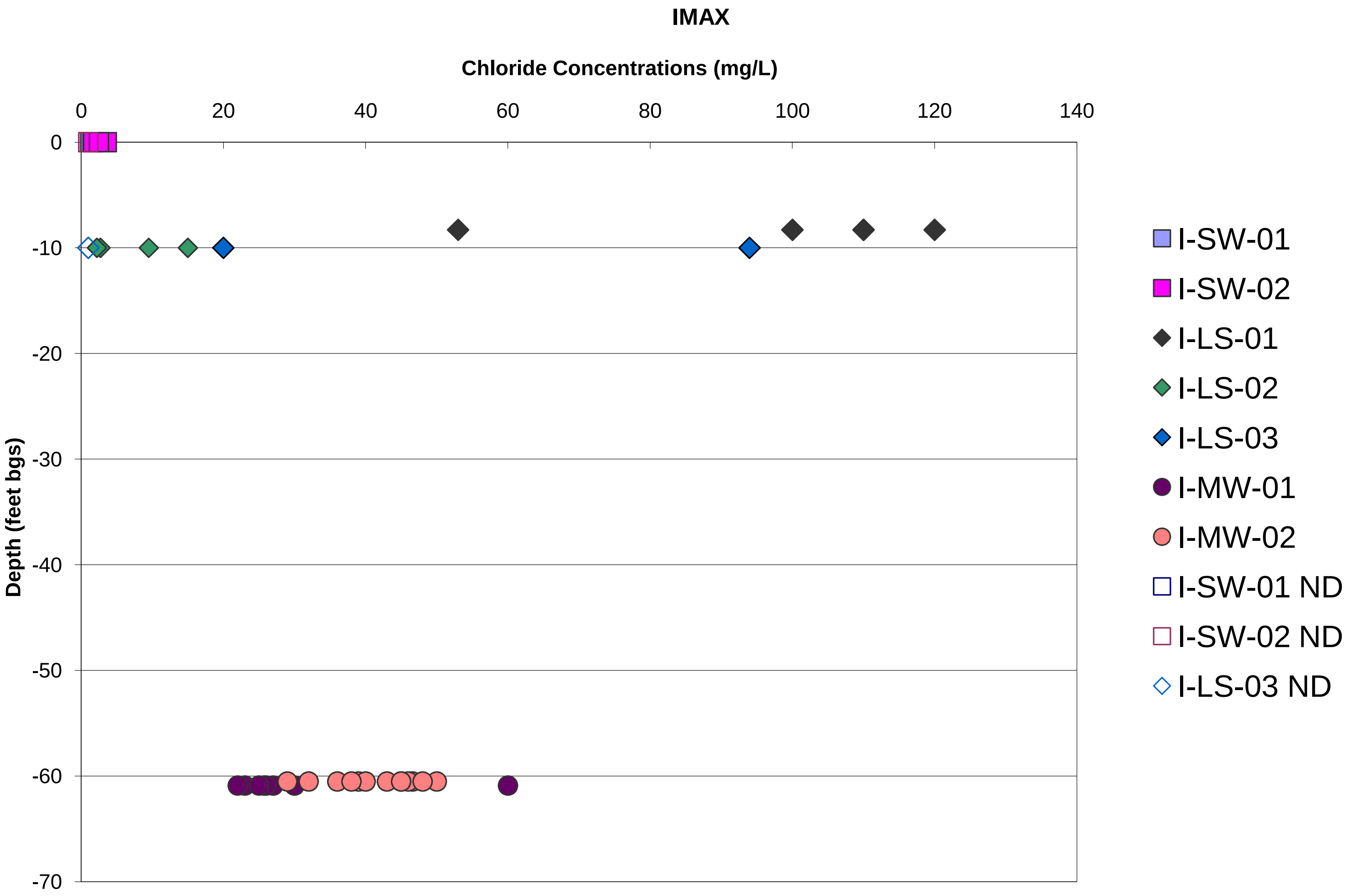


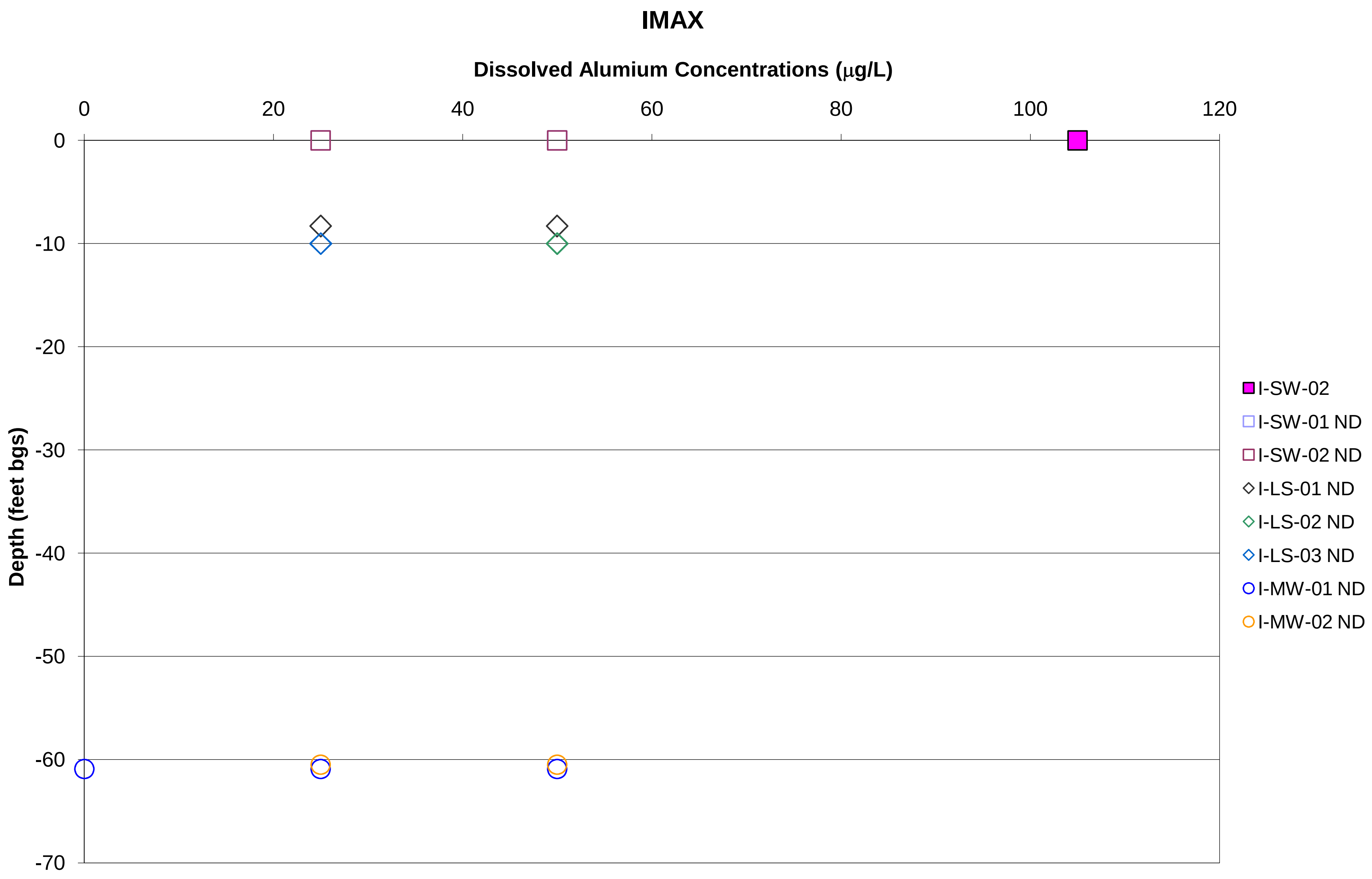
IMAX
Total Dissolved Solids Concentrations (mg/L)
0
500
1000
1500
2000
2500
3000
3500
Depth (feet bgs)
0
-10
-20
-30
-40
-50
-60
-70
I-SW-01
I-SW-02
I-LS-01
I-LS-02
I-LS-03
I-MW-01
I-MW-02

# IMAX

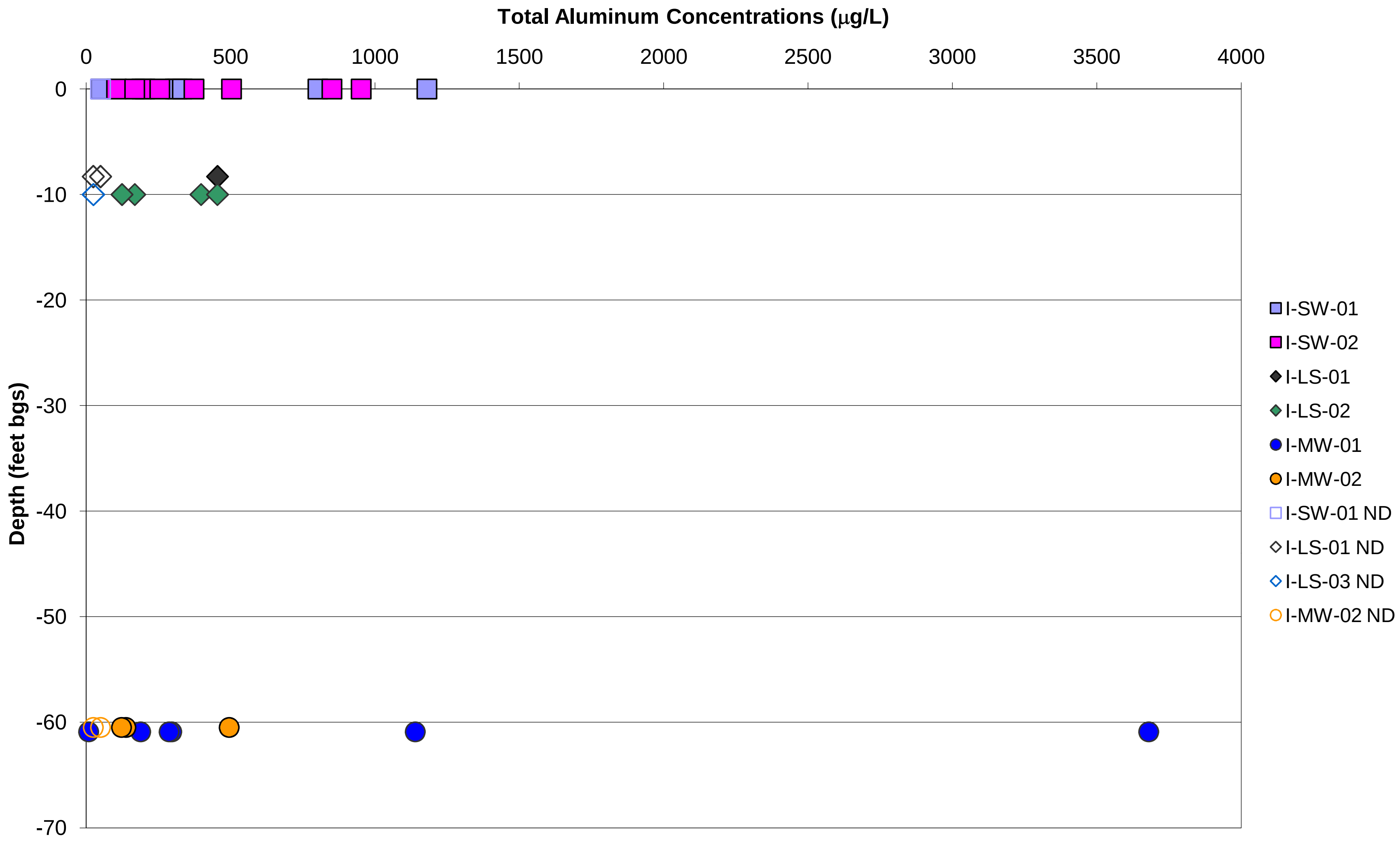

Total Suspended Solids Concentrations (mg/L)
0
200
400
600
800
1000
1200
1400
1600
1800
0
-10
-20
-30
-40
-50
-60
-70
Depth (feet bgs)
I-SW-01
I-SW-02
I-MW-01
I-MW-02
I-SW-01 ND
I-SW-02 ND
I-MW-02 ND


IMAX
Chemical Oxygen Demand Concentrations (mg/L)
0
20
40
60
80
100
120
140
Depth (feet bgs)
0
-10
-20
-30
-40
-50
-60
-70
I-SW-01
I-SW-02
I-LS-01
I-LS-02
I-LS-03
I-MW-01
I-MW-02
I-LS-01 ND
I-MW-01 ND
I-MW-02 ND

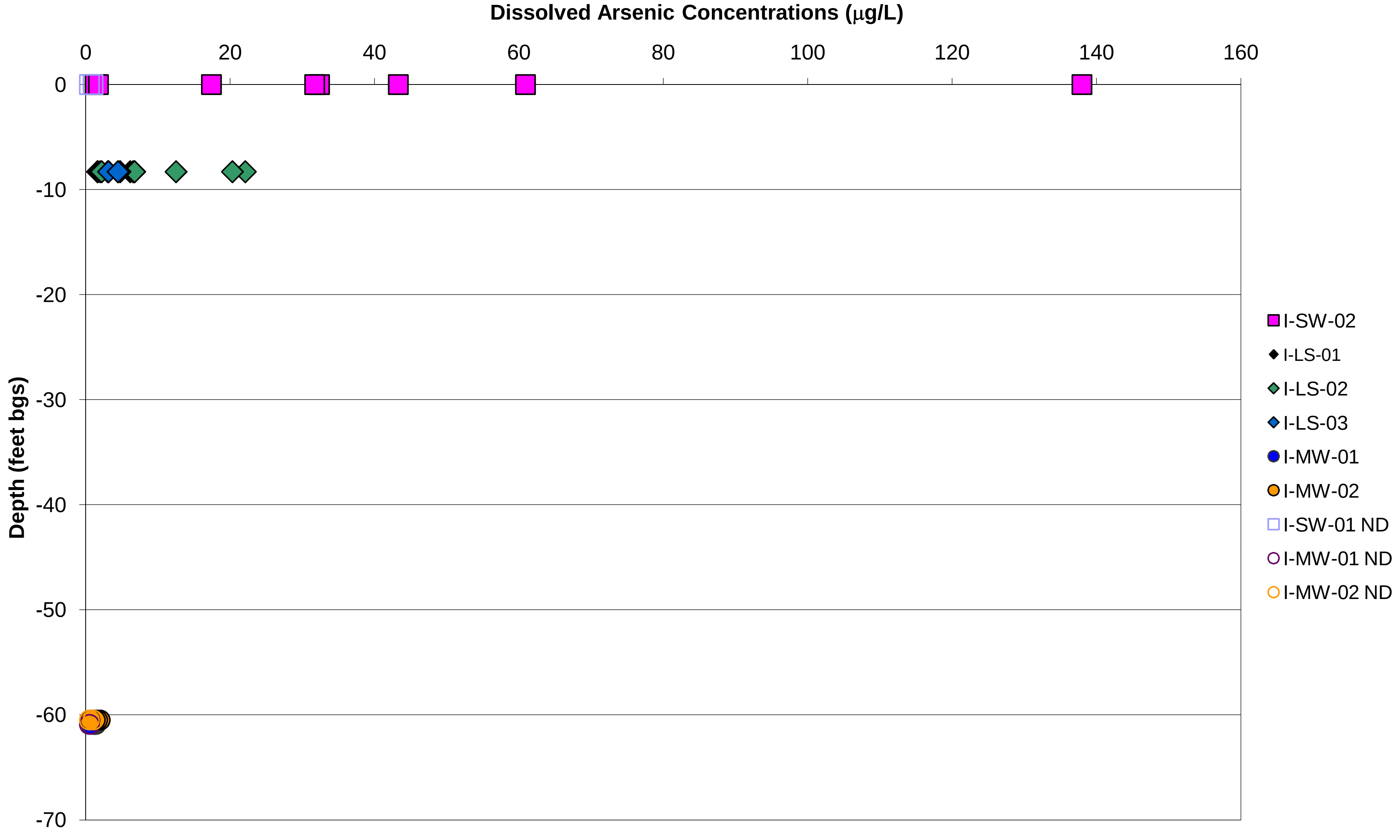

IMAX
Chloride Concentrations (mg/L)
0
20
40
60
80
100
120
140
0
-10
-20
-30
-40
-50
-60
-70
Depth (feet bgs)
I-SW-01
I-SW-02
I-LS-01
I-LS-02
I-LS-03
I-MW-01
I-MW-02
I-SW-01 ND
I-SW-02 ND
I-LS-03 ND

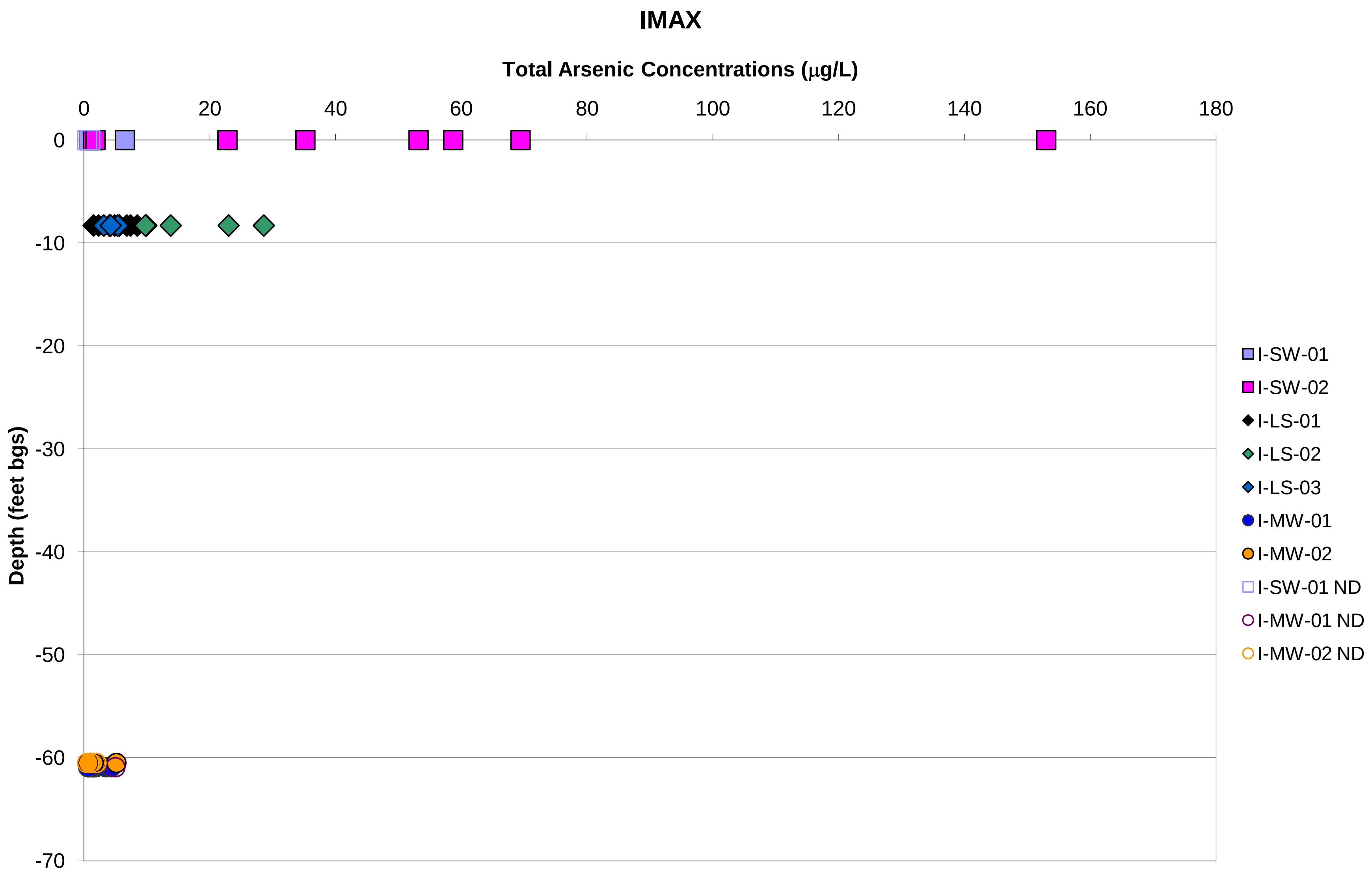

IMAX
Dissolved Alumium Concentrations (µg/L)
0
20
40
60
80
100
120
0
-10
-20
-30
-40
-50
-60
-70
Depth (feet bgs)
I-SW-02
I-SW-01 ND
I-SW-02 ND
I-LS-01 ND
I-LS-02 ND
I-LS-03 ND
I-MW-01 ND
I-MW-02 ND

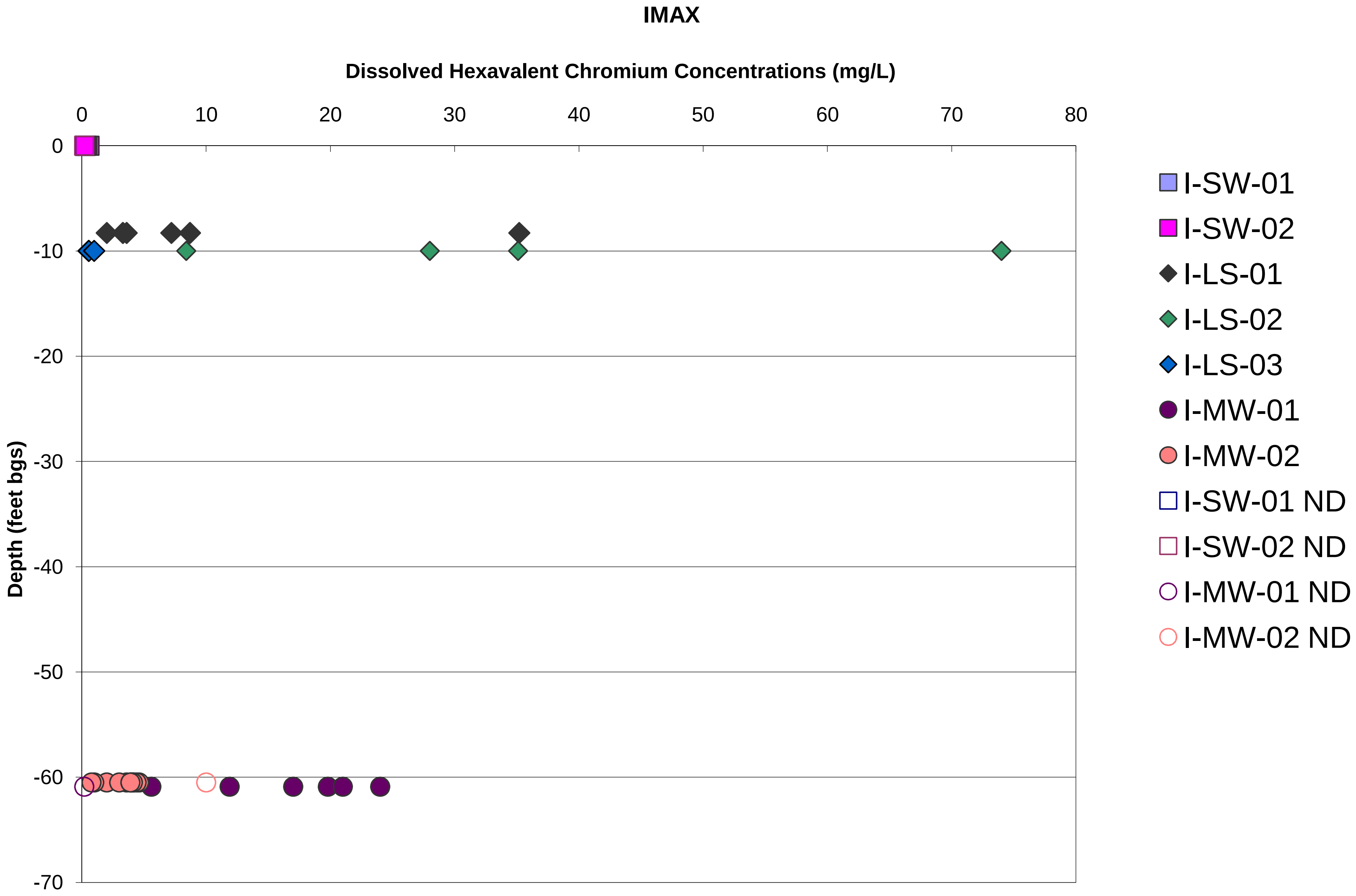
# IMAX

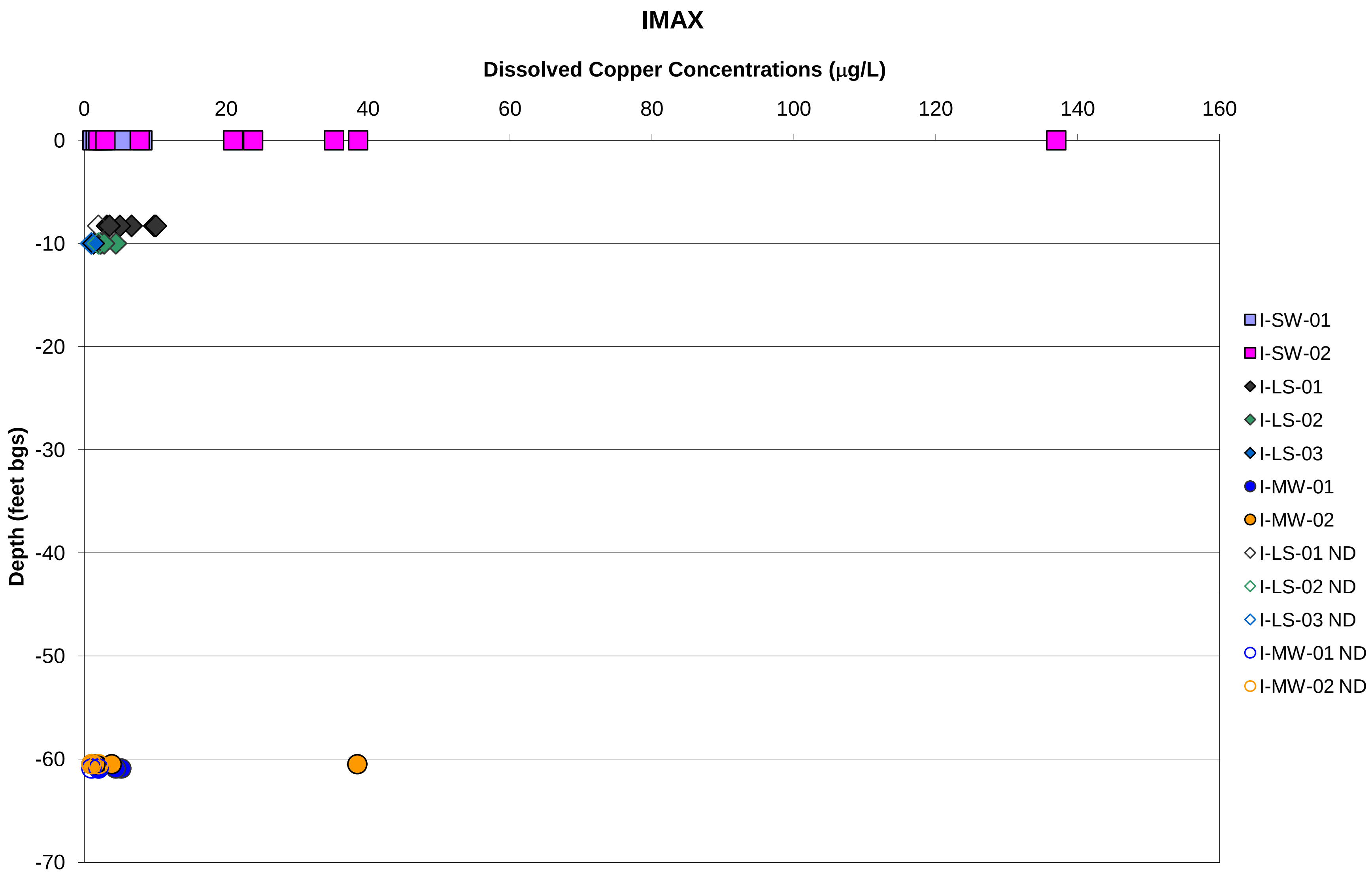

Total Aluminum Concentrations (µg/L)
0
500
1000
1500
2000
2500
3000
3500
4000
Depth (feet bgs)
0
-10
-20
-30
-40
-50
-60
-70
I-SW-01
I-SW-02
I-LS-01
I-LS-02
I-MW-01
I-MW-02
I-SW-01 ND
I-LS-01 ND
I-LS-03 ND
I-MW-02 ND

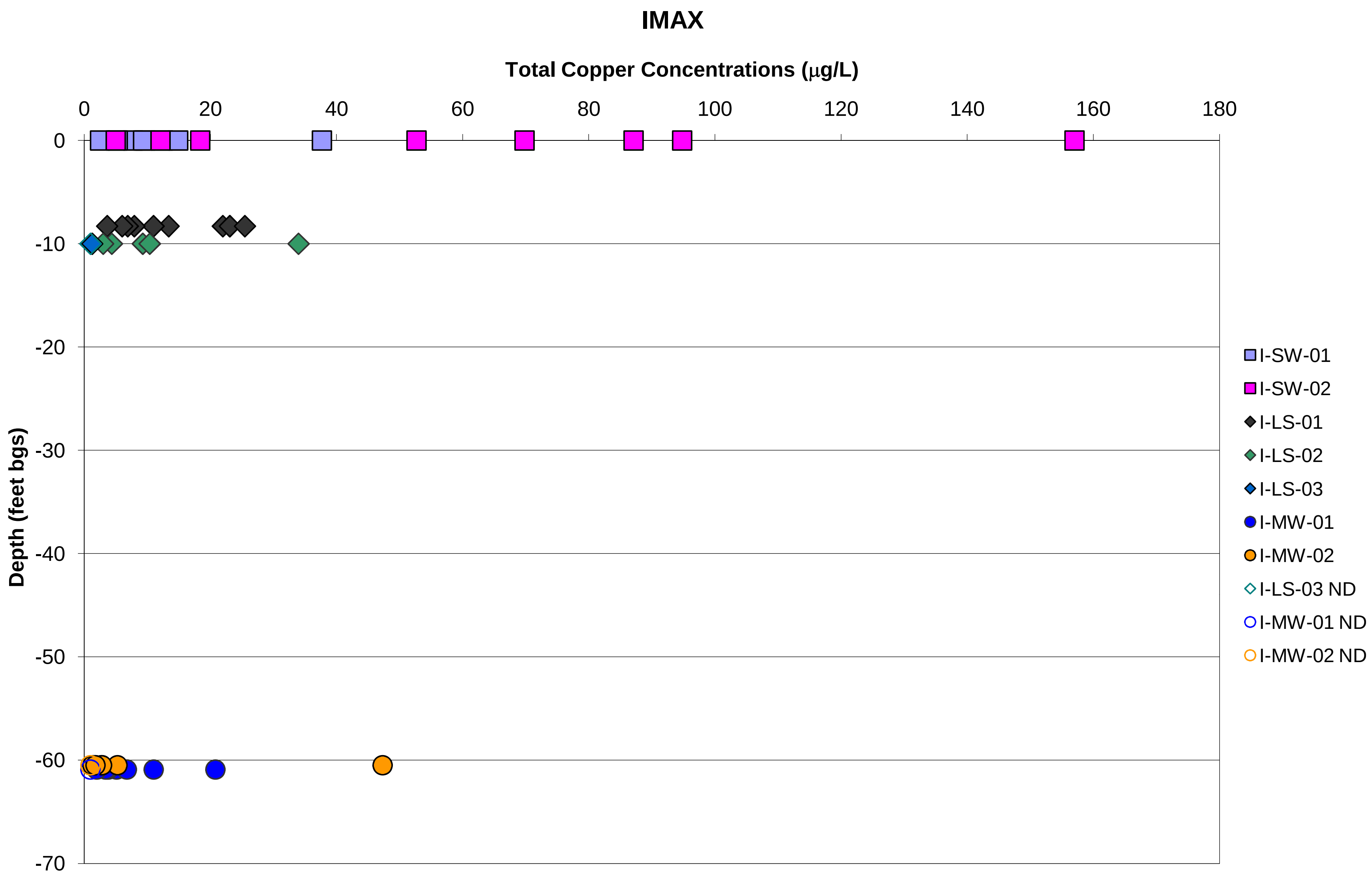
## IMAX

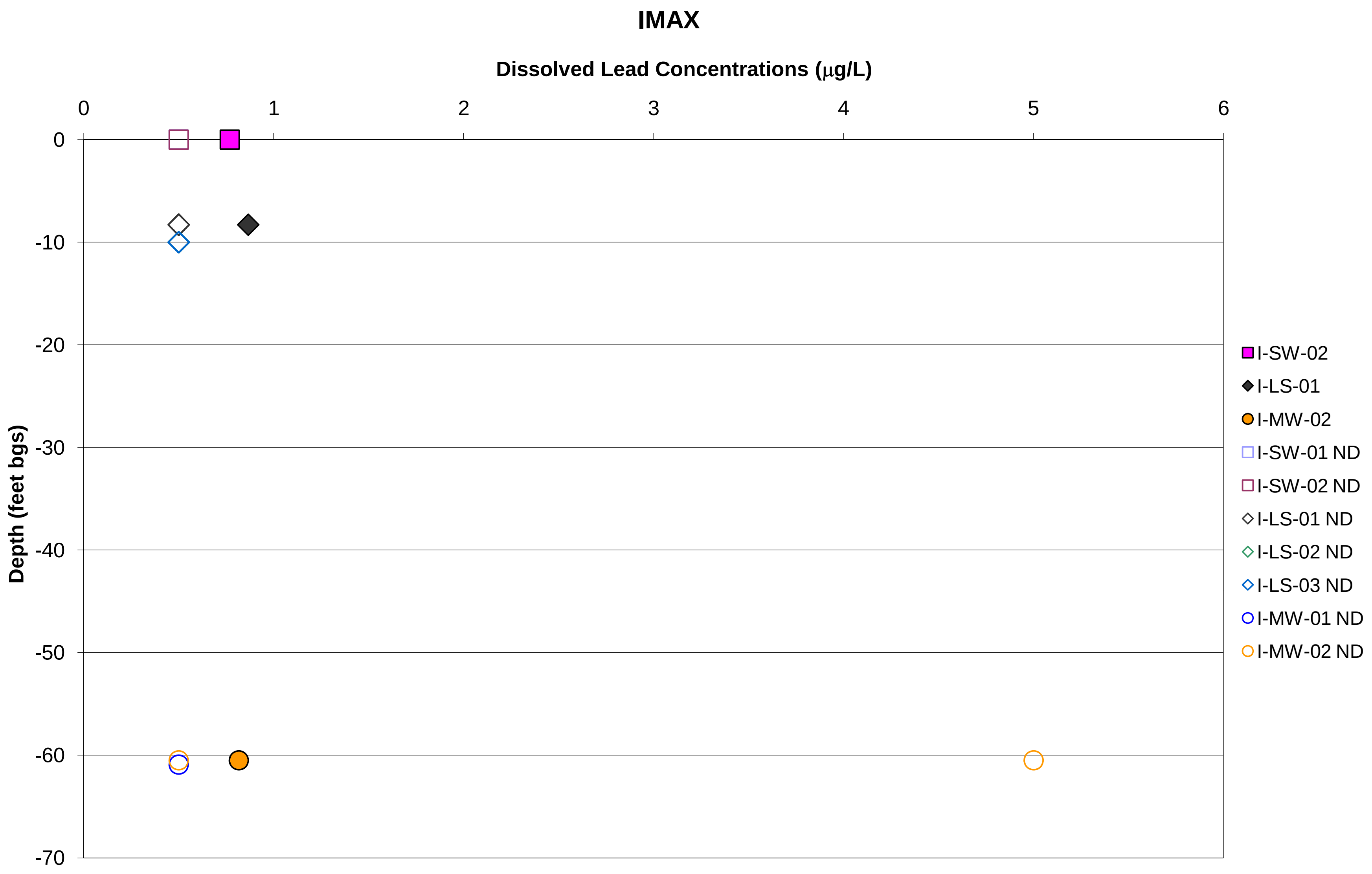

Dissolved Arsenic Concentrations (µg/L)
0
20
40
60
80
100
120
140
160
0
-10
-20
-30
-40
-50
-60
-70
Depth (feet bgs)
I-SW-02
I-LS-01
I-LS-02
I-LS-03
I-MW-01
I-MW-02
I-SW-01 ND
I-MW-01 ND
I-MW-02 ND

IMAX
Total Arsenic Concentrations (µg/L)
0
20
40
60
80
100
120
140
160
180
Depth (feet bgs)
0
-10
-20
-30
-40
-50
-60
-70
I-SW-01
I-SW-02
I-LS-01
I-LS-02
I-LS-03
I-MW-01
I-MW-02
I-SW-01 ND
I-MW-01 ND
I-MW-02 ND

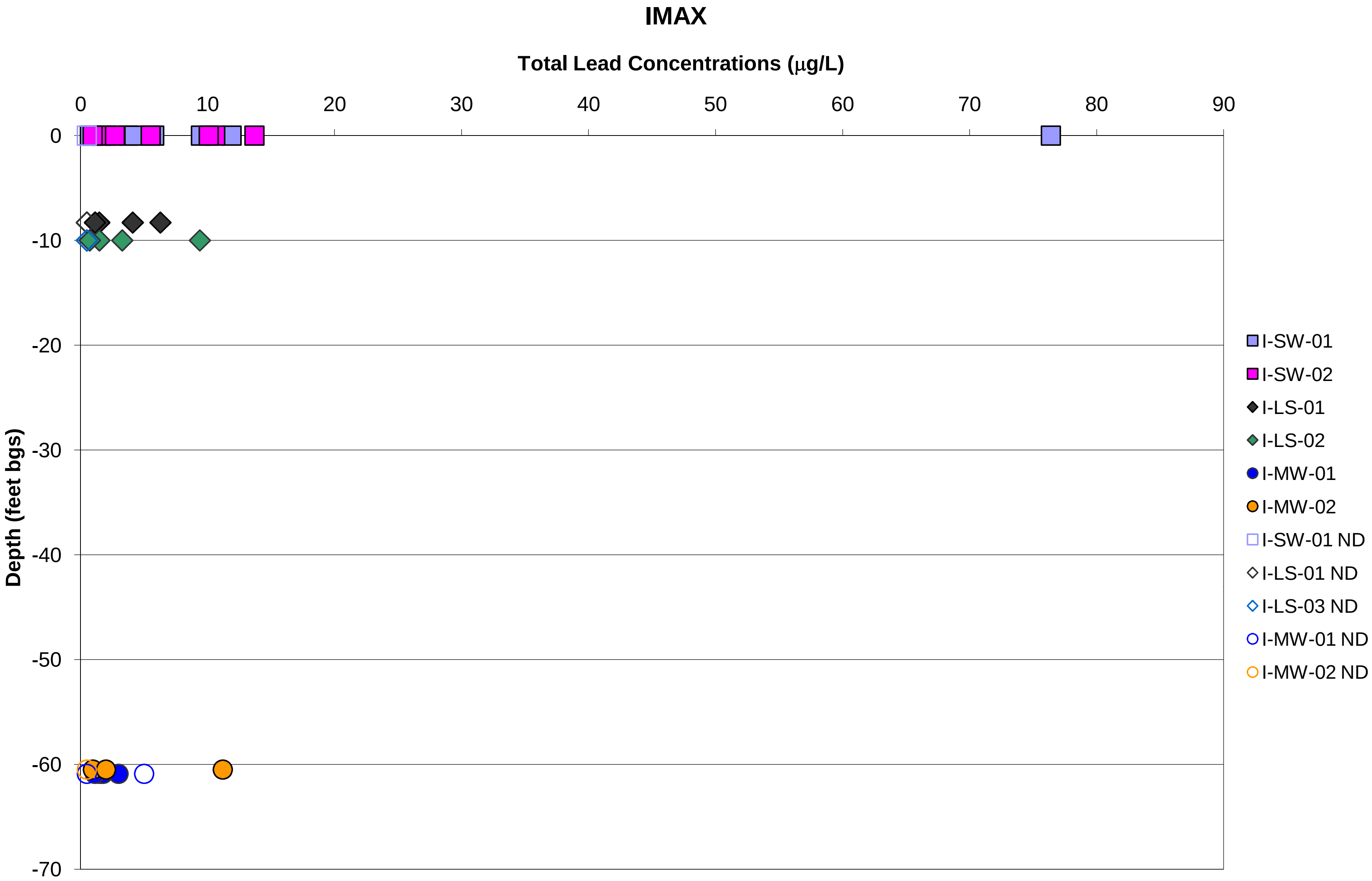

IMAX
Dissolved Hexavalent Chromium Concentrations (mg/L)
0
10
20
30
40
50
60
70
80
0
-10
-20
-30
-40
-50
-60
-70
Depth (feet bgs)
I-SW-01
I-SW-02
I-LS-01
I-LS-02
I-LS-03
I-MW-01
I-MW-02
I-SW-01 ND
I-SW-02 ND
I-MW-01 ND
I-MW-02 ND

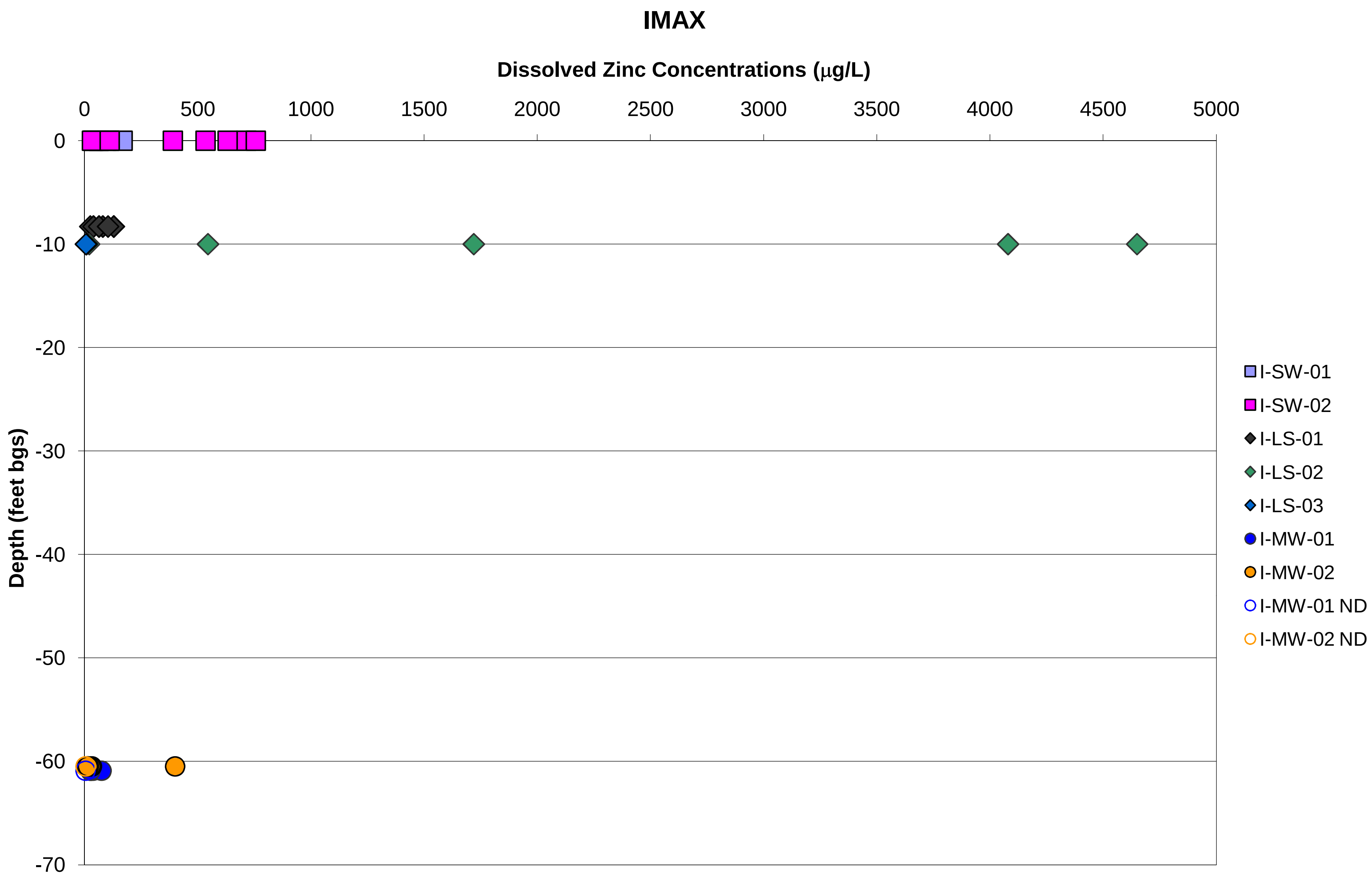

IMAX
Dissolved Copper Concentrations (µg/L)
0
20
40
60
80
100
120
140
160
Depth (feet bgs)
0
-10
-20
-30
-40
-50
-60
-70
I-SW-01
I-SW-02
I-LS-01
I-LS-02
I-LS-03
I-MW-01
I-MW-02
I-LS-01 ND
I-LS-02 ND
I-LS-03 ND
I-MW-01 ND
I-MW-02 ND

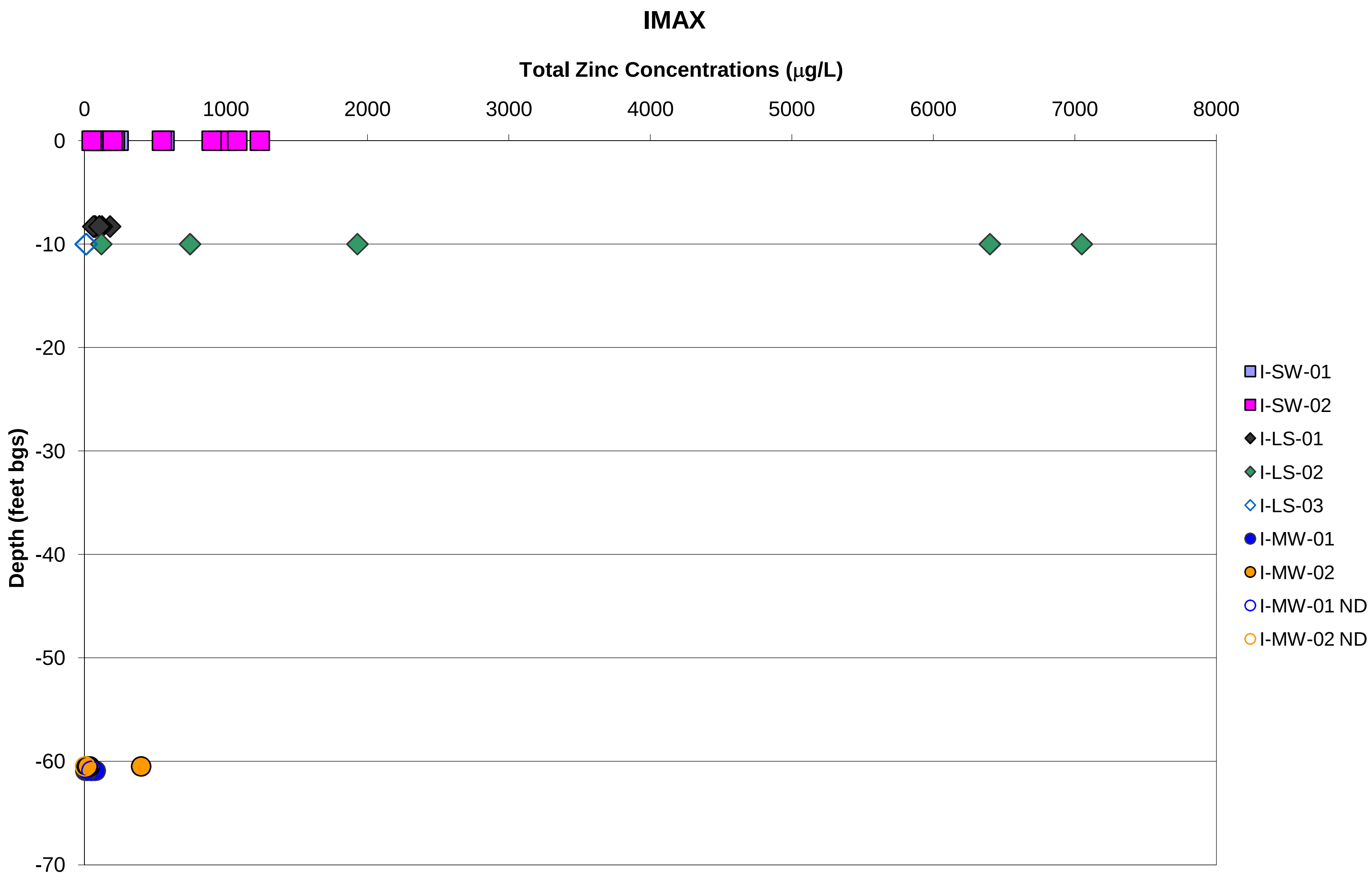

IMAX
Total Copper Concentrations (µg/L)
0
20
40
60
80
100
120
140
160
180
Depth (feet bgs)
0
-10
-20
-30
-40
-50
-60
-70
I-SW-01
I-SW-02
I-LS-01
I-LS-02
I-LS-03
I-MW-01
I-MW-02
I-LS-03 ND
I-MW-01 ND
I-MW-02 ND

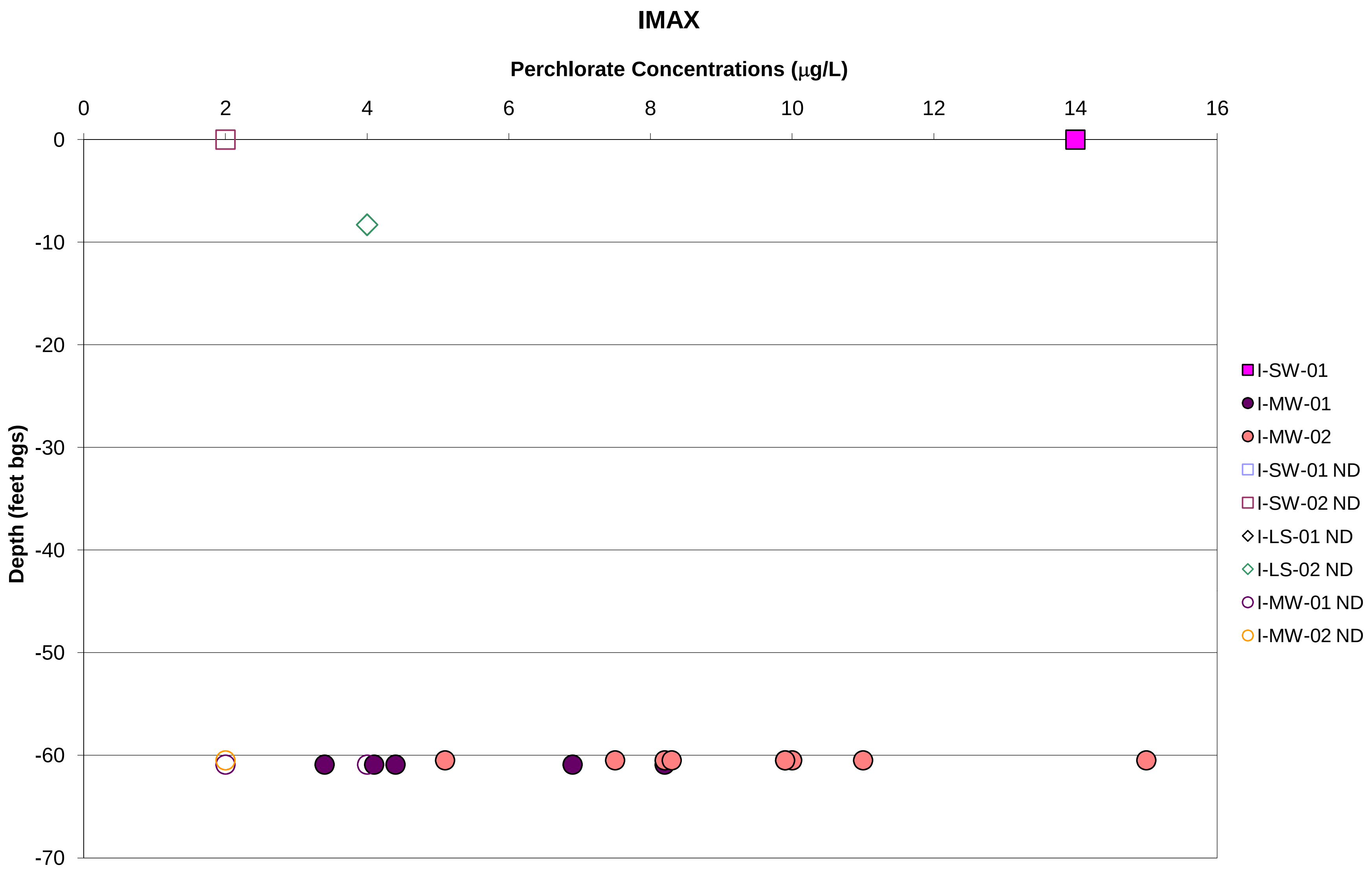


IMAX
Dissolved Lead Concentrations (µg/L)
0
1
2
3
4
5
6
Depth (feet bgs)
0
-10
-20
-30
-40
-50
-60
-70
I-SW-02
I-LS-01
I-MW-02
I-SW-01 ND
I-SW-02 ND
I-LS-01 ND
I-LS-02 ND
I-LS-03 ND
I-MW-01 ND
I-MW-02 ND

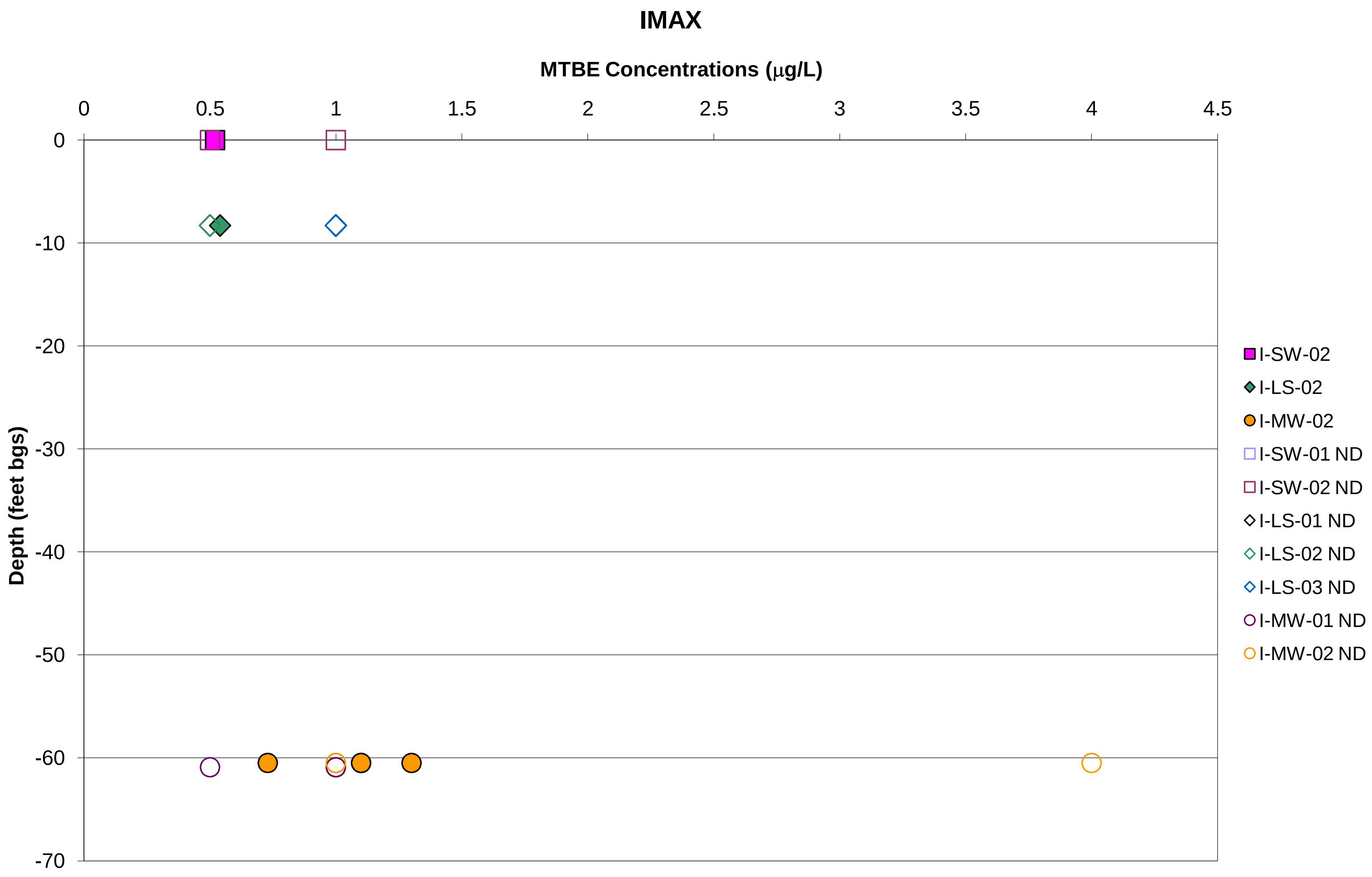

IMAX
Total Lead Concentrations (µg/L)
0
10
20
30
40
50
60
70
80
90
Depth (feet bgs)
0
-10
-20
-30
-40
-50
-60
-70
I-SW-01
I-SW-02
I-LS-01
I-LS-02
I-MW-01
I-MW-02
I-SW-01 ND
I-LS-01 ND
I-LS-03 ND
I-MW-01 ND
I-MW-02 ND

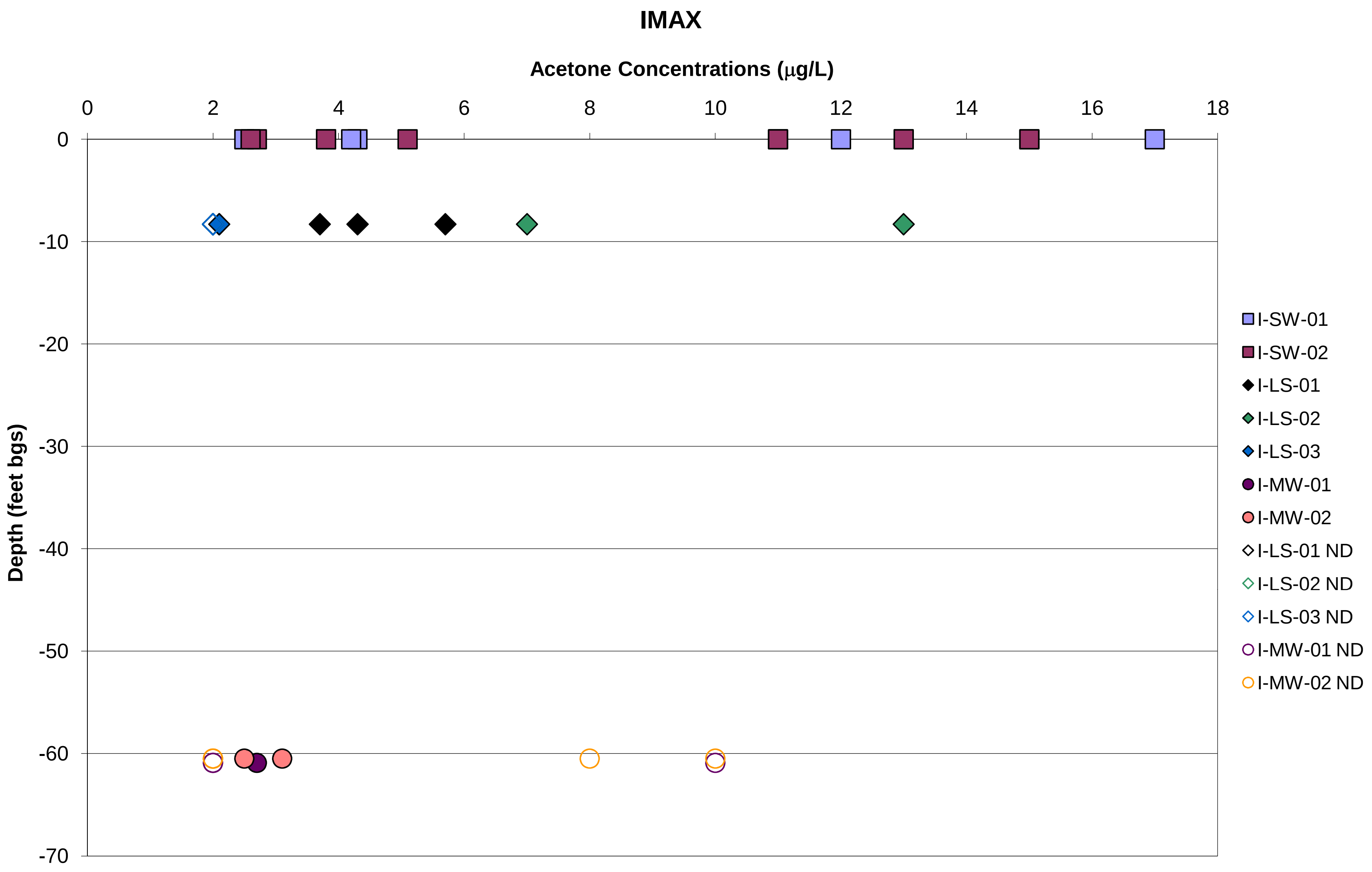

IMAX
Dissolved Zinc Concentrations (µg/L)
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
Depth (feet bgs)
0
-10
-20
-30
-40
-50
-60
-70
I-SW-01
I-SW-02
I-LS-01
I-LS-02
I-LS-03
I-MW-01
I-MW-02
I-MW-01 ND
I-MW-02 ND


IMAX
Total Zinc Concentrations (μg/L)
0
1000
2000
3000
4000
5000
6000
7000
8000
Depth (feet bgs)
0
-10
-20
-30
-40
-50
-60
-70
I-SW-01
I-SW-02
I-LS-01
I-LS-02
I-LS-03
I-MW-01
I-MW-02
I-MW-01 ND
I-MW-02 ND

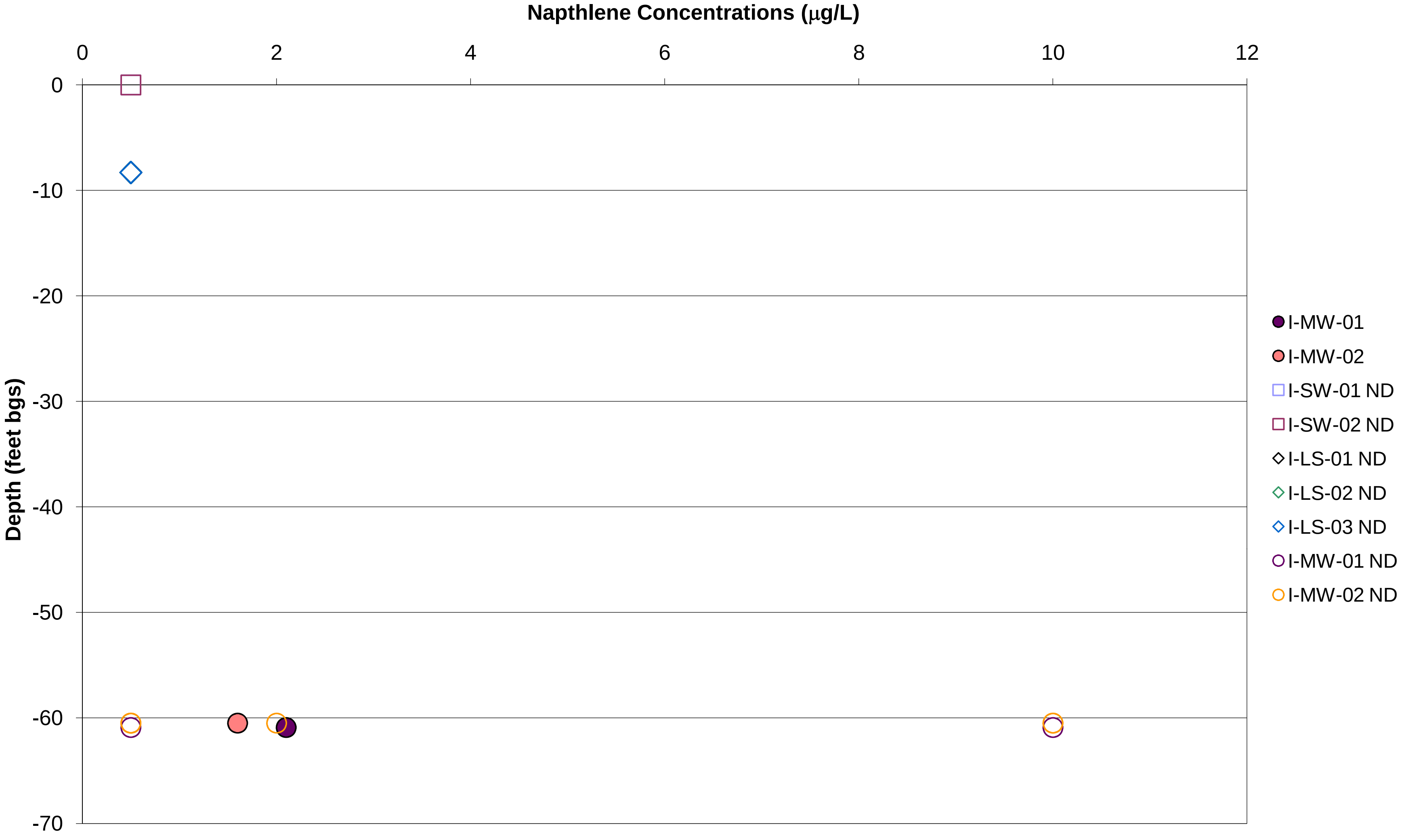


IMAX
Perchlorate Concentrations (µg/L)
0
2
4
6
8
10
12
14
16
Depth (feet bgs)
0
-10
-20
-30
-40
-50
-60
-70
I-SW-01
I-MW-01
I-MW-02
I-SW-01 ND
I-SW-02 ND
I-LS-01 ND
I-LS-02 ND
I-MW-01 ND
I-MW-02 ND

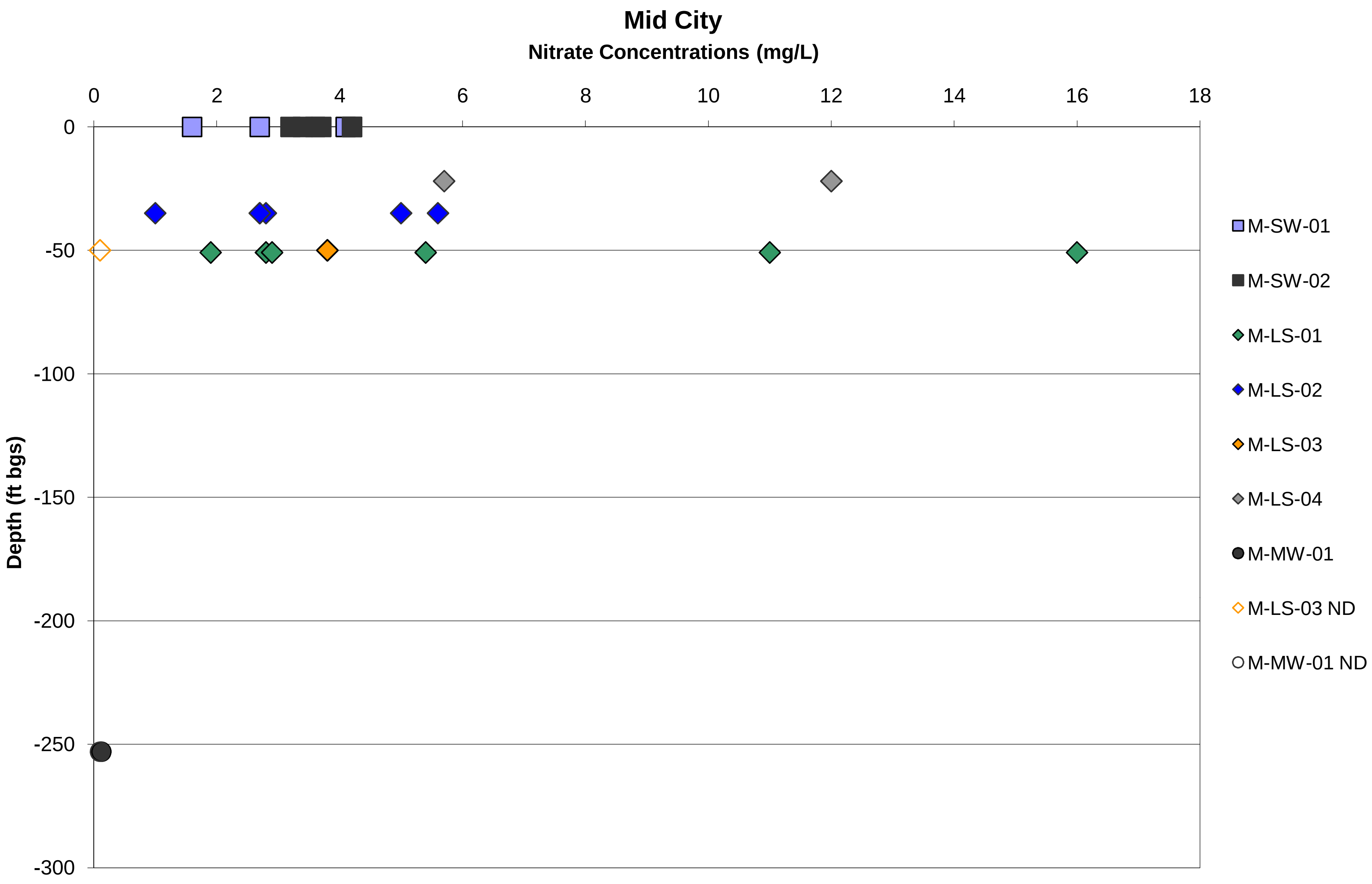

IMAX
MTBE Concentrations (µg/L)
0
0.5
1
1.5
2
2.5
3
3.5
4
4.5
Depth (feet bgs)
0
-10
-20
-30
-40
-50
-60
-70
I-SW-02
I-LS-02
I-MW-02
I-SW-01 ND
I-SW-02 ND
I-LS-01 ND
I-LS-02 ND
I-LS-03 ND
I-MW-01 ND
I-MW-02 ND


IMAX
Acetone Concentrations (µg/L)
0
2
4
6
8
10
12
14
16
18
0
-10
-20
-30
-40
-50
-60
-70
Depth (feet bgs)
I-SW-01
I-SW-02
I-LS-01
I-LS-02
I-LS-03
I-MW-01
I-MW-02
I-LS-01 ND
I-LS-02 ND
I-LS-03 ND
I-MW-01 ND
I-MW-02 ND

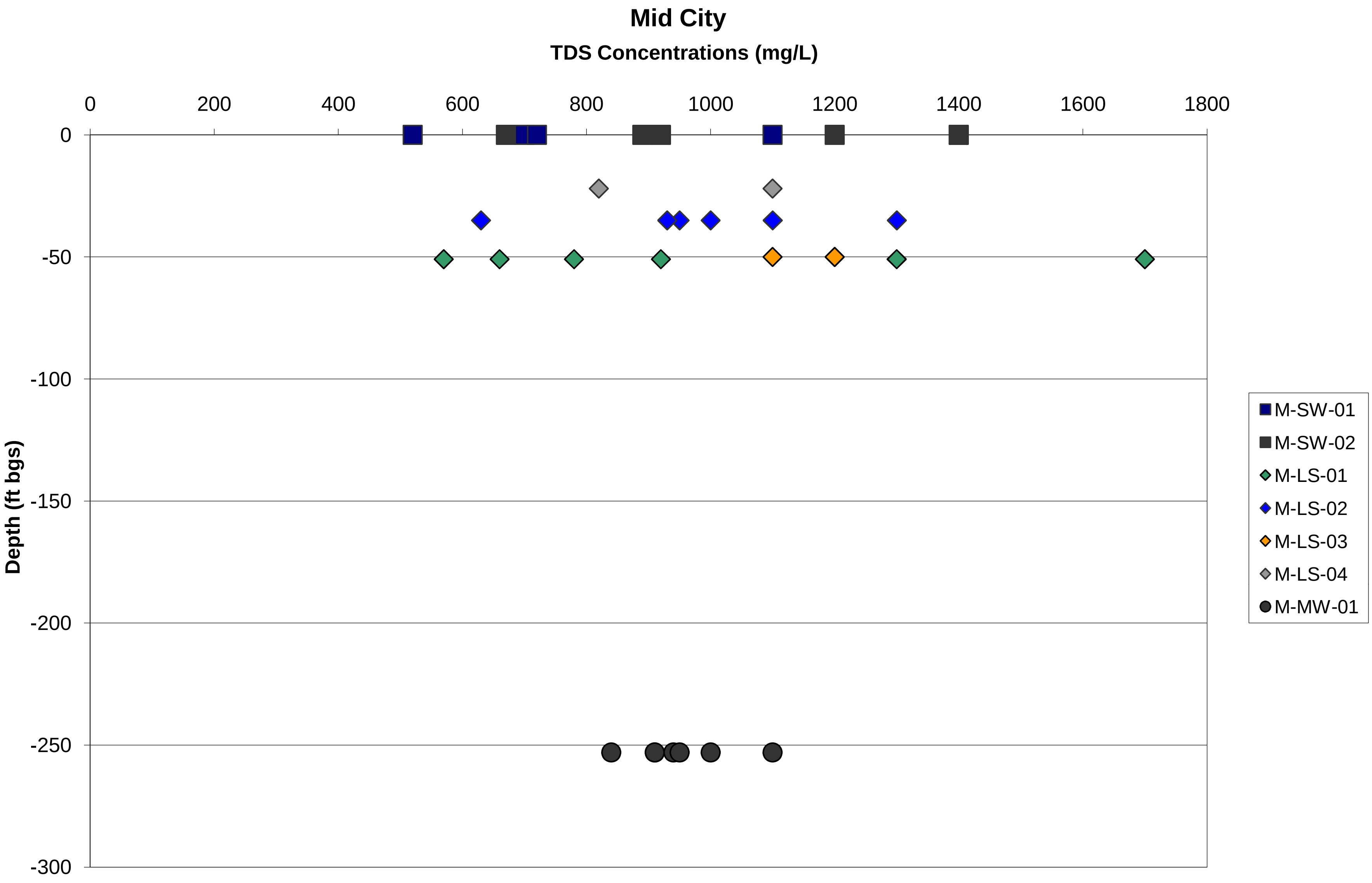
## IMAX

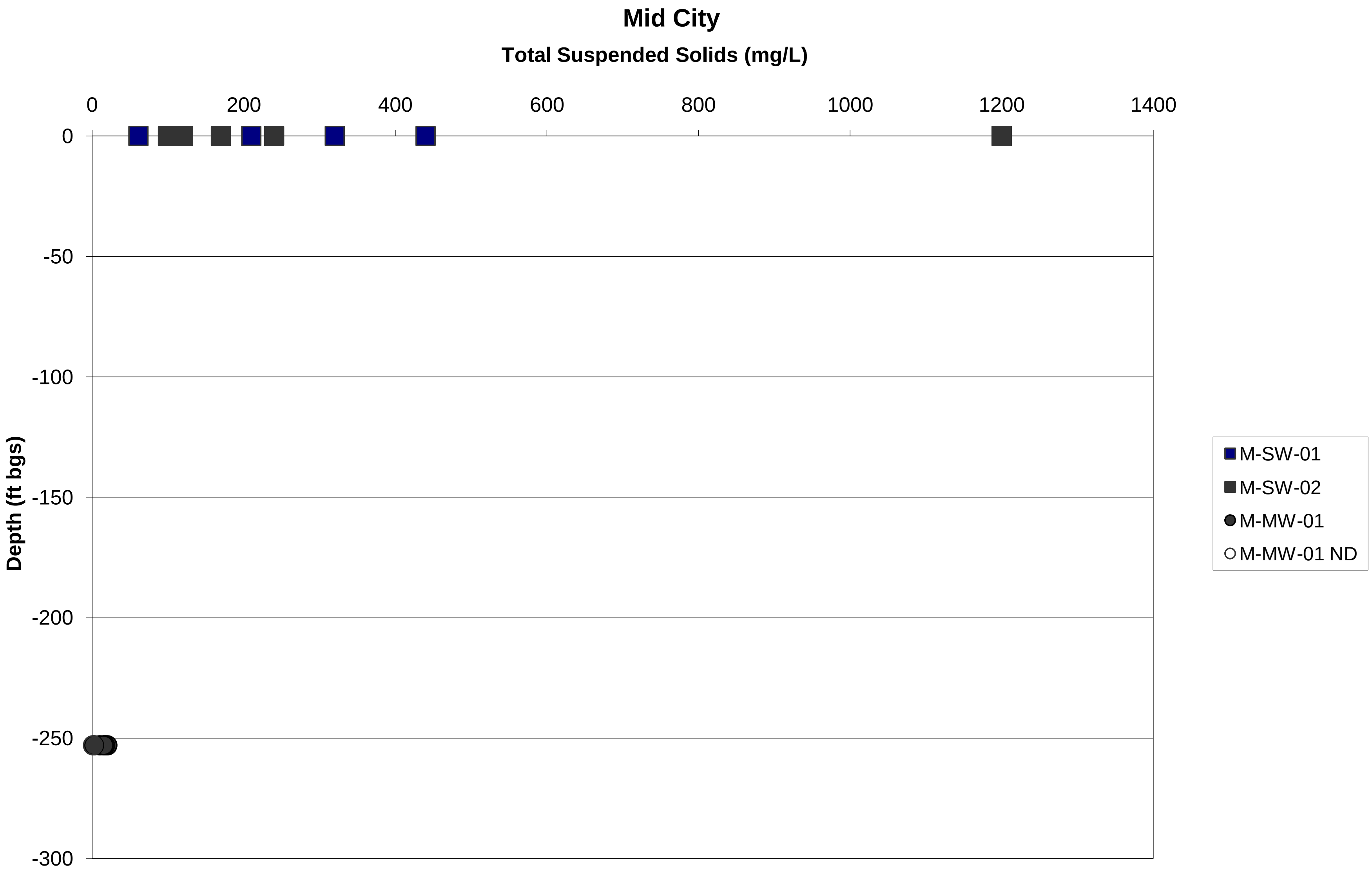


Napthlene Concentrations (µg/L)
0
2
4
6
8
10
12
Depth (feet bgs)
0
-10
-20
-30
-40
-50
-60
-70
● I-MW-01
● I-MW-02
□ I-SW-01 ND
□ I-SW-02 ND
◇ I-LS-01 ND
◇ I-LS-02 ND
◇ I-LS-03 ND
○ I-MW-01 ND
○ I-MW-02 ND


Mid City
Nitrate Concentrations (mg/L)
0
2
4
6
8
10
12
14
16
18
0
-50
-100
-150
-200
-250
-300
Depth (ft bgs)
M-SW-01
M-SW-02
M-LS-01
M-LS-02
M-LS-03
M-LS-04
M-MW-01
M-LS-03 ND
M-MW-01 ND

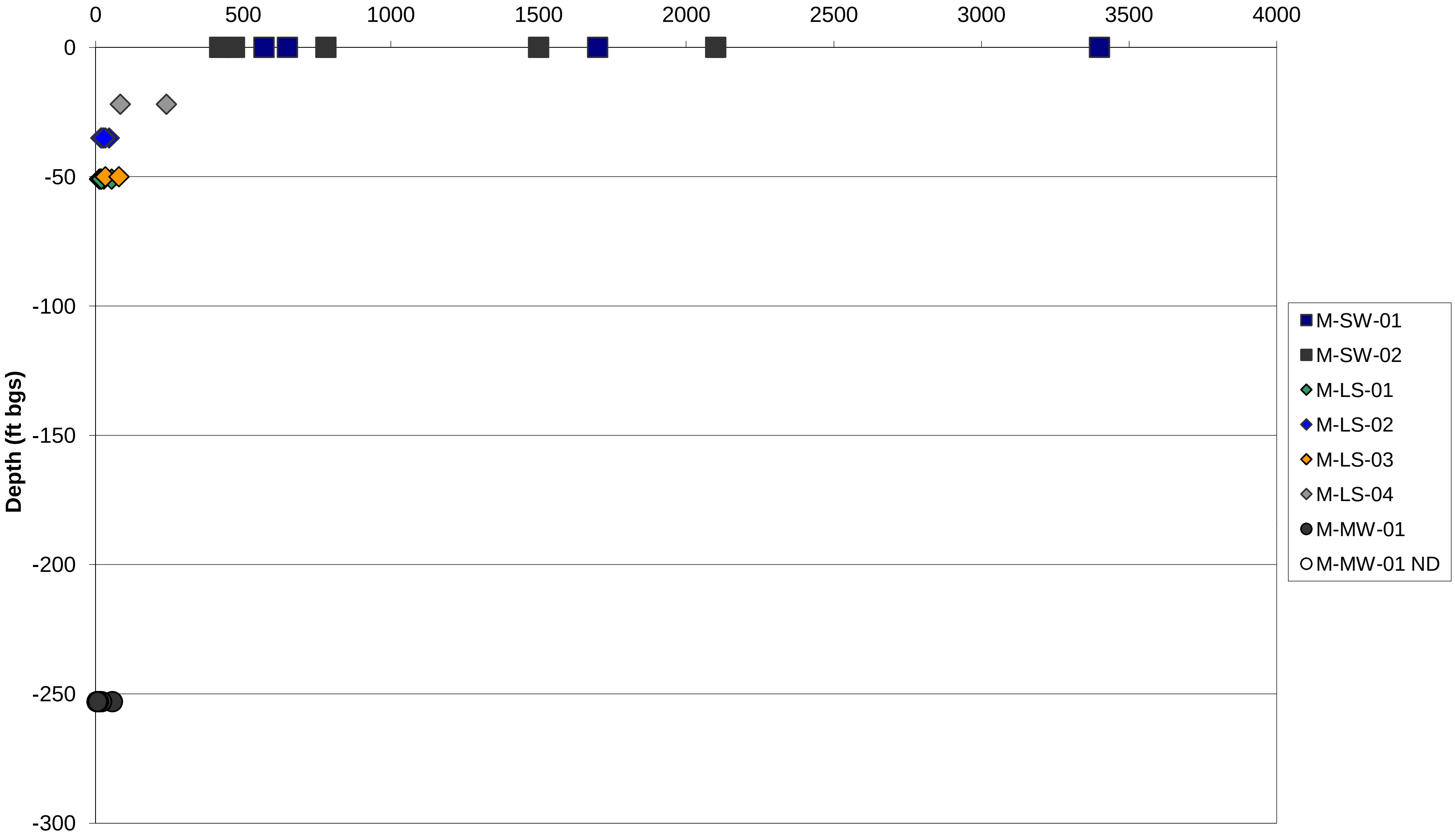

Mid City
Total Kjeldahl Nitrogen Concentrations (mg/L)
0
2
4
6
8
10
12
0
-50
-100
-150
-200
-250
-300
Depth (ft bgs)
M-SW-01
M-SW-02
M-LS-01
M-LS-02
M-LS-03
M-LS-04
M-MW-01
M-LS-01 ND
M-LS-02 ND
M-MW-01 ND

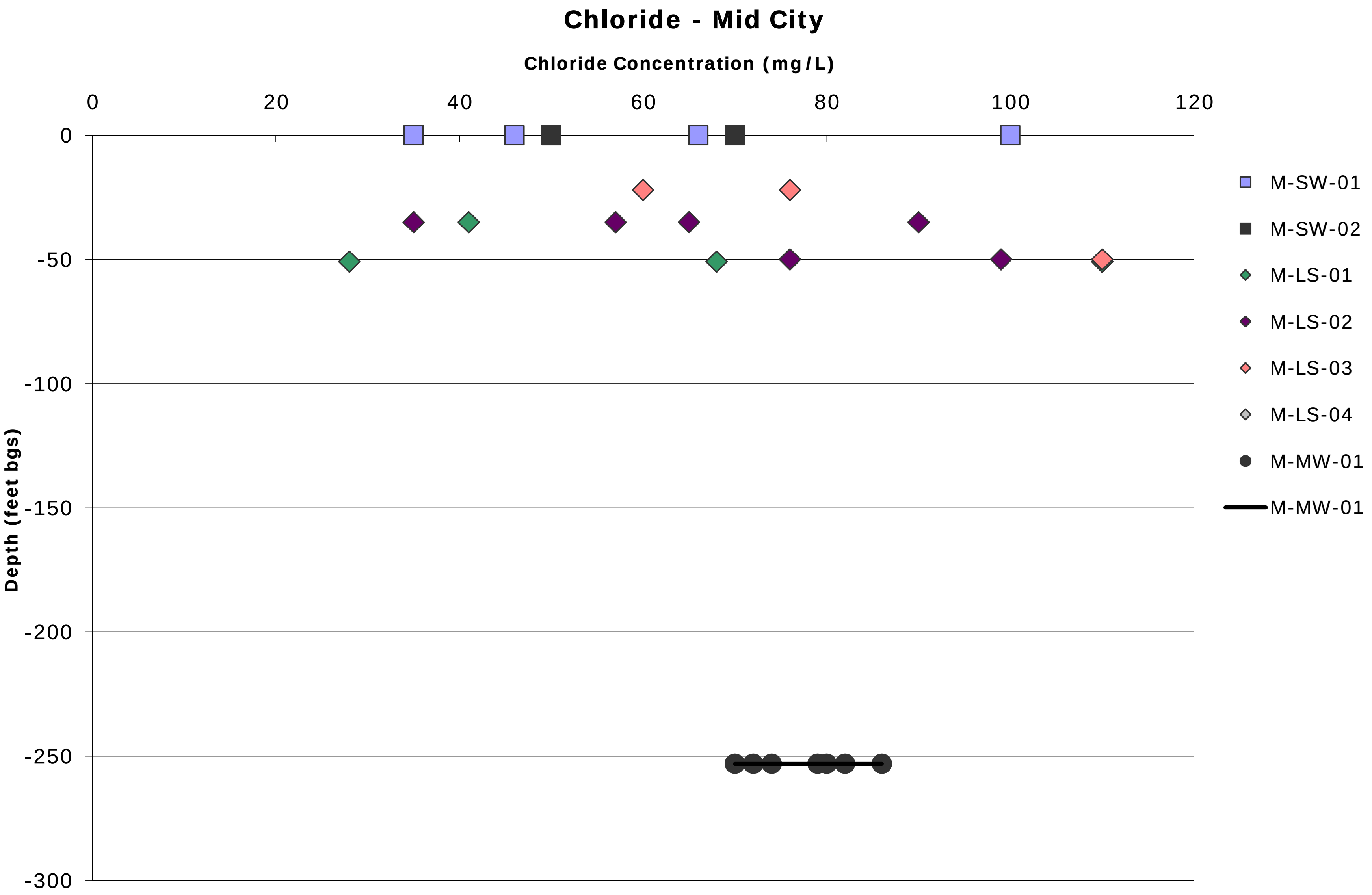

Mid City
TDS Concentrations (mg/L)
0
200
400
600
800
1000
1200
1400
1600
1800
0
-50
-100
-150
-200
-250
-300
Depth (ft bgs)
M-SW-01
M-SW-02
M-LS-01
M-LS-02
M-LS-03
M-LS-04
M-MW-01


Mid City
Total Suspended Solids (mg/L)
0
200
400
600
800
1000
1200
1400
0
-50
-100
-150
-200
-250
-300
Depth (ft bgs)
M-SW-01
M-SW-02
M-MW-01
M-MW-01 ND

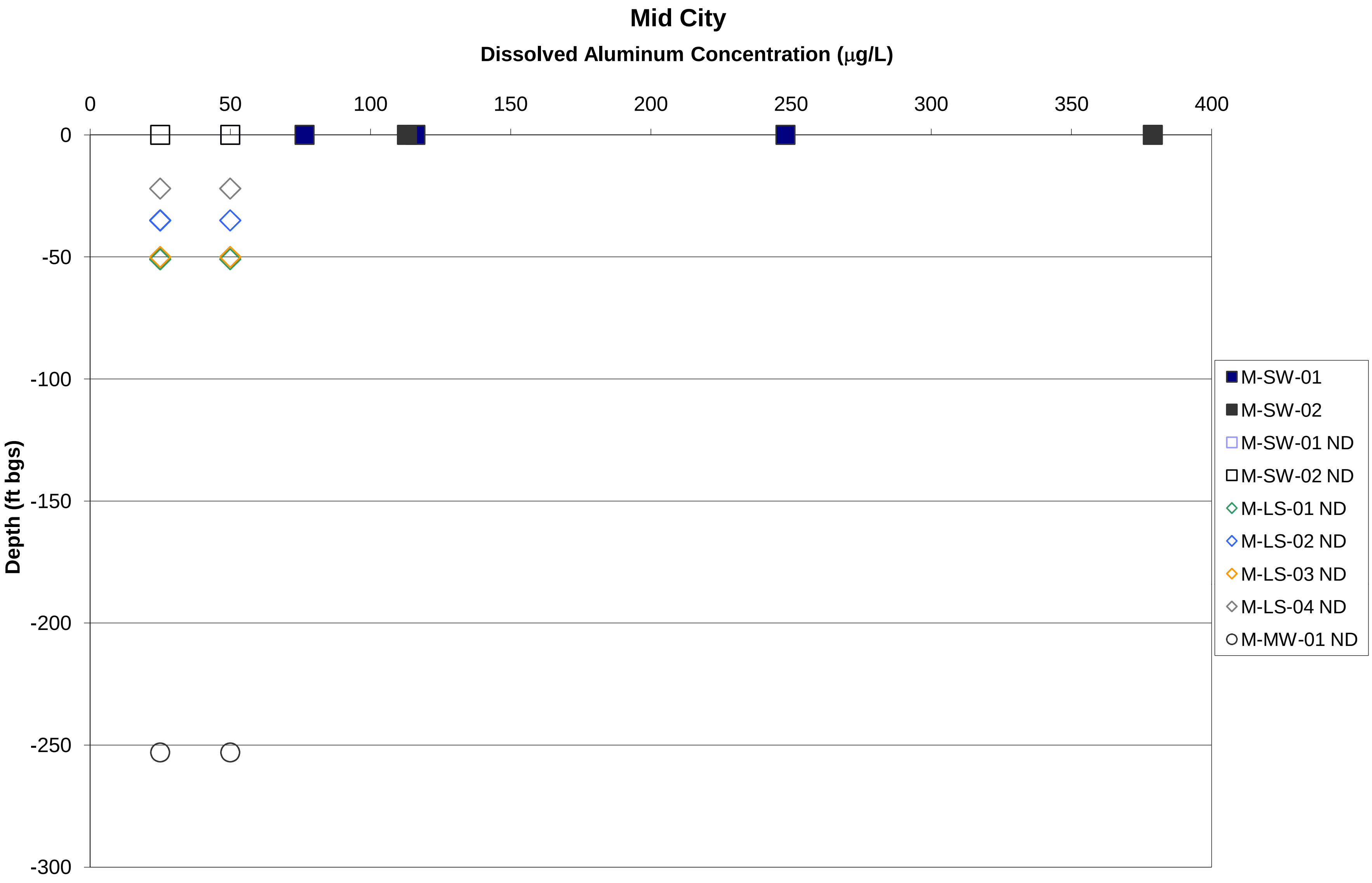
# Mid City

## Chemical Oxygen Demand Concentrations (mg/L)

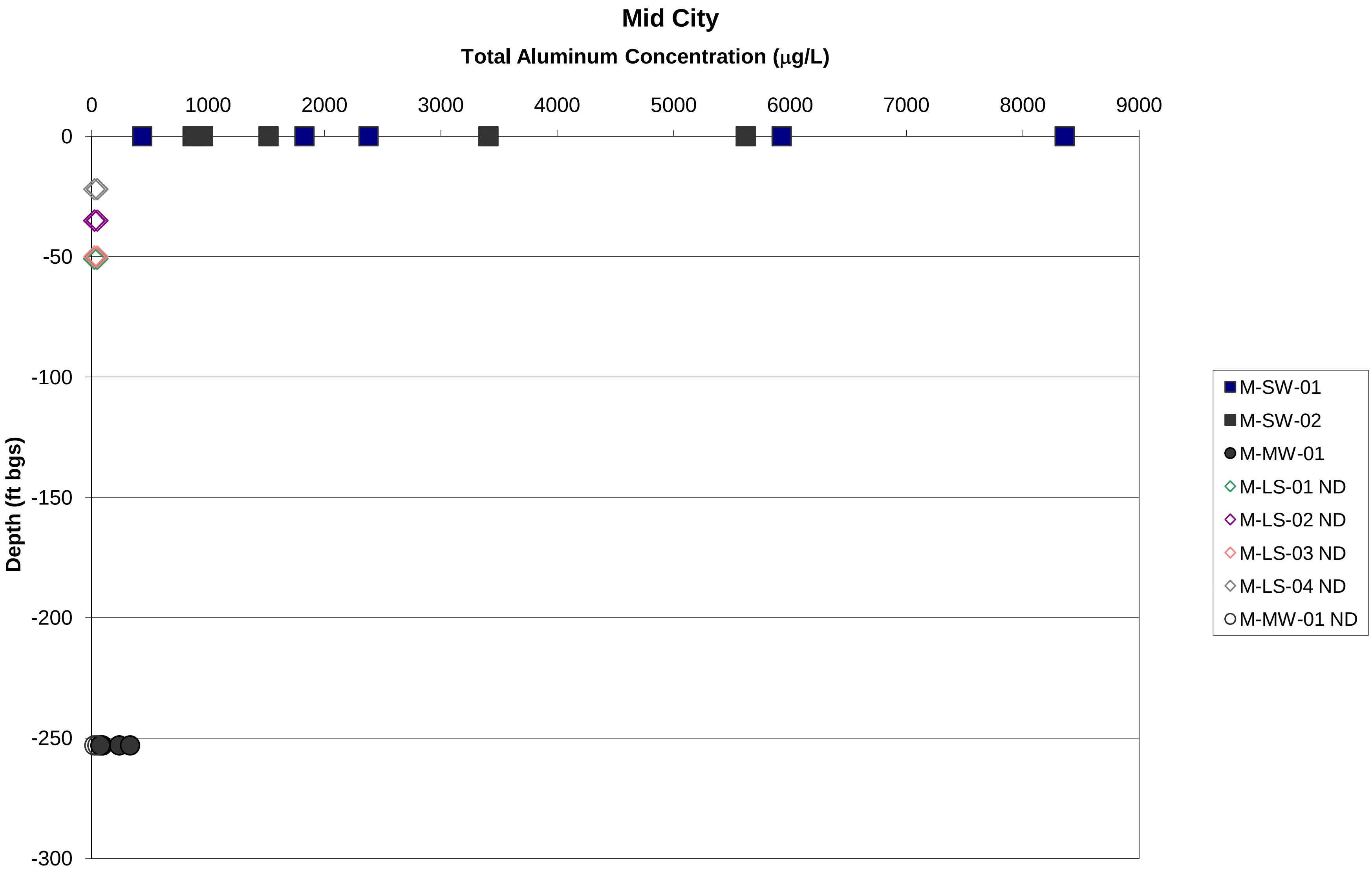


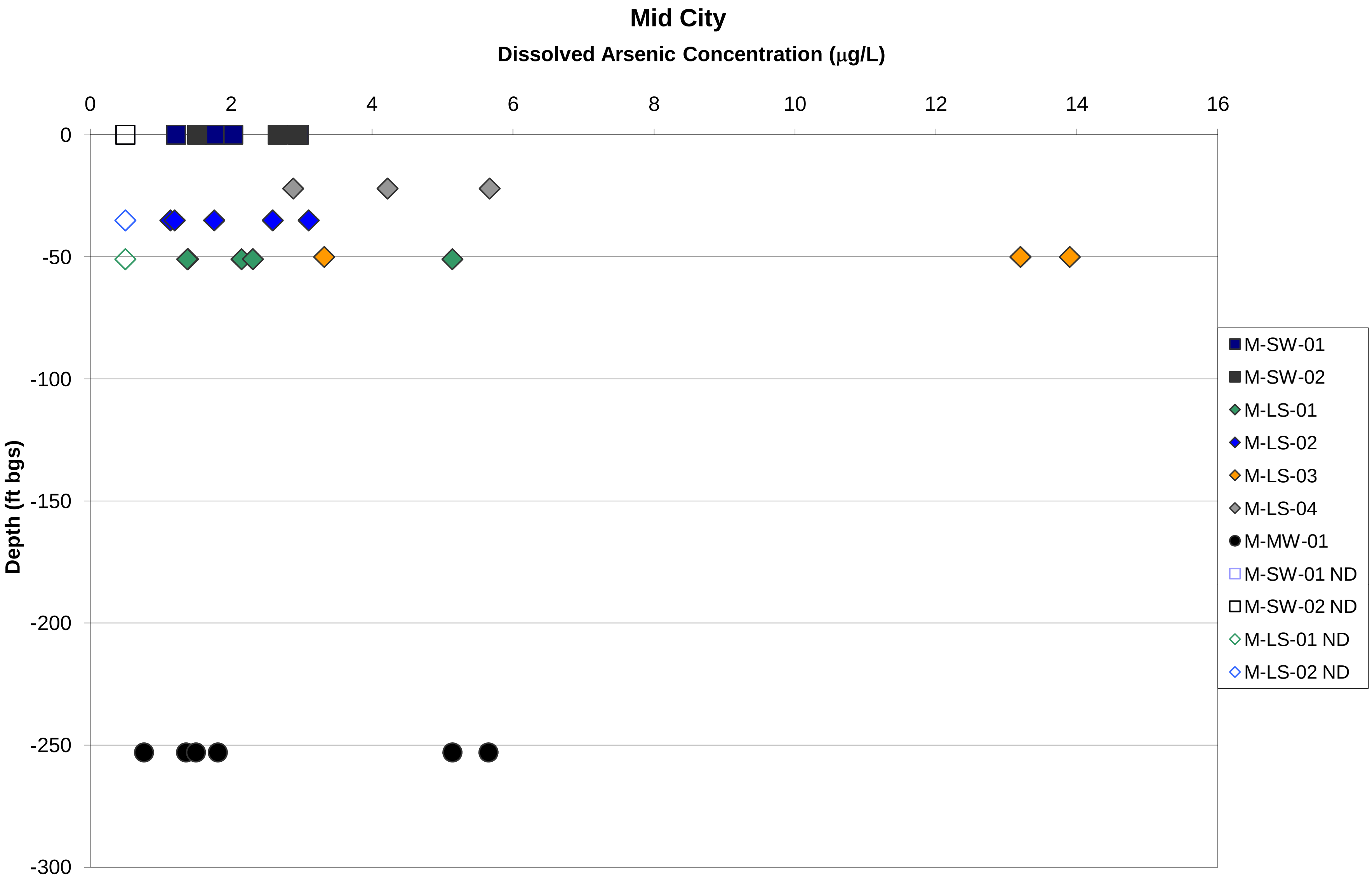


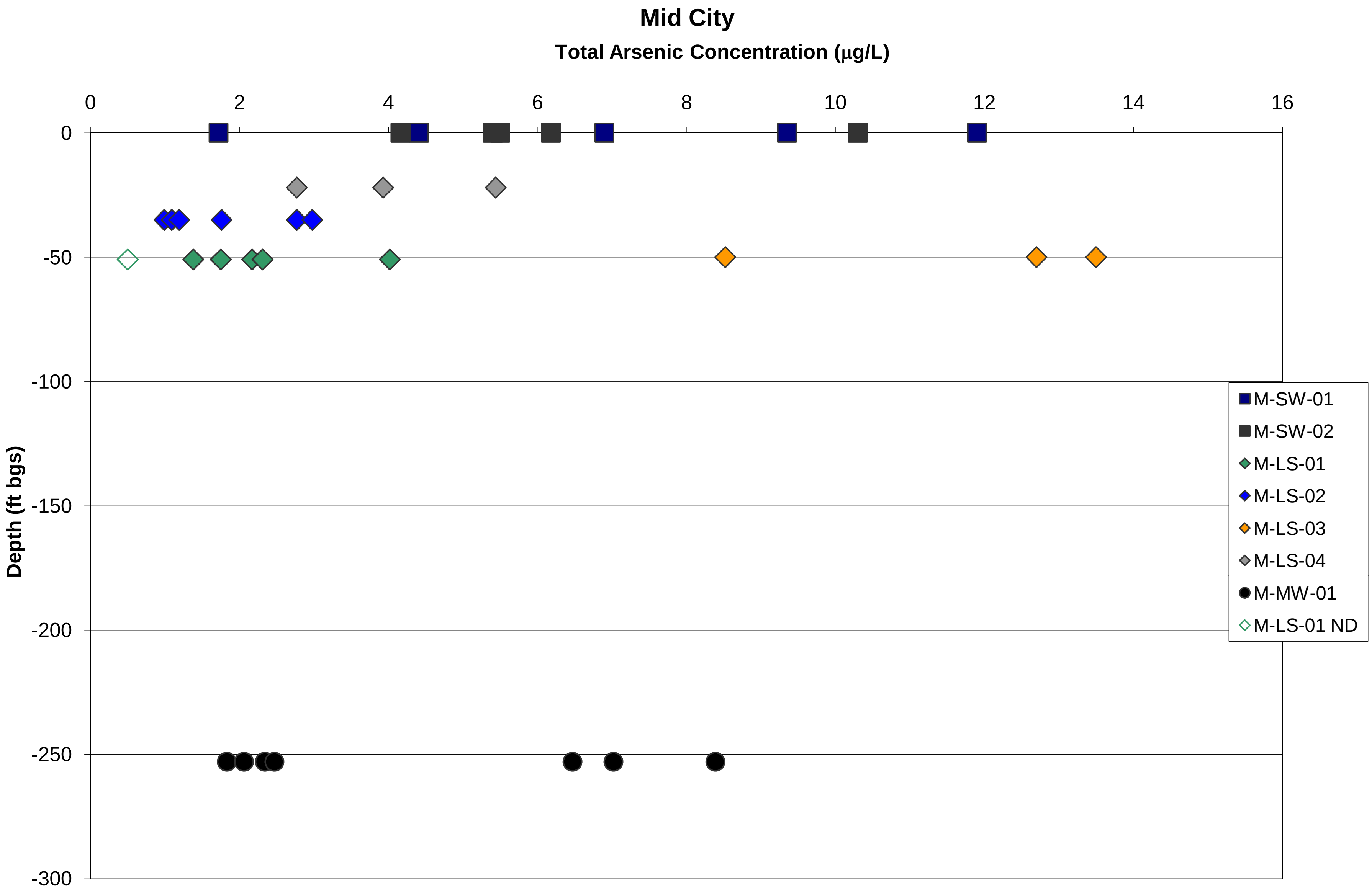
Chloride - Mid City
Chloride Concentration (mg/L)
0
20
40
60
80
100
120
0
-50
-100
-150
-200
-250
-300
Depth (feet bgs)
M-SW-01
M-SW-02
M-LS-01
M-LS-02
M-LS-03
M-LS-04
M-MW-01
M-MW-01



Mid City
Dissolved Aluminum Concentration (µg/L)
0
50
100
150
200
250
300
350
400
0
-50
-100
-150
-200
-250
-300
Depth (ft bgs)
M-SW-01
M-SW-02
M-SW-01 ND
M-SW-02 ND
M-LS-01 ND
M-LS-02 ND
M-LS-03 ND
M-LS-04 ND
M-MW-01 ND

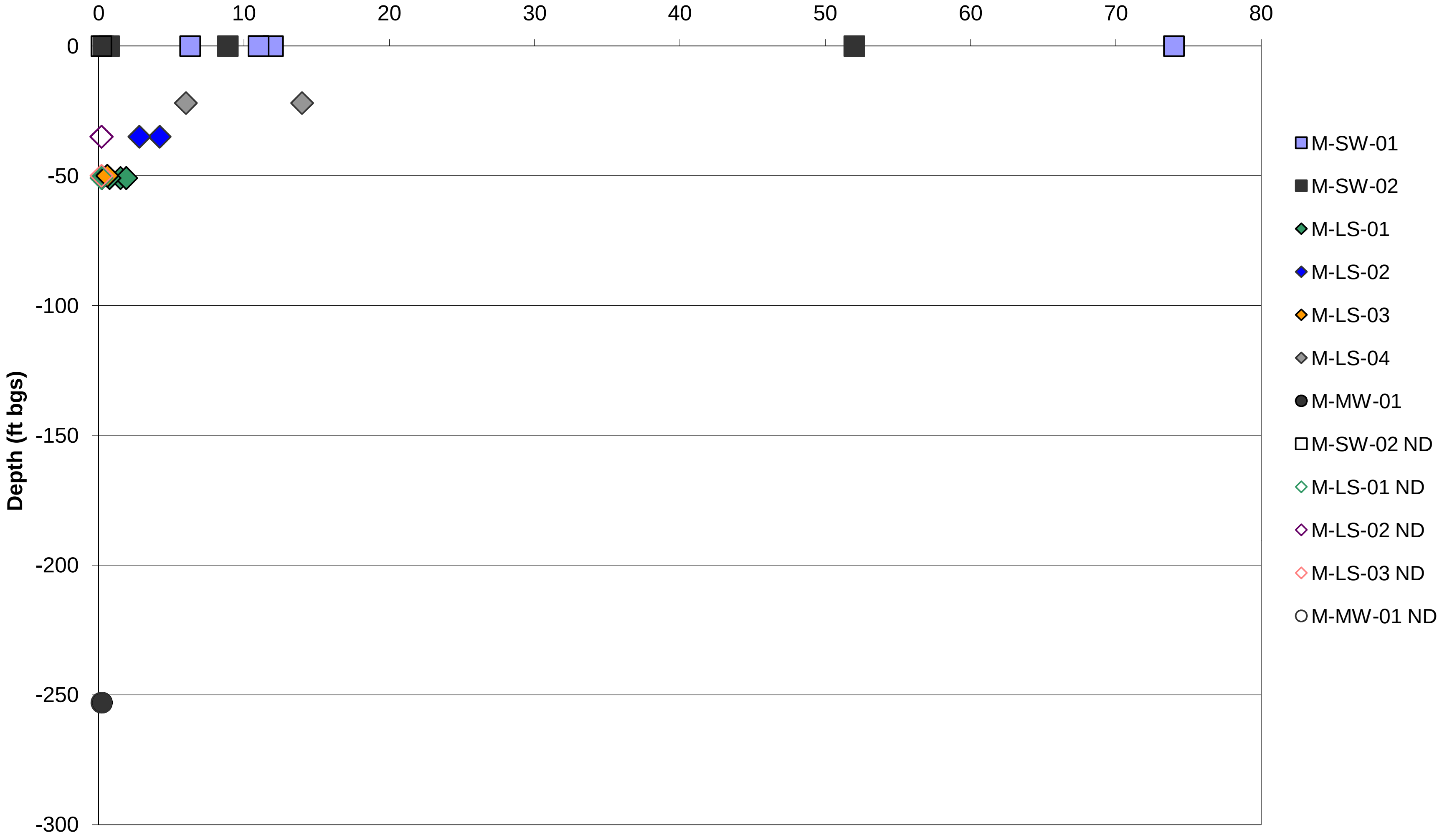

Mid City
Total Aluminum Concentration (µg/L)
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
Depth (ft bgs)
0
-50
-100
-150
-200
-250
-300
M-SW-01
M-SW-02
M-MW-01
M-LS-01 ND
M-LS-02 ND
M-LS-03 ND
M-LS-04 ND
M-MW-01 ND

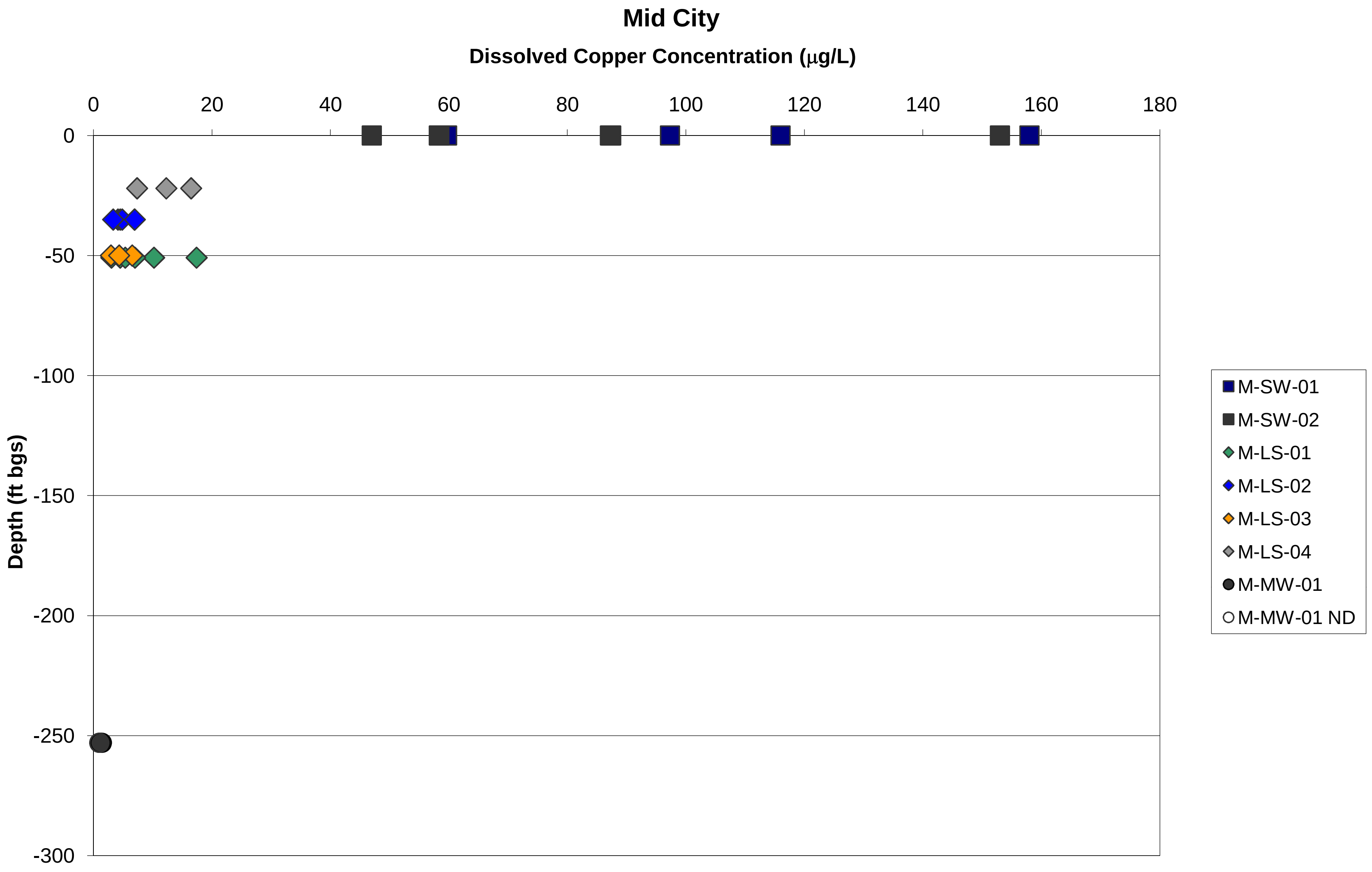

Mid City
Dissolved Arsenic Concentration (µg/L)
0
2
4
6
8
10
12
14
16
0
-50
-100
-150
-200
-250
-300
Depth (ft bgs)
M-SW-01
M-SW-02
M-LS-01
M-LS-02
M-LS-03
M-LS-04
M-MW-01
M-SW-01 ND
M-SW-02 ND
M-LS-01 ND
M-LS-02 ND

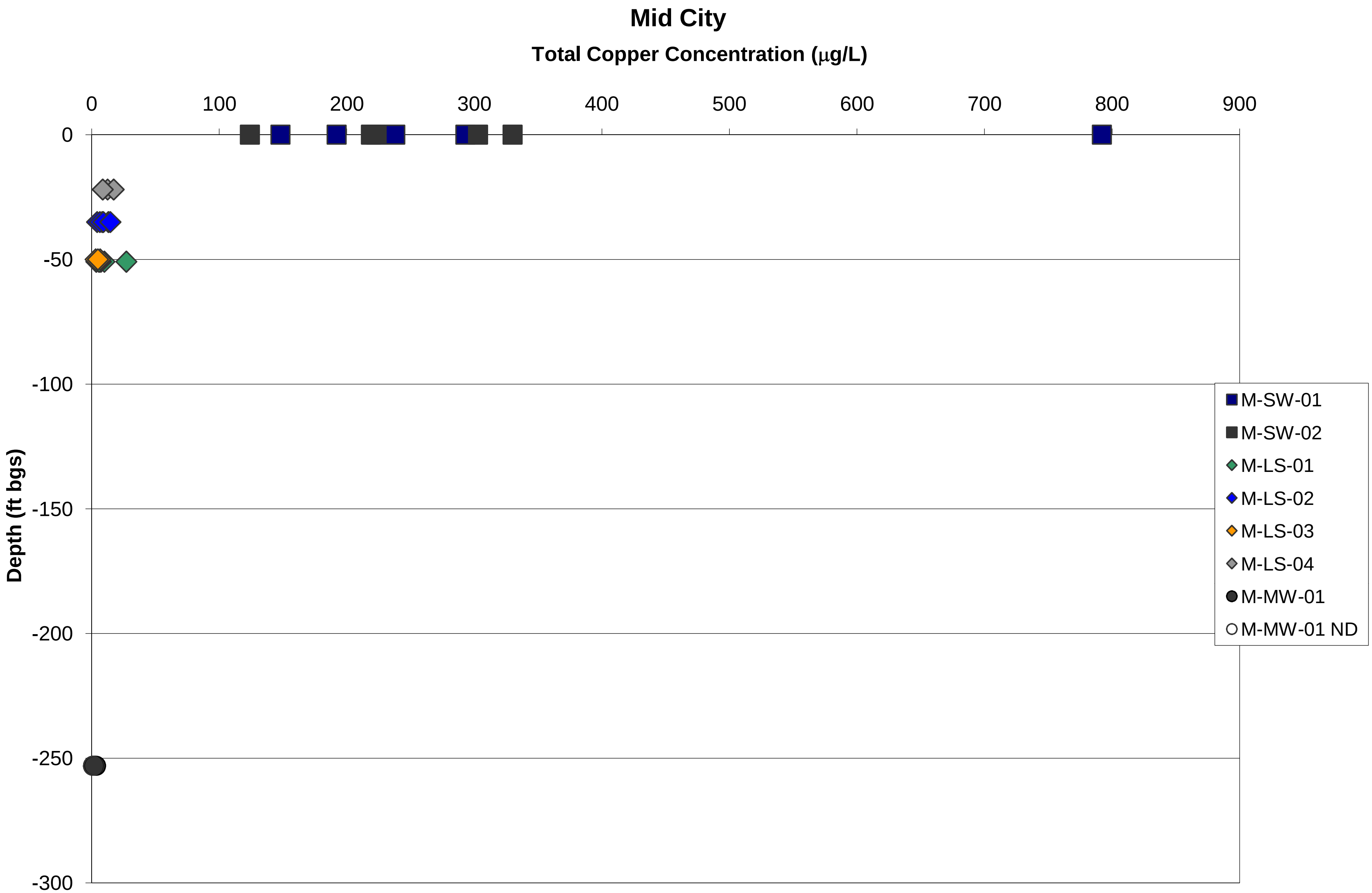

Mid City
Total Arsenic Concentration (µg/L)
0
2
4
6
8
10
12
14
16
0
-50
-100
-150
-200
-250
-300
Depth (ft bgs)
M-SW-01
M-SW-02
M-LS-01
M-LS-02
M-LS-03
M-LS-04
M-MW-01
M-LS-01 ND

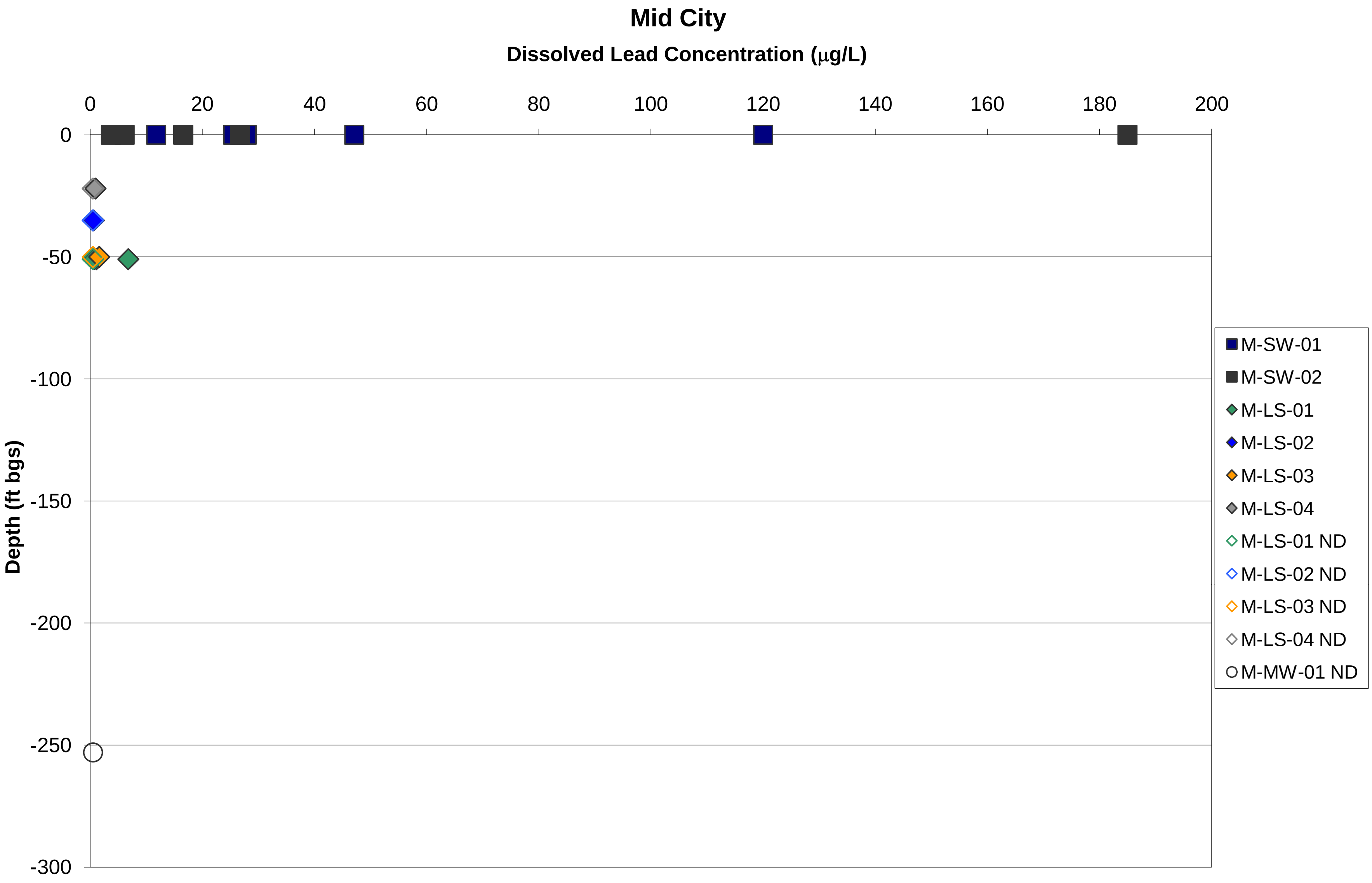
## Mid City

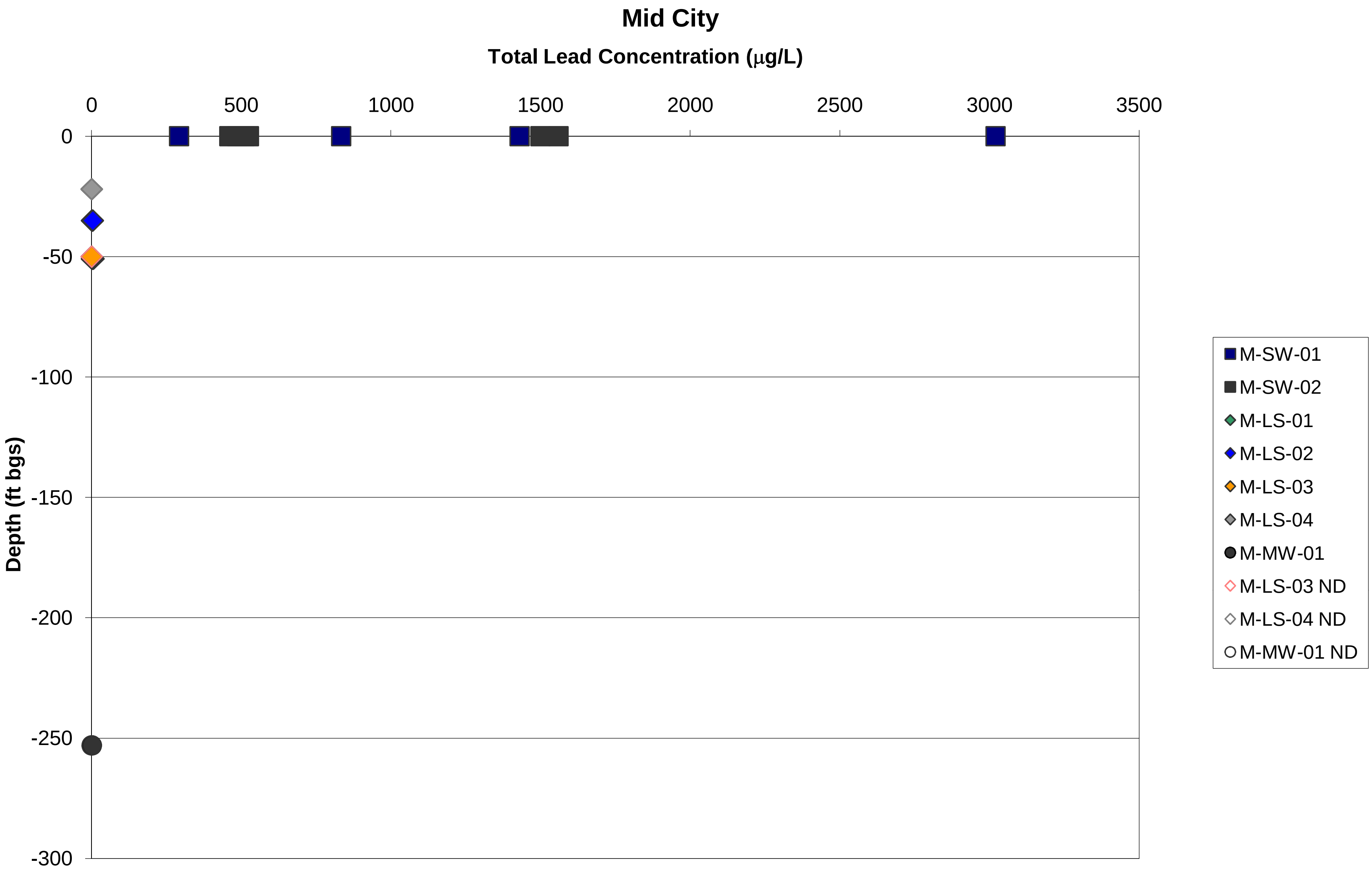
### Dissolved Hexavalent Chromium Concentrations (µg/L)

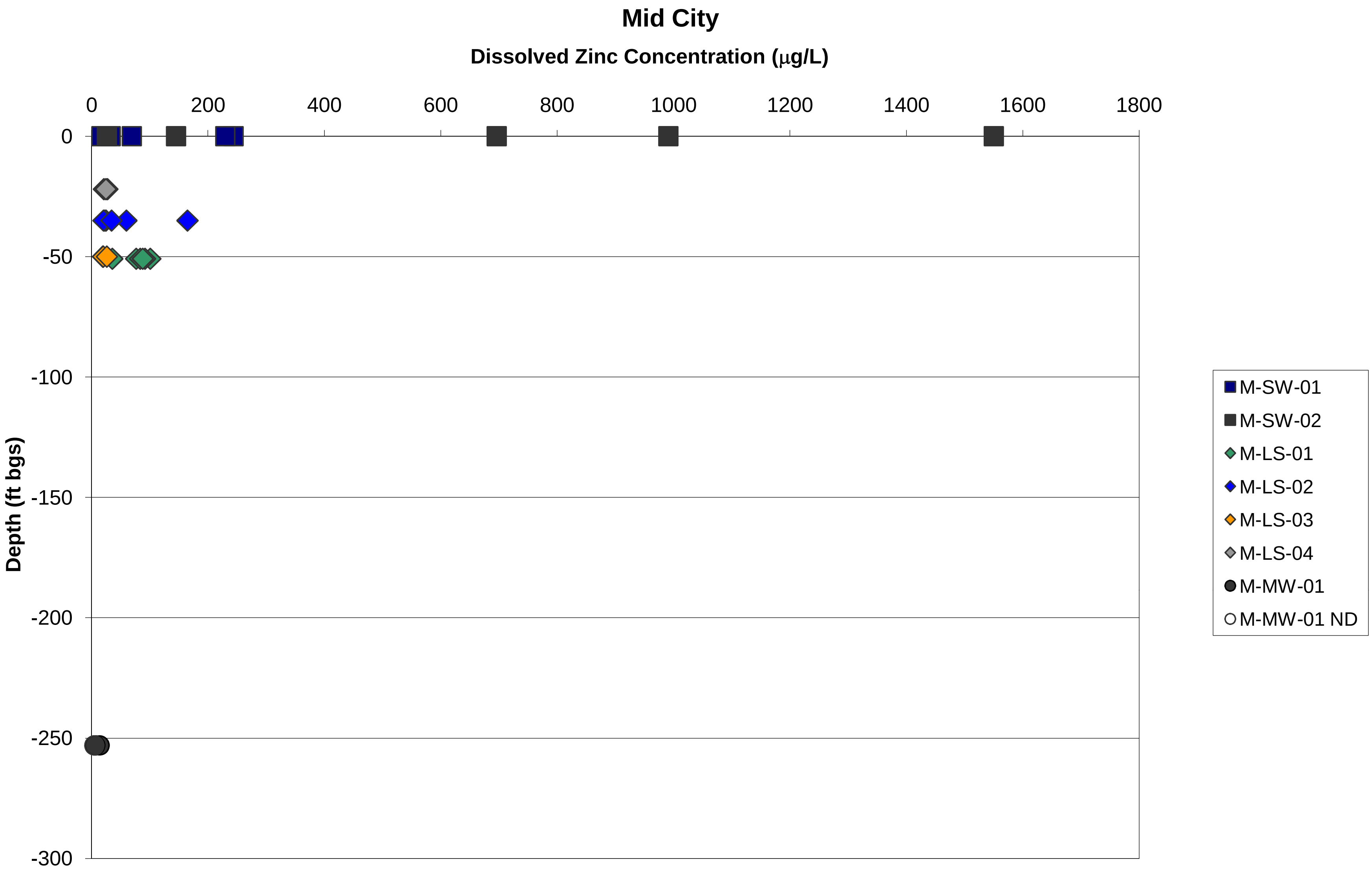


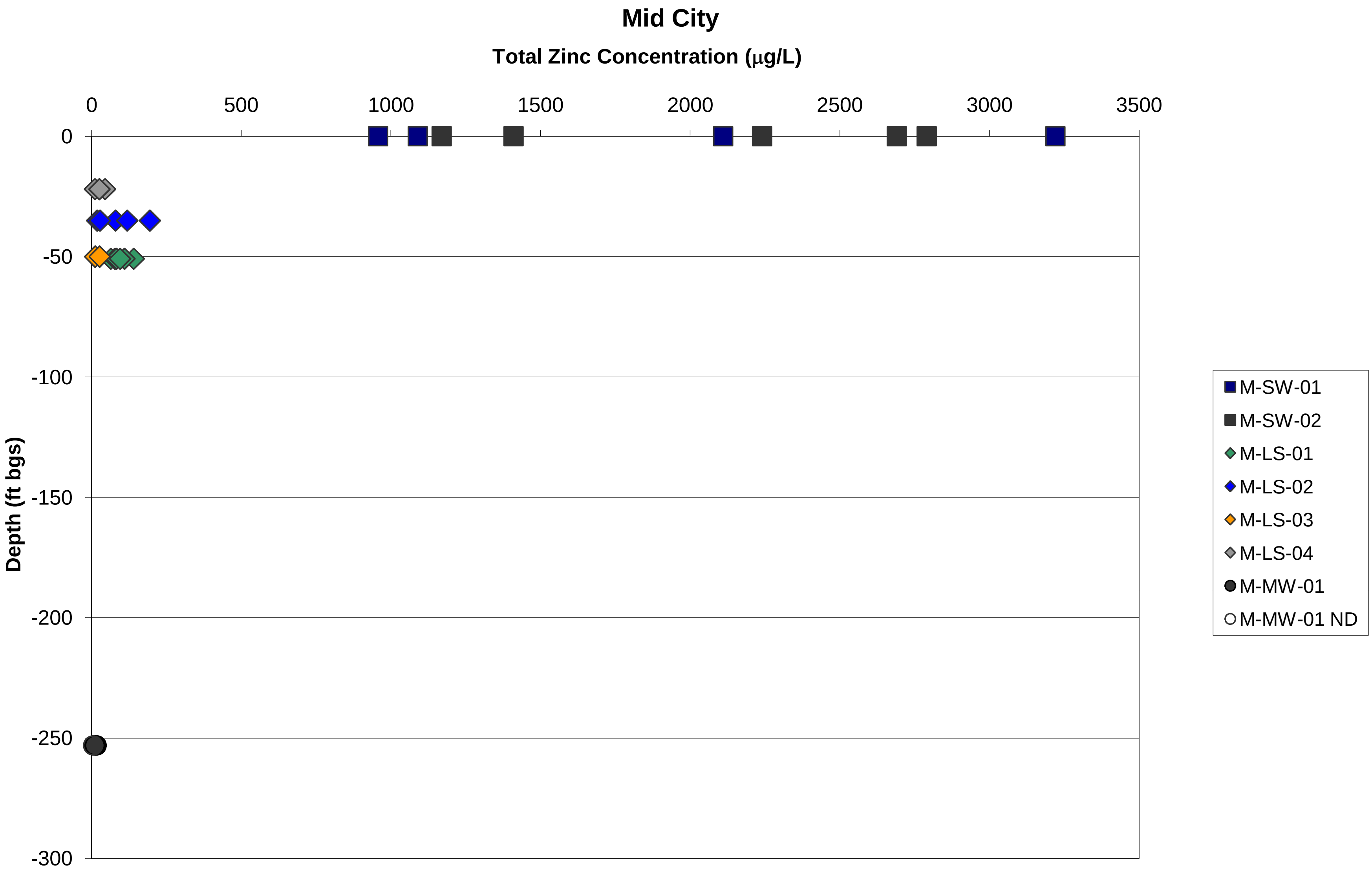

Mid City
Dissolved Copper Concentration (µg/L)
0
20
40
60
80
100
120
140
160
180
Depth (ft bgs)
0
-50
-100
-150
-200
-250
-300
M-SW-01
M-SW-02
M-LS-01
M-LS-02
M-LS-03
M-LS-04
M-MW-01
M-MW-01 ND

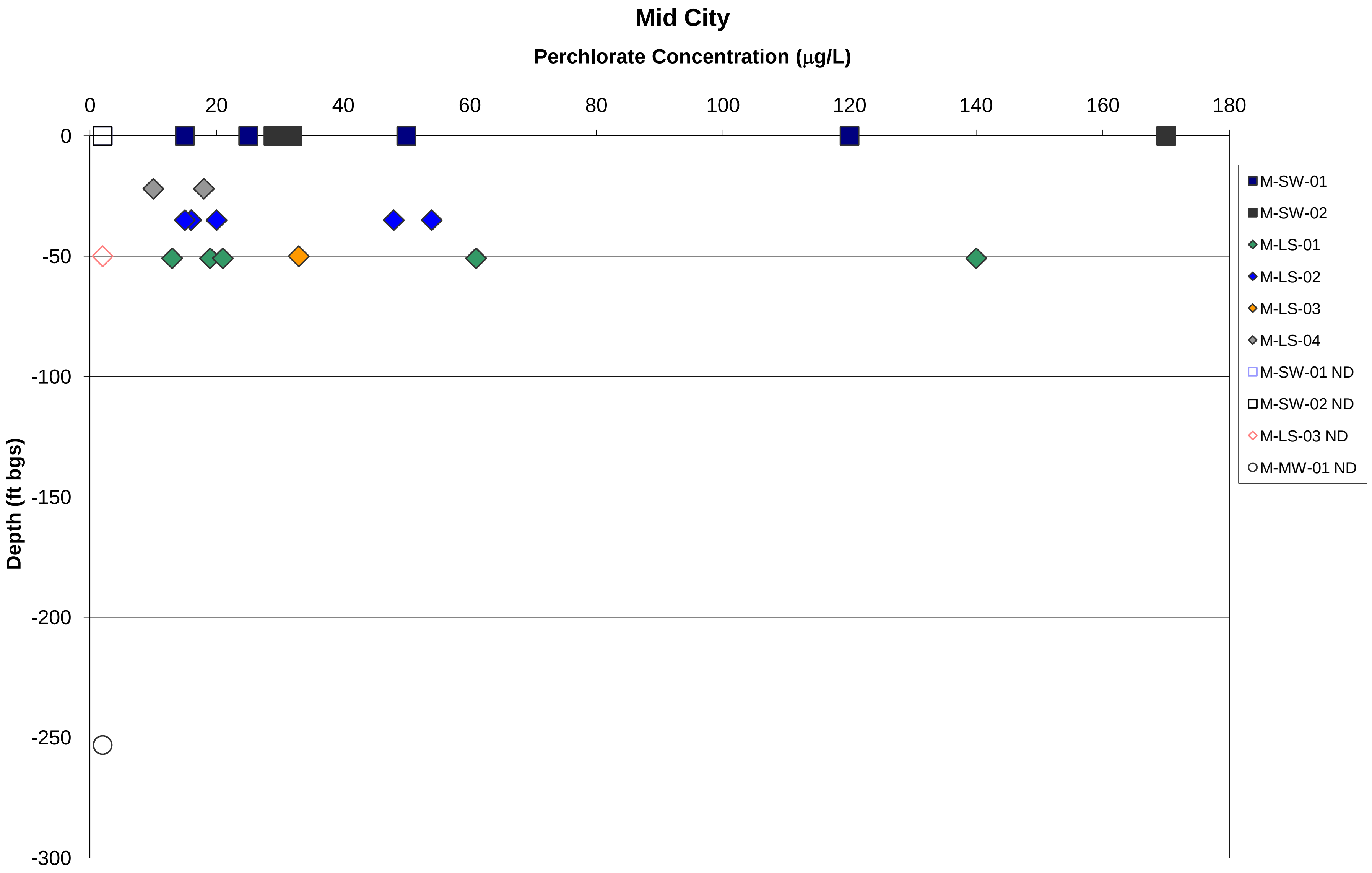

Mid City
Total Copper Concentration (µg/L)
0
100
200
300
400
500
600
700
800
900
0
-50
-100
-150
-200
-250
-300
Depth (ft bgs)
M-SW-01
M-SW-02
M-LS-01
M-LS-02
M-LS-03
M-LS-04
M-MW-01
M-MW-01 ND


Mid City
Dissolved Lead Concentration (µg/L)
0
20
40
60
80
100
120
140
160
180
200
0
-50
-100
-150
-200
-250
-300
Depth (ft bgs)
M-SW-01
M-SW-02
M-LS-01
M-LS-02
M-LS-03
M-LS-04
M-LS-01 ND
M-LS-02 ND
M-LS-03 ND
M-LS-04 ND
M-MW-01 ND

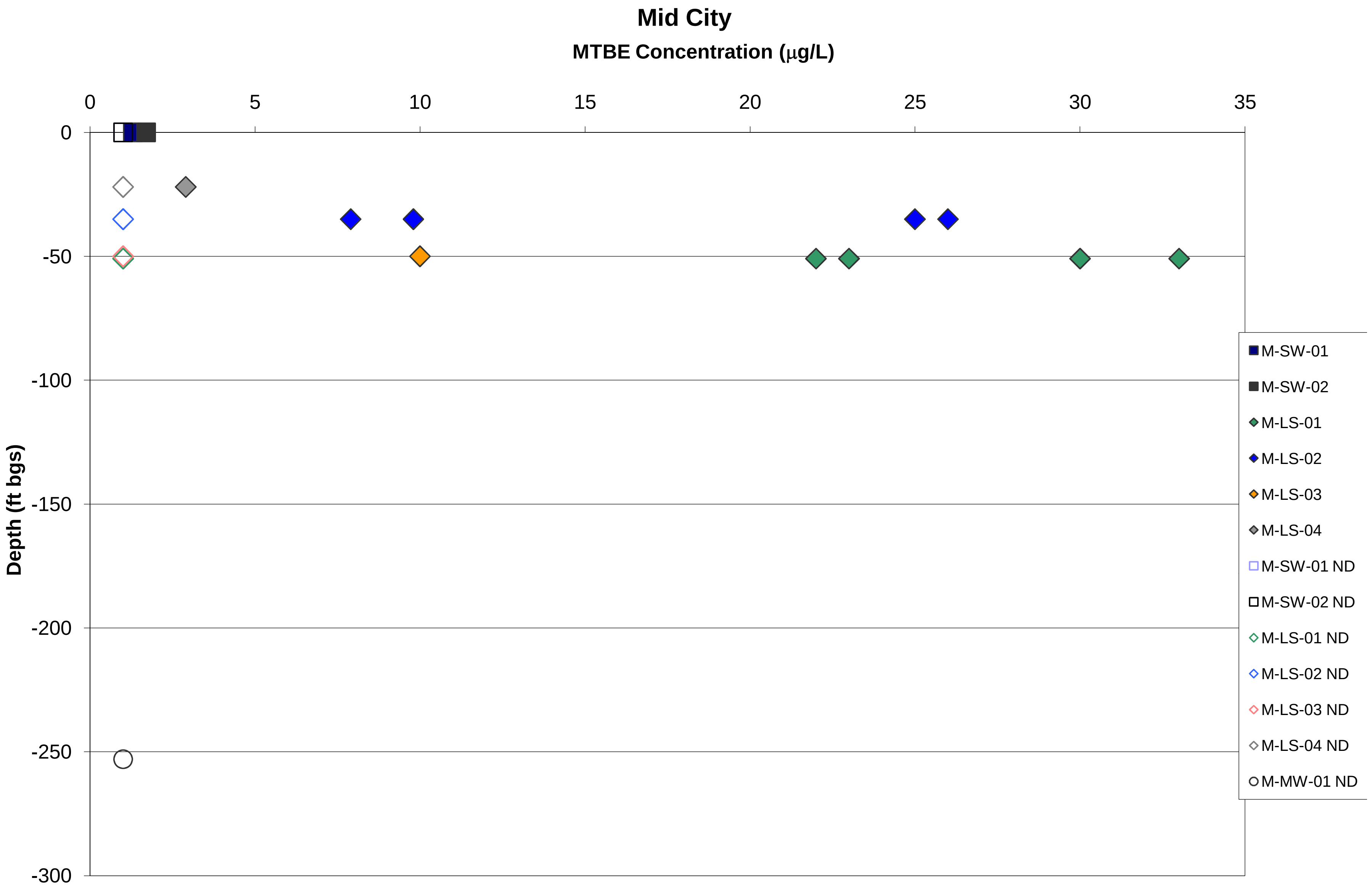

Mid City
Total Lead Concentration (μg/L)
0
500
1000
1500
2000
2500
3000
3500
Depth (ft bgs)
0
-50
-100
-150
-200
-250
-300
■ M-SW-01
■ M-SW-02
◆ M-LS-01
◆ M-LS-02
◆ M-LS-03
◆ M-LS-04
● M-MW-01
◇ M-LS-03 ND
◇ M-LS-04 ND
○ M-MW-01 ND

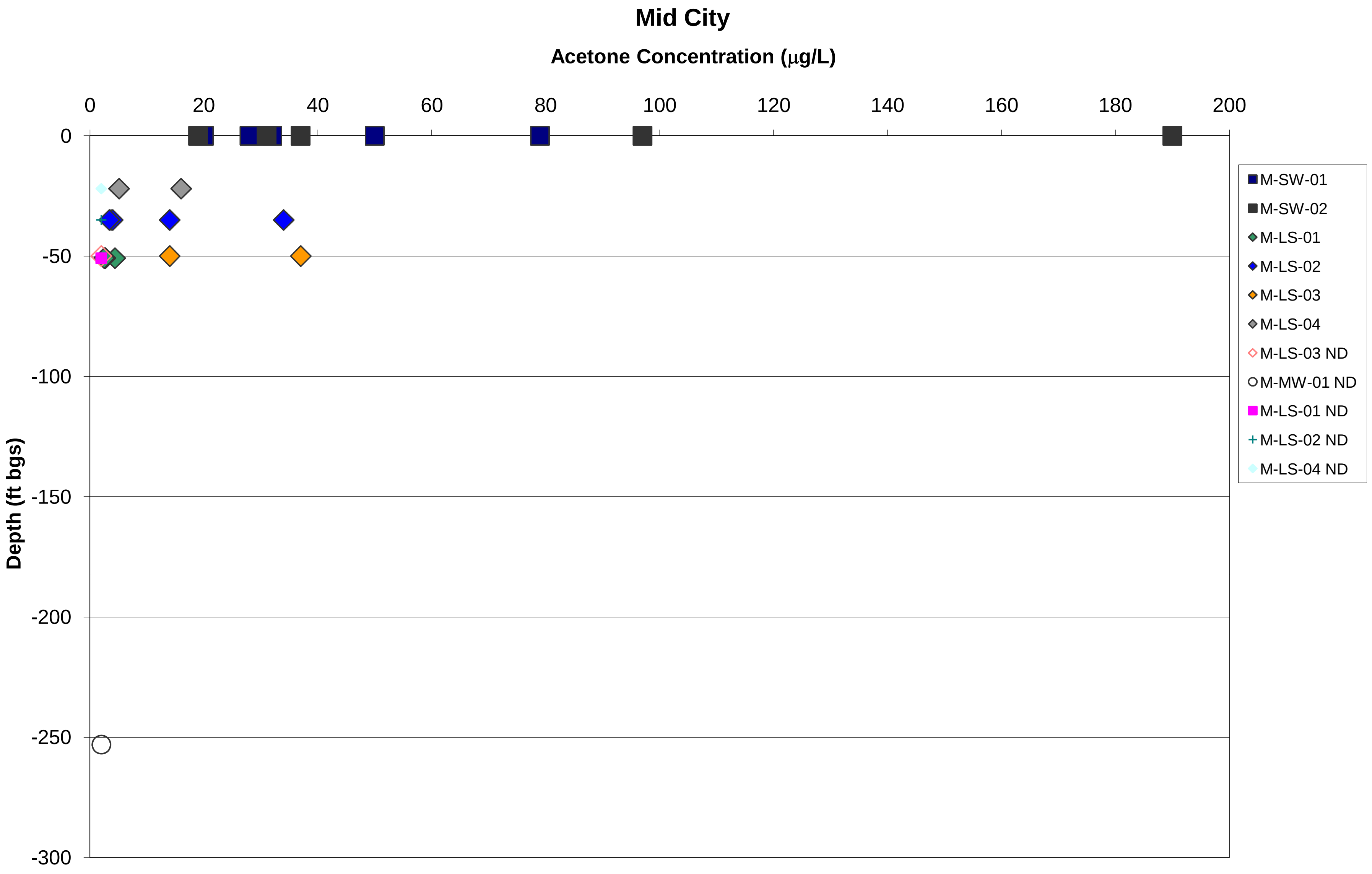
Mid City
Dissolved Zinc Concentration (µg/L)
0
200
400
600
800
1000
1200
1400
1600
1800
Depth (ft bgs)
0
-50
-100
-150
-200
-250
-300
M-SW-01
M-SW-02
M-LS-01
M-LS-02
M-LS-03
M-LS-04
M-MW-01
M-MW-01 ND

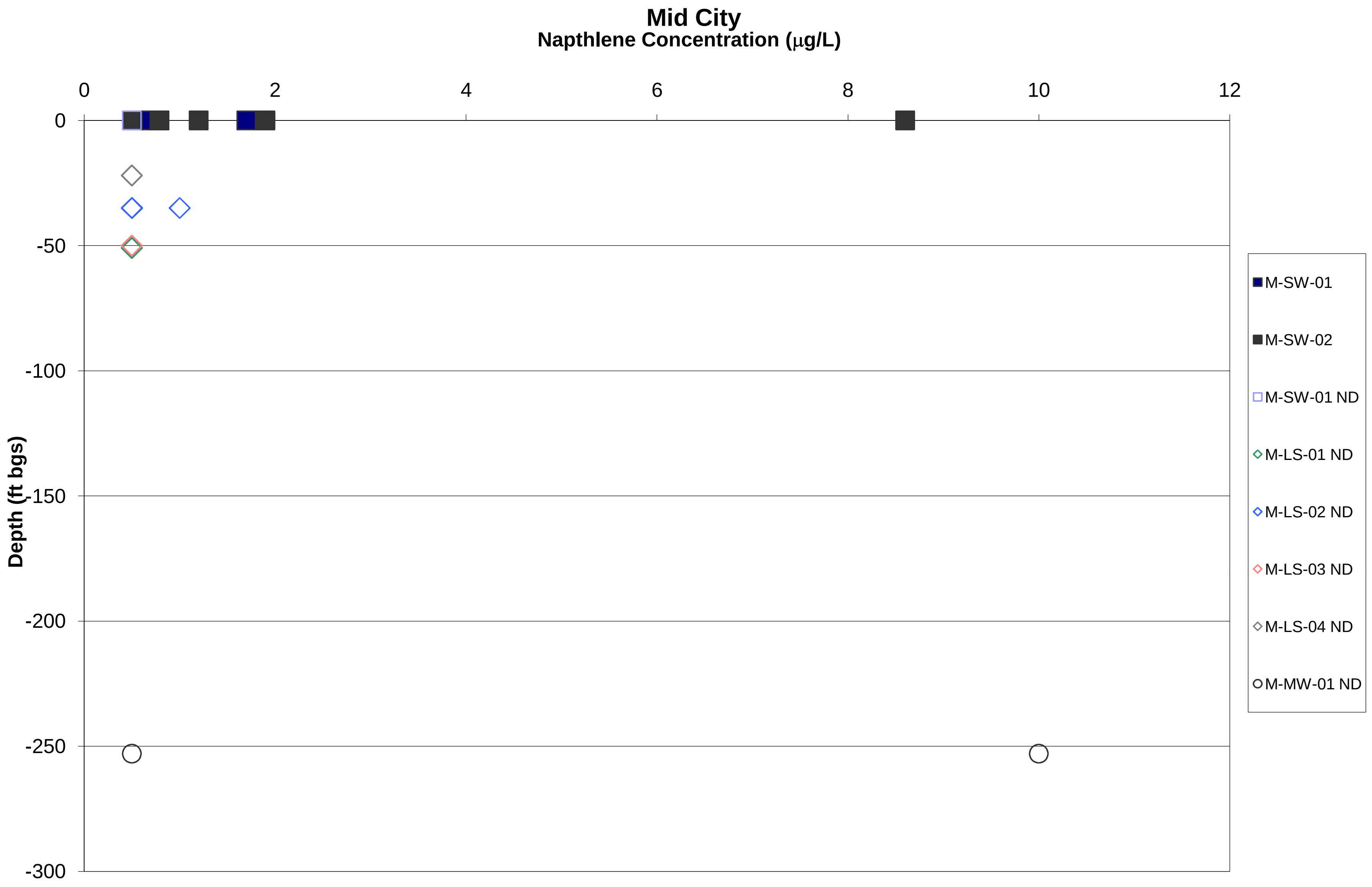

Mid City
Total Zinc Concentration (µg/L)
0
500
1000
1500
2000
2500
3000
3500
0
-50
-100
-150
-200
-250
-300
Depth (ft bgs)
M-SW-01
M-SW-02
M-LS-01
M-LS-02
M-LS-03
M-LS-04
M-MW-01
M-MW-01 ND

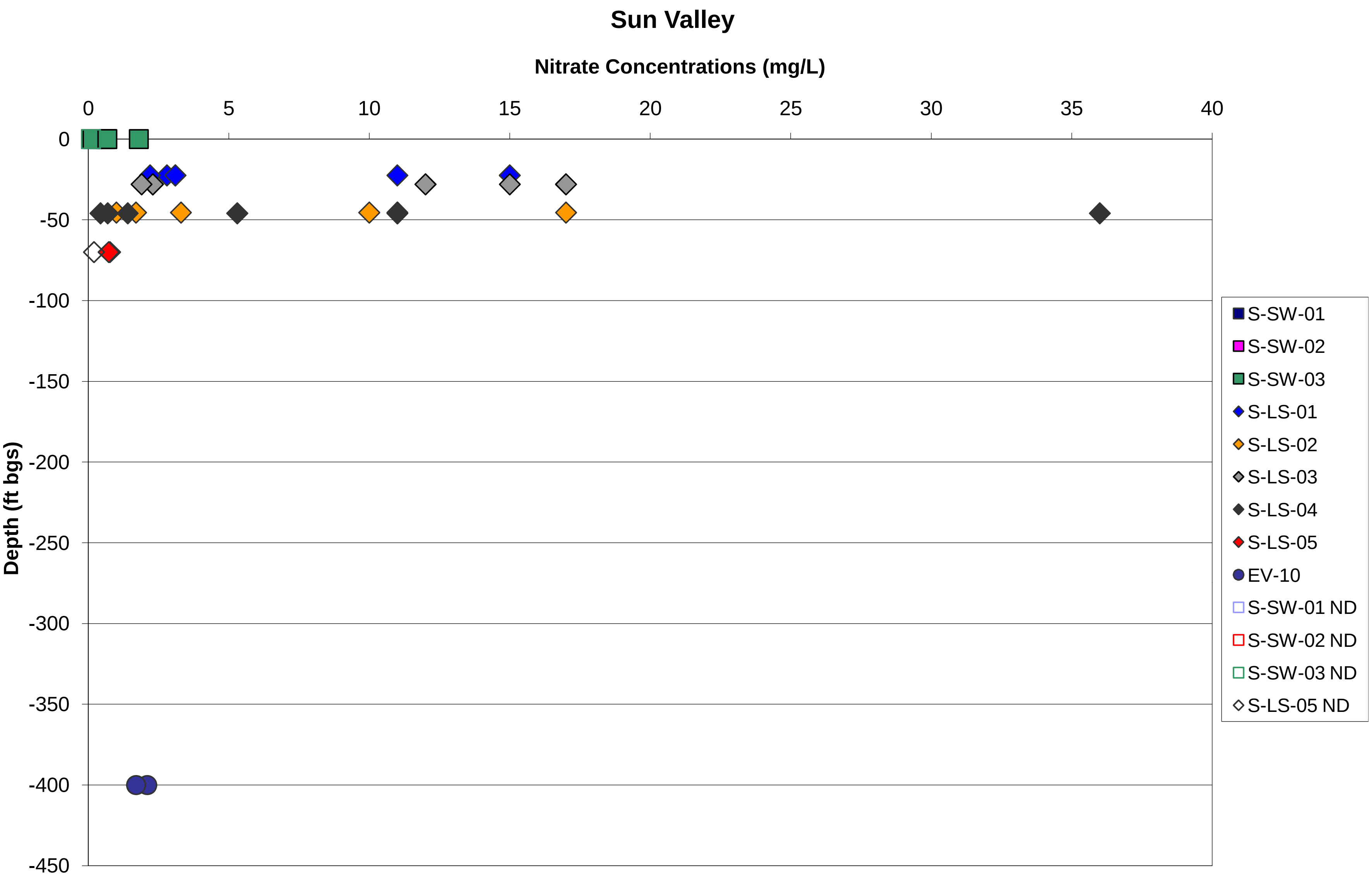


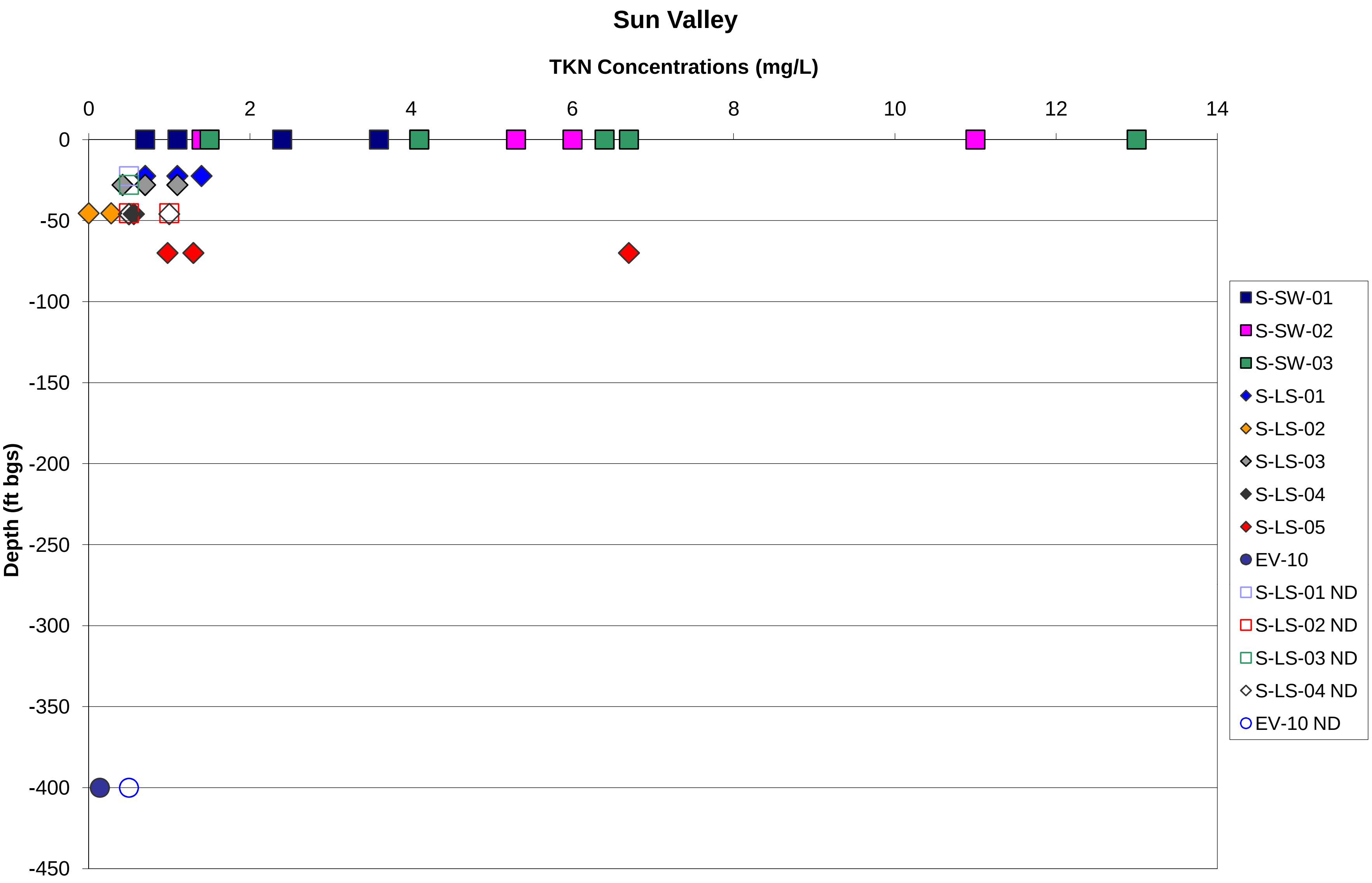
Mid City
Perchlorate Concentration (µg/L)
0
20
40
60
80
100
120
140
160
180
0
-50
-100
-150
-200
-250
-300
Depth (ft bgs)
M-SW-01
M-SW-02
M-LS-01
M-LS-02
M-LS-03
M-LS-04
M-SW-01 ND
M-SW-02 ND
M-LS-03 ND
M-MW-01 ND

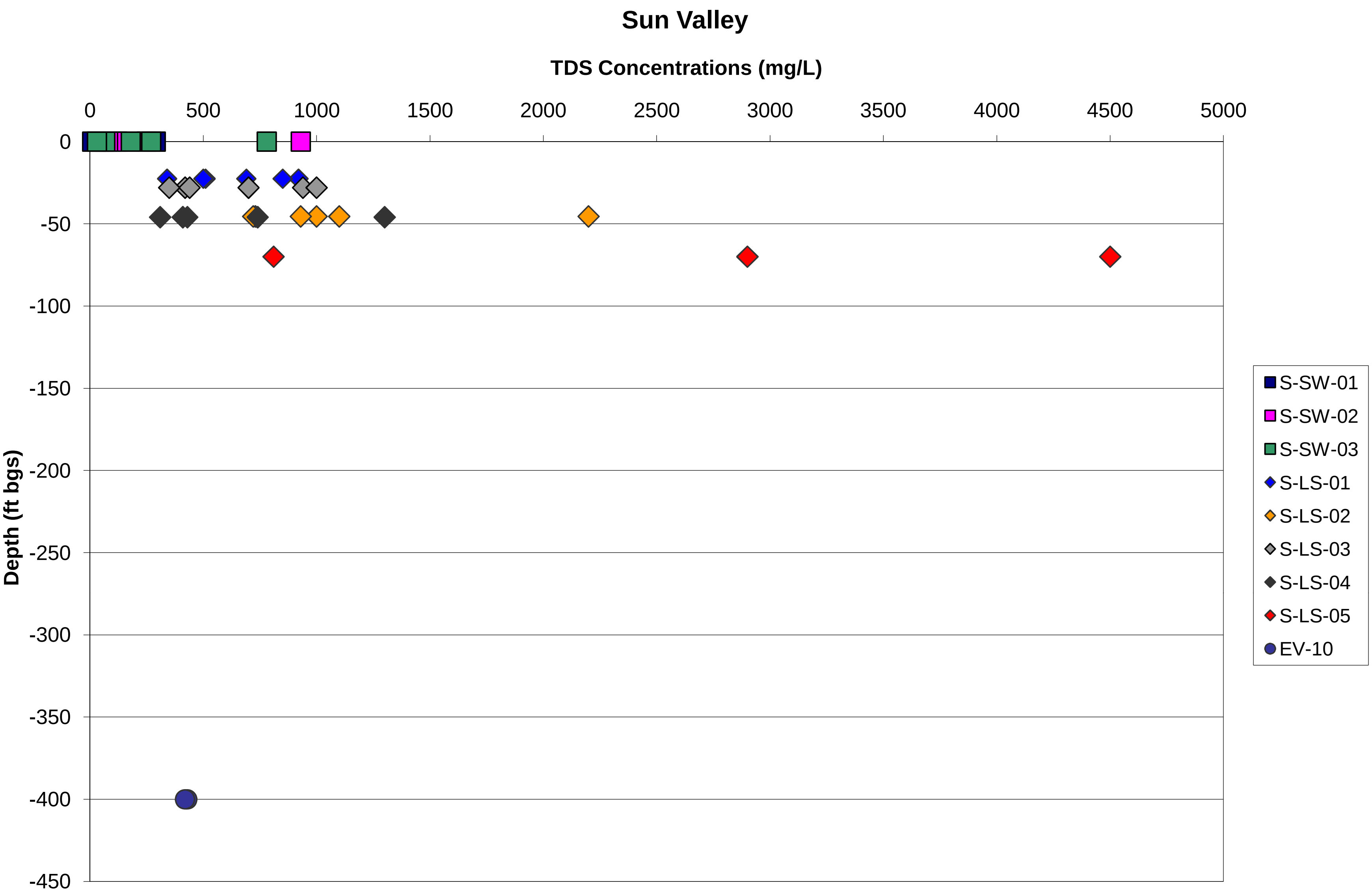

Mid City
MTBE Concentration (µg/L)
0
5
10
15
20
25
30
35
0
-50
-100
-150
-200
-250
-300
Depth (ft bgs)
M-SW-01
M-SW-02
M-LS-01
M-LS-02
M-LS-03
M-LS-04
M-SW-01 ND
M-SW-02 ND
M-LS-01 ND
M-LS-02 ND
M-LS-03 ND
M-LS-04 ND
M-MW-01 ND

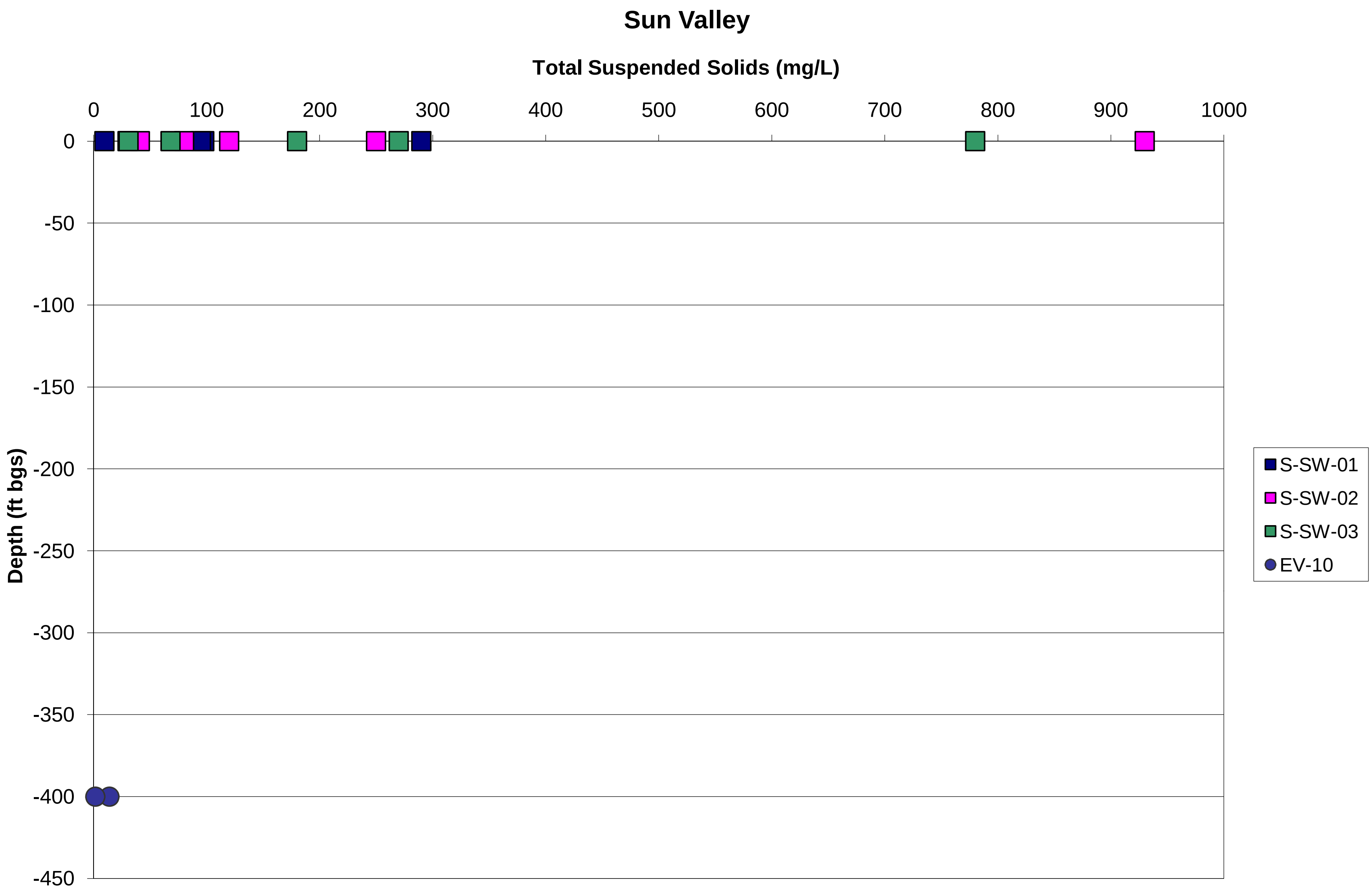
Mid City
Acetone Concentration (µg/L)
0
20
40
60
80
100
120
140
160
180
200
0
-50
-100
-150
-200
-250
-300
Depth (ft bgs)
M-SW-01
M-SW-02
M-LS-01
M-LS-02
M-LS-03
M-LS-04
M-LS-03 ND
M-MW-01 ND
M-LS-01 ND
M-LS-02 ND
M-LS-04 ND


Mid City
Napthlene Concentration (µg/L)
0
2
4
6
8
10
12
0
-50
-100
-150
-200
-250
-300
Depth (ft bgs)
M-SW-01
M-SW-02
M-SW-01 ND
M-LS-01 ND
M-LS-02 ND
M-LS-03 ND
M-LS-04 ND
M-MW-01 ND

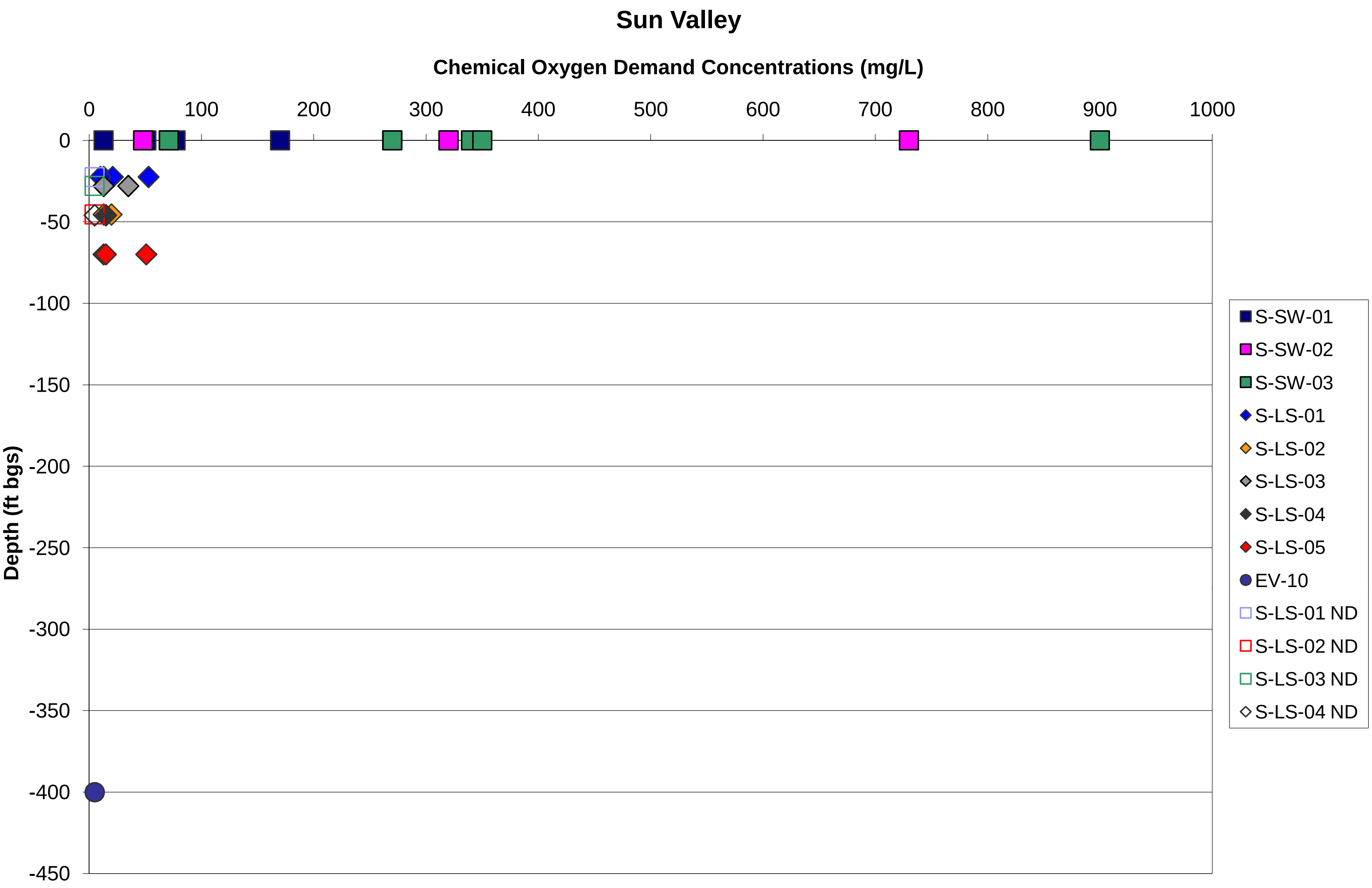

Sun Valley
Nitrate Concentrations (mg/L)
0
5
10
15
20
25
30
35
40
Depth (ft bgs)
0
-50
-100
-150
-200
-250
-300
-350
-400
-450
S-SW-01
S-SW-02
S-SW-03
S-LS-01
S-LS-02
S-LS-03
S-LS-04
S-LS-05
EV-10
S-SW-01 ND
S-SW-02 ND
S-SW-03 ND
S-LS-05 ND

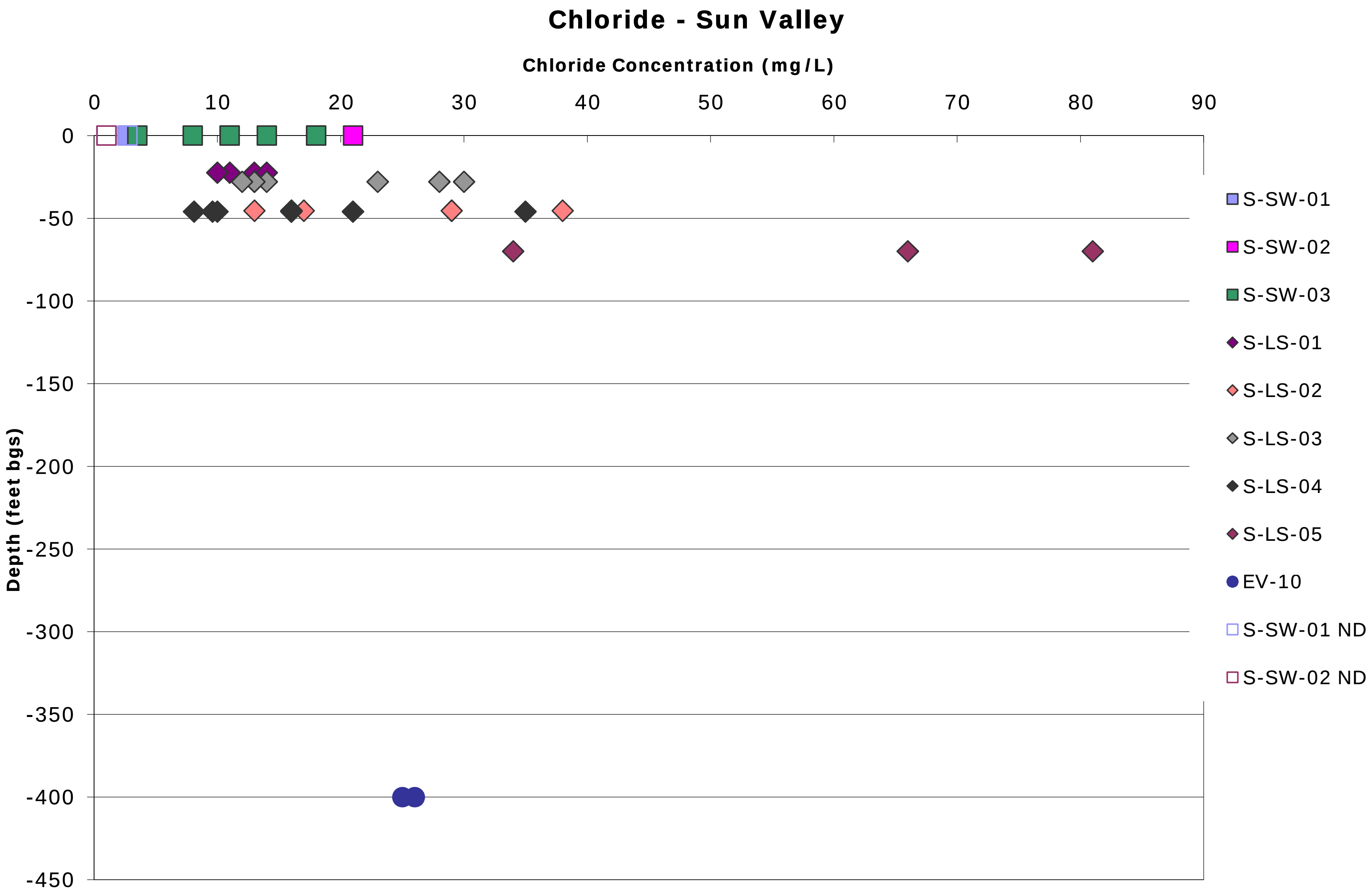

Sun Valley
TKN Concentrations (mg/L)
0
2
4
6
8
10
12
14
Depth (ft bgs)
0
-50
-100
-150
-200
-250
-300
-350
-400
-450
S-SW-01
S-SW-02
S-SW-03
S-LS-01
S-LS-02
S-LS-03
S-LS-04
S-LS-05
EV-10
S-LS-01 ND
S-LS-02 ND
S-LS-03 ND
S-LS-04 ND
EV-10 ND


Sun Valley
TDS Concentrations (mg/L)
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
Depth (ft bgs)
0
-50
-100
-150
-200
-250
-300
-350
-400
-450
S-SW-01
S-SW-02
S-SW-03
S-LS-01
S-LS-02
S-LS-03
S-LS-04
S-LS-05
EV-10



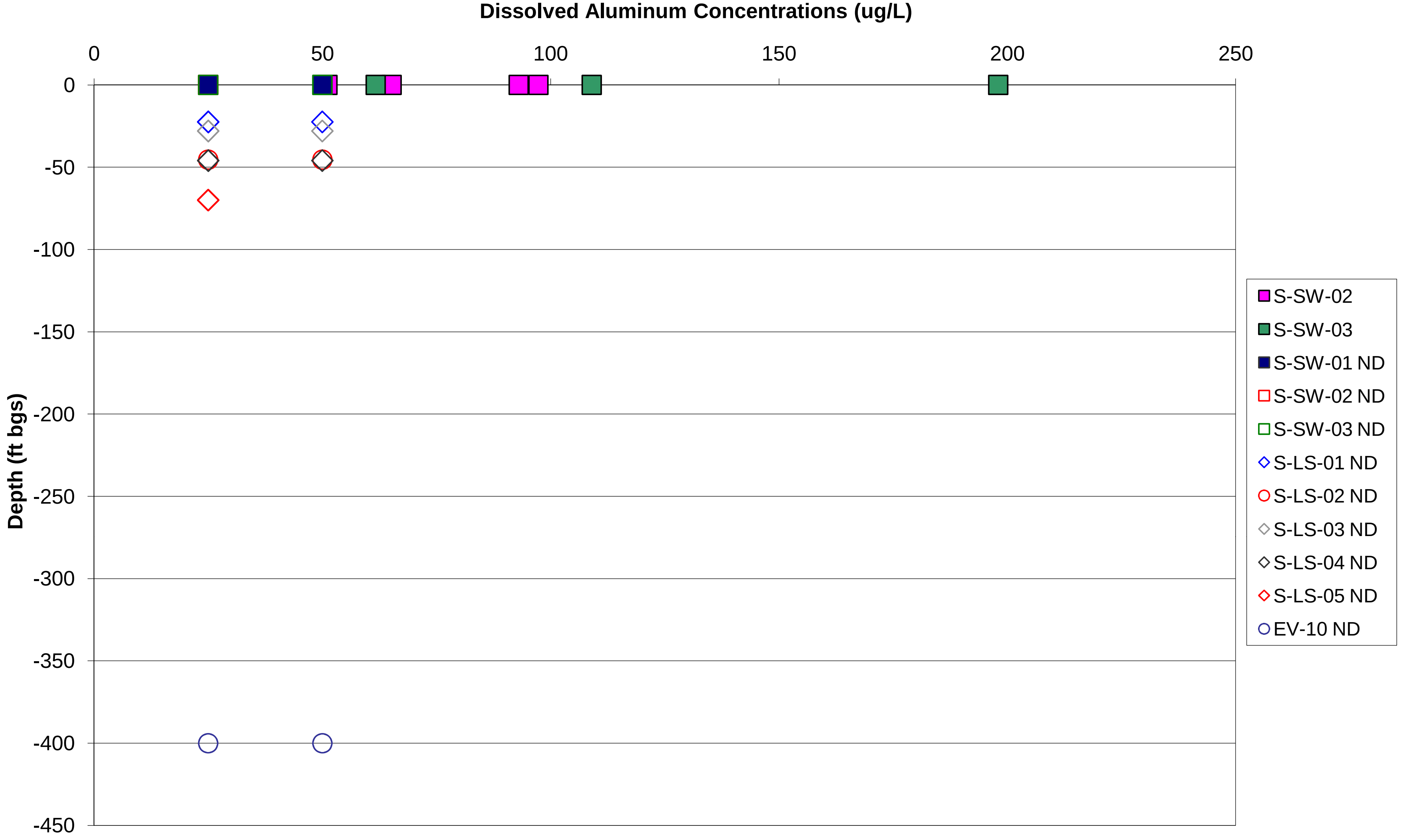
Sun Valley
Total Suspended Solids (mg/L)
0
100
200
300
400
500
600
700
800
900
1000
Depth (ft bgs)
0
-50
-100
-150
-200
-250
-300
-350
-400
-450
S-SW-01
S-SW-02
S-SW-03
EV-10

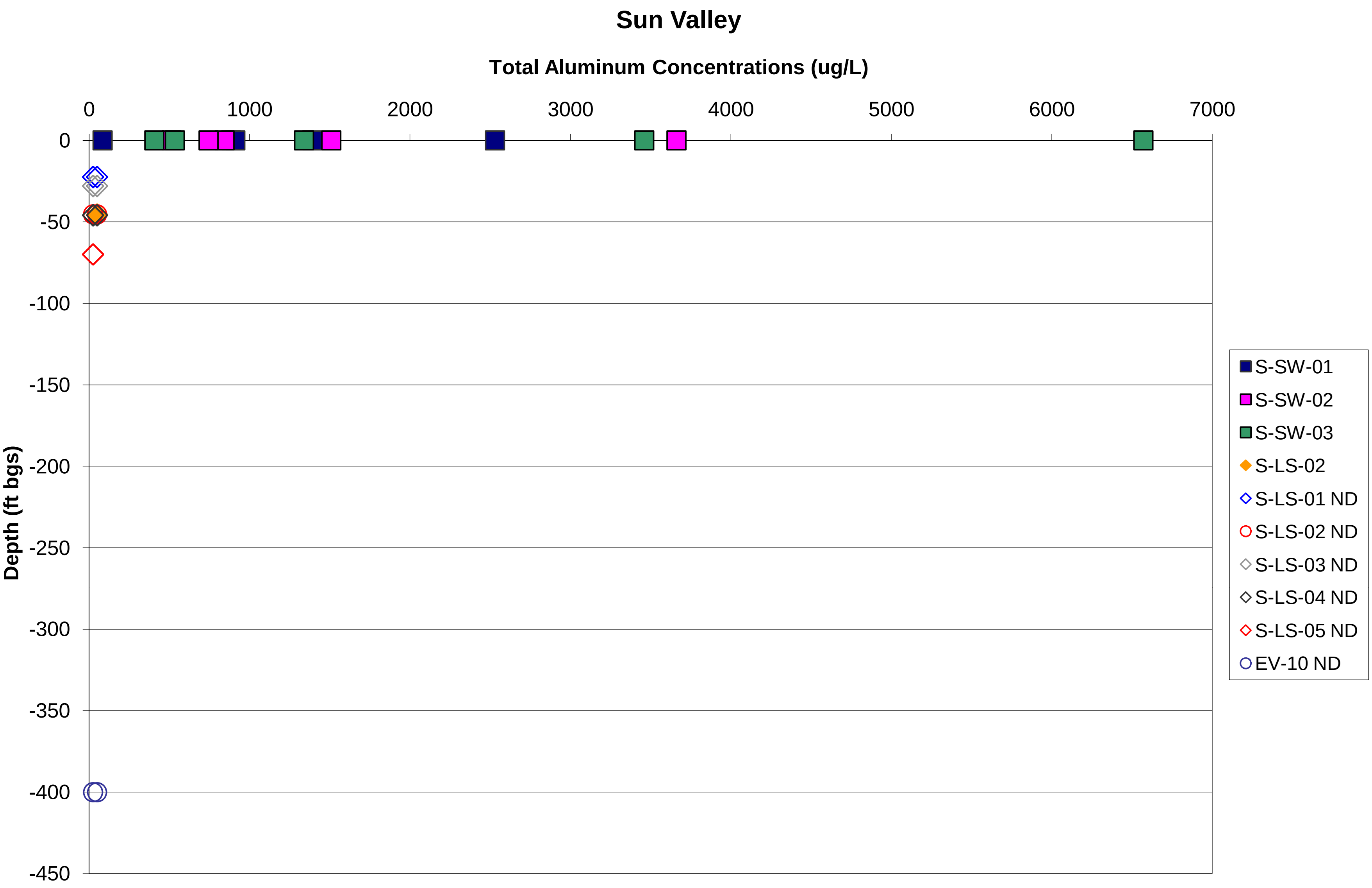

Sun Valley
Chemical Oxygen Demand Concentrations (mg/L)
0
100
200
300
400
500
600
700
800
900
1000
Depth (ft bgs)
0
-50
-100
-150
-200
-250
-300
-350
-400
-450
S-SW-01
S-SW-02
S-SW-03
S-LS-01
S-LS-02
S-LS-03
S-LS-04
S-LS-05
EV-10
S-LS-01 ND
S-LS-02 ND
S-LS-03 ND
S-LS-04 ND

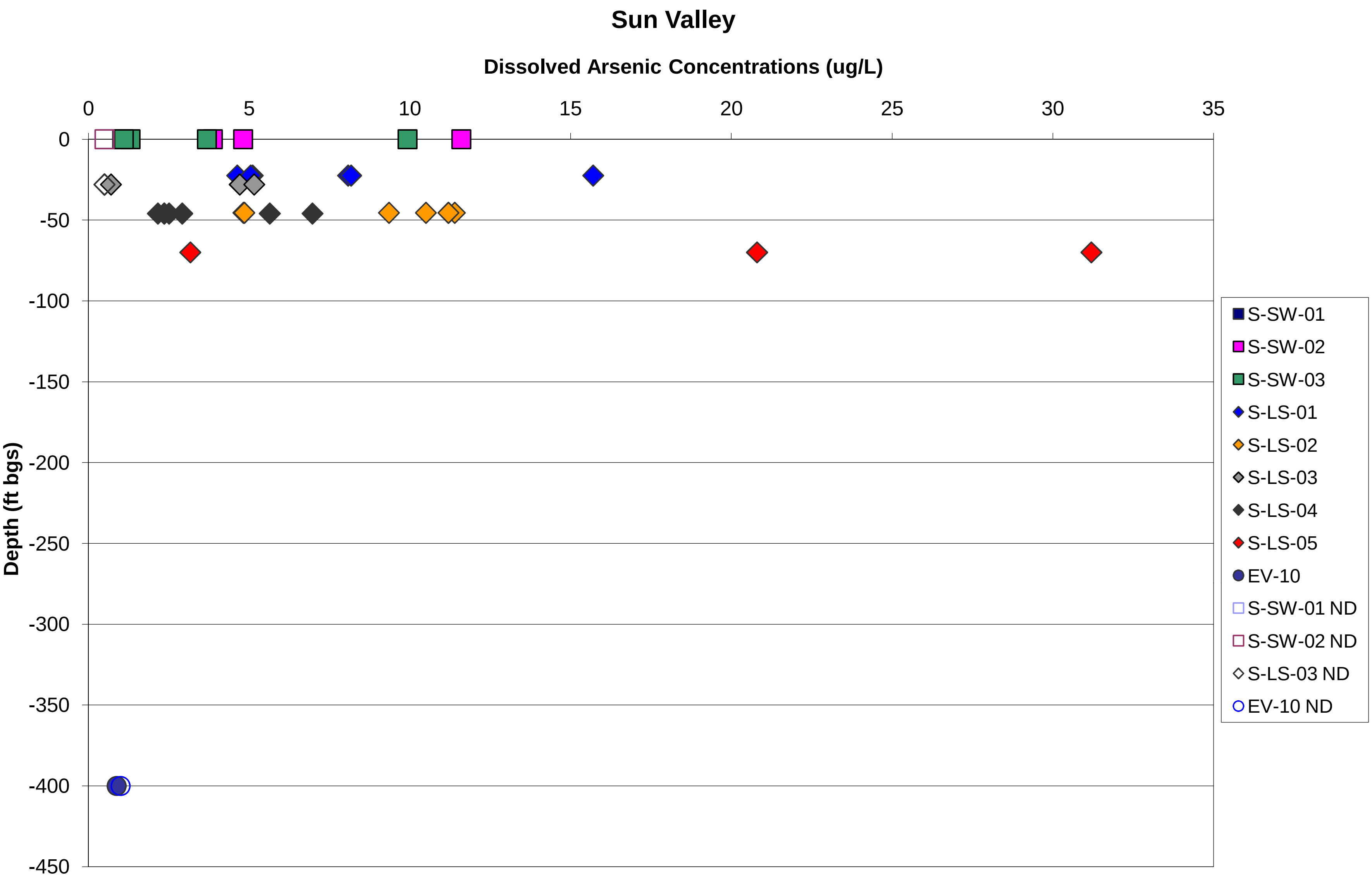


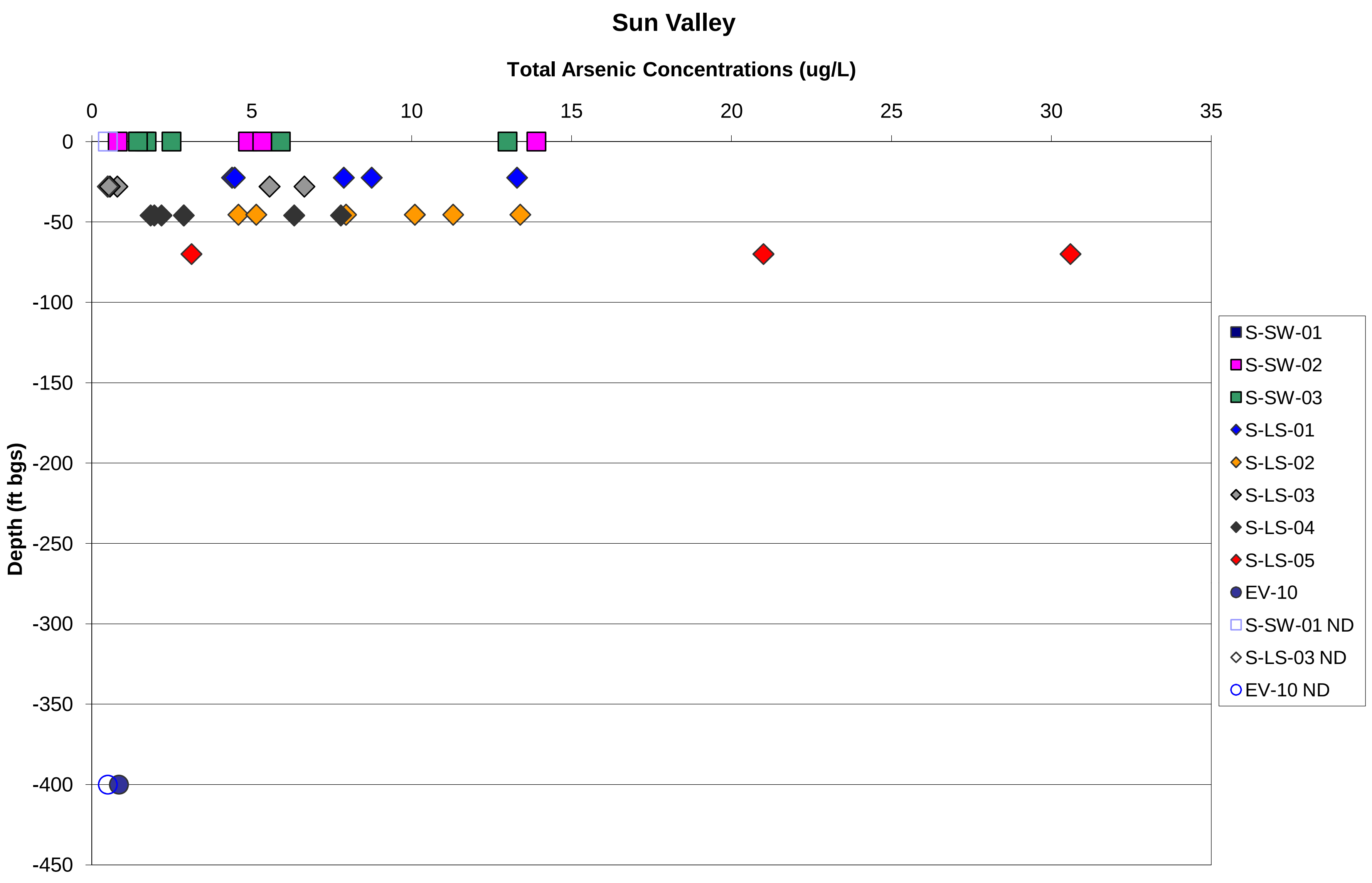
Chloride - Sun Valley
Chloride Concentration (mg/L)
0
10
20
30
40
50
60
70
80
90
0
-50
-100
-150
-200
-250
-300
-350
-400
-450
Depth (feet bgs)
S-SW-01
S-SW-02
S-SW-03
S-LS-01
S-LS-02
S-LS-03
S-LS-04
S-LS-05
EV-10
S-SW-01 ND
S-SW-02 ND

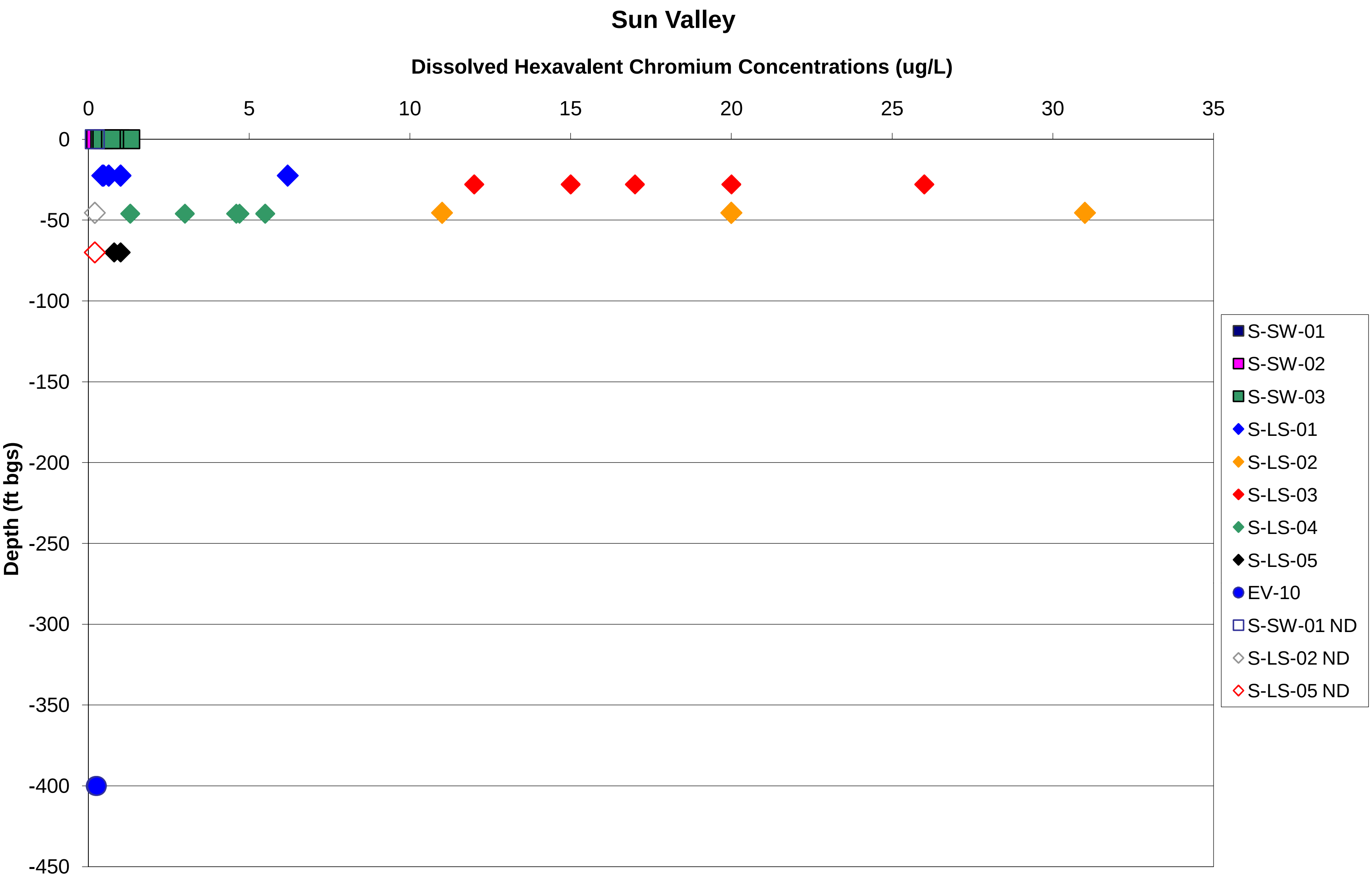
# Sun Valley

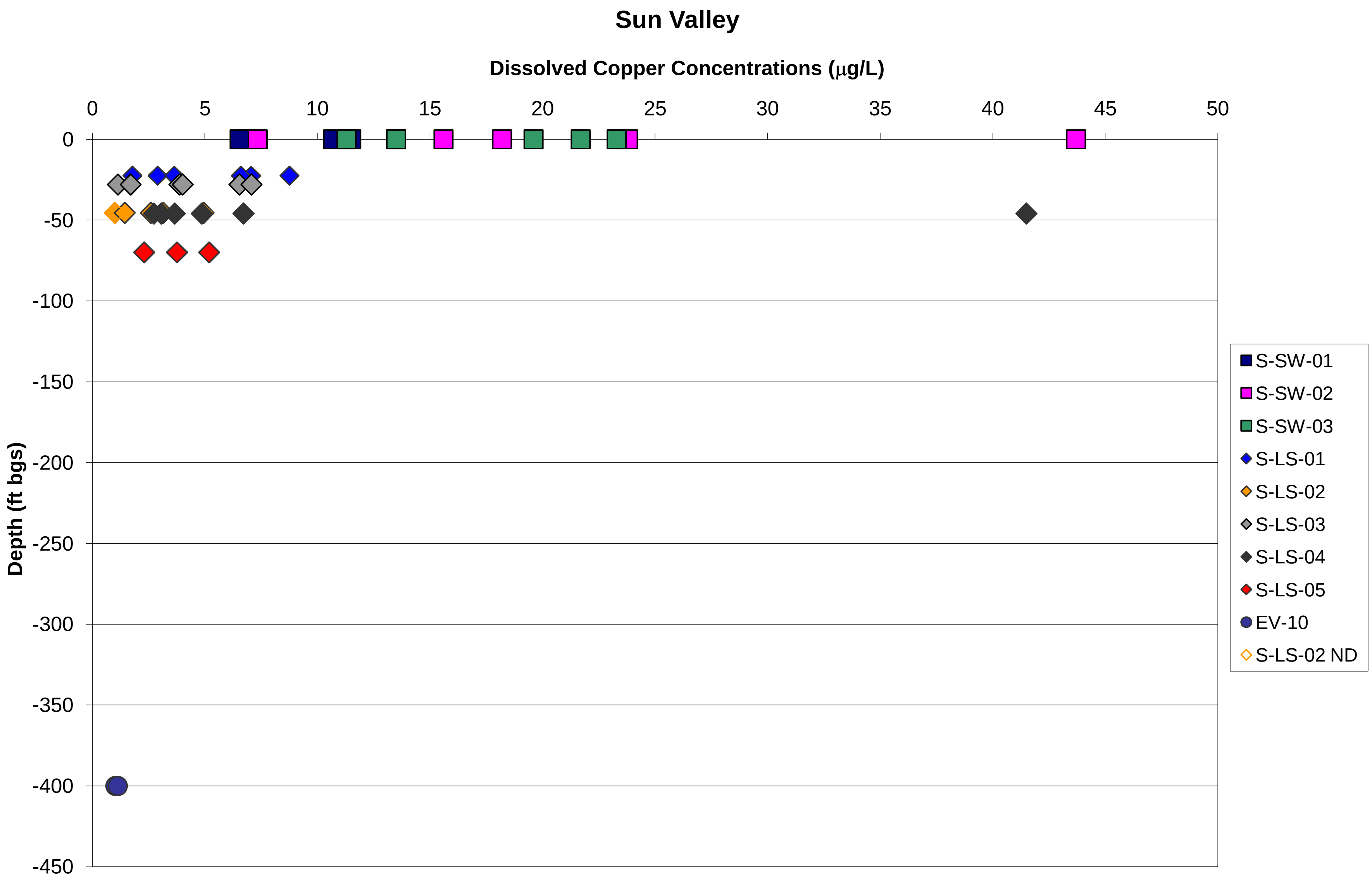

Dissolved Aluminum Concentrations (ug/L)
0
50
100
150
200
250
Depth (ft bgs)
0
-50
-100
-150
-200
-250
-300
-350
-400
-450
S-SW-02
S-SW-03
S-SW-01 ND
S-SW-02 ND
S-SW-03 ND
S-LS-01 ND
S-LS-02 ND
S-LS-03 ND
S-LS-04 ND
S-LS-05 ND
EV-10 ND


Sun Valley
Total Aluminum Concentrations (ug/L)
0
1000
2000
3000
4000
5000
6000
7000
Depth (ft bgs)
0
-50
-100
-150
-200
-250
-300
-350
-400
-450
S-SW-01
S-SW-02
S-SW-03
S-LS-02
S-LS-01 ND
S-LS-02 ND
S-LS-03 ND
S-LS-04 ND
S-LS-05 ND
EV-10 ND

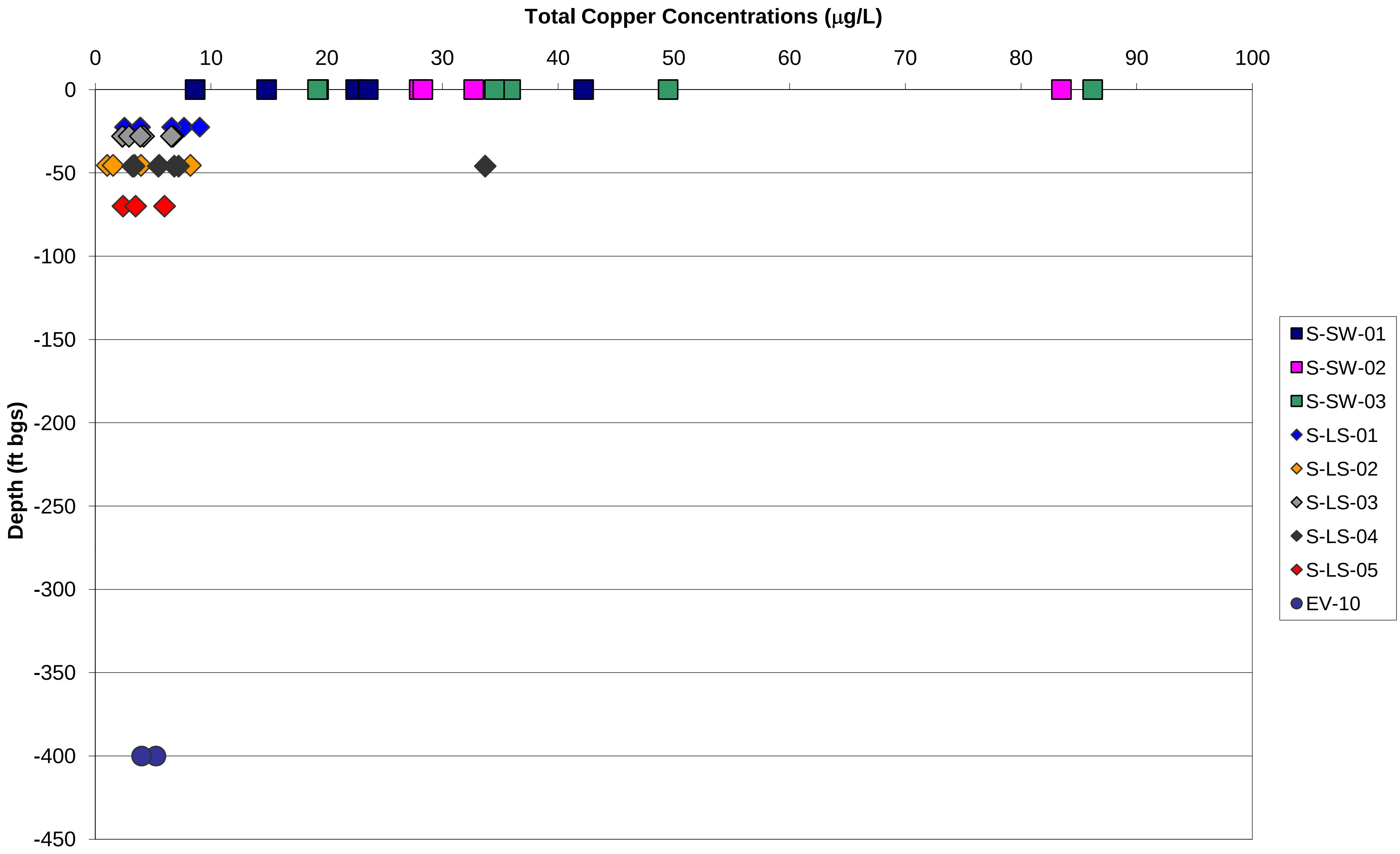

Sun Valley
Dissolved Arsenic Concentrations (ug/L)
0
5
10
15
20
25
30
35
Depth (ft bgs)
0
-50
-100
-150
-200
-250
-300
-350
-400
-450
S-SW-01
S-SW-02
S-SW-03
S-LS-01
S-LS-02
S-LS-03
S-LS-04
S-LS-05
EV-10
S-SW-01 ND
S-SW-02 ND
S-LS-03 ND
EV-10 ND


Sun Valley
Total Arsenic Concentrations (ug/L)
0
5
10
15
20
25
30
35
Depth (ft bgs)
0
-50
-100
-150
-200
-250
-300
-350
-400
-450
S-SW-01
S-SW-02
S-SW-03
S-LS-01
S-LS-02
S-LS-03
S-LS-04
S-LS-05
EV-10
S-SW-01 ND
S-LS-03 ND
EV-10 ND

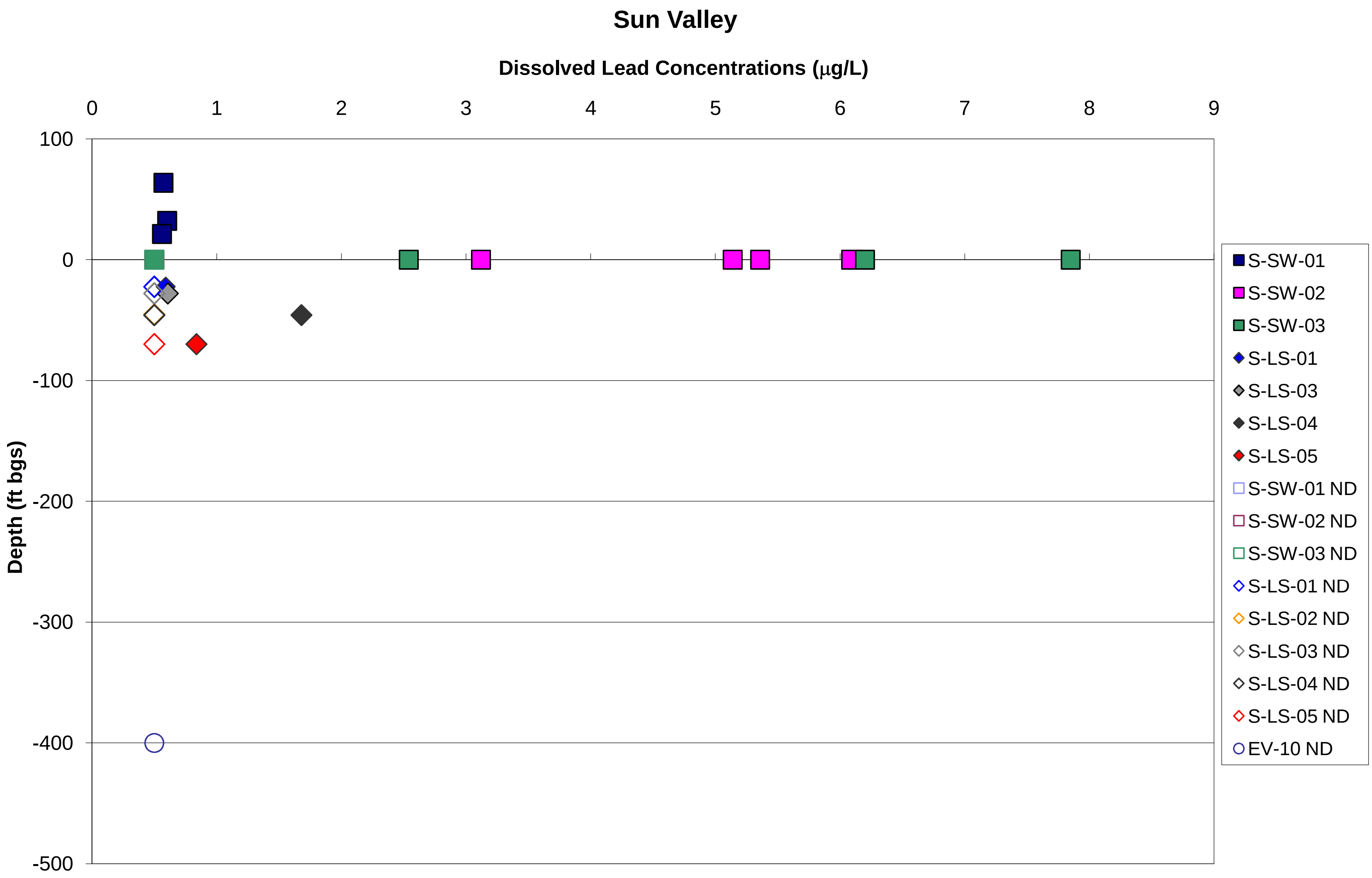

Sun Valley
Dissolved Hexavalent Chromium Concentrations (ug/L)
0
5
10
15
20
25
30
35
Depth (ft bgs)
0
-50
-100
-150
-200
-250
-300
-350
-400
-450
S-SW-01
S-SW-02
S-SW-03
S-LS-01
S-LS-02
S-LS-03
S-LS-04
S-LS-05
EV-10
S-SW-01 ND
S-LS-02 ND
S-LS-05 ND

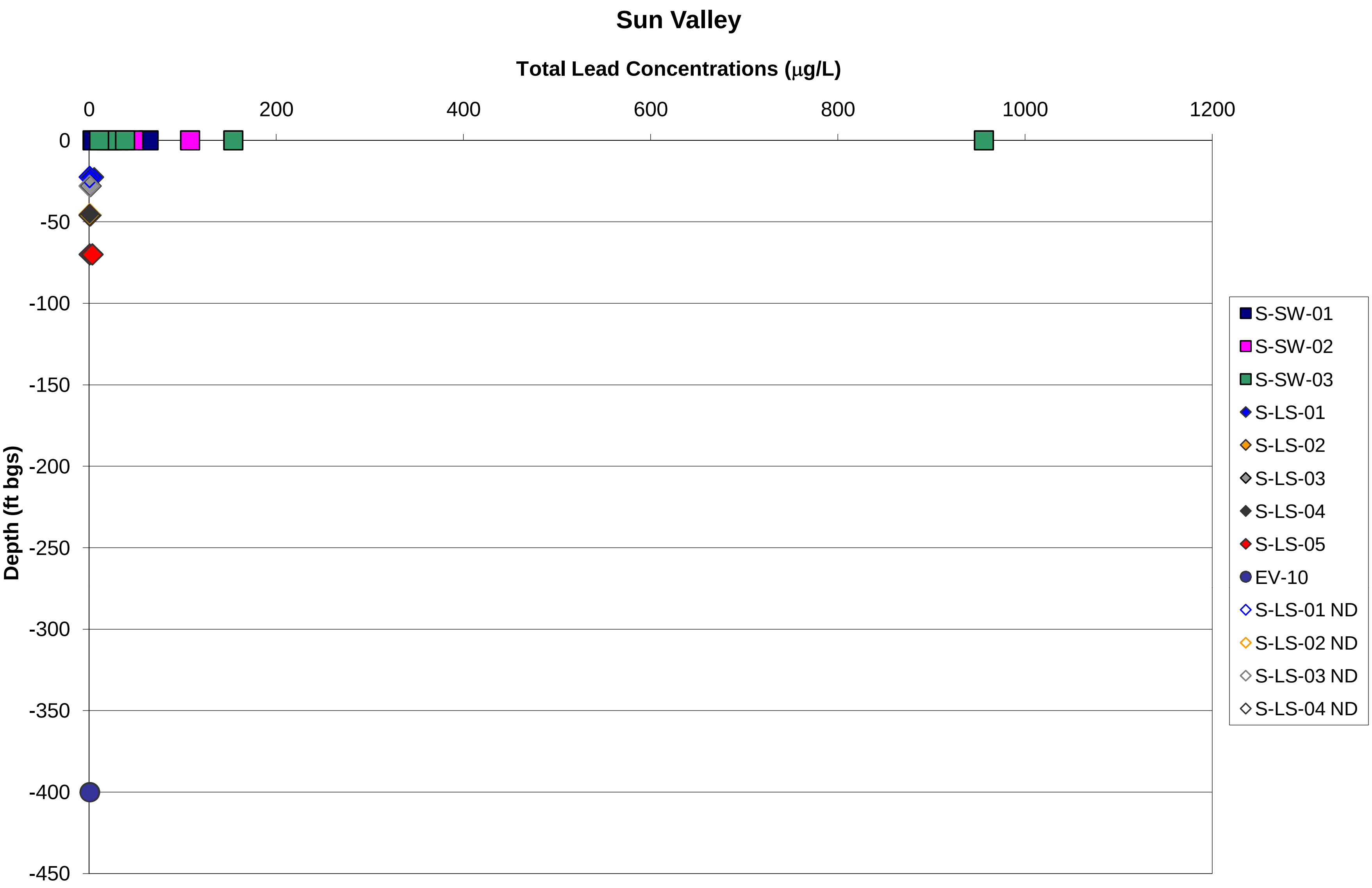

Sun Valley
Dissolved Copper Concentrations (µg/L)
0
5
10
15
20
25
30
35
40
45
50
Depth (ft bgs)
0
-50
-100
-150
-200
-250
-300
-350
-400
-450
S-SW-01
S-SW-02
S-SW-03
S-LS-01
S-LS-02
S-LS-03
S-LS-04
S-LS-05
EV-10
S-LS-02 ND

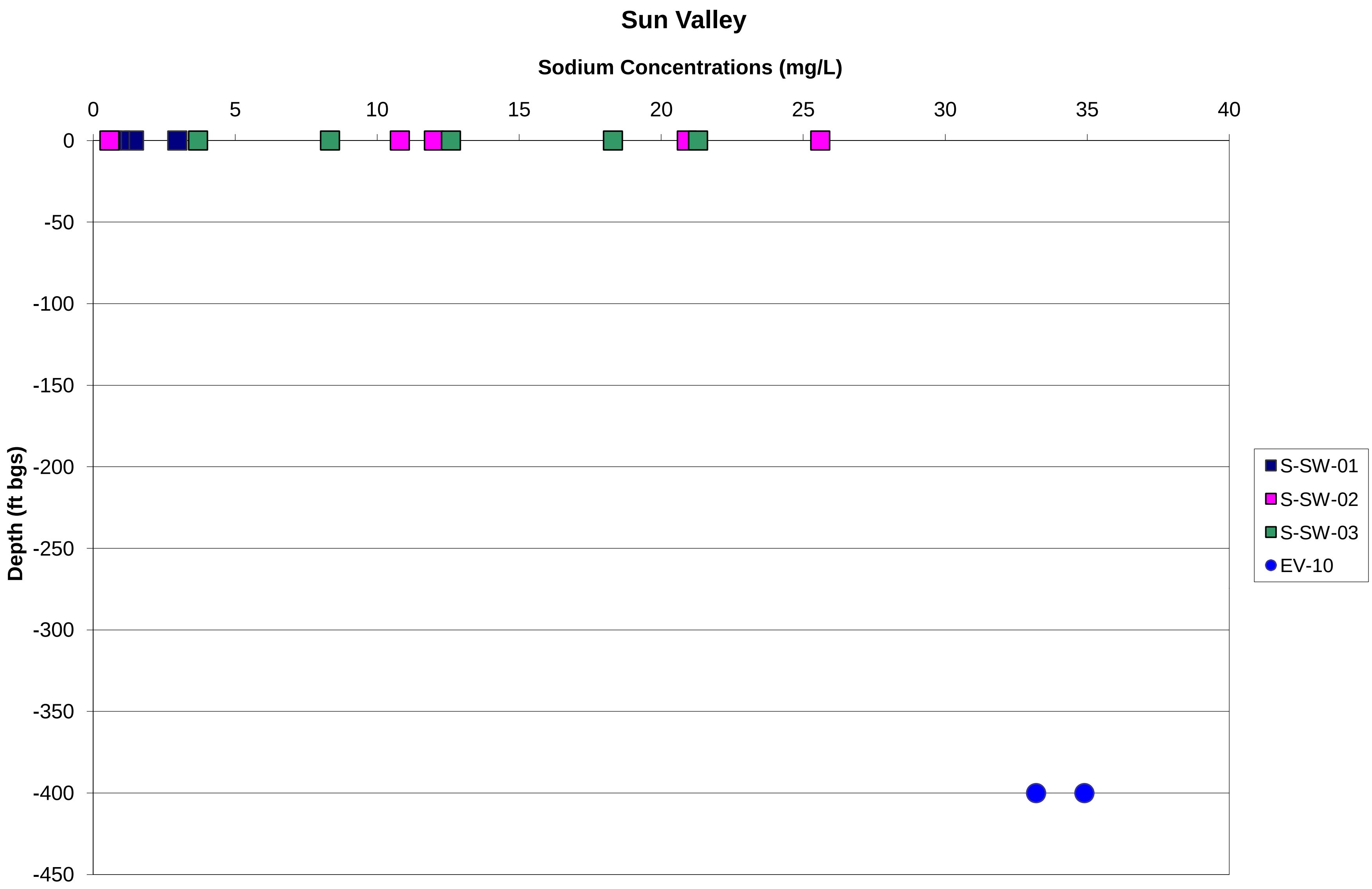
# Sun Valley

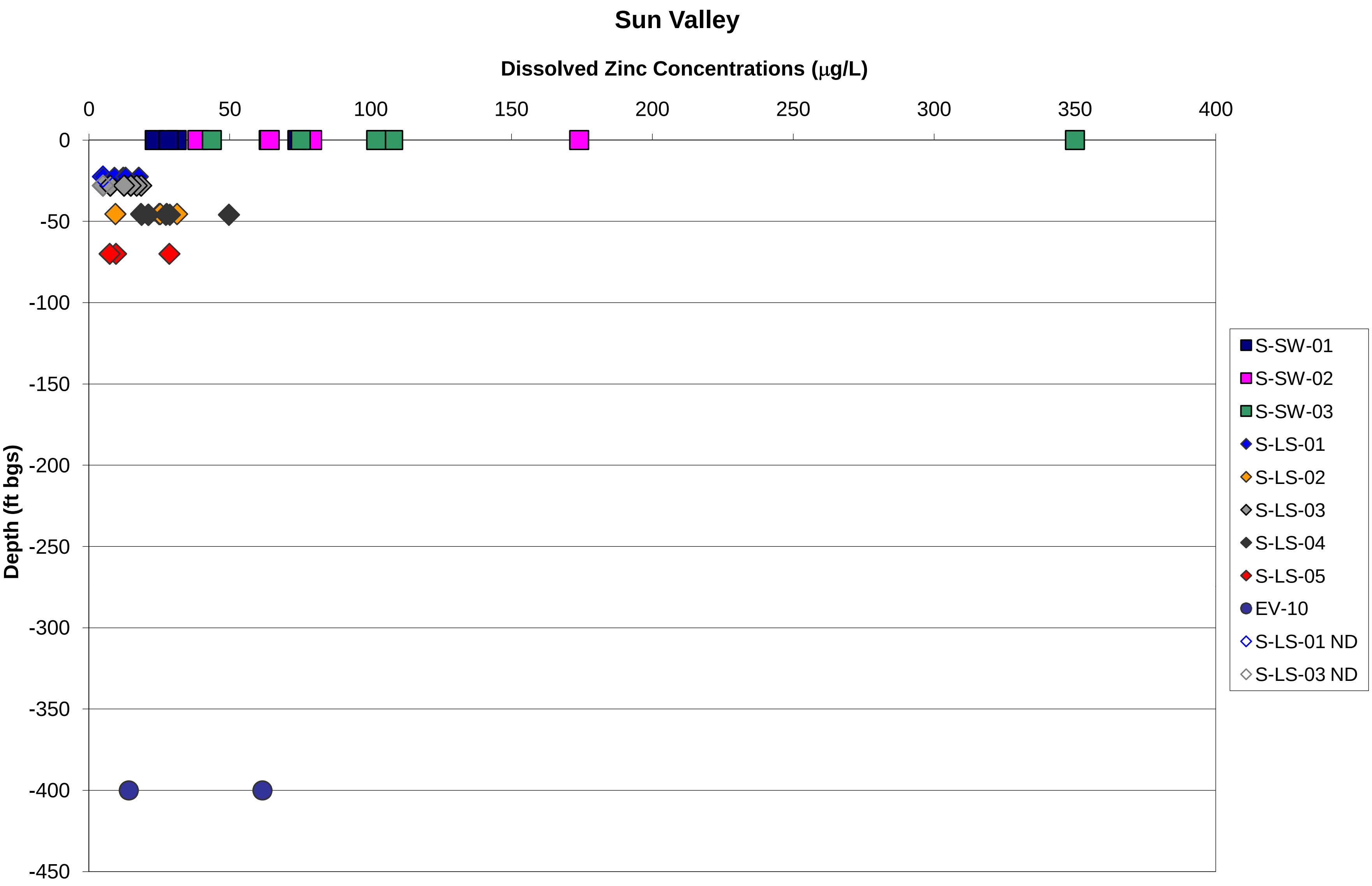


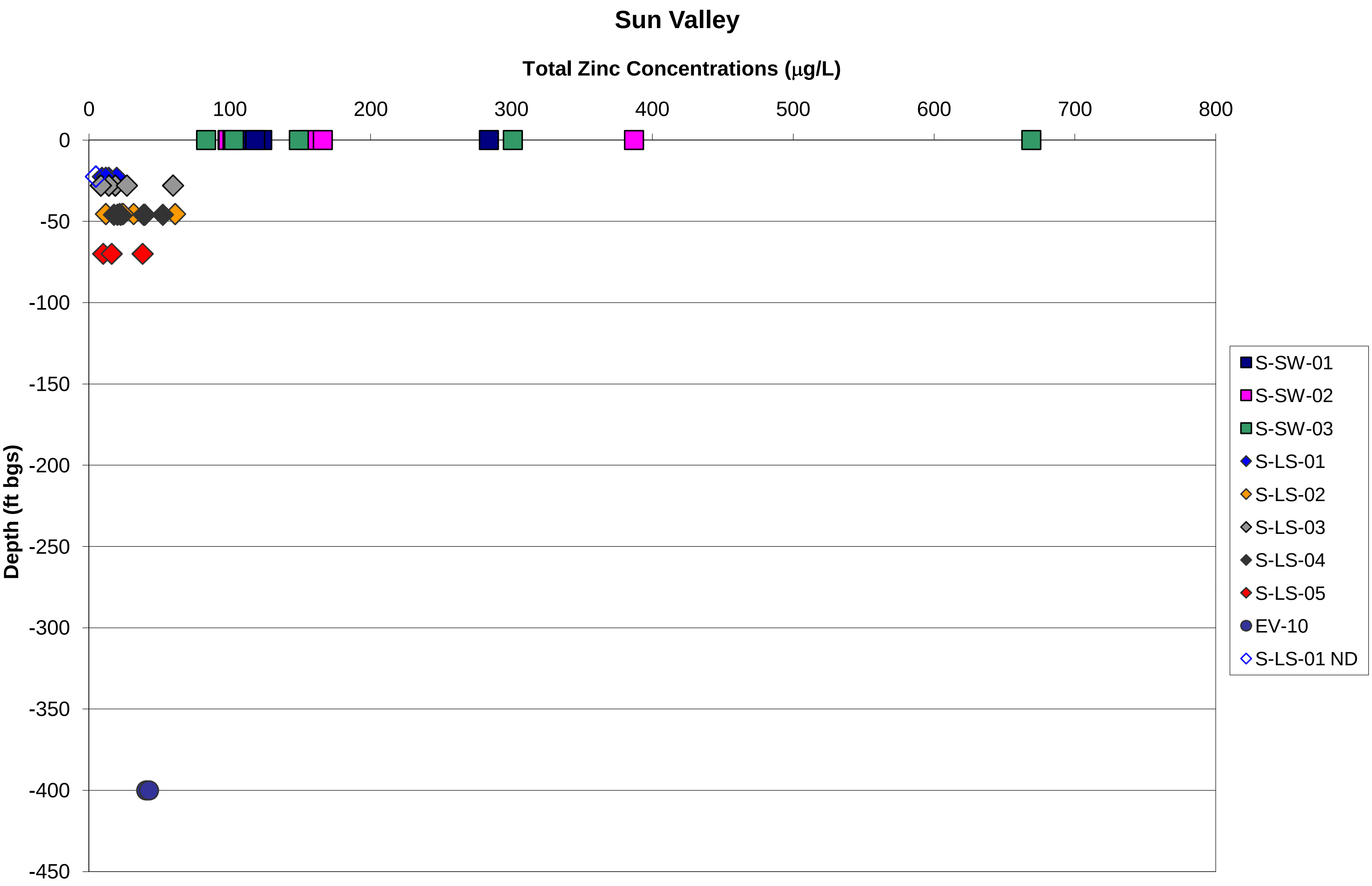
Total Copper Concentrations (µg/L)
0
10
20
30
40
50
60
70
80
90
100
Depth (ft bgs)
0
-50
-100
-150
-200
-250
-300
-350
-400
-450
S-SW-01
S-SW-02
S-SW-03
S-LS-01
S-LS-02
S-LS-03
S-LS-04
S-LS-05
EV-10

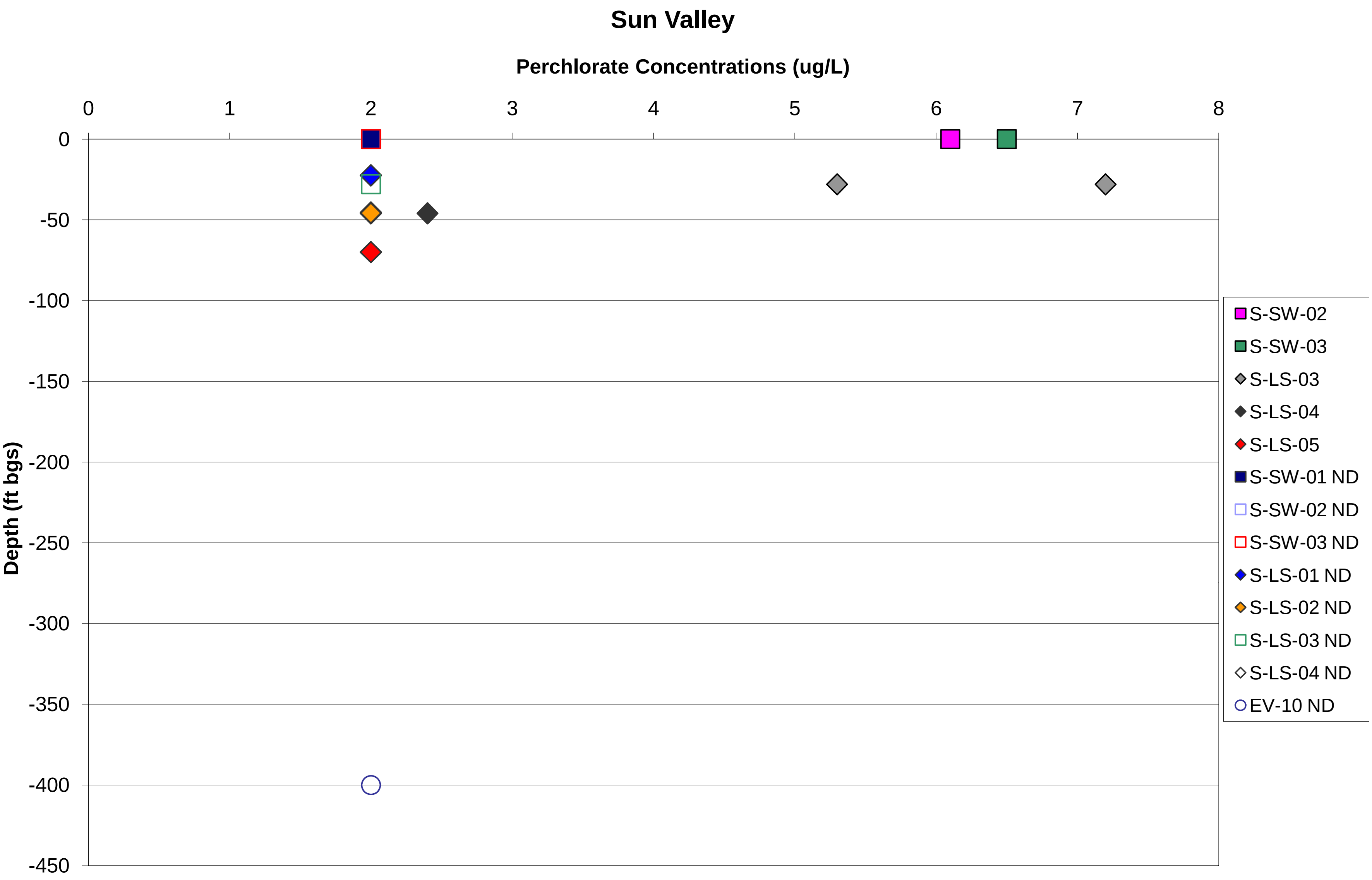

Sun Valley
Dissolved Lead Concentrations (µg/L)
0
1
2
3
4
5
6
7
8
9
100
0
-100
-200
-300
-400
-500
Depth (ft bgs)
S-SW-01
S-SW-02
S-SW-03
S-LS-01
S-LS-03
S-LS-04
S-LS-05
S-SW-01 ND
S-SW-02 ND
S-SW-03 ND
S-LS-01 ND
S-LS-02 ND
S-LS-03 ND
S-LS-04 ND
S-LS-05 ND
EV-10 ND

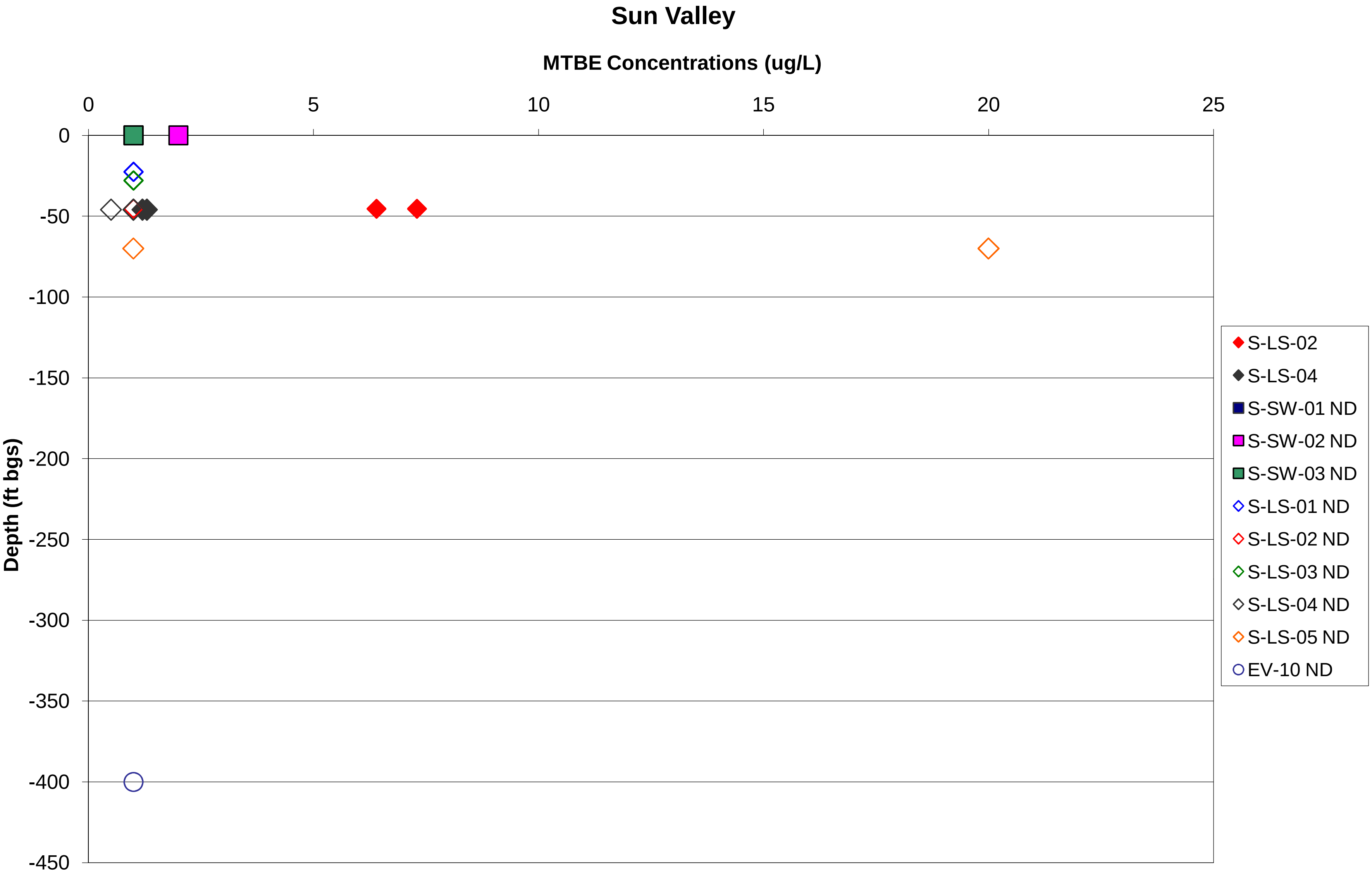

Sun Valley
Total Lead Concentrations (µg/L)
0
200
400
600
800
1000
1200
Depth (ft bgs)
0
-50
-100
-150
-200
-250
-300
-350
-400
-450
S-SW-01
S-SW-02
S-SW-03
S-LS-01
S-LS-02
S-LS-03
S-LS-04
S-LS-05
EV-10
S-LS-01 ND
S-LS-02 ND
S-LS-03 ND
S-LS-04 ND


Sun Valley
Sodium Concentrations (mg/L)
0
5
10
15
20
25
30
35
40
0
-50
-100
-150
-200
-250
-300
-350
-400
-450
Depth (ft bgs)
S-SW-01
S-SW-02
S-SW-03
EV-10

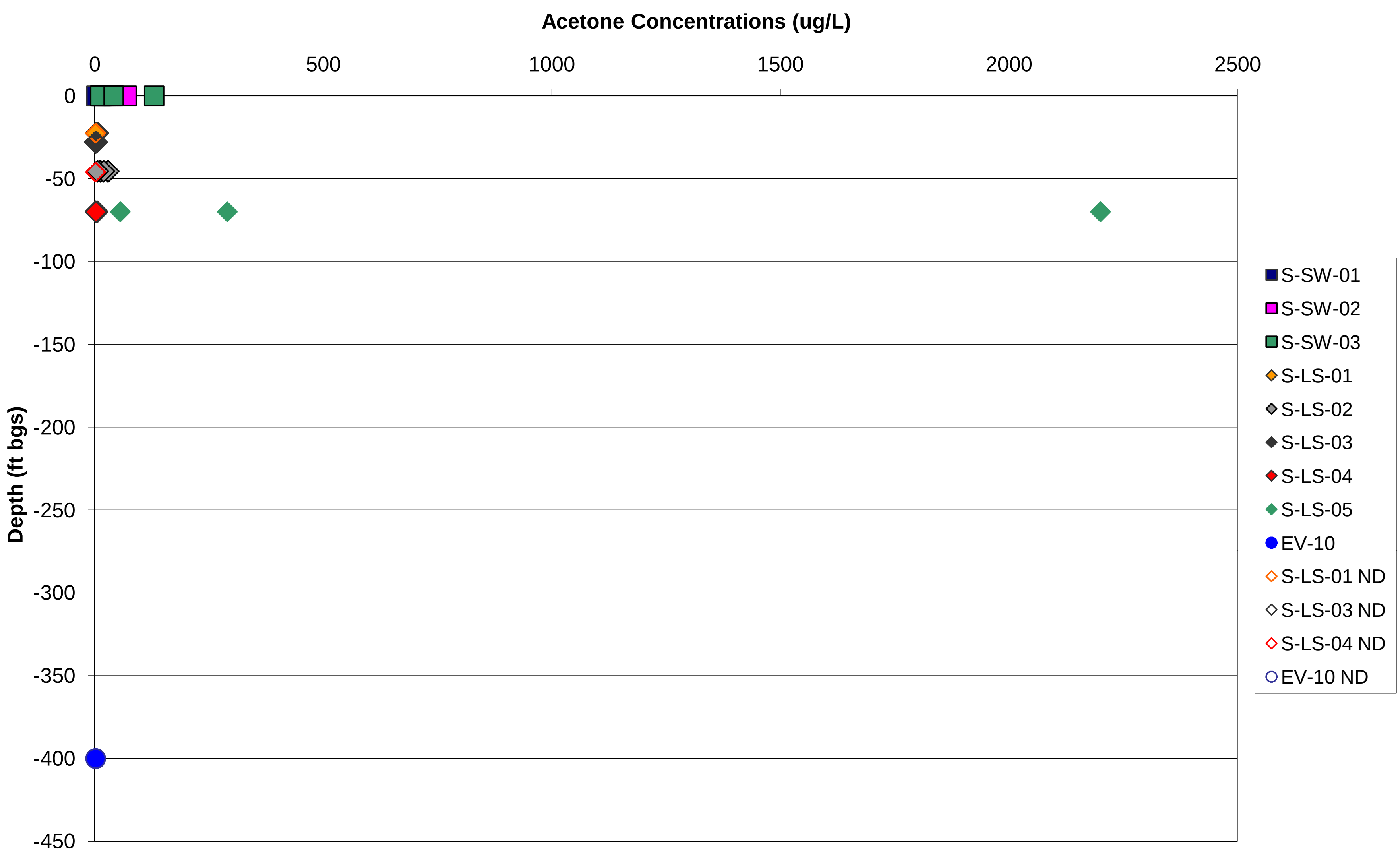

Sun Valley
Dissolved Zinc Concentrations (µg/L)
0
50
100
150
200
250
300
350
400
Depth (ft bgs)
0
-50
-100
-150
-200
-250
-300
-350
-400
-450
S-SW-01
S-SW-02
S-SW-03
S-LS-01
S-LS-02
S-LS-03
S-LS-04
S-LS-05
EV-10
S-LS-01 ND
S-LS-03 ND


Sun Valley
Total Zinc Concentrations (µg/L)
0
100
200
300
400
500
600
700
800
Depth (ft bgs)
0
-50
-100
-150
-200
-250
-300
-350
-400
-450
S-SW-01
S-SW-02
S-SW-03
S-LS-01
S-LS-02
S-LS-03
S-LS-04
S-LS-05
EV-10
S-LS-01 ND


Sun Valley
Perchlorate Concentrations (ug/L)
0
1
2
3
4
5
6
7
8
Depth (ft bgs)
0
-50
-100
-150
-200
-250
-300
-350
-400
-450
S-SW-02
S-SW-03
S-LS-03
S-LS-04
S-LS-05
S-SW-01 ND
S-SW-02 ND
S-SW-03 ND
S-LS-01 ND
S-LS-02 ND
S-LS-03 ND
S-LS-04 ND
EV-10 ND


Sun Valley
MTBE Concentrations (ug/L)
0
5
10
15
20
25
0
-50
-100
-150
-200
-250
-300
-350
-400
-450
Depth (ft bgs)
◆ S-LS-02
◆ S-LS-04
■ S-SW-01 ND
■ S-SW-02 ND
■ S-SW-03 ND
◇ S-LS-01 ND
◇ S-LS-02 ND
◇ S-LS-03 ND
◇ S-LS-04 ND
◇ S-LS-05 ND
○ EV-10 ND

# Sun Valley



Acetone Concentrations (ug/L)
0
500
1000
1500
2000
2500
Depth (ft bgs)
0
-50
-100
-150
-200
-250
-300
-350
-400
-450
S-SW-01
S-SW-02
S-SW-03
S-LS-01
S-LS-02
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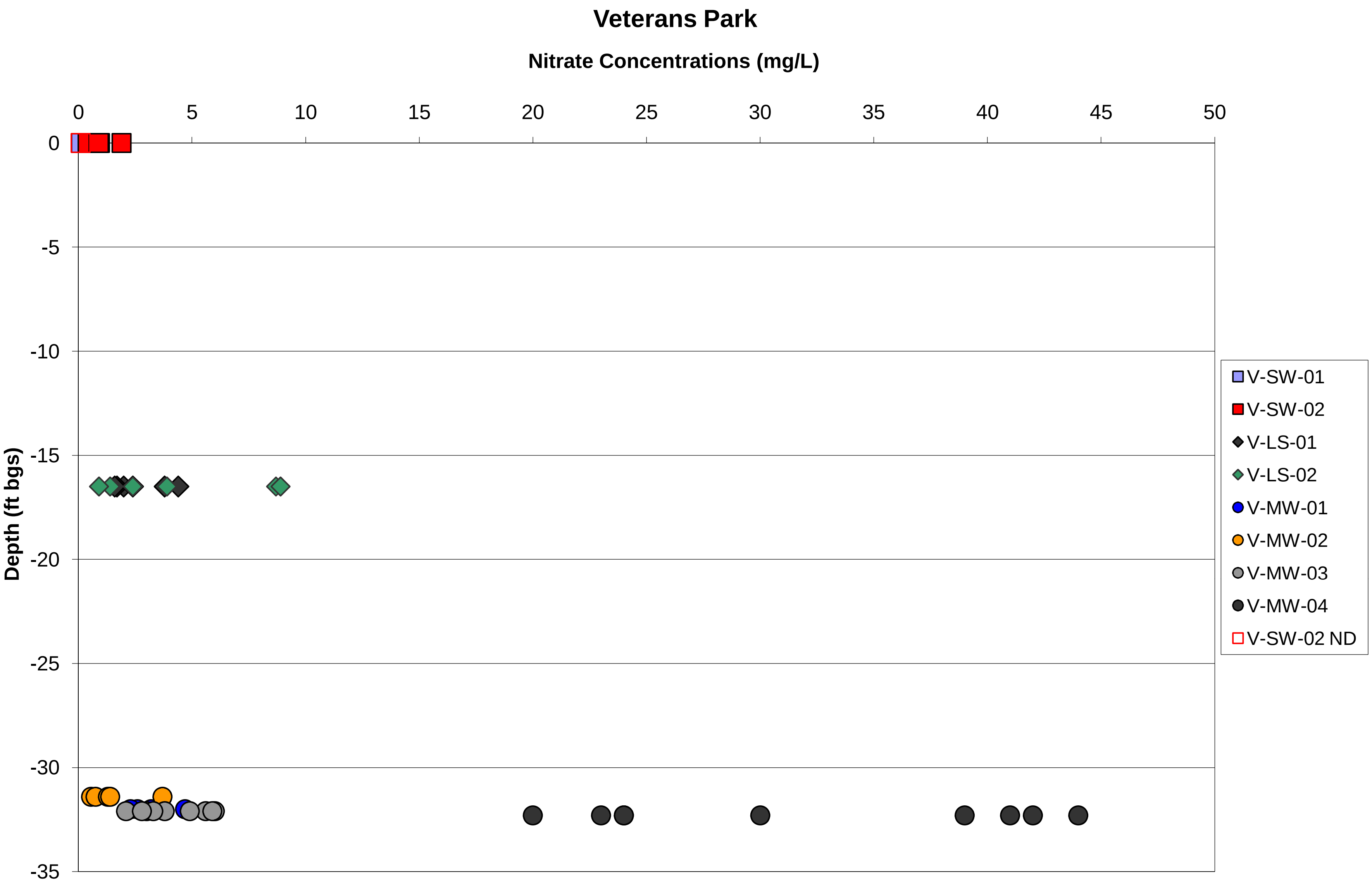
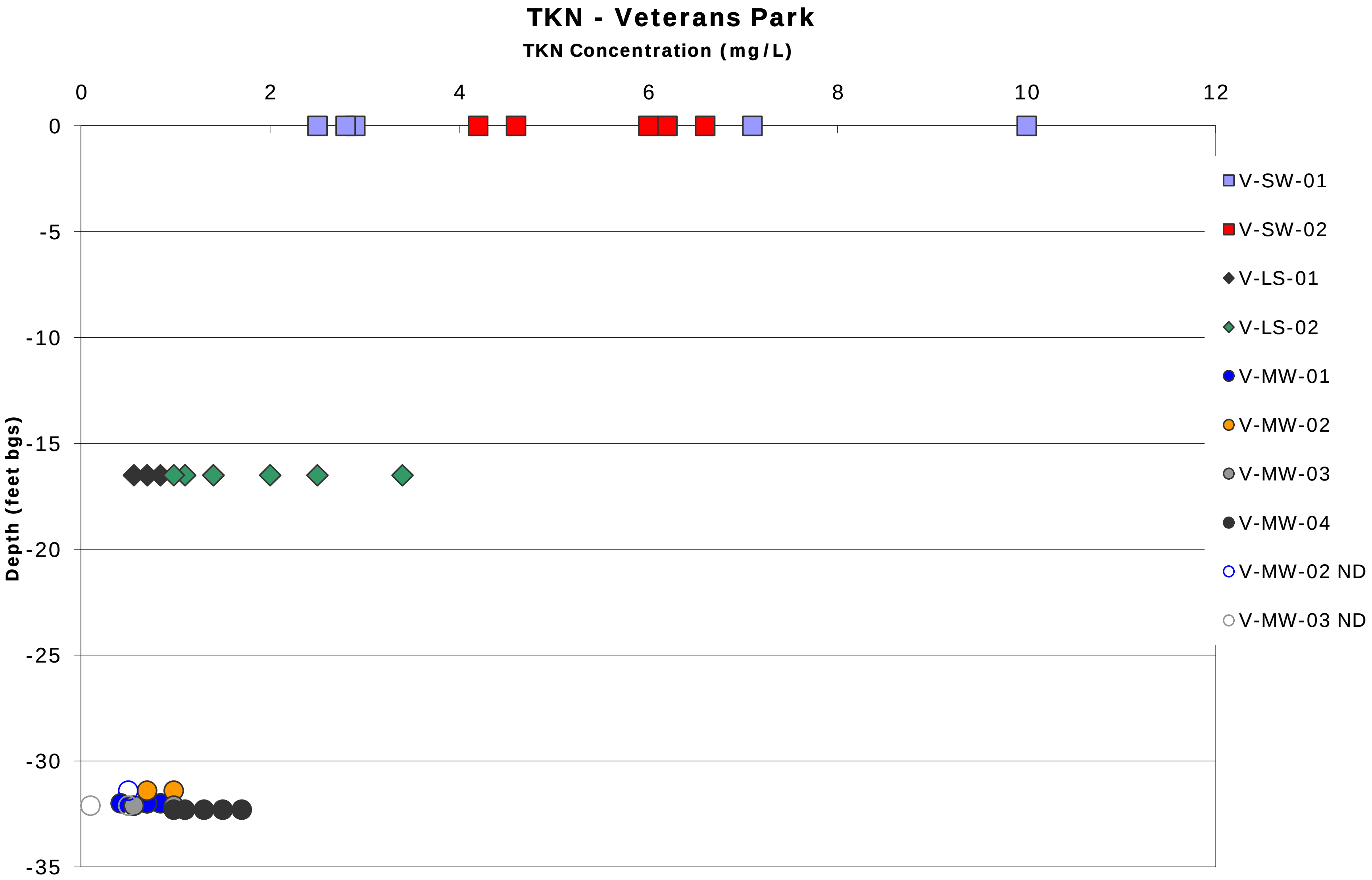
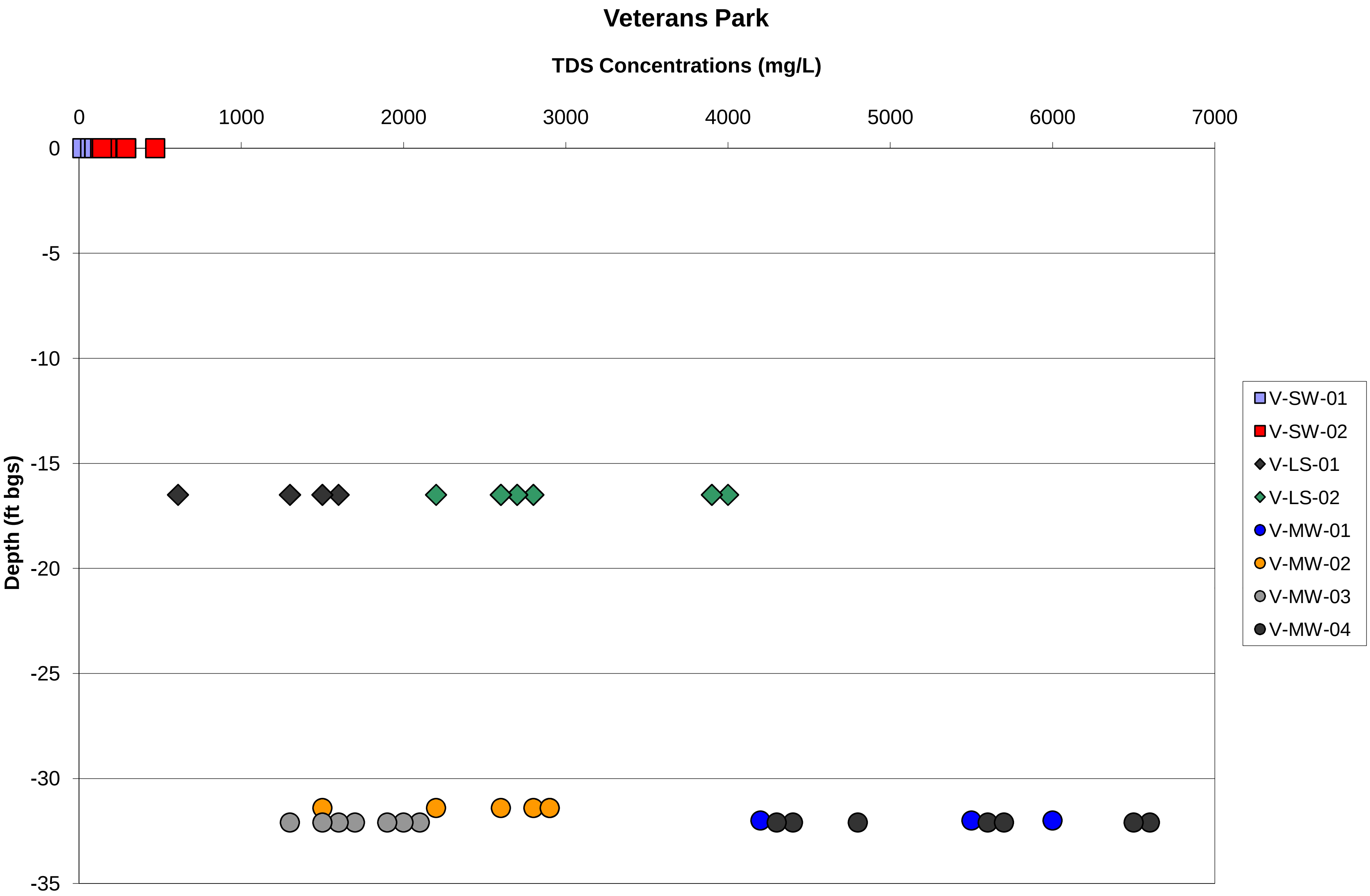
S-LS-04
S-LS-05
EV-10
S-LS-01 ND
S-LS-03 ND
S-LS-04 ND
EV-10 ND


Veterans Park
Nitrate Concentrations (mg/L)
0
5
10
15
20
25
30
35
40
45
50
0
-5
-10
-15
-20
-25
-30
-35
Depth (ft bgs)
V-SW-01
V-SW-02
V-LS-01
V-LS-02
V-MW-01
V-MW-02
V-MW-03
V-MW-04
V-SW-02 ND

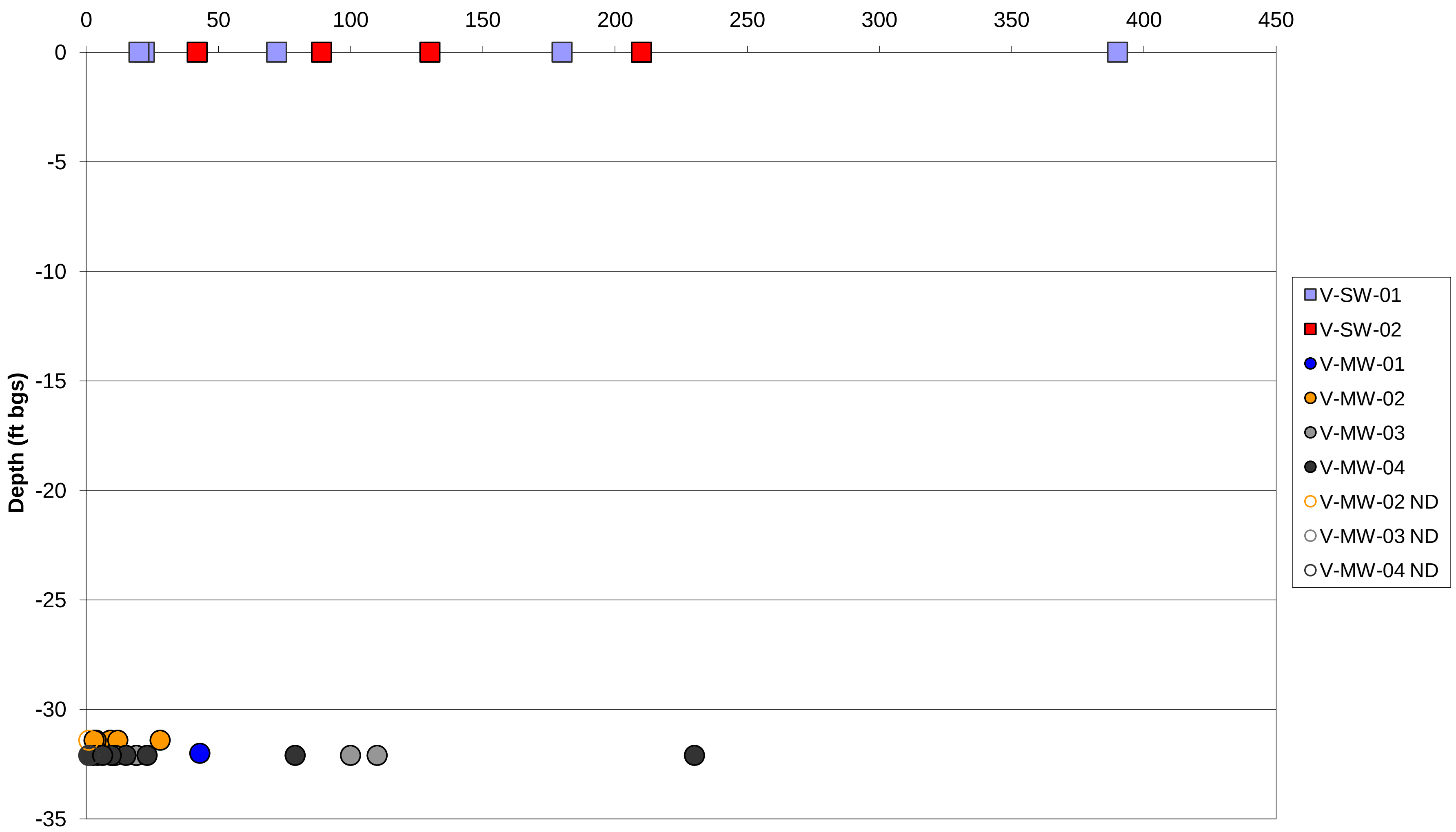

TKN - Veterans Park
TKN Concentration (mg/L)
0
2
4
6
8
10
12
0
-5
-10
-15
-20
-25
-30
-35
Depth (feet bgs)
V-SW-01
V-SW-02
V-LS-01
V-LS-02
V-MW-01
V-MW-02
V-MW-03
V-MW-04
V-MW-02 ND
V-MW-03 ND

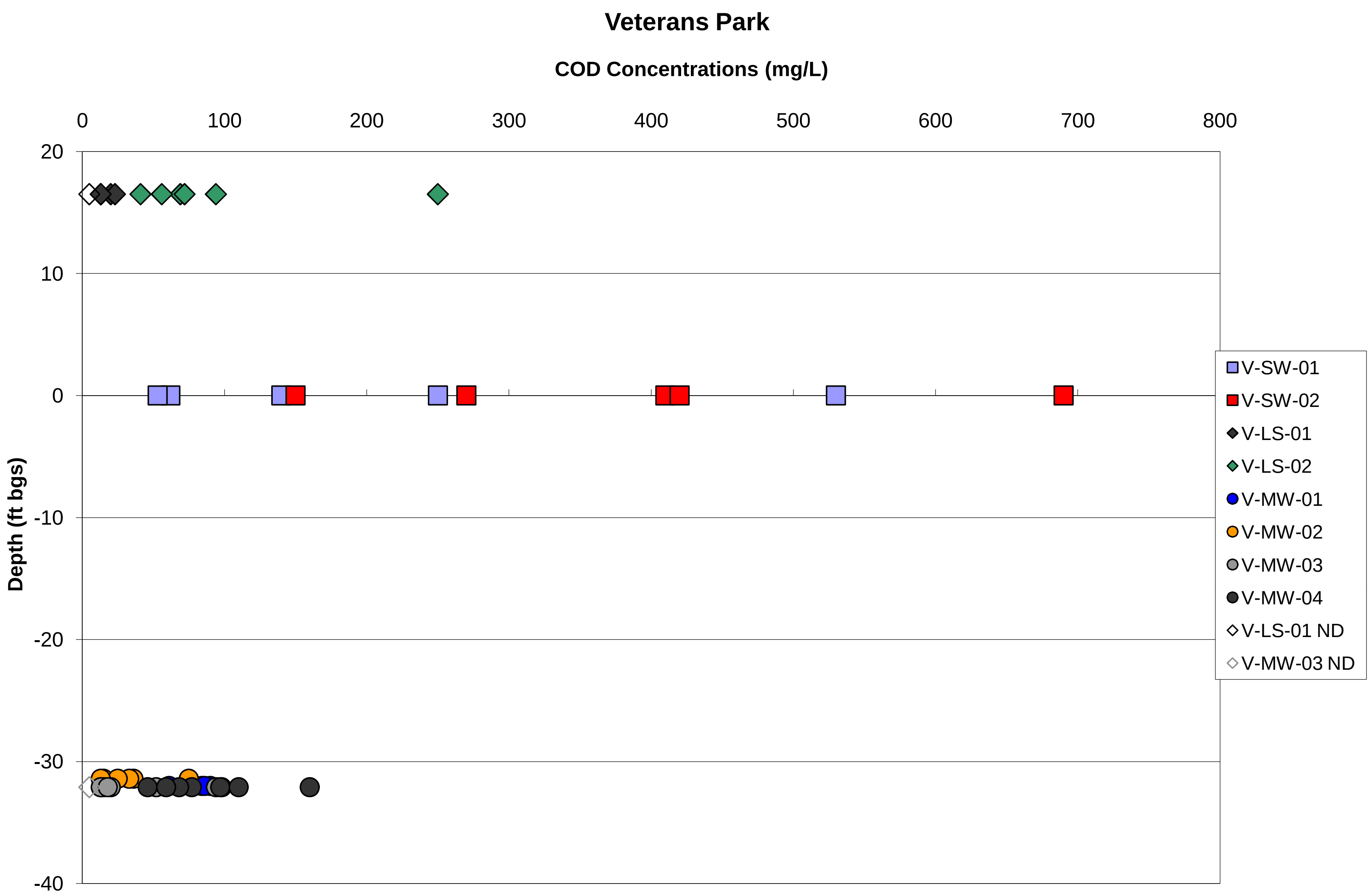


Veterans Park
TDS Concentrations (mg/L)
0
1000
2000
3000
4000
5000
6000
7000
0
-5
-10
-15
-20
-25
-30
-35
Depth (ft bgs)
V-SW-01
V-SW-02
V-LS-01
V-LS-02
V-MW-01
V-MW-02
V-MW-03
V-MW-04

# Veterans Park

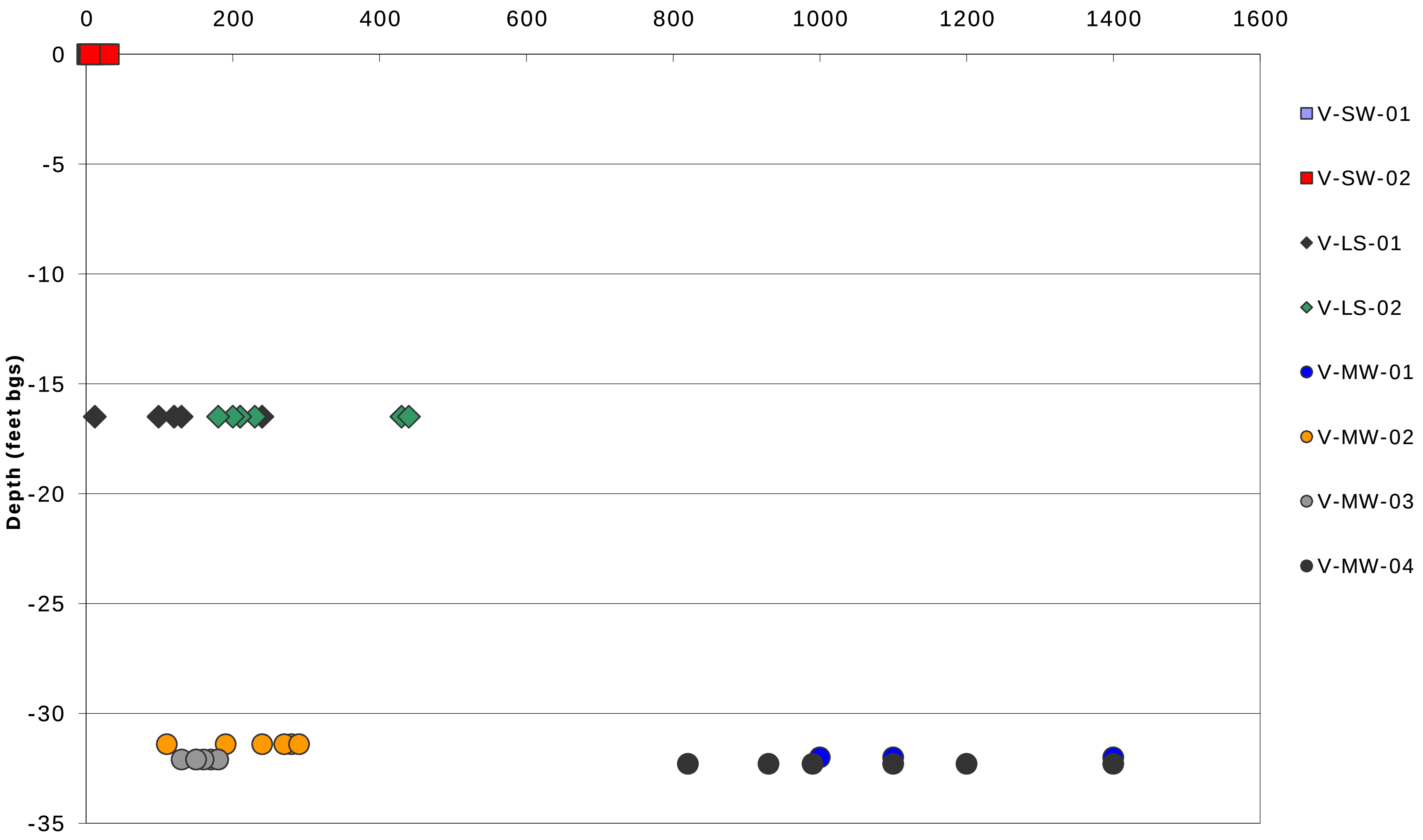
## Total Suspended Solids Concentrations (mg/L)

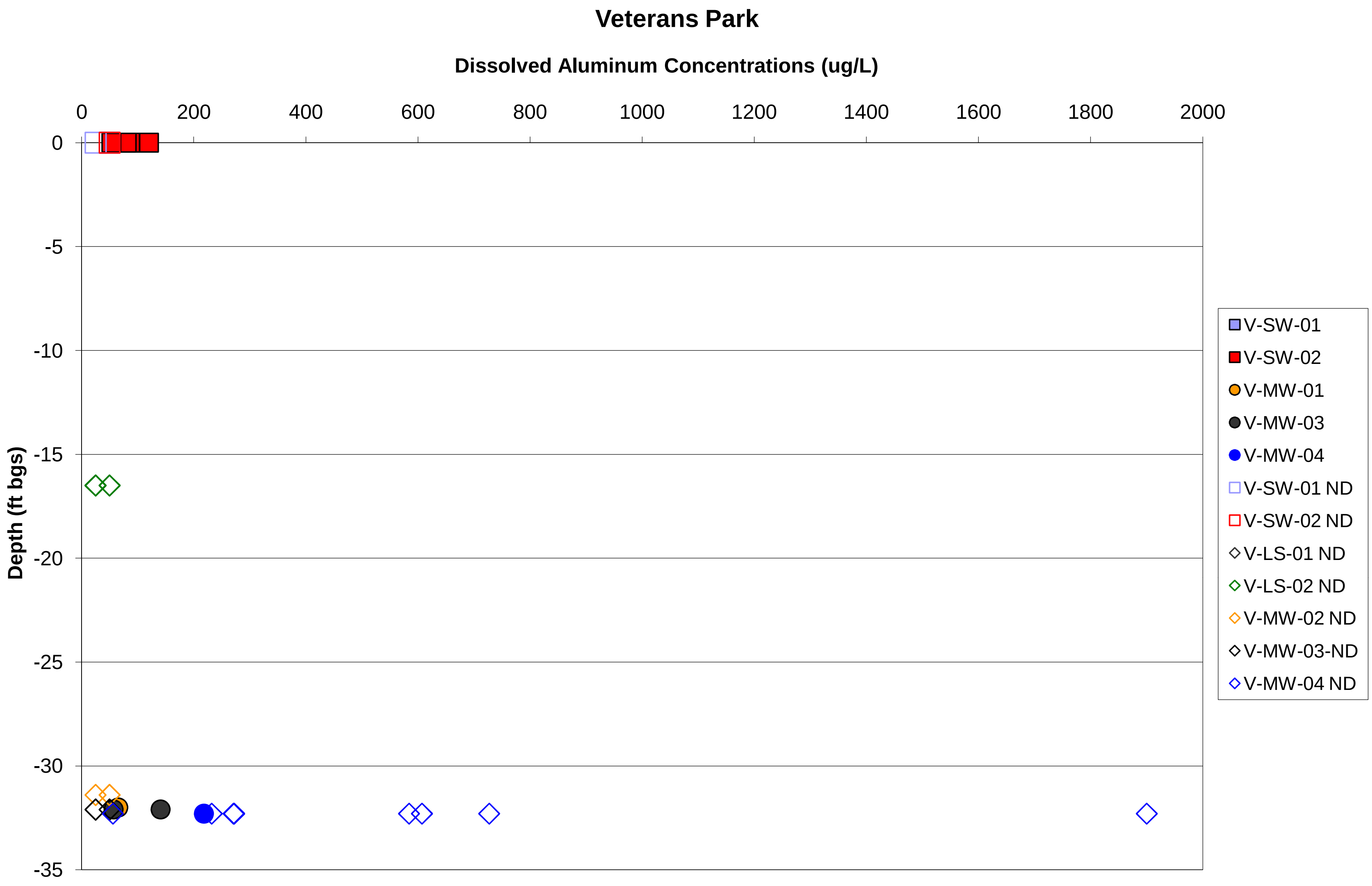




Veterans Park
COD Concentrations (mg/L)
0
100
200
300
400
500
600
700
800
20
10
0
-10
-20
-30
-40
Depth (ft bgs)
V-SW-01
V-SW-02
V-LS-01
V-LS-02
V-MW-01
V-MW-02
V-MW-03
V-MW-04
V-LS-01 ND
V-MW-03 ND

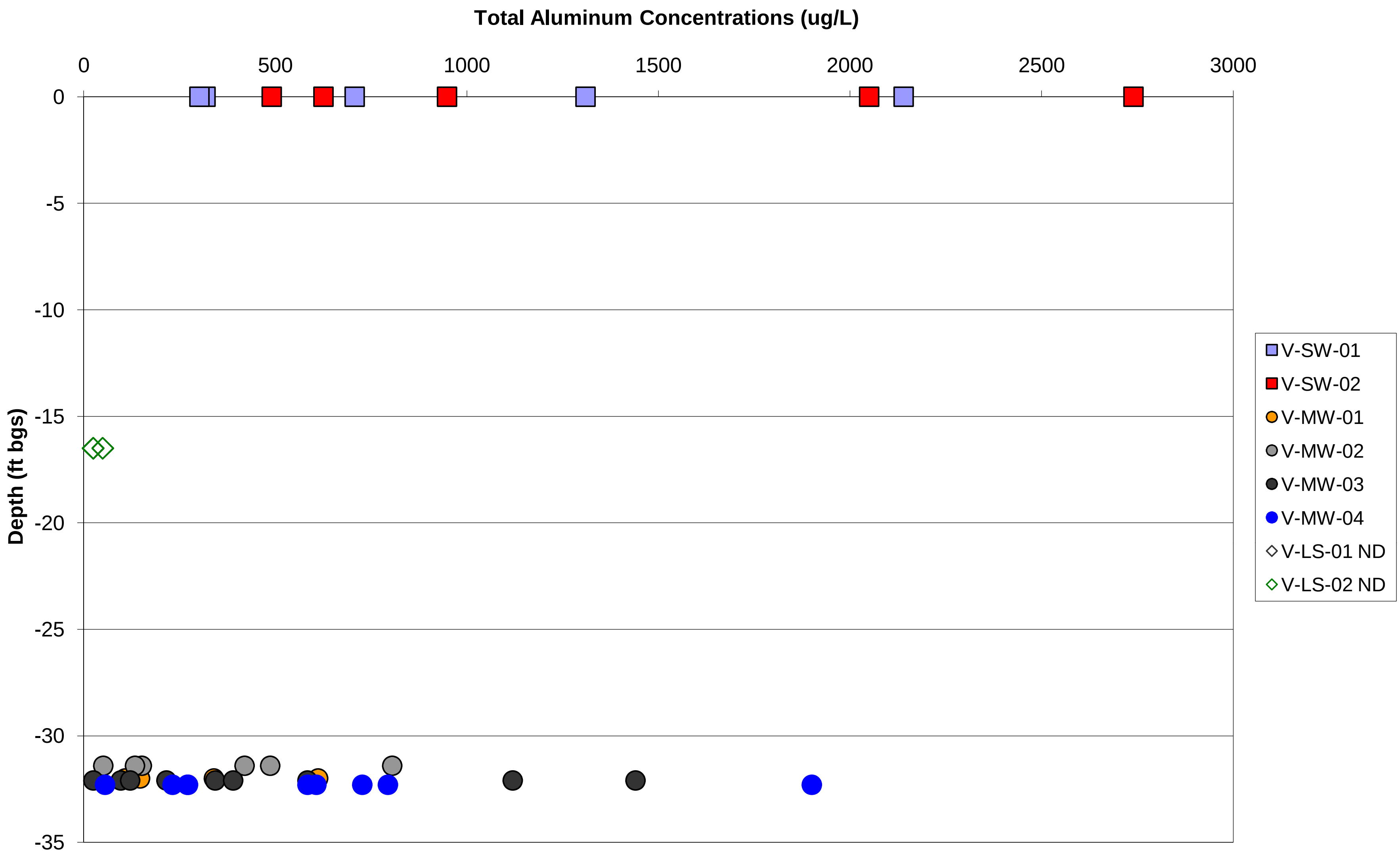
# Chloride - Veterans Park





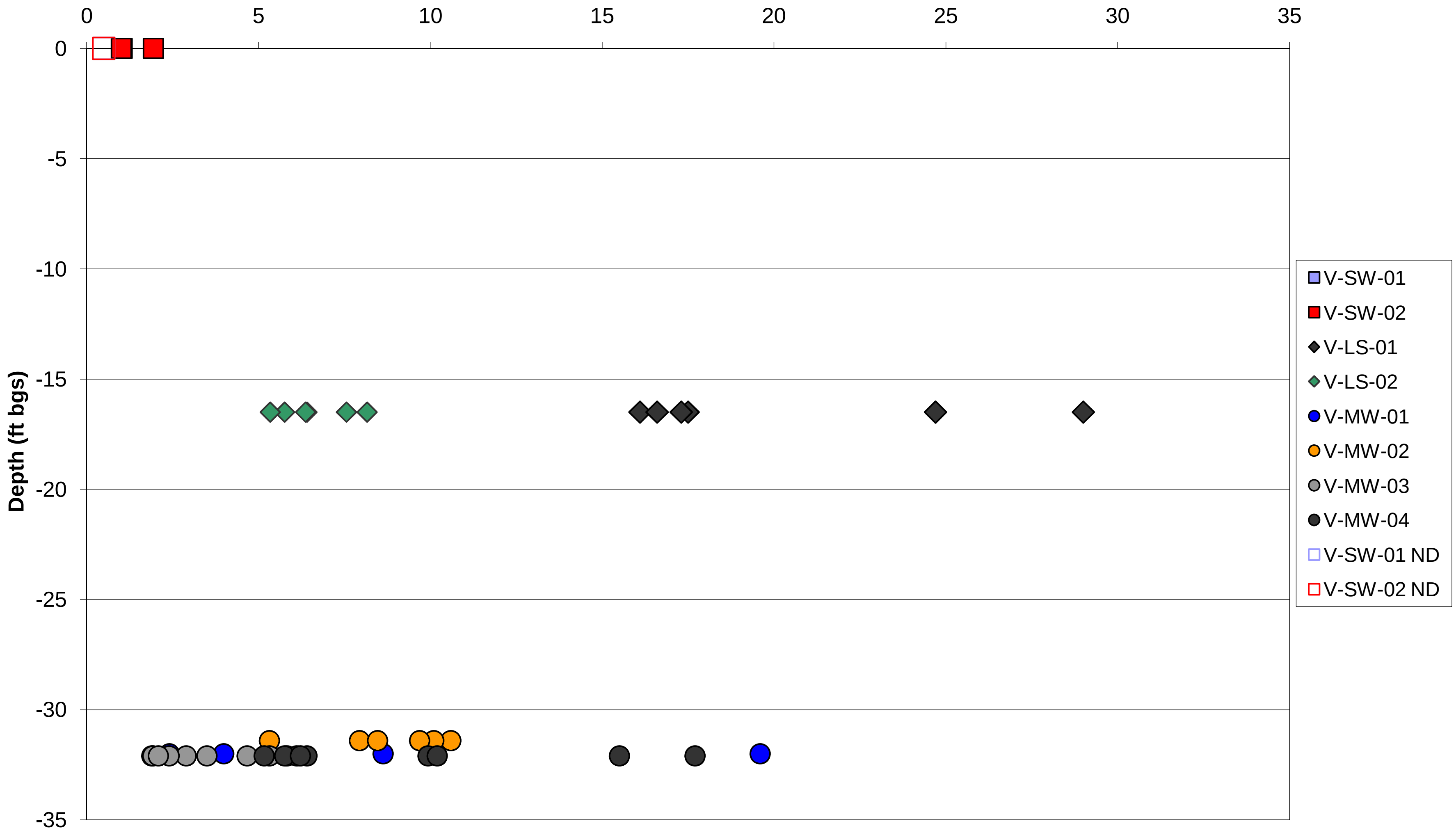
Veterans Park

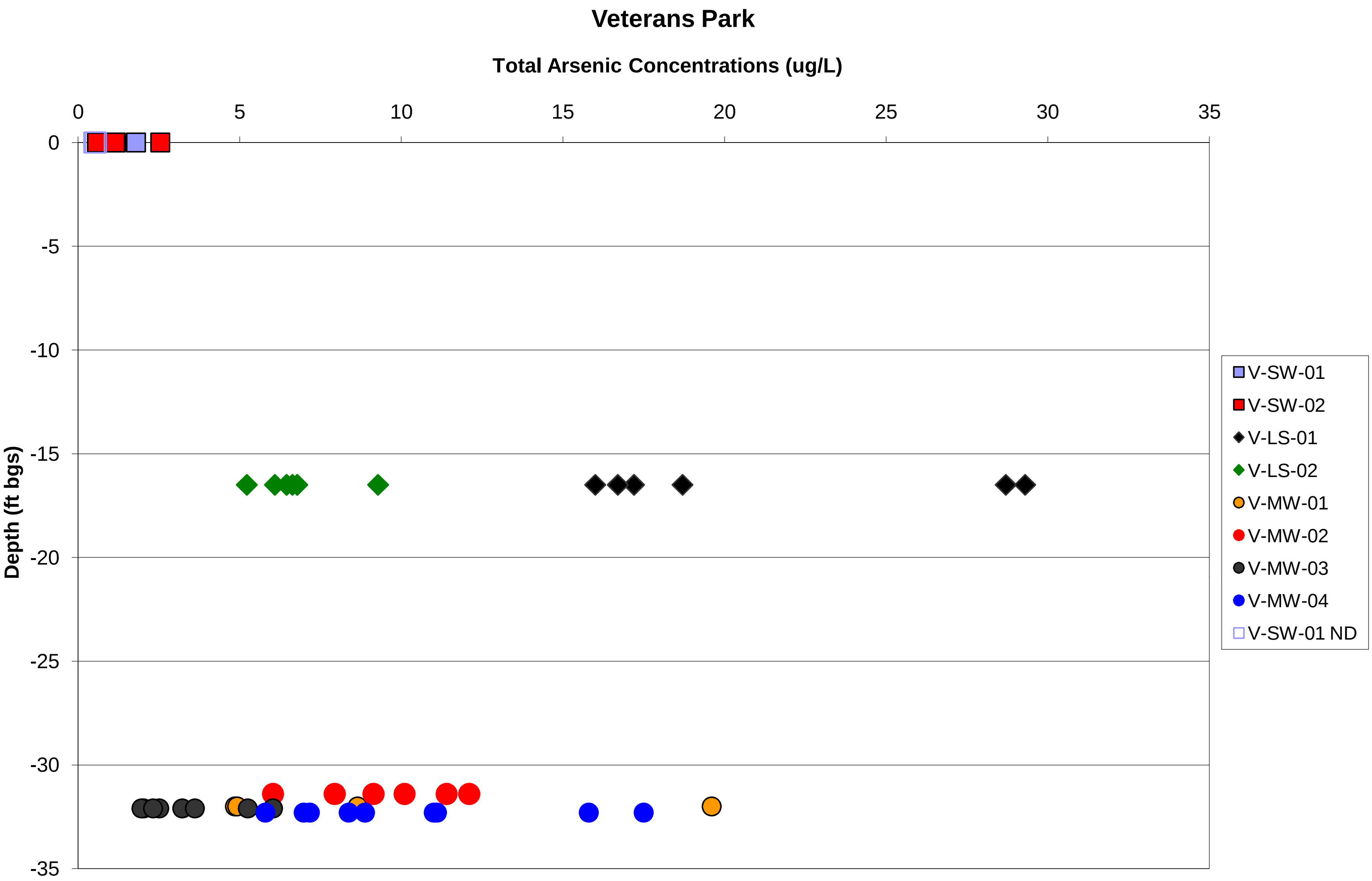
# Veterans Park

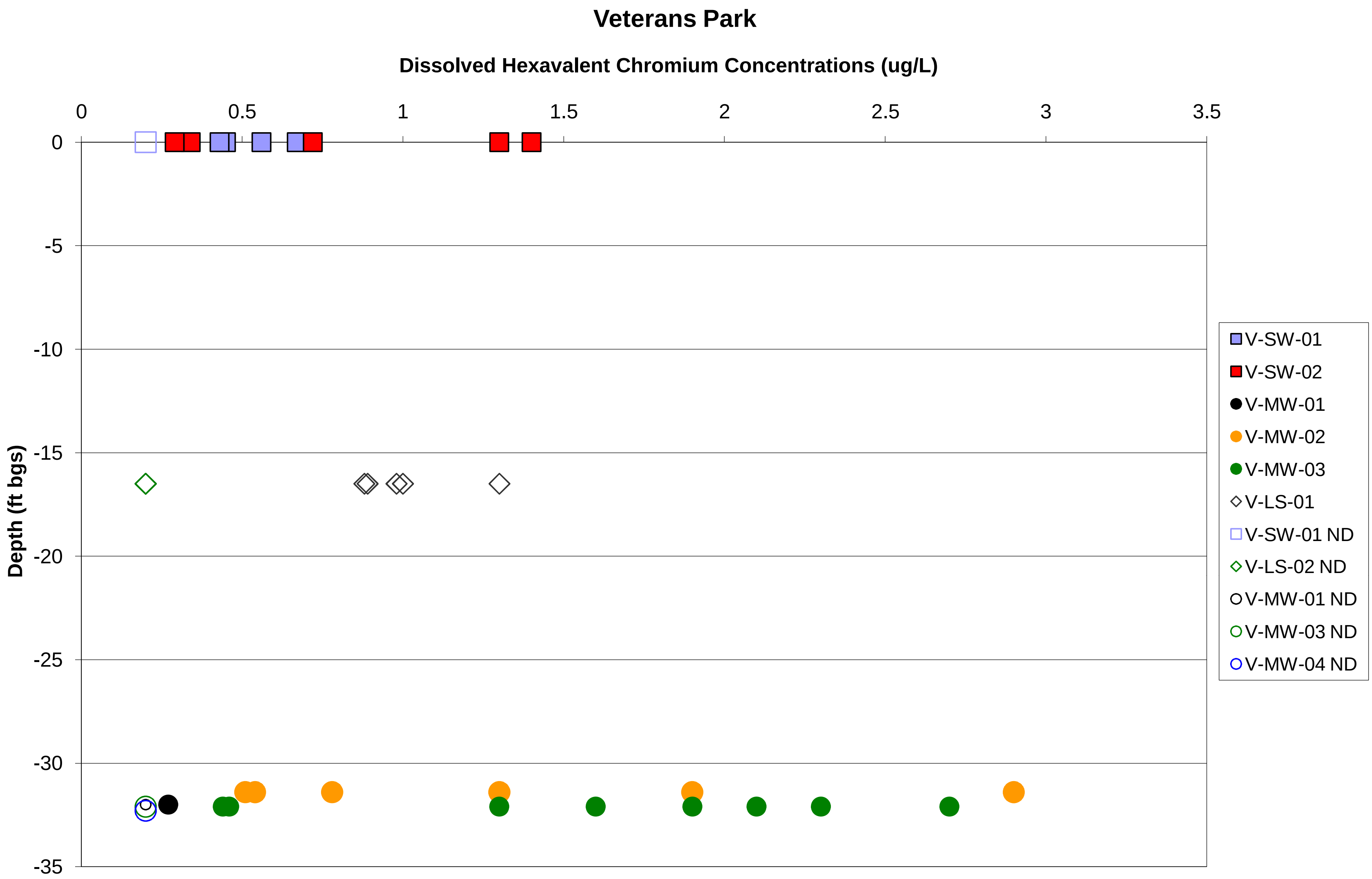


# Veterans Park

## Dissolved Arsenic Concentrations (μg/L)

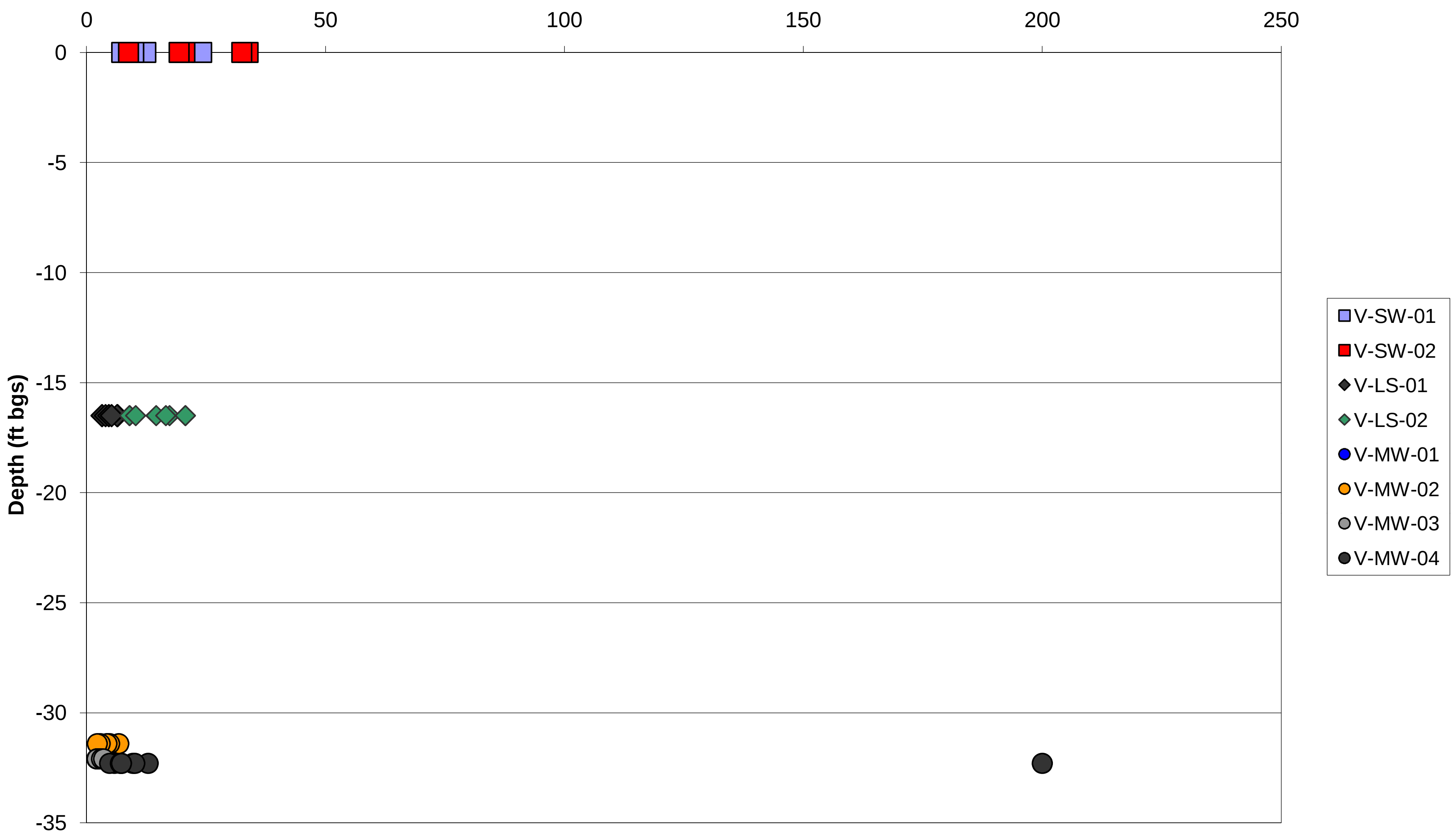


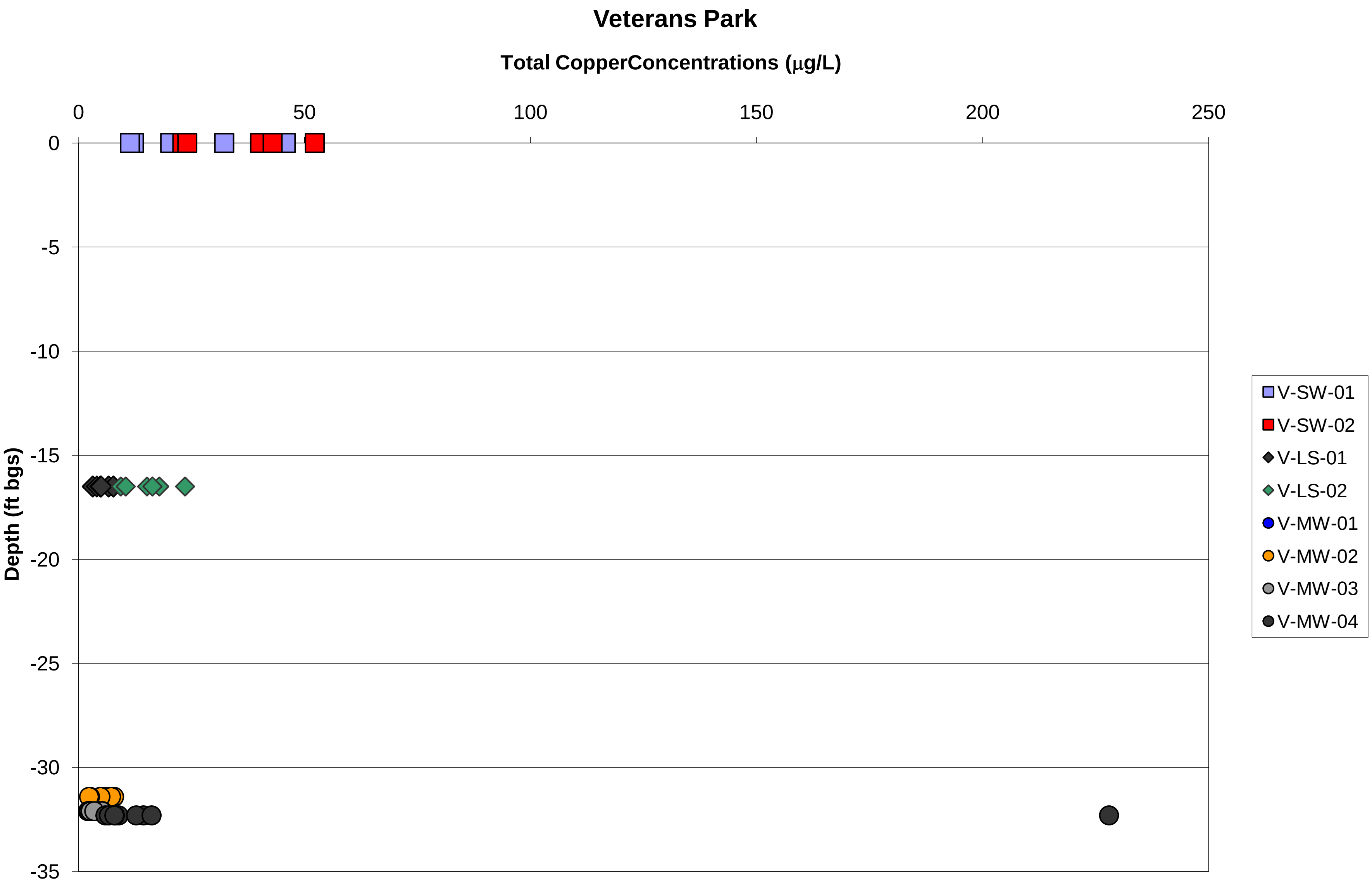

Veterans Park
Total Arsenic Concentrations (ug/L)
0
5
10
15
20
25
30
35
Depth (ft bgs)
0
-5
-10
-15
-20
-25
-30
-35
V-SW-01
V-SW-02
V-LS-01
V-LS-02
V-MW-01
V-MW-02
V-MW-03
V-MW-04
V-SW-01 ND


Veterans Park
Dissolved Hexavalent Chromium Concentrations (ug/L)
0
0.5
1
1.5
2
2.5
3
3.5
0
-5
-10
-15
-20
-25
-30
-35
Depth (ft bgs)
V-SW-01
V-SW-02
V-MW-01
V-MW-02
V-MW-03
V-LS-01
V-SW-01 ND
V-LS-02 ND
V-MW-01 ND
V-MW-03 ND
V-MW-04 ND

## Veterans Park

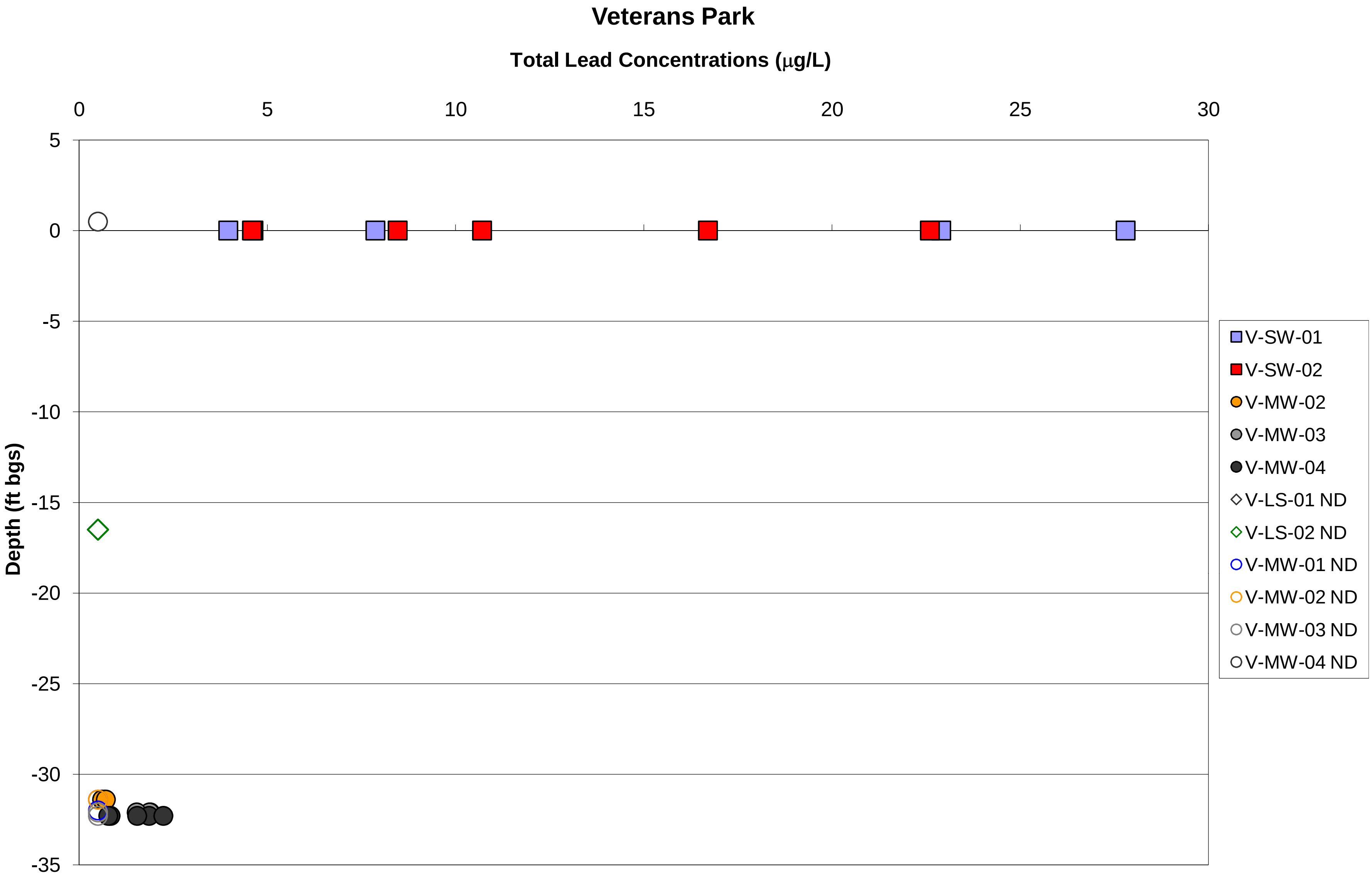
### Dissolved CopperConcentrations (µg/L)

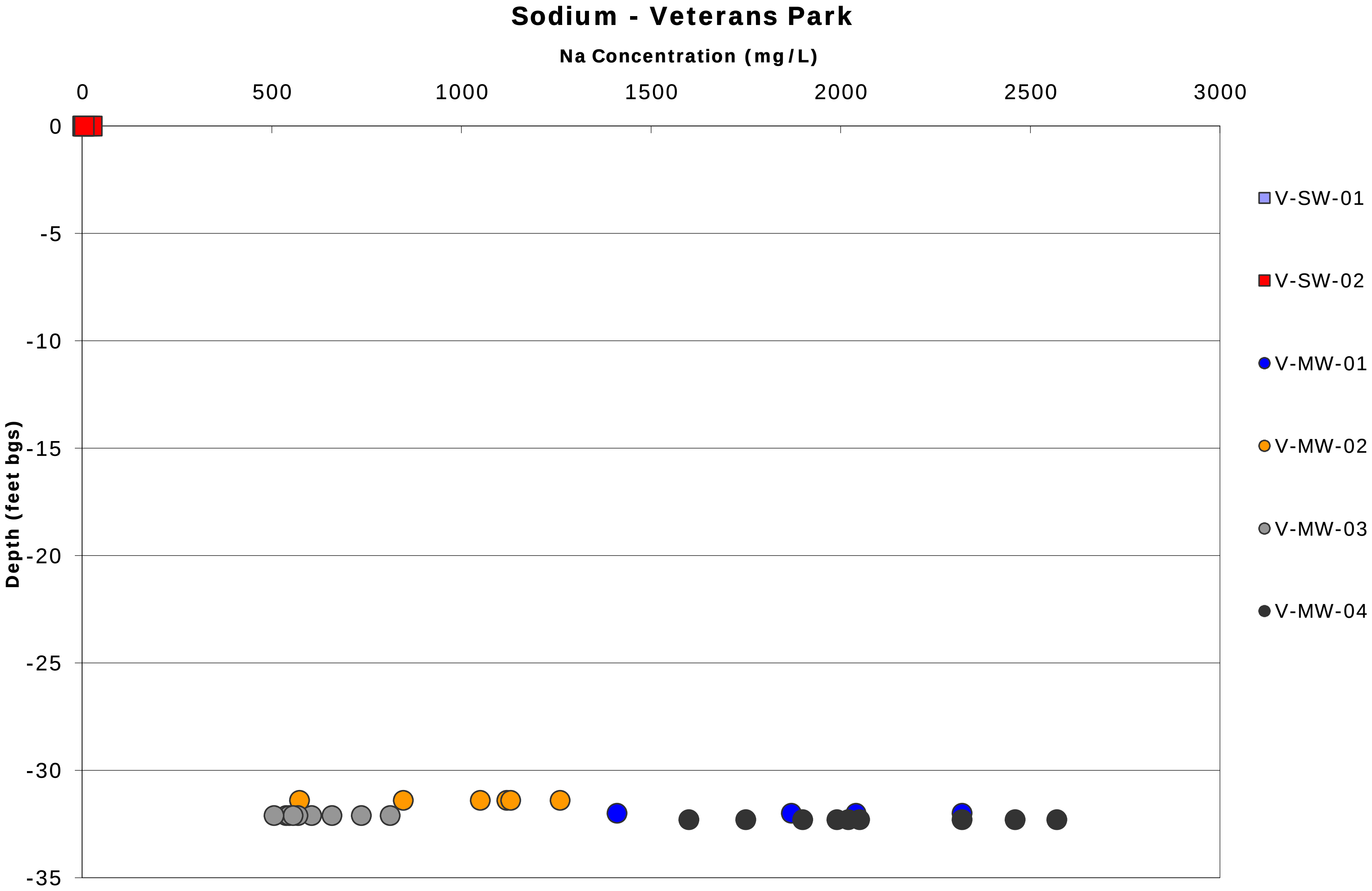



Veterans Park
Total CopperConcentrations (µg/L)
0
50
100
150
200
250
0
-5
-10
-15
-20
-25
-30
-35
Depth (ft bgs)
V-SW-01
V-SW-02
V-LS-01
V-LS-02
V-MW-01
V-MW-02
V-MW-03
V-MW-04

# Veterans Park

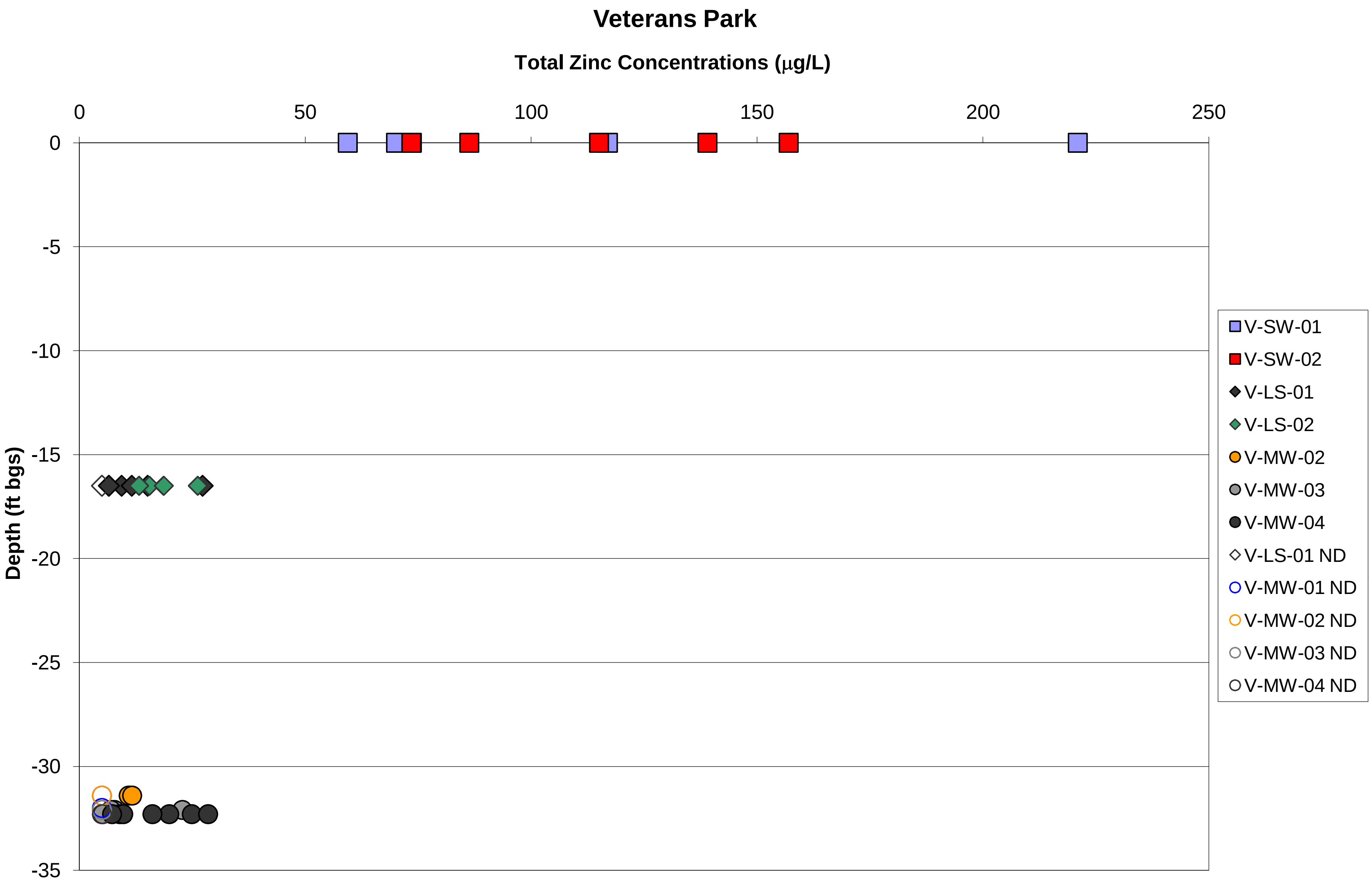
## Dissolved Lead Concentrations (µg/L)


Veterans Park
Total Lead Concentrations (µg/L)
0
5
10
15
20
25
30
5
0
-5
-10
-15
-20
-25
-30
-35
Depth (ft bgs)
V-SW-01
V-SW-02
V-MW-02
V-MW-03
V-MW-04
V-LS-01 ND
V-LS-02 ND
V-MW-01 ND
V-MW-02 ND
V-MW-03 ND
V-MW-04 ND


Sodium - Veterans Park
Na Concentration (mg/L)
0
500
1000
1500
2000
2500
3000
Depth (feet bgs)
0
-5
-10
-15
-20
-25
-30
-35
V-SW-01
V-SW-02
V-MW-01
V-MW-02
V-MW-03
V-MW-04

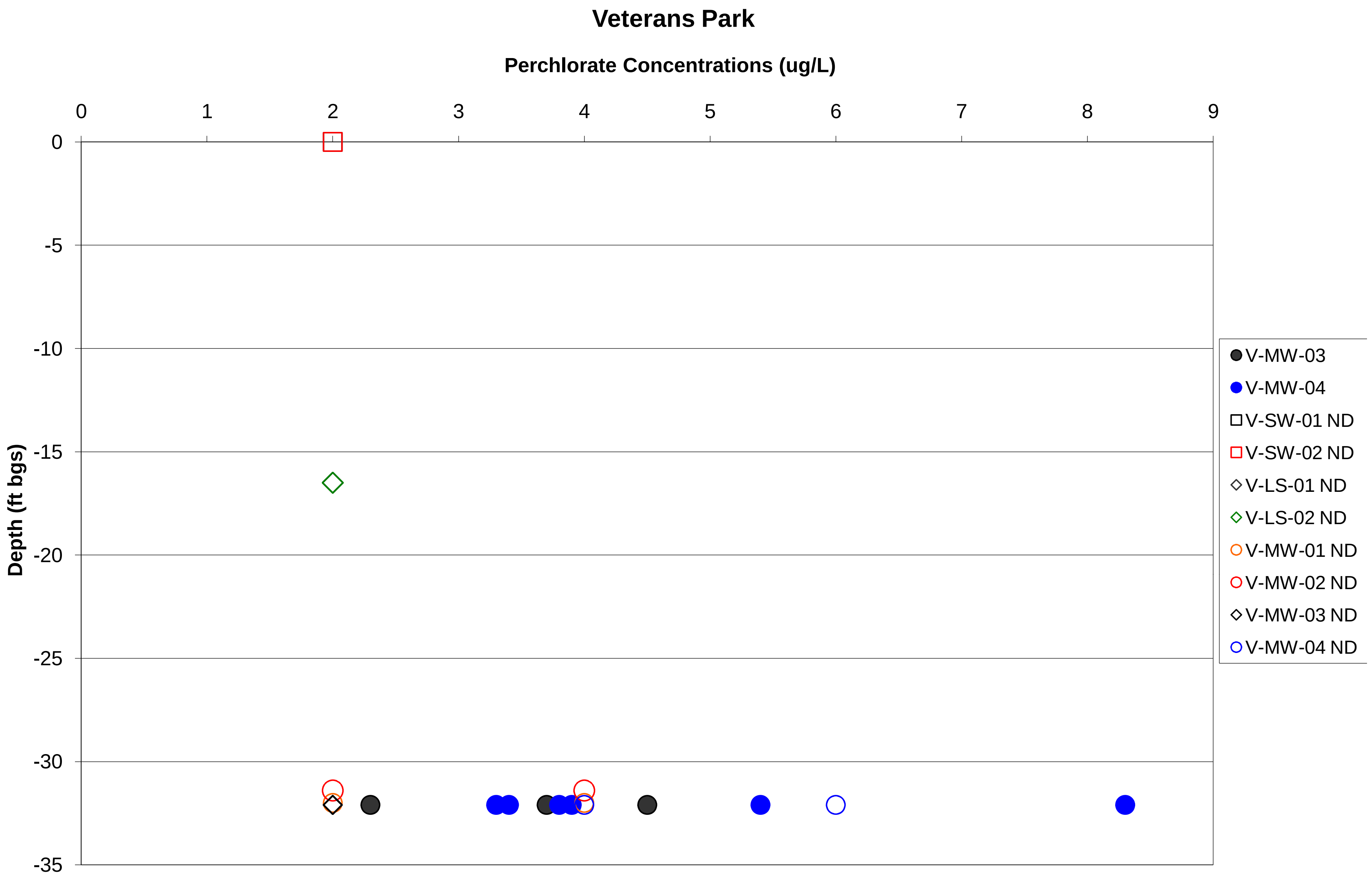
# Veterans Park

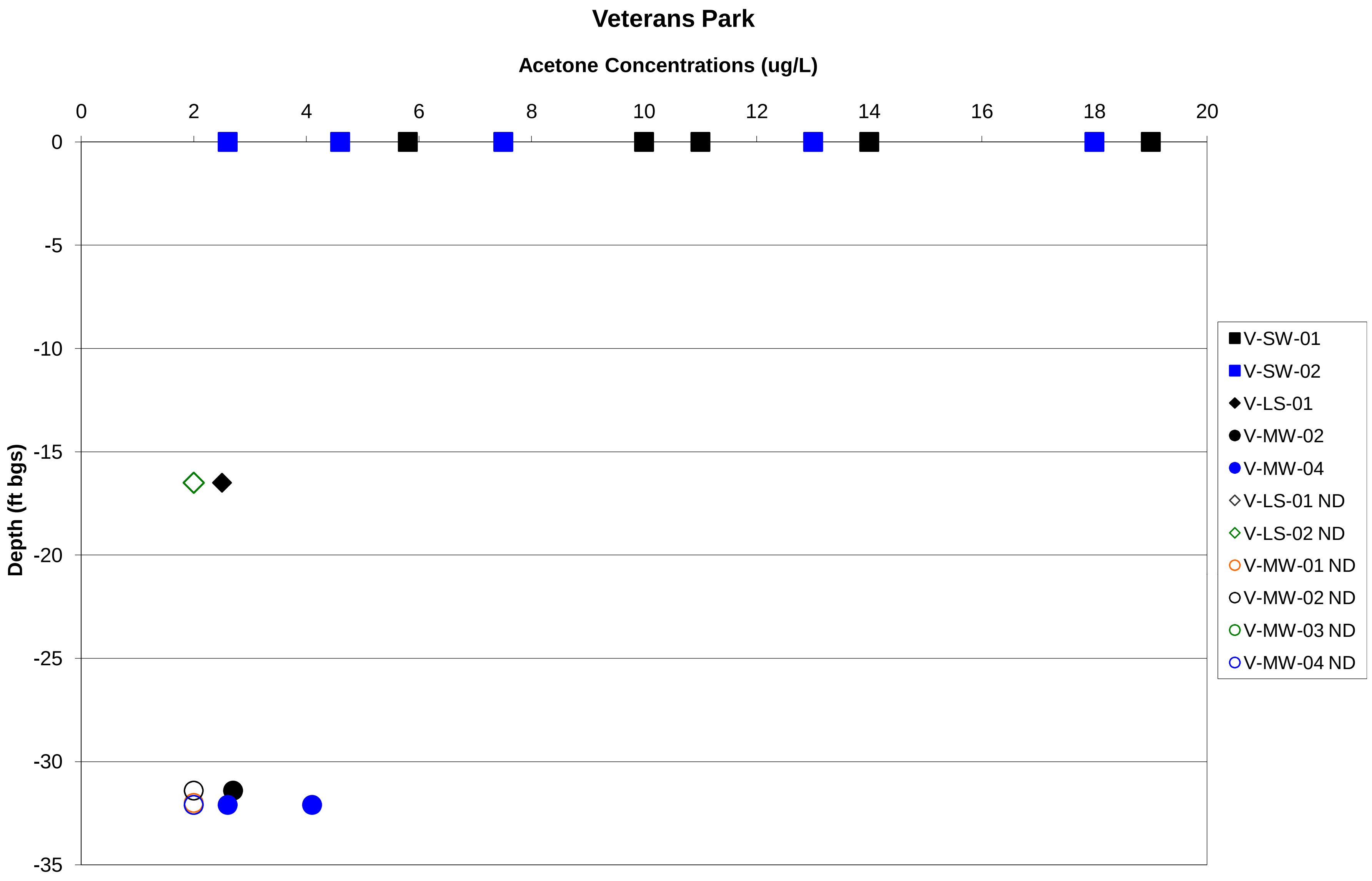
## Dissolved Zinc Concentrations (μg/L)



Veterans Park

Total Zinc Concentrations (µg/L)


Veterans Park
Perchlorate Concentrations (ug/L)
0
1
2
3
4
5
6
7
8
9
0
-5
-10
-15
-20
-25
-30
-35
Depth (ft bgs)
● V-MW-03
● V-MW-04
□ V-SW-01 ND
□ V-SW-02 ND
◇ V-LS-01 ND
◇ V-LS-02 ND
○ V-MW-01 ND
○ V-MW-02 ND
◇ V-MW-03 ND
○ V-MW-04 ND


Veterans Park
Acetone Concentrations (ug/L)
0
2
4
6
8
10
12
14
16
18
20
Depth (ft bgs)
0
-5
-10
-15
-20
-25
-30
-35
V-SW-01
V-SW-02
V-LS-01
V-MW-02
V-MW-04
V-LS-01 ND
V-LS-02 ND
V-MW-01 ND
V-MW-02 ND
V-MW-03 ND
V-MW-04 ND

clay fines in the coarser grained deposits. Fine sand was present in the desander and has been added to the descriptions of materials.

## Urban Stormwater Runoff at BMP Sites

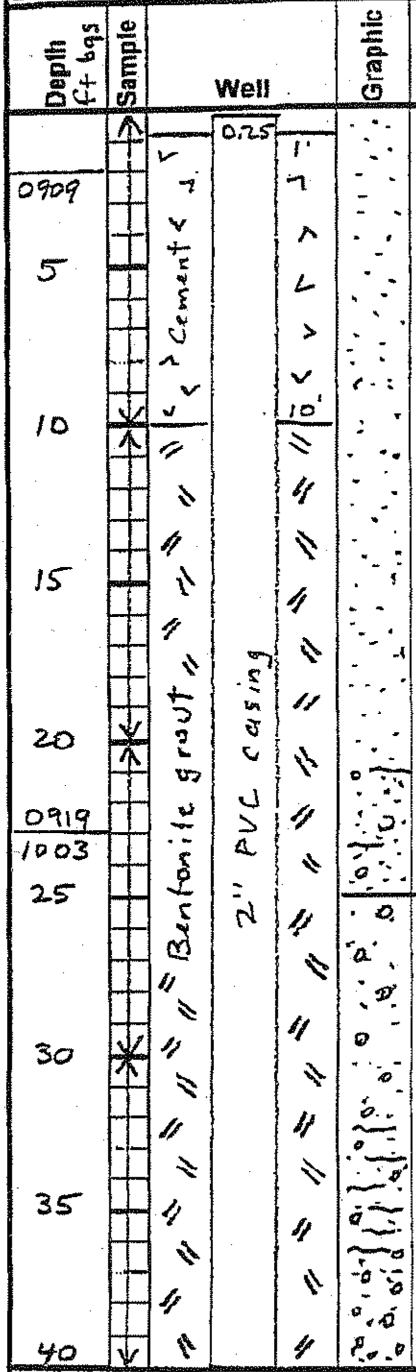
Broadous School, 12561 Filmore Street, Pacoima, California

## Log of Borehole

MW-01

Page 1 of 5

Dates Drilled: 9/25/01 Well Completed: 9/26/01 Logged by: G. Guacci
Total Depth (ft): 203 First Water: ? Static Level: 154.8* Date/Time: 10/2/01 @ 1257
Drilling Method: Mud rotary Drill Rig: IR Ro-300 Drilled by: Spectrum (Bill)
Type bit: Tricone Borehole Diameter (inches): 8½ Type of Well: Monitoring
Location: 1 foot SE of ℄ Montford St. and 7 feet NE of ℄ Bromont Ave.



| Description of Materials | Comments |
|---|---|
| SAND - fine to medium grained, pale brown (10YR-6/3), subang-subrd, predominantly granitic detritus | Hand augered to 5 feet after drilling through asphalt. Began drilling with tricone roller bit at 0909<br>Grab samples were composited for each 10-foot interval |
| @ 12' fine to coarse grained, also broken grains, trace metamorphic detritus, well graded | Drilling rate: for 2-23' 2.1 ft/min |
| @ 21' with some fine gravel broken, ang-subrd. sand ang to subrd, trace clay, granitic detritus w/some metamorphic detritus, well graded | @ 21' Drill chatter<br>@ 23' Packing on circulating head repair |
| @ 25' Gravelly SAND, f-c sand, fine gravel, ang-subrd, well graded | 20-43': 2.8 ft/min |
| @ 32' increase in metamorphic clasts, gravel broken and ang-subang, some olive yellow (2.5Y-6/8) clayey matrix; sand is subang-subrd | @ 32' Chatter |
| @ 37' very gravelly, increasing % of metamorphic clasts, some broken gravel ang-subrd | |

State of California, Department of Water Resources—Southern District
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Glendale, California 91203-1035 (818) 543-4600

EXPLANATION: "trace" = 0 - 5%, "with some" = 5 - 15%, "clayey, silty, sandy, gravelly" = 15 - 30%, "very" = >30%, "and " = 50%

* below top of casing

clay fines in the coarser grained deposits. Fine sand was present in the desander and has been added to the descriptions of materials.

| *Urban Stormwater Runoff at BMP Sites*<br>*Broadous School, 12561 Filmore Street, Pacoima, California* | **Log of** MW-01<br>Page 2 of 5 |
|---|---|

| Depth ft bgs | Sample | Well | Graphic | USCS | Description of Materials | Comments |
|---|---|---|---|---|---|---|
| 40 | | | | | very gravelly SAND, continued, olive yellow (2.5Y-6/8) matrix, ang-subang sand | continued drill chatter |
| 1010<br>1057<br>45 | | | | | | 43-60':<br>0.9 ft/min |
| 50 | | | | | @49' Sandy GRAVEL fine gravel, trace coarse gravel, f-c sand, broken clasts and subang-subrd gravel, ang-subrd sand, well graded | |
| 55 | | | | | 54-57' very gravelly SAND, as above | |
| 1116<br>— 60 | | | | | 57-58' GRAVEL and SAND, as above<br>58-60' Sandy GRAVEL as above<br>Increase in granitic detritus 59-60' | 58-68' Loud chatter, hard drilling, bit locking up, switch to carbide insert tricone bit at 60' |
| 1130<br>1140<br>1151<br>65 | | Bentonite grout<br>2" PVC casing | | | @60'<br>Gravelly SAND, fine gravel, f-c sand, ang-subrd gravel, ang-subang sand, well graded | 60-63':<br>0.3 ft/min |
| one sample 60-80'<br>70 | | | | | | 68'-84' intermittent drill chatter; quick drilling 68-78' |
| 75 | | | | | | 63-83':<br>5.0 ft/min |
| 80<br>1155 | | | | | @78' SAND with some fine gravel, f-c sand, ang-subrd, ang-subrd gravel, increased % of granitic detritus, well graded | |
| 1210<br>85 | | | | | 84-85' gravelly | 84-85' drill chatter |

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clay fines in the coarser grained deposits. Fine sand was present in the desander and has been added to the descriptions of materials.

*Urban Stormwater Runoff at BMP Sites*
*Broadous School, 12561 Filmore Street, Pacoima, California*

**Log of** MW-01
**Page** 3 **of** 5

| Depth ft bgs | Sample | Well | Graphic | USCS | Description of Materials | Comments |
|---|---|---|---|---|---|---|
| 85 | | Bentonite grout<br>2" PVC Casing | | | SAND with some fine gravel, f-c sand, ang-subrd; gravel ang-subrd, broken; well graded | Intermittent drill chatter, continued |
| 90 | | | | | | 83-103': 4.0 ft/min |
| | | | | | | 94' Drill chatter |
| 95 | | | | | @ 95' trace to some clay, lt yellow brown (10YR-6/4) | 95' Intermittent chatter |
| 100 | | | | | @ 99' Gravelly SAND, f-c sand, fine gravel, ang-subrd, trace to some clay, well graded | |
| 1215<br>1325 | | | | | @ 102' SAND, trace to some gravel: f-c sand, ang-subrd, well graded-and clayey SAND fine grained, lt yellow brown (10YR-6/4) | @ 103' drillers took lunch break |
| 105 | | | | | | 105' Smooth drilling |
| 110 | | | | SC | @ 108' Clayey SAND, fine grained, lt yellow brown (10YR-6/4). also interbedded or intermixed SAND w/some fine gravel, f-c sand, ang-subrd, broken clasts | 103-123': 1.2 ft/min |
| 115 | | | | SC/ CL | @ 115' CLAY and fine SAND, lt yellow brown (10YR-6/4) | |
| 120 | | 121.7 | | CL | @ 118' Silty CLAY w/some fine sand, sticky, firm/very firm, lt. yellow brown (10YR-6/4) | |
| 1341<br>1348 | | Bentonite tablets | | | | |
| 125 | | | | ML & SC | @ 124' Clayey SILT and Clayey fine SAND w/some coarse sand and fine gravel, lt yellow brown | 123-143': 1.4 ft/min |
| 130 | | | | ML | @ 128' Clayey SILT w/some fine sand, firm, lt yellow brown | |

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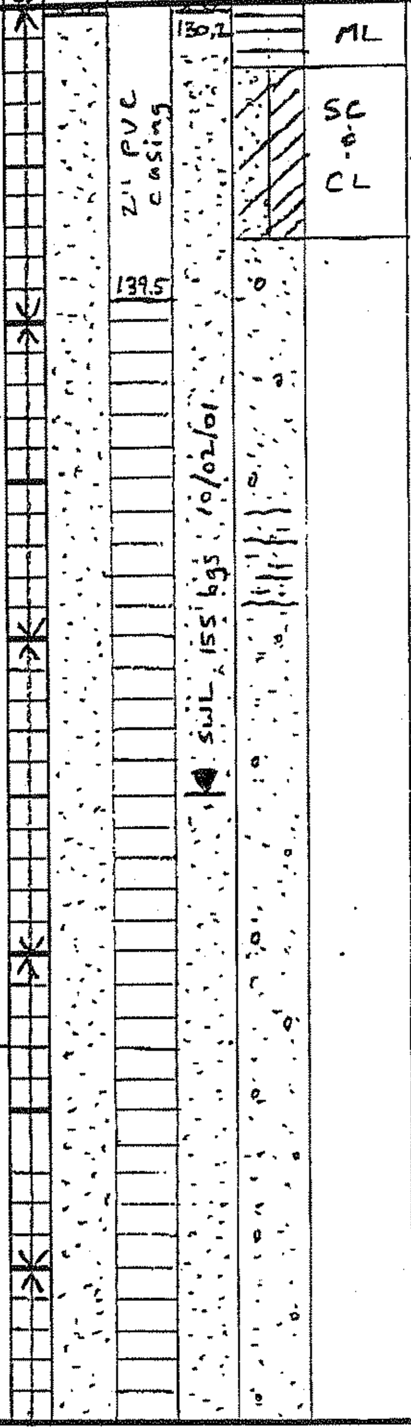
clay fines in the coarser grained deposits. Fine sand was present in the desander and has been added to the descriptions of materials.

| *Urban Stormwater Runoff at BMP Sites*<br>Broadous School, 12561 Filmore Street, Pacoima, California | Log of MW-01<br>Page 4 of 5 |
|---|---|



| Depth | Sample | Well | Graphic | USCS | Description of Materials | Comments |
|---|---|---|---|---|---|---|
| 130 | | 130.2 | | ML | Clayey SILT, as above | Smooth drilling |
| | | | | SC-CL | 132'<br>Clayey SAND with some sandy CLAY, fine grained, lt yel brown (10YR-6/4) | 123-143':<br>1.4 ft/min |
| 135 | | 2" PVC casing | | | | |
| | | | | | 137½'<br>SAND, fine and coarse grained, trace to some medium grained sand, trace fine ang-subang gravel, well graded, predom. granitic detritus | 137½' drill chatter |
| | | 139.5 | | | | |
| 140 | | | | | | 143-163':<br>0.9 ft/min |
| 1402<br>1409 | | | | | | |
| 145 | | | | | 146'<br>matrix? or thin beds of Clayey SAND/Sandy Clay, fine grained, lt yellow brown (10YR-6/4) | 146' less drill chatter |
| | | | | | 149'<br>SAND as above, trace to some fine gravel (ang-subrd, broken clasts) | 149' more drill chatter |
| 150 | | | | | | |
| 155 | | SWL 155' bgs 10/02/01 | | | | |
| | | | | | | 157 increase in chatter |
| | | | | | | 159½' slightly slower drilling |
| 160 | | | | | | |
| 1430<br>1444 | | | | | | |
| | | | | | beginning @ 164' indurated? | 164' hard drilling<br>163-183':<br>1.6 ft/min |
| 165 | | | | | | |
| 170 | | | | | 170' trace to some rounded metamorphic clasts | 171' no drill chatter |
| 175 | | | | | | |

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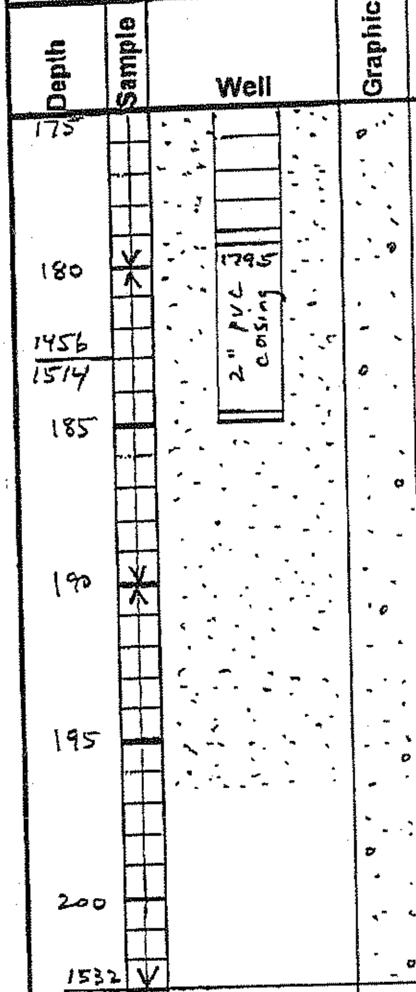
clay fines in the coarser grained deposits. Fine sand was present in the desander and has been added to the descriptions of materials.

## Urban Stormwater Runoff at BMP Sites
Broadous School, 12561 Filmore Street, Pacoima, California

**Log of** MW-01
Page 5 of 5



**Description of Materials**

SAND, continued

180-190 ang-s-brd; broken rounded clasts

190-203' predom granitic detritus

TOTAL DEPTH 203 feet

**Comments**

177' Intermittent drill chatter

183-203': 1.1 ft/min

187-187½' drill chatter increased

189-190' hard chatter

190-203' intermittent chatter

Borehole E logged by Pacific Surveys, 9/25/01

Bottom of borehole open to at least 196.7' bgs prior to well construction

Construction materials:

All casing and screen 2" ID, 2⅜" OD SCH 40 PVC, flush-threaded
- 0.35' end cap
- 5' blank casing
- 40' screen, 0.020" horizontally-slotted
- 140' blank casing
- 23½ bags (100 lbs/bag) RMC Pacific Materials #3 sand
- 5 buckets (50 lbs/bucket) CETCO 3/8" coated bentonite tablets
- 13 bags (50 lbs/bag) volclay high solids bentonite grout
- 12(?) bags cement and concrete

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Glendale, California 91203-1035 (818) 543-4600

EXPLANATION: "trace" = 0 - 5%, "with some" = 5 -15%, "clayey, silty, sandy, gravelly" = 15 - 30%, "very" = >30%, "and" = 50%

NOTE: The use of drilling mud, in general, produced clay fines in the coarser grained deposits. Fine sand was present in the desander and has been added to the descriptions of materials.

## Urban Stormwater Runoff at BMP Sites

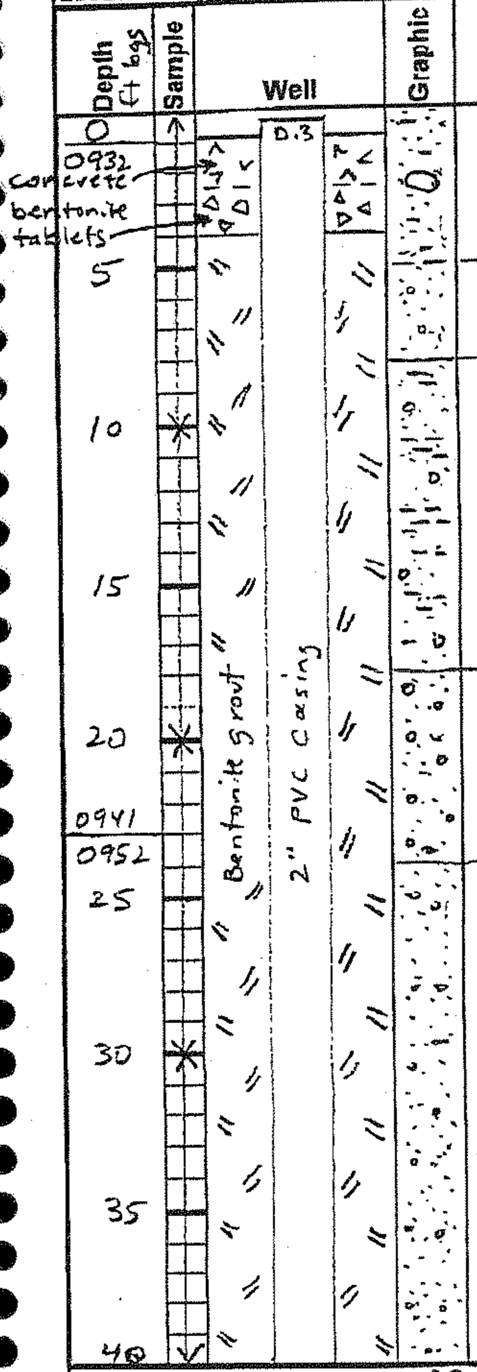
Broadous School, 12561 Filmore Street, Pacoima, California

**Log of Borehole** MW-02

Page 1 of 5

Dates Drilled: 9/27/01 Well Completed: 9/28/01 Logged by: G. Guacci
Total Depth (ft): 198 First Water: ? Static Level: 138.8* Date/Time: 10/15/01 @ 0842
Drilling Method: Mud rotary Drill Rig: IR RD-300 Drilled by: Spectrum (Bill)
Type bit: Tricone Borehole Diameter (inches): 8½ Type of Well: Monitoring
Location: 8 feet SW of ℄ Dronfield Ave and 64.5 feet SE of ℄ Weider Ave.

f= fine m = medium c= coarse



| USCS | Description of Materials | Comments |
|---|---|---|
| SM | Silty SAND, fine grained, yellow brown (10YR-5/4); 6" ϕ rock @ 2' | Hand augered to 5 ft. Began drilling w/ 8½" carbide insert tricone bit. |
|  | 5' SAND, f-c grained, w/some fine gravel | @5' Drill chatter began |
|  | 8' Fine silty SAND w/some clay and f-c sand w/some fine gravel; gravel broken and ang-subrd; sand ang-subrd; trace roots @ 8-10' | @ 8' Less chatter<br>1-23': 24 ft/min (drilling rate)<br>Grab samples composited over each 10-foot interval |
|  | 18' very Gravelly SAND, f-c grained, well graded, ang-subrd; fine gravel, broken, ang-subrd, trace coarse gravel; granitic and metamorphic clasts. @ 21' gravelly SAND, as above | @18' strong chatter<br>23' |
|  | 24' SAND w/some fine gravel and Gravelly SAND, f-c grained, ang-subrd sand and gravel, well graded<br>@ 33' fine gravel is smaller<br>@ 35' fine gravel is larger; trace coarse gravel<br>@ 38' fine gravel is smaller | @ 24' intermittent drill chatter<br>23-43': 2.2 ft/min<br>38-39' strong chatter |

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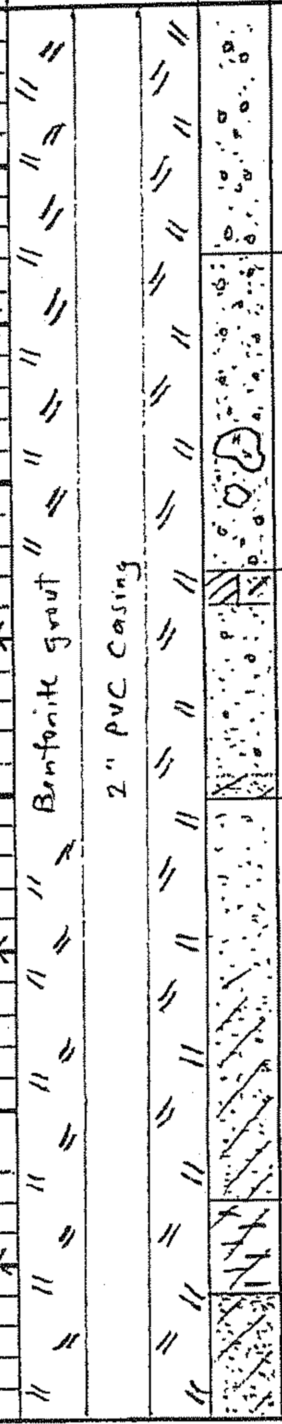
EXPLANATION: "trace" = 0 - 5%, "with some" = 5 - 15%, "clayey, silty, sandy, gravelly" = 15 - 30%, "very" = >30%, "and" = 50%

* = below top of casing

clay fines in the coarser grained deposits. Fine sand was present in the desander and has been added to the descriptions of materials.

## Urban Stormwater Runoff at BMP Sites
Broadous School, 12561 Filmore Street, Pacoima, California

**Log of** MW-02
Page 2 of 5



| Depth | Sample | Well | Graphic | USCS | Description of Materials | Comments |
|---|---|---|---|---|---|---|
| 40 | ↑ | | | | SAND and gravilly SAND, continued | Intermittent chatter |
| 1001<br>1029 | | | | | | @ 43' drilling mud thickened to keep borehole walls from sloughing. Broken rounded gravel (to 1½" ⌀) cleaned out of borehole. Drilling mud prior to 43' unable to lift out larger gravel |
| 45 | | | | | @ 45' loud drill chatter | |
| | | | | | 48'<br>SAND and GRAVEL to very Sandy GRAVEL sand f-c grained, ang-subrd gravel fine and coarse to 1" ⌀, broken, and ang-rd | @ 48-70' chatter |
| 50 | * | | | | | 43-63': 1.0 ft/min |
| | | | | | 53½-54½ large rock | |
| 55 | | | | | | @ 55' drill string locked up, stopped rotating. |
| | | | | CL/SC | 58-59' Very sandy CLAY and clayey fine SAND, yel brown (10YR-5/4) | |
| 60 | * | | | | @ 59' SAND, f-c grained w/some fine gravel, ang-subrd sand and gravel; also broken gravel | |
| 1048<br>1131 | | | | | | @ 63' borehole cleaned out; rocks sloughing in |
| 65 | | | | SC | 64½-65+' clayey SAND, fine, dk yel brown (10YR-3/4) | @ 64½-65' drill string locked up |
| | | | | | @ 65' SAND w/some fine gravel, trace coarse gravel, f-c ang-subrd sand; gravel broken and ang-subrd | 63-73': 1.4 ft/min |
| 70 | * | | | ?—?<br>SC? | 70<br>clayey fine SAND? | @ 70' and below → no chatter to infrequent chatter, smooth drilling |
| | | | | SC | 71½<br>Clayey fine SAND, yel brown (10YR-5/4), w/some fine gravel, trace coarse gravel; gravel broken and ang-subrd. | |
| 1138<br>1314 | | | | | | @ 73' Fan belt replaced on drill rig |
| 75 | | | | | | 73-83': 1.0 ft/min |
| | | | | ML | 78'<br>Clayey SILT, firm, w/some fine sand, yel brown as above | |
| 80 | * | | | | | |
| | | | | SC | 81'<br>Clayey fine SAND, as above | |
| 1324<br>1344 | | | | | | |
| 85 | | | | | | @ 83' borehole cleaned out |

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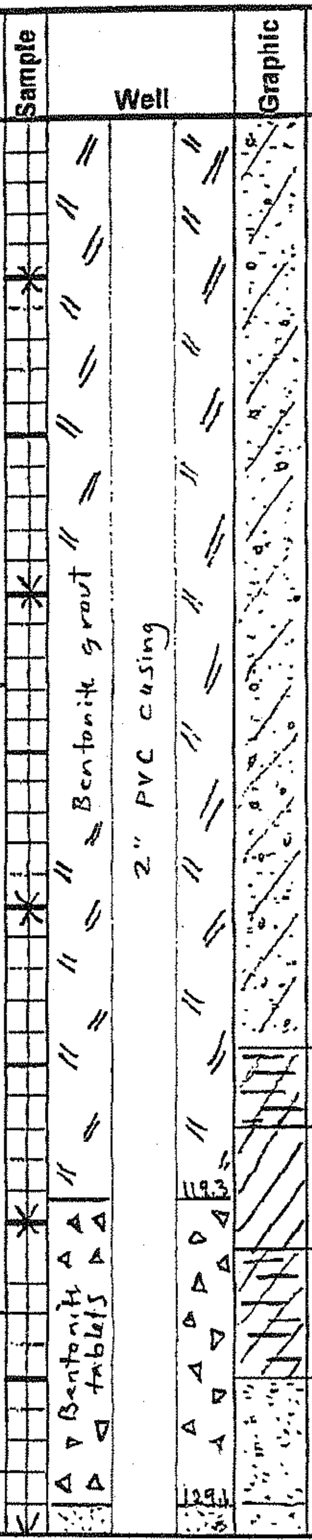
EXPLANATION: "trace" = 0 - 5%, "with some" = 5 -15%, "clayey, silty, sandy, gravelly = 15 - 30%, "very" = >30%, "and" = 50%

clay fines in the coarser grained deposits. Fine sand was present in the desander and has been added to the descriptions of materials.

## Urban Stormwater Runoff at BMP Sites

Broadous School, 12561 Filmore Street, Pacoima, California

**Log of** MW-02
Page 3 of 5



| Depth | USCS | Description of Materials | Comments |
|---|---|---|---|
| 85 | SC | Clayey fine SAND, as above, trace fine gravel | continued smooth drilling; no chatter |
| 90 | | | 83-103': 1.2 ft/min |
| 95 | | | |
| 100 | | @ 100' increase in sand %, f-c grained | |
| 1400<br>1421 | | @ 104' trace coarse sand | @ 103' borehole cleaned out |
| 105 | | 105' with some fine gravel | 103-123': 1.2 ft/min |
| 110 | | -112' | |
| 115 | ML | 114½' Clayey SILT w/ some fine sand, trace fine and coarse gravel; | continued smooth drilling, no chatter |
| | CL | 117' sticky, firm to very firm, yel brn Silty CLAY, stiff, yel brn | |
| 120 | ML | 121' Clayey SILT, very firm, yel brn | |
| 1438<br>1445 | | @ 124' firm, w/ some f-c sand and clayey SAND | 123-129': 0.8 ft/min |
| 125 | | 125' SAND, coarse grained, some fine and medium sand w/ some fine ang-subrd gravel | @ 125' drill chatter |
| 1451 | | | |
| 130 | | @ 129' thin beds of clayey fine SAND | |

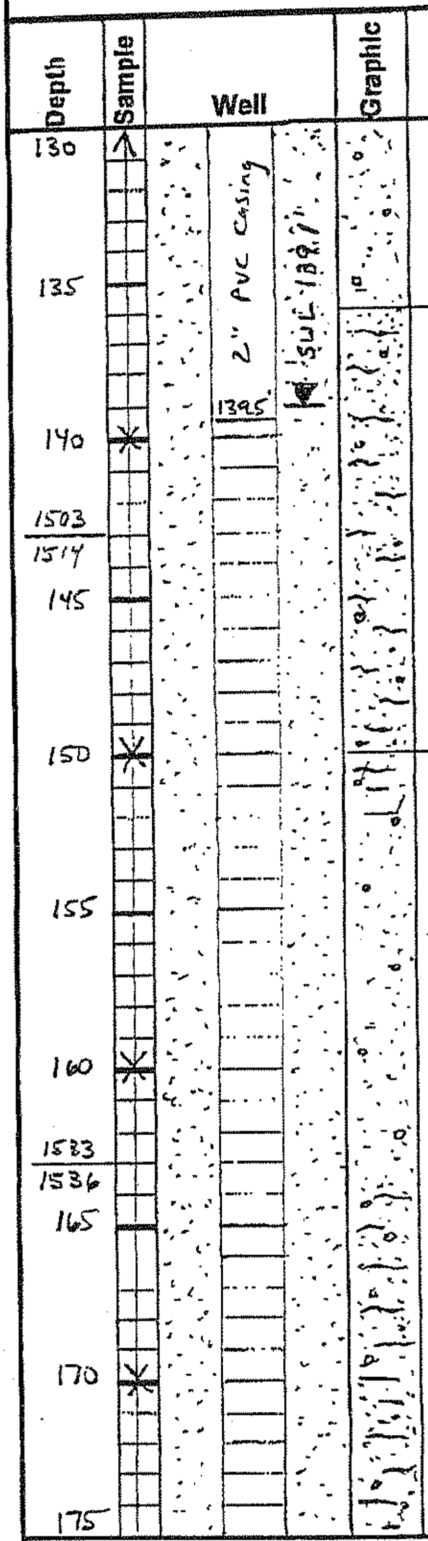
EXPLANATION: "trace" = 0 - 5%, "with some" = 5 -15%, "clayey, silty, sandy, gravelly = 15 - 30%, "very" = >30%, "and" = 50%

clay fines in the coarser grained deposits. Fine sand was present in the desander and has been added to the descriptions of materials.

*Urban Stormwater Runoff at BMP Sites*

*Broadous School, 12561 Filmore Street, Pacoima, California*

**Log of**
MW-02
Page 4 of 5



**Description of Materials**

SAND continued, predominantly granitic

136'
Gravelly SAND and SAND w/some fine gravel; sand f-c grained, ang-subrd; gravel broken and ang-rd; contains beds or matrix of clayey fine SAND; well-graded

@ 140' sand is ang-subang; gravel ang-subrd and broken

150'
SAND as above, w/some fine gravel; sand and gravel ang-subrd; trace clayey fine SAND 150-152'

155-160 trace clayey fine sand matrix or beds

160' SAND, as above, with trace fine gravel

@ 164 slight increase in fine gravel, more clayey fine SAND beds or matrix

@ 170 gravel is ang-subang

**Comments**

Drill chatter, continued

@ 136 increase in chatter

143-163': 1.0 ft/min

@ 144-145 further increase in chatter

@ 145' intermittent chatter

@ 160 minor chatter

163-183'; 0.5 ft/min

@ 173½' chatter

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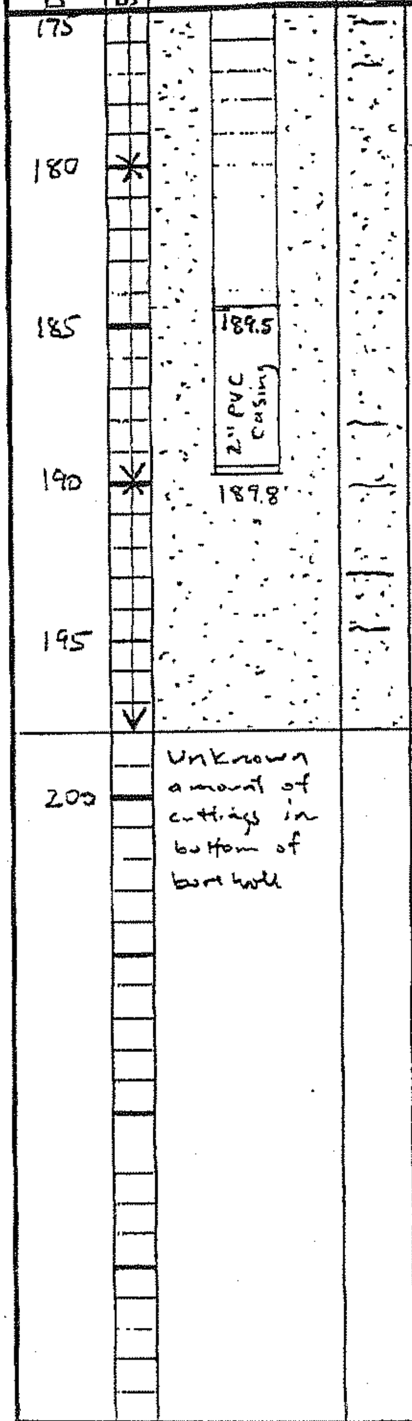
clay fines in the coarser grained deposits. Fine sand was present in the desander and has been added to the descriptions of materials.

## Urban Stormwater Runoff at BMP Sites

Broadous School, 12561 Filmore Street, Pacoima, California

**Log of** MW-02
Page 5 of 5

| Depth | Sample | Well | Graphic | USCS | Description of Materials | Comments |
|---|---|---|---|---|---|---|



**Description of Materials**

SAND, continued with clayey fine SAND beds or matrix
@ 177' w/ some fine gravel
@ 179' trace fine gravel
180' w/ some fine gravel, broken, hard (indurated?)

few clayey fine SAND beds or matrix @ 188-190', 192½-194'

@ 193' w/ trace fine gravel, subang-subrd.

TOTAL DEPTH 198 feet

**Comments**

chatter, continued

@ 177-178 slower drilling
@ 178-179 no chatter
@ 180 more chatter, harder drilling

183-198'
0.6 ft/min

@ 196 very hard drilling

<u>Construction materials</u>:

All casing and screen 2" ID, 2⅞" OD SCH 40 PVC, flush threaded
- 0.35' end cap
- 5' blank casing
- 45' screen, 0.020" horizontally-slotted
- 140' blank casing
- 21 bags (100 lbs/bag) RMC Pacific Materials #3 Sand
- 5 buckets (50 lbs/bucket) CETCO ⅜" coated bentonite tablets
- 18 bags (50 lbs/bag) Volclay High Solids Bentonite grout
- 1 bucket CETCO ⅜" coated bentonite tablets
- 2 bags Quikcrete
- 1 bag Sir Mix concrete

Borehole E-logged by Pacific Surveys 9/27/01

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Glendale, California 91203-1035 (818) 543-4600

EXPLANATION: "trace" = 0 - 5%, "with some" = 5 -15%, "clayey, silty, sandy, gravelly = 15 - 30%, "very" = >30%, "and" = 50%

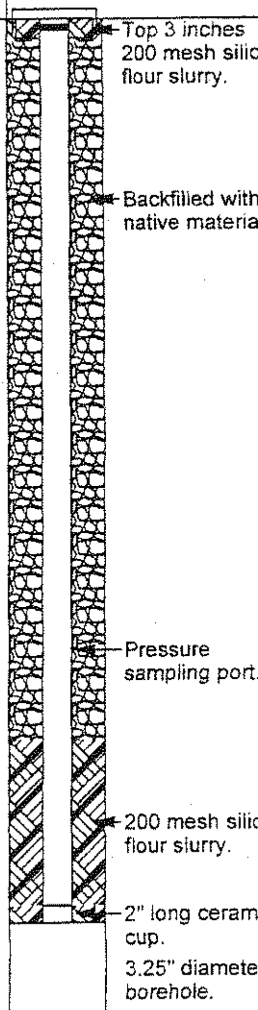
**CDM**
18581 Teller Avenue, Suite 200
Irvine, CA 92612
(949) 752-5452
(949) 752-1307 (FAX)

# BORING/WELL CONSTRUCTION LOG

**PROJECT NUMBER** 22140-37371.LYS
**PROJECT NAME** LA & SG River Watershed Counsil
**LOCATION** 1828 W 50th St. Los Angeles, CA 90062
**DRILLING METHOD** Hand auger
**SAMPLING METHOD** Hand auger
**GROUND SURFACE ELEVATION (FT MSL)** NA
**TOP OF CASING ELEVATION (FT MSL)** NA
**LOGGED BY** Rob Lopez
**REMARKS** Hall House Lysimeter Boring Log

**BORING/WELL NUMBER** HA
**DATE DRILLED** 10/28/02
**CASING TYPE/DIAMETER** 2" PVC
**SCREEN TYPE/SLOT** Ceramic cup
**GRAVEL PACK TYPE** 200 mesh silica flour slurry
**GROUT TYPE/QUANTITY** Native soil
**STATIC WATER LEVEL (FT BELOW TOC)** N/A
**GROUND WATER ELEVATION (FT MSL)**

| PID (ppm) | BLOW COUNTS | RECOVERY (inches) | SAMPLE ID. | EXTENT | DEPTH (ft. BGL) | U.S.C.S. | GRAPHIC LOG | LITHOLOGIC DESCRIPTION | CONTACT DEPTH | WELL DIAGRAM |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Top 6 inches grass and sod. | 0.5 | |
| | | | HA-1 | G | | SM | | SILTY SAND; dark brown (10YR2/2); 70% fine-grained sand, loose, micaceous; 30% silt, organic rich; damp. | 4.0 | |
| | | | | | 5 | SM | | SILTY SAND; light yellowish brown (10YR6/4); 80% fine-grained sand, poorly graded, loose; 20% silt; some mica; dry to damp. | 7.0 | |
| | | | HA-2 | G | | ML | | SILT; grayish brown (10YR5/2); 100% silt, soft, slightly cohesive, nonplastic; trace fine-grained sand; damp. | 10.0 | |
| | | | | | 10 | | | Total depth = 10 feet below ground surface (bgs). | | |

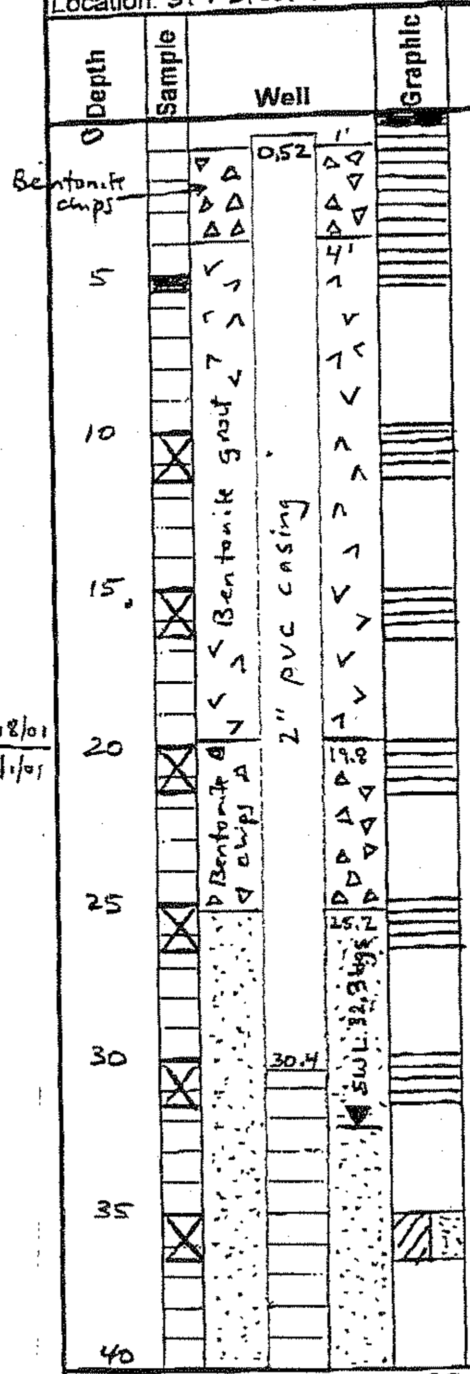


## *Urban Stormwater Runoff at BMP Sites*

*IMAX, 3003 Exposition Blvd., Santa Monica, California*

**Log of Borehole**
MW-01
Page 1 of 2

Dates Drilled: 10/18/01 - 11/1/01
Well Completed: 11/1/01
Logged by: G. Guacci
Total Depth (ft): 61.5
First Water: ?
Static Level: 31.8*
Date/Time: 11/6/01 @ 0720
Drilling Method: HSA
Drill Rig: CME 85
Drilled by: Spectrum (Jeff)
Type bit: Rock
Borehole Diameter (inches): 8
Type of Well: Monitoring
Location: 317½ feet northerly ℄ Exposition Blvd and 312 feet easterly ℄ Dorchester Ave.



| USCS | Description of Materials | PID Readings<br>BZ = Breathing Zone<br>SC = Soil cuttings<br>DS = Drive Sample<br>Comments |
|---|---|---|
| ML | SILT w/some clay, moist, med stiff to stiff very dark grayish brown (10YR-3/2); trace fine & medium sand<br>@ 2' Clayey SILT, very stiff, no sand<br>@ 3' SILT w/some clay, med stiff<br>@ 4' Clayey SILT | Hand augered to 5½' to check for utilities<br>Background air reading 0.1 ppm<br>@ 5' Hand auger sample<br>BZ = 0.1 ppm<br>SC = 0.1 ppm |
| ML | SILT w/some fine sand and trace clay, slightly moist, stiff, dk yel brown (10YR-4/4) | @ 10' BZ = 1.0 ppm<br>SC = 2.8 - 7.7 ppm (max)<br>DS = 11.6 max<br>SPT samples at 10, 15 and 20' |
| ML | Clayey SILT, moist, dk yel brown (10YR-4/4), stiff, trace fine sand | @ 15' BZ = 0.7 ppm<br>DS = 26.5 ppm<br>@ 0900 stopped drilling @ 20' to discuss readings with Montgomery - Watson |
| ML | Clayey to very clayey SILT, moist, stiff, dk yel brown (10YR-4/4), no sand | @ 20' at 0919 took 20' sample<br>DS = 0.3 ppm steady, 0.4 max<br>BZ = 0.1 ppm<br>10/18/01 Terminated drilling at 20'. Backfilled w/ ceme<br>11/1/01 Resumed drilling borehole |
| ML | Clayey SILT and SILT w/some clay, moist, med stiff, very dk grayish brown (10YR-3/2), mottled dk yel brown | @ 25' BZ = 0.0 ppm<br>SC and DS = 0.0 ppm |
| ML | Clayey SILT w/some fine very sandy SILT, very moist, med stiff, dk grayish brown (10YR-4/2), mottled | @ 30' BZ = 0.0 ppm<br>SC and DS = 0.0 ppm<br>Split spoon samples from 25 to 60' |
| CL/SC | CLAY and fine SAND, wet, med stiff, brown/dark brown (10YR-4/3), w/ some coarse sand and fine ang-subrd gravel; gravelly in some layers | @ 35' BZ = 0.0 ppm<br>SC and DS = 0.0 ppm |

* below top of casing = 32.3' bgs

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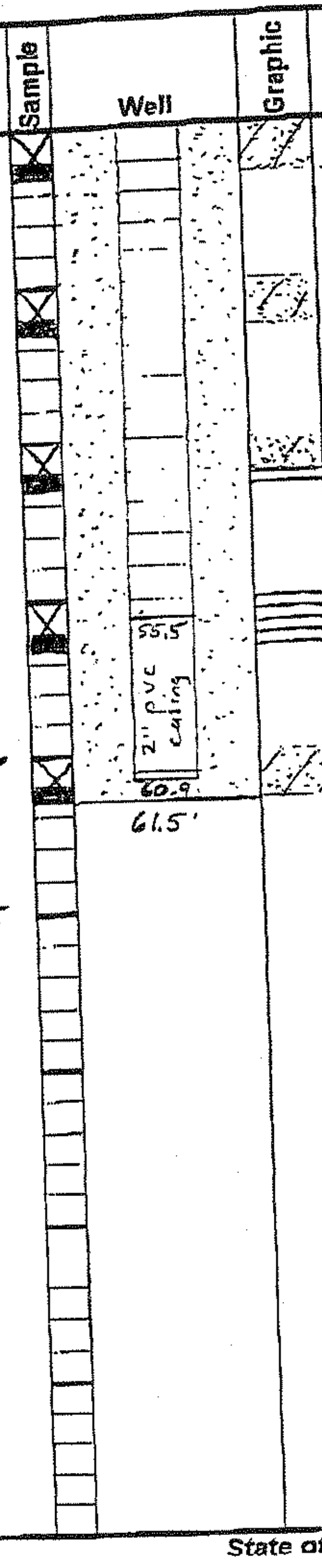
EXPLANATION: "trace" = 0 - 5%. "with some" = 5 - 15%, "clayey, silty, sandy, gravelly" = 15 - 30%, "very" = >30%, "and " = 50%

Urban Stormwater Runoff at BMP Sites
IMAX, 3003 Exposition Blvd., Santa Monica, California

**Log of** MW-01
Page 2 of 2



| Depth | USCS | fine Description of Materials | Comments |
|---|---|---|---|
| 40 | SC | Clayey SAND w/some gravel and silt, wet, med dense, brown/dark brown (10YR-4(3); fine gravel to 1½", ang-rd; trace med : coarse sand | @ 40' BZ = 0.0ppm SC and DS = 0.0 ppm Driller slowed rotation of augers w/intent of keeping cuttings from sticking to augers |
| 45 | SC/SW | SAND, fine to coarse, wet, well-graded, w/some fine and coarse gravel to 2". ang-subrd. w/some clay, very dark gray brown (10YR-3/2) coarser than above, less clay than above, med dense | @ 45' BZ = 0.0ppm SC and DS = 0.0ppm |
| 50 | SW | As above, trace clay | @ 50' BZ = 0.0ppm<br>SC = 0.0ppm<br>DS = 0.0ppm |
| 51¼' | ML | Clayey SILT w/ trace to some fine to coarse sand, dark yel brown (10YR-4/4) moist, stiff | |
| 55 | ML | As above, stiff to very stiff, very dark grayish brown (10YR-3/2) | @ 55' BZ = 0.0ppm<br>SC = 0.0 ppm<br>DS = 0.0 ppm |
| 60 | SC | Clayey fine SAND, med dense to dense w/some silt, trace medium-coarse sand, dark yel brown (10YR-3/4), moist | @ 60' BZ = 0.0 ppm<br>SC = 0.0 ppm<br>DS = 0.0 ppm<br>cuttings at surface now wet.<br>sampled from 60-61½' then predrilled 60-61½' |
| 65 | | TOTAL DEPTH 61.5 feet | |

Construction materials:

All casing and screen 2" ID, 2⅜" OD SCH 40 PVC, flush threaded

- 0.35 end cap
- 5' blank casing
- 25' screen, 0.020" horizontally slotted
- 30' blank casing
- 12½ bags (100 lbs/bag) RMC Pacific Materials # 3 Sand
- 2½ bags CETCO PureGold Medium bentonite chips
- 2 bags (50 lbs/bag) CETCO Volclay High Solids Grout
- 2 bags CETCO Pure Gold Medium bentonite chips
- 1+ bag concrete

EXPLANATION: "trace" = 0 - 5%, "with some" = 5 -15%, "clayey, silty, sandy, gravelly = 15 - 30%, "very" = >30%, "and" = 50%

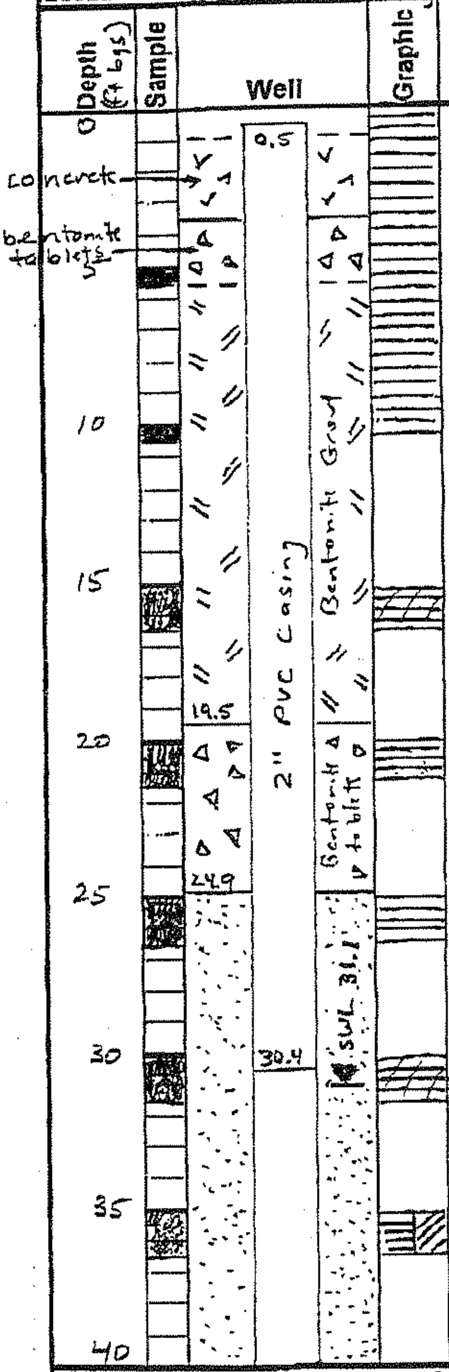
# Urban Stormwater Runoff at BMP Sites

## IMAX, 3003 Exposition Blvd., Santa Monica, California

## Log of Borehole MW-02

Page 1 of 2

Dates Drilled: 10/16/01 Well Completed: 10/17/01 Logged by: G. Gurecci
Total Depth (ft): 60.5 First Water: Static Level: 30.64* Date/Time: 10/17/01 @ 1805
Drilling Method: HSA Drill Rig: CME 85 Drilled by: Spectrum (Jeff)
Type bit: Rock Borehole Diameter (inches): 8 Type of Well: Monitoring
Location: 6½ feet southerly of ℄ Exposition Blvd and 160 feet easterly ℄ Dorchester Ave.



| USCS | Description of Materials | Background air reading 0.1 ppm<br>Comments |
|---|---|---|
| ML | SILT w/some clay, moist, very stiff, dark brown (10YR-3/3)<br>@ 3' medium stiff<br>@ 6' brown to dark brown (10YR-4/3) | Hand augered to 10.3 feet to check for utilities. Began drilling w/ drill rig at 1551 |
|  | @ 10' dark yellow brown (10YR-4/4) | @ 10' soil : air 0.1 ppm (ND) |
| ML | Clayey SILT, very stiff, moist, dark brown (10YR-3/3), mottled, trace fine sand | @ 15' switched over to sampling w/SPT sampler. soil and air 0.1 ppm (ND) |
| ML | Sandy SILT medium stiff, trace fine and coarse ang-subang gravel, with some clay, fine to coarse sand, mottled | @ 20' soil : air 0.1 ppm (ND) |
| ML | SILT w/some clay and fine sand, very moist, medium stiff to stiff, sand fine grained, trace coarse sand, brown/dark brown (10YR-4/3), mottled | @ 25' soil : air 0.1 ppm (ND) |
| ML | Clayey SILT w/some fine to coarse sand, very moist, stiff to very stiff brown/dark brown (10YR-4/3) mottled | @ 30' soil : air 0.1 ppm (ND) |
| ML : CL | SILT and CLAY, trace fine sand, very moist, stiff and med stiff, mottled dark grey and dark yellow brown (10YR-3/4) | @ 35' soil : air 0.1 ppm (ND) |

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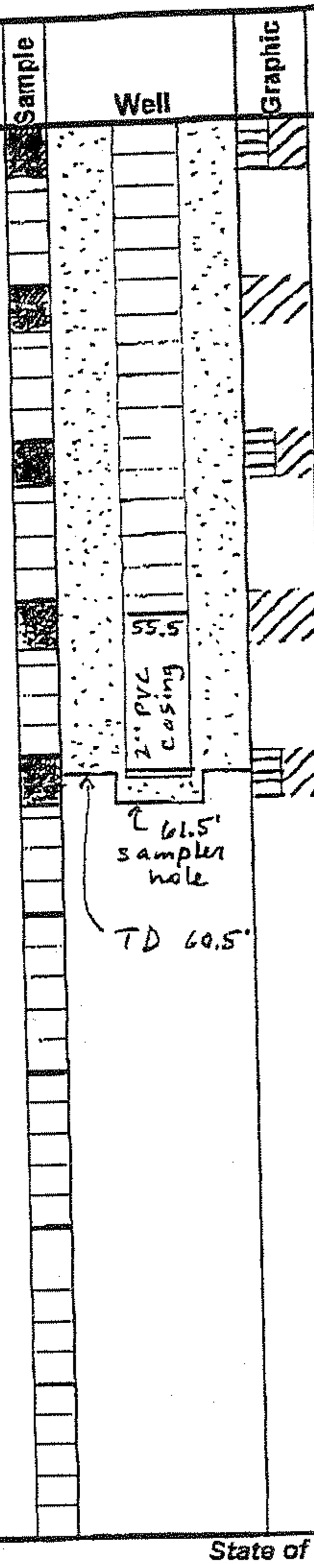
EXPLANATION: "trace" = 0 - 5%, "with some" = 5 - 15%, "clayey, silty, sandy, gravelly" = 15 - 30%, "very" = >30%, "and " = 50%

* = below top of casing ND = nothing detected above background

## Urban Stormwater Runoff at BMP Sites
IMAX, 3003 Exposition Blvd., Santa Monica, California

**Log of** MW-02
Page 2 of 2



| Depth | Sample | Well | Graphic | USCS | Description of Materials | Comments |
|---|---|---|---|---|---|---|
| 40 | | | | ML: CL | SILT and CLAY, as above, med. stiff | @ 40' sampler rod and sampler wet for about 10 feet (water level @ 30 feet ±)<br>air ; cuttings 0.1 ppm (N |
| 45 | | | | CL | Very Silty CLAY, very moist, med stiff to stiff, dark yellow brown (10YR-3/4), trace fine sand | @ 45' air ; soil 0.1 ppm (ND) |
| 50 | | | | CL: ML | CLAY and SILT, moist, very stiff, less clay than above, dark yellow brown (as above), mottled | @ 50' air ; soil 0.1 ppm (ND) |
| 55 | | | | CL | Very silty CLAY, moist, stiff, dk yellow brown (10YR-4/4), mottled, more clay than above | @ 55' air ; soil 0.1 ppm (ND) |
| 60 | | | | CL: ML | CLAY and SILT, moist, stiff to very stiff, dk yellow brown (as above), mottled | - 60.5 Finished drilling @ 1715 |
| | | | | | TOTAL DEPTH DRILLED 60.5 feet (overdrilled 0.5 feet to set augers below ground surface).<br>Note: bottom of well extended into hole left by sampler at 60 - 61.5 feet | Note: Spectrum deconned SPT sampler prior to each use |

Construction materials:

All casing and screen 2" ID, 2 3/8" ID SCH 40 PVC, flush threaded

- 0.35' end cap
- 5' blank casing
- 25' screen, 0.020", horizontally slotted
- 30' blank casing
- 12 bags (100 lbs/bag) RMC Pacific materials #3 Sand
- 3 bags CETCO Pure Gold Medium Bentonite Chips
- 1 bag CETCO Volclay High Solids Grout
- 2 bags CETCO Pure Gold Medium Bentonite Chips
- 2½ bags concrete

State of California, Department of Water Resources--Southern District
770 Fairmont Avenue, Suite 102
Glendale, California 91203-1035 (818) 543-4600

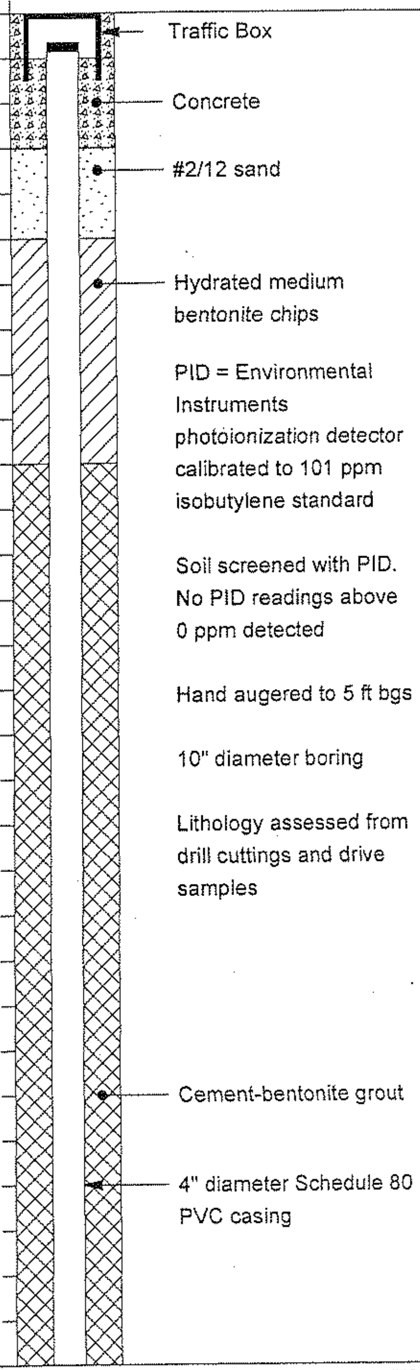
EXPLANATION: "trace" = 0 - 5%, "with some" = 5 - 15%, "clayey, silty, sandy, gravelly = 15 - 30%, "very" = >30%, "and" = 50%

PROJECT: LA BASIN WATERSHED AUGMENTATION
Mid City Metals, Los Angeles, California

# Log of Well No. M-MW-1B

BORING LOCATION: ~10' N & ~86' E of SE corner of 2035 15th St. bldg.
GROUND SURFACE ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Layne Christensen Company
DATE STARTED: 10/27/03
DATE FINISHED: 10/30/03
DRILLING METHOD: Dual wall percussion hammer
TOTAL DEPTH (ft.): 256.5
SCREEN INTERVAL (ft.): 237.9 - 252
DRILLING EQUIPMENT: Foremost Drills AP-1000
DEPTH TO WATER ATD: 240
CASING: 4" Sch 80 PVC
SAMPLING METHOD: CA Modified split spoon sampler [18" x 2"]
LOGGED BY: K. Howe/T. Phyu
HAMMER WEIGHT: 160 lbs
DROP: 18 in.
RESPONSIBLE PROFESSIONAL: K. Holland-Chominsky
REG. NO. RG 7033

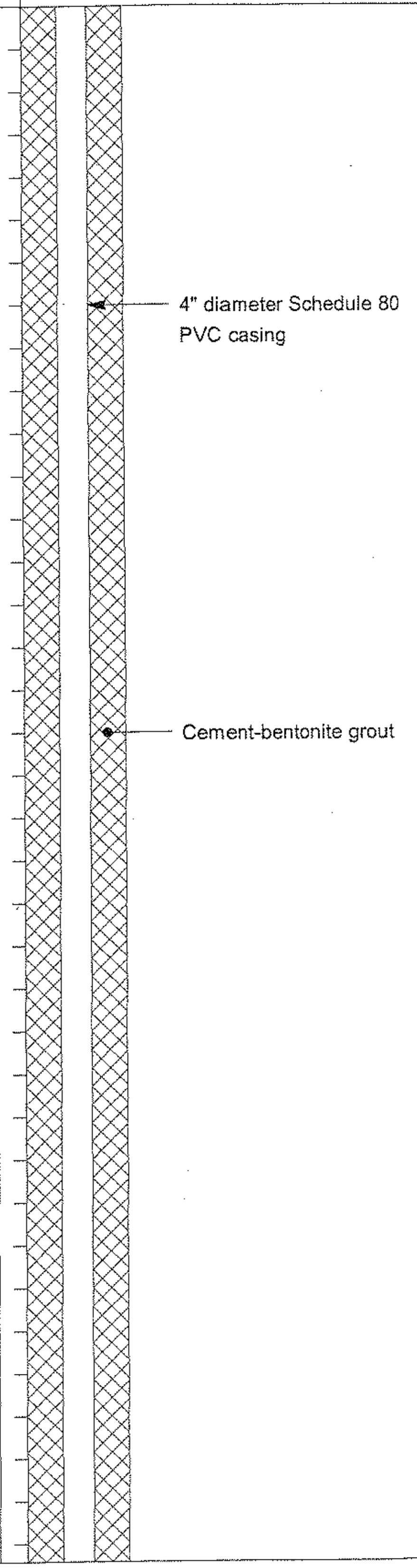
| DEPTH (feet) | SAMPLES Sample No. | Sample | Blows/ 6 Inches | PID Reading (ppm) | DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed; datum is ground surface | WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS |
|---|---|---|---|---|---|---|
| 1<br>2<br>3<br>4<br>5<br>6<br>7<br>8<br>9<br>10<br>11<br>12<br>13<br>14<br>15 | | | | | See boring log M-MW-1 for lithology to 140 feet<br>This boring was the third attempt at installing monitoring well M-MW-01. Monitoring well M-MW-01 was successfully installed in boring M-MW-1B and will be referred to as M-MW-01. | PID = Environmental Instruments photoionization detector calibrated to 101 ppm isobutylene standard<br>Soil screened with PID. No PID readings above 0 ppm detected<br>Hand augered to 5 ft bgs<br>10" diameter boring<br>Lithology assessed from drill cuttings and drive samples |



PROJECT: LA BASIN WATERSHED AUGMENTATION
Mid City Metals, Los Angeles, California

# Log of Well No. M-MW-1B (cont'd)

| DEPTH (feet) | SAMPLES | | | PID Reading (ppm) | DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. | WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS |
|---|---|---|---|---|---|---|
| | Sample No. | Sample | Blows/ 6 Inches | | | |
| 16 | | | | | | |
| 17 | | | | | | |
| 18 | | | | | | |
| 19 | | | | | | |
| 20 | | | | | | |
| 21 | | | | | | |
| 22 | | | | | | |
| 23 | | | | | | |
| 24 | | | | | | |
| 25 | | | | | | |
| 26 | | | | | | |
| 27 | | | | | | |
| 28 | | | | | | |
| 29 | | | | | | |
| 30 | | | | | | |
| 31 | | | | | | |
| 32 | | | | | | |
| 33 | | | | | | |



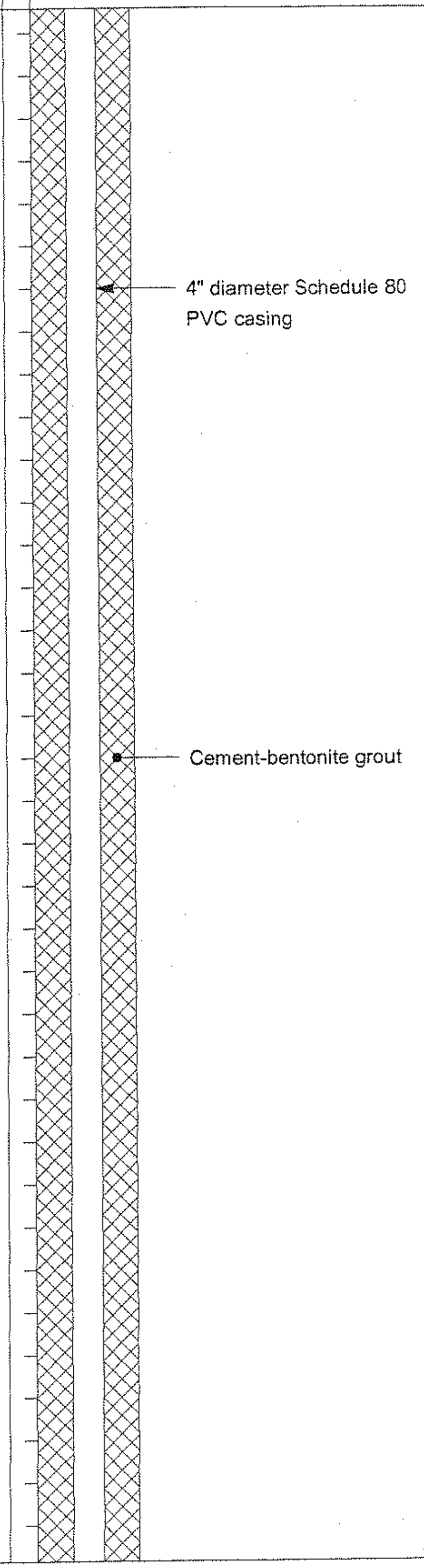
WELL3_INCHES

PROJECT: LA BASIN WATERSHED AUGMENTATION
Mid City Metals, Los Angeles, California

## Log of Well No. M-MW-1B (cont'd)

| DEPTH (feet) | SAMPLES | | | PID Reading (ppm) | DESCRIPTION<br>NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. |
|---|---|---|---|---|---|
| | Sample No. | Sample | Blows/ 6 Inches | | |
| 34 | | | | | |
| 35 | | | | | |
| 36 | | | | | |
| 37 | | | | | |
| 38 | | | | | |
| 39 | | | | | |
| 40 | | | | | |
| 41 | | | | | |
| 42 | | | | | |
| 43 | | | | | |
| 44 | | | | | |
| 45 | | | | | |
| 46 | | | | | |
| 47 | | | | | |
| 48 | | | | | |
| 49 | | | | | |
| 50 | | | | | |
| 51 | | | | | |

WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS



WELL3_INCHES

Geomatrix Consultants

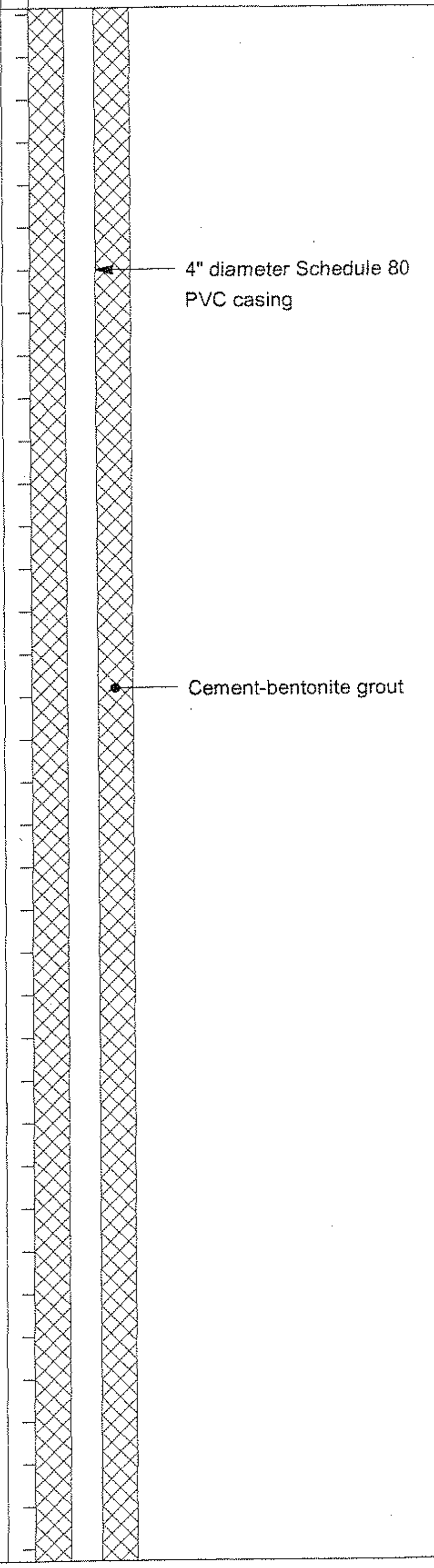
Project No. 8952.000.0

PROJECT: LA BASIN WATERSHED AUGMENTATION
Mid City Metals, Los Angeles, California

## Log of Well No. M-MW-1B (cont'd)

| DEPTH (feet) | SAMPLES |  |  | PID Reading (ppm) | DESCRIPTION<br>NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. |
|---|---|---|---|---|---|
|  | Sample No. | Sample | Blows/ 6 Inches |  |  |
| 52 |  |  |  |  |  |
| 53 |  |  |  |  |  |
| 54 |  |  |  |  |  |
| 55 |  |  |  |  |  |
| 56 |  |  |  |  |  |
| 57 |  |  |  |  |  |
| 58 |  |  |  |  |  |
| 59 |  |  |  |  |  |
| 60 |  |  |  |  |  |
| 61 |  |  |  |  |  |
| 62 |  |  |  |  |  |
| 63 |  |  |  |  |  |
| 64 |  |  |  |  |  |
| 65 |  |  |  |  |  |
| 66 |  |  |  |  |  |
| 67 |  |  |  |  |  |
| 68 |  |  |  |  |  |
| 69 |  |  |  |  |  |

WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS

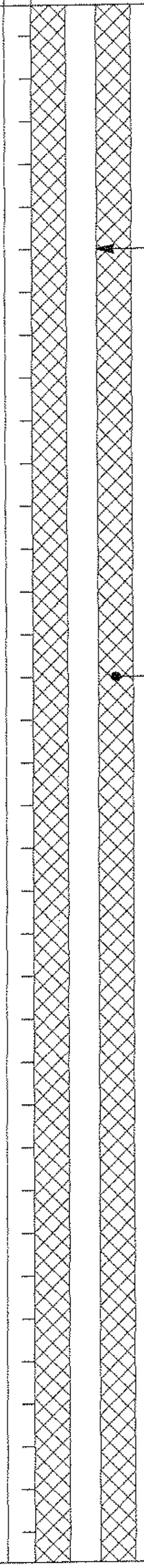


WELL3_INCHES

PROJECT: LA BASIN WATERSHED AUGMENTATION
Mid City Metals, Los Angeles, California

# Log of Well No. M-MW-1B (cont'd)

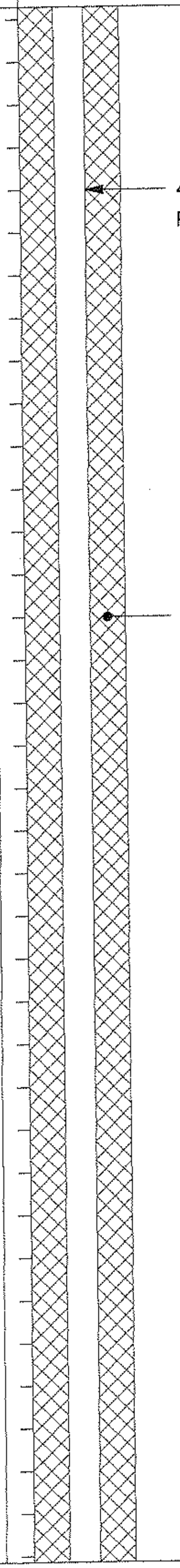
| DEPTH (feet) | SAMPLES | | | PID Reading (ppm) | DESCRIPTION<br>NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. | WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS |
|---|---|---|---|---|---|---|
| | Sample No. | Sample | Blows/ 6 Inches | | | |
| 70 | | | | | | |
| 71 | | | | | | |
| 72 | | | | | | 4" diameter Schedule 80 PVC casing |
| 73 | | | | | | |
| 74 | | | | | | |
| 75 | | | | | | |
| 76 | | | | | | |
| 77 | | | | | | Cement-bentonite grout |
| 78 | | | | | | |
| 79 | | | | | | |
| 80 | | | | | | |
| 81 | | | | | | |
| 82 | | | | | | |
| 83 | | | | | | |
| 84 | | | | | | |
| 85 | | | | | | |
| 86 | | | | | | |
| 87 | | | | | | |



WELL3_INCHES

PROJECT: LA BASIN WATERSHED AUGMENTATION
Mid City Metals, Los Angeles, California

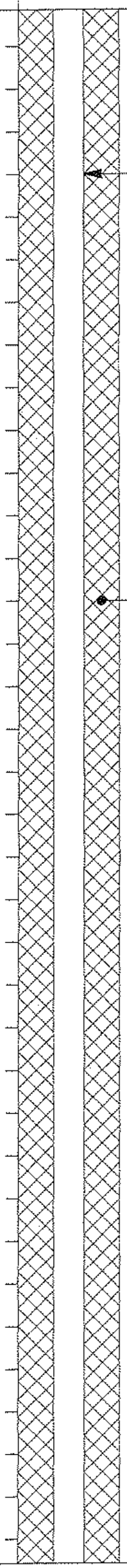
# Log of Well No. M-MW-1B (cont'd)

| DEPTH (feet) | SAMPLES | | | PID Reading (ppm) | DESCRIPTION<br>NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. | WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS |
|---|---|---|---|---|---|---|
| | Sample No. | Sample | Blows/ 6 Inches | | | |
| 88 | | | | | |  |
| 89 | | | | | | |
| 90 | | | | | | 4" diameter Schedule 80 PVC casing |
| 91 | | | | | | |
| 92 | | | | | | |
| 93 | | | | | | |
| 94 | | | | | | |
| 95 | | | | | | Cement-bentonite grout |
| 96 | | | | | | |
| 97 | | | | | | |
| 98 | | | | | | |
| 99 | | | | | | |
| 100 | | | | | | |
| 101 | | | | | | |
| 102 | | | | | | |
| 103 | | | | | | |
| 104 | | | | | | |
| 105 | | | | | | |
| 106 | | | | | | |

PROJECT: LA BASIN WATERSHED AUGMENTATION
Mid City Metals, Los Angeles, California

# Log of Well No. M-MW-1B (cont'd)

| DEPTH (feet) | SAMPLES<br>Sample No. | <br>Sample | <br>Blows/ 6 Inches | PID Reading (ppm) | DESCRIPTION<br>NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. | WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS |
|---|---|---|---|---|---|---|
| 107 | | | | | | |
| 108 | | | | | | |
| 109 | | | | | | |
| 110 | | | | | | |
| 111 | | | | | | |
| 112 | | | | | | |
| 113 | | | | | | |
| 114 | | | | | | |
| 115 | | | | | | |
| 116 | | | | | | |
| 117 | | | | | | |
| 118 | | | | | | |
| 119 | | | | | | |
| 120 | | | | | | |
| 121 | | | | | | |
| 122 | | | | | | |
| 123 | | | | | | |
| 124 | | | | | | |



4" diameter Schedule 80 PVC casing

Cement-bentonite grout

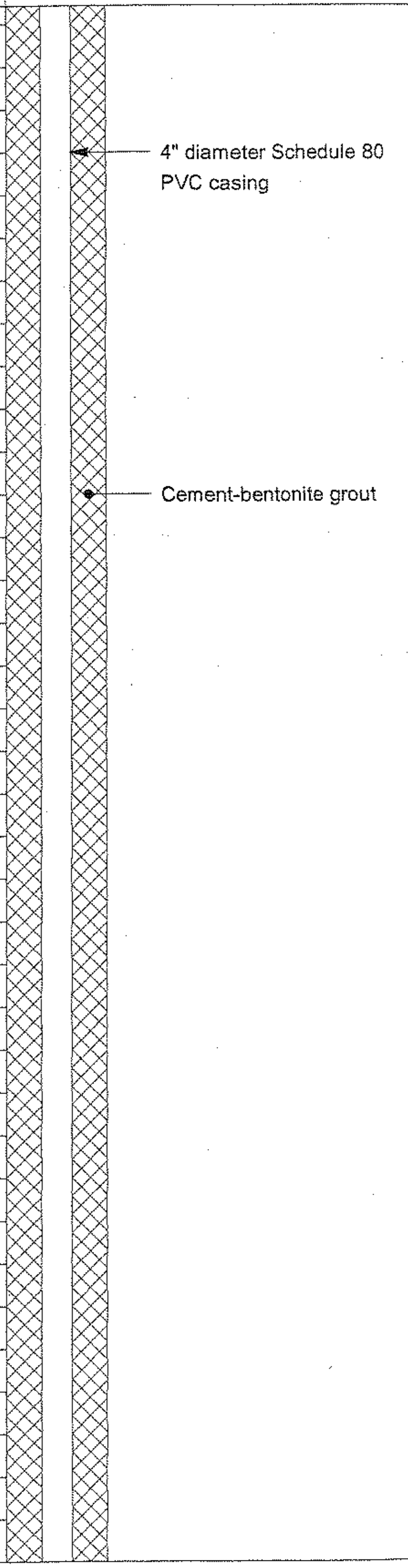
WELL3_INCHES

PROJECT: LA BASIN WATERSHED AUGMENTATION
Mid City Metals, Los Angeles, California

## Log of Well No. M-MW-1B (cont'd)

| DEPTH (feet) | SAMPLES Sample No. | Sample | Blows/ 6 Inches | PID Reading (ppm) | DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. |
|---|---|---|---|---|---|
| 125 | | | | | |
| 126 | | | | | |
| 127 | | | | | |
| 128 | | | | | |
| 129 | | | | | |
| 130 | | | | | |
| 131 | | | | | |
| 132 | | | | | |
| 133 | | | | | |
| 134 | | | | | |
| 135 | | | | | |
| 136 | | | | | |
| 137 | | | | | |
| 138 | | | | | |
| 139 | | | | | |
| 140 | | | | | See boring log M-MW-1A for lithology to 190 feet |
| 141 | | | | | |
| 142 | | | | | |

WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS

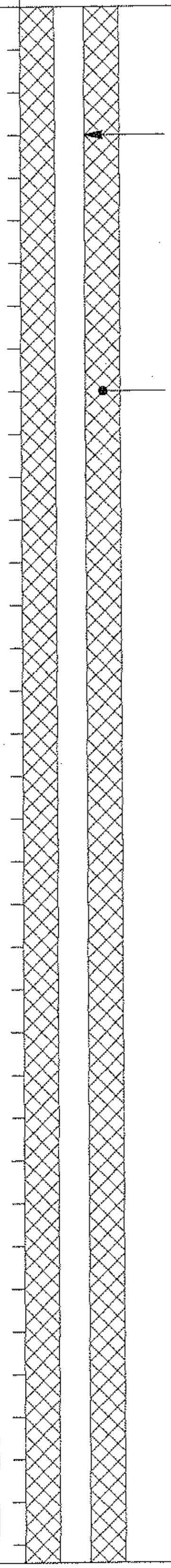


WELL3_INCHES

PROJECT: LA BASIN WATERSHED AUGMENTATION
Mid City Metals, Los Angeles, California

# Log of Well No. M-MW-1B (cont'd)

| DEPTH (feet) | SAMPLES | | | PID Reading (ppm) | DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. | WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS |
|---|---|---|---|---|---|---|
| | Sample No. | Sample | Blows/ 6 Inches | | | |
| 143 | | | | | | |
| 144 | | | | | | 4" diameter Schedule 80 PVC casing |
| 145 | | | | | | |
| 146 | | | | | | |
| 147 | | | | | | Cement-bentonite grout |
| 148 | | | | | | |
| 149 | | | | | | |
| 150 | | | | | | |
| 151 | | | | | | |
| 152 | | | | | | |
| 153 | | | | | | |
| 154 | | | | | | |
| 155 | | | | | | |
| 156 | | | | | | |
| 157 | | | | | | |
| 158 | | | | | | |
| 159 | | | | | | |
| 160 | | | | | | |

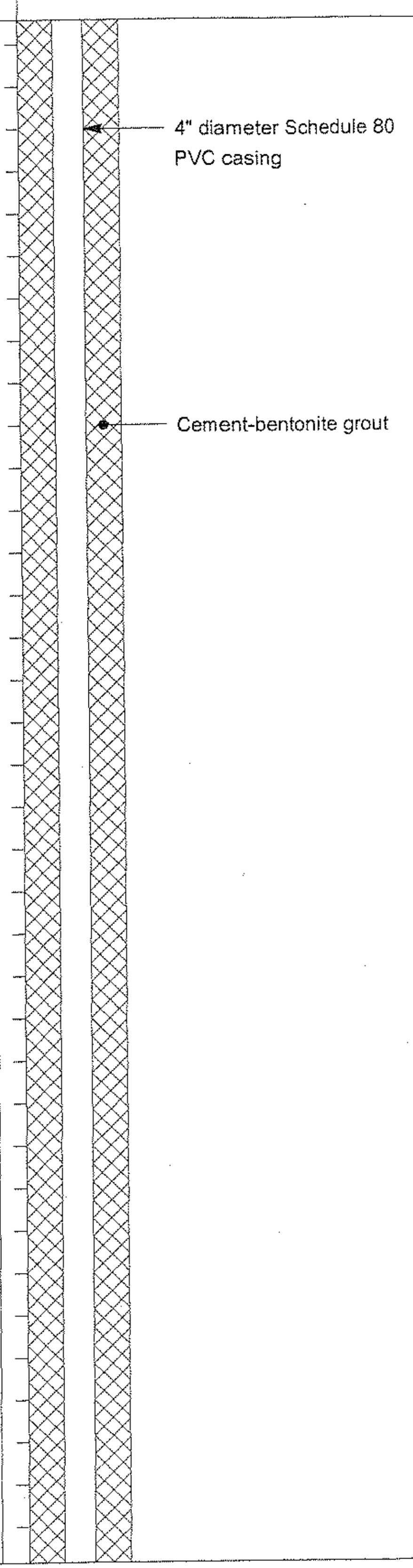


PROJECT: LA BASIN WATERSHED AUGMENTATION
Mid City Metals, Los Angeles, California

# Log of Well No. M-MW-1B (cont'd)

| DEPTH (feet) | SAMPLES Sample No. | Sample | Blows/ 6 Inches | PID Reading (ppm) | DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. |
|---|---|---|---|---|---|
| 161 | | | | | |
| 162 | | | | | |
| 163 | | | | | |
| 164 | | | | | |
| 165 | | | | | |
| 166 | | | | | |
| 167 | | | | | |
| 168 | | | | | |
| 169 | | | | | |
| 170 | | | | | |
| 171 | | | | | |
| 172 | | | | | |
| 173 | | | | | |
| 174 | | | | | |
| 175 | | | | | |
| 176 | | | | | |
| 177 | | | | | |
| 178 | | | | | |

WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS

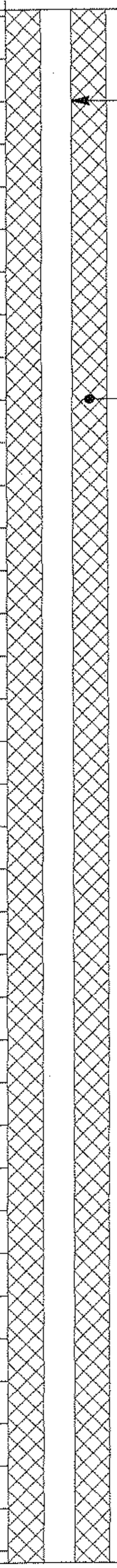


WELL3_INCHES

PROJECT: LA BASIN WATERSHED AUGMENTATION
Mid City Metals, Los Angeles, California

# Log of Well No. M-MW-1B (cont'd)

| DEPTH (feet) | SAMPLES Sample No. | Sample | Blows/ 6 Inches | PID Reading (ppm) | DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. | WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS |
|---|---|---|---|---|---|---|
| 180 | | | | | | 4" diameter Schedule 80 PVC casing |
| 181 | | | | | | |
| 182 | | | | | | |
| 183 | | | | | | Cement-bentonite grout |
| 184 | | | | | | |
| 185 | | | | | | |
| 186 | | | | | POORLY GRADED SAND (SP): yellowish brown (10YR 5/6), moist, ~95% fine to coarse sand, ~5% fines, trace coarse gravel | Lithologic description for 186' to 190' from boring log M-MW-1A |
| 187 | | | | | | |
| 188 | | | | | | |
| 189 | | | | | | |
| 190 | | | | | light olive brown (2.5Y 5/6) | |
| 191 | | | | | | |
| 192 | | | | | ~85% fine to coarse sand, ~10% fine gravel, ~5% fines | |
| 193 | | | | | | |
| 194 | | | | | olive brown (2.5Y 4/4), moist | |
| 195 | | | | | | |
| 196 | | | | | ~95% fine to medium sand, ~5% fines, trace coarse sand | |
| 197 | | | | | | |



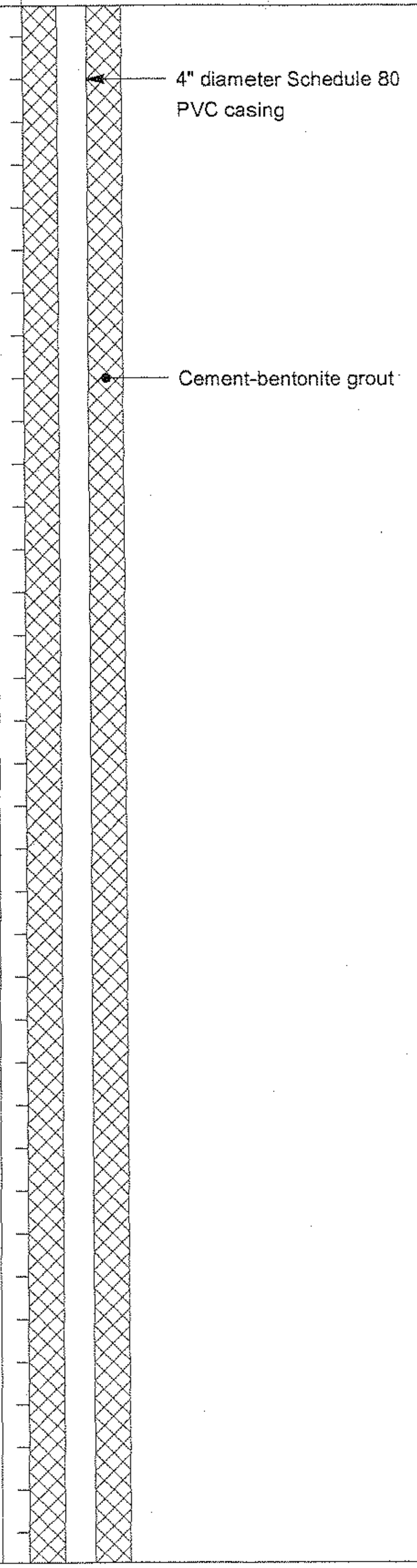
WELL3_INCHES

PROJECT: LA BASIN WATERSHED AUGMENTATION
Mid City Metals, Los Angeles, California

## Log of Well No. M-MW-1B (cont'd)

| DEPTH (feet) | SAMPLES: Sample No. | SAMPLES: Sample | SAMPLES: Blows/ 6 Inches | PID Reading (ppm) | DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. |
|---|---|---|---|---|---|
| | | | | | POORLY GRADED SAND (SP): continued |
| 198 | | | | | ~90% fine to coarse sand, ~5% fines, ~5% fine to coarse gravel |
| 199 | | | | | |
| 200 | | | | | |
| 201 | | | | | |
| 202 | | | | | ~95% fine to medium sand, ~5% fines, trace coarse sand, trace fine to coarse gravel |
| 203 | | | | | |
| 204 | | | | | trace fine gravel |
| 205 | | | | | |
| 206 | | | | | |
| 207 | | | | | |
| 208 | | | | | |
| 209 | | | | | |
| 210 | | | | | |
| 211 | | | | | |
| 212 | | | | | |
| 213 | | | | | |
| 214 | | | | | ~90% fine to medium sand, ~5% fines, ~5% fine gravel |
| 215 | | | | | |

WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS

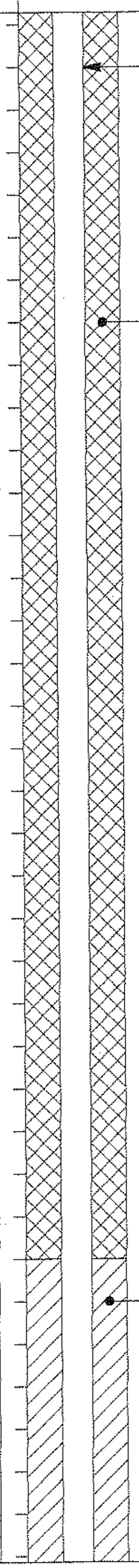

4" diameter Schedule 80 PVC casing

Cement-bentonite grout

PROJECT: LA BASIN WATERSHED AUGMENTATION
Mid City Metals, Los Angeles, California

# Log of Well No. M-MW-1B (cont'd)

| DEPTH (feet) | SAMPLES Sample No. | Sample | Blows/ 6 Inches | PID Reading (ppm) | DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. | WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS |
|---|---|---|---|---|---|---|
| 216 | | | | | POORLY GRADED GRAVEL with SAND (GP): olive brown (2.5Y 4/4), moist, ~60% fine to coarse gravel, ~35% fine to coarse sand, ~5% fines | 4" diameter Schedule 80 PVC casing |
| 217 | | | | | | |
| 218 | | | | | SILTY SAND (SM): olive brown (2.5Y 4/4), moist, ~75% fine to coarse sand, ~25% low plasticity fines | |
| 219 | | | | | | Cement-bentonite grout |
| 220 | | | | | POORLY GRADED SAND (SP): light olive brown (2.5Y 5/3), moist, ~95% fine to coarse sand, ~5% fines | |
| 221 | | | | | | |
| 222 | | | | | SILTY SAND (SM): olive brown (2.5Y 4/4), moist, ~70% fine to coarse sand, ~25% low plasticity fines, ~5% fine gravel, trace coarse gravel | |
| 223 | | | | | | |
| 224 | | | | | | |
| 225 | | | | | POORLY GRADED GRAVEL with SAND (GP): gravel in various colors, sand in light olive brown (2.5Y 5/6), ~60% fine to coarse gravel, ~35% fine to coarse sand, ~5% low plasticity fines | |
| 226 | | | | | LEAN CLAY (CL): dark greenish gray (GLEY1 3/1), moist, ~100% fines, medium to high plasticity, slow dilatancy, trace fine sand | Drill bit plugged with soil cuttings. Stopped drilling at 226'. Drillers pulled some of the drill pipe to blow out the plug. Drillers added water when drilling from 180' to 228'. |
| 227 | | | | | | |
| 228 | | | 21<br>37 | | | |
| 229 | | | 50 | | LEAN CLAY with SAND (SP) | |
| 230 | | | | | ~95% fines, ~5% fine sand | Hydrated medium bentonite chips |
| 231 | | | | | | |
| 232 | | | | | | |
| 233 | | | | | LEAN CLAY with SAND (CL): see next page | |

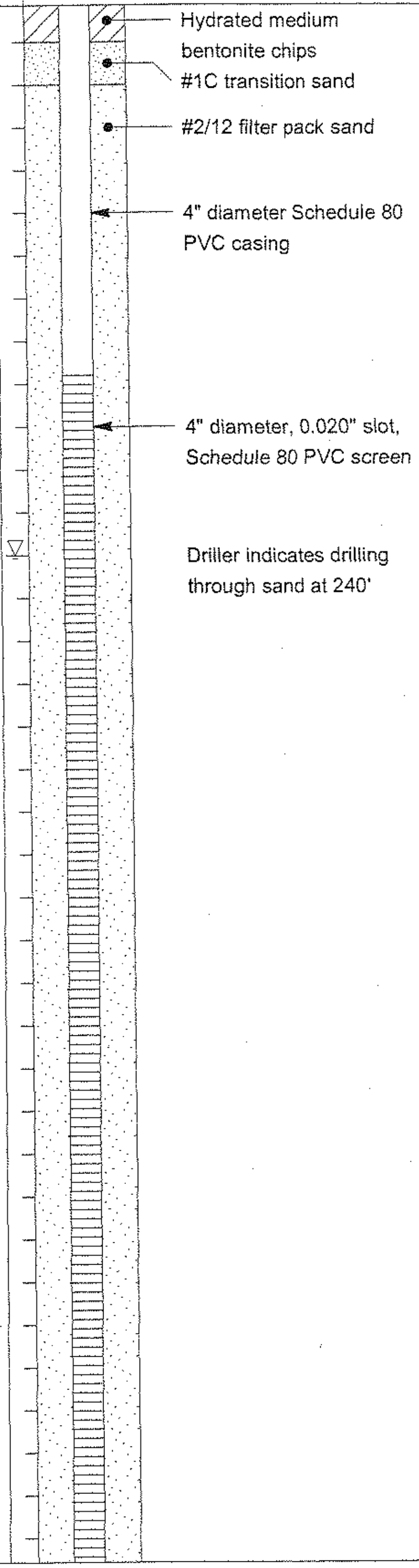


PROJECT: LA BASIN WATERSHED AUGMENTATION
Mid City Metals, Los Angeles, California

# Log of Well No. M-MW-1B (cont'd)

| DEPTH (feet) | SAMPLES Sample No. | Sample | Blows/ 6 Inches | PID Reading (ppm) | DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. |
|---|---|---|---|---|---|
| 234 | | | | | LEAN CLAY with SAND (CL): dark greenish gray (3/10Y 3/1), ~70% fines, ~30% fine to medium sand, medium plasticity, slow dilatancy |
| 235 | | | | | |
| 236 | | | | | |
| 237 | | | | | |
| 238 | | | | | |
| 239 | | | | | |
| 240 | | | | | POORLY GRADED SAND (SP): dark greenish gray (4/10Y 4/1), ~95% fine to medium sand, ~5% fines |
| 241 | | | | | |
| 242 | | | | | |
| 243 | | | | | |
| 244 | | | | | |
| 245 | | | | | |
| 246 | | | | | |
| 247 | | | | | |
| 248 | | | | | |
| 249 | | | | | SILTY SAND (SM): dark greenish gray (4/10Y 4/1), ~85% fine to medium sand, ~15% low plasticity fines |
| 250 | | | 4 | | |
| | | | 5 | | |
| 251 | | | 9 | | some lenses of clay present |

WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS



Driller indicates drilling through sand at 240'

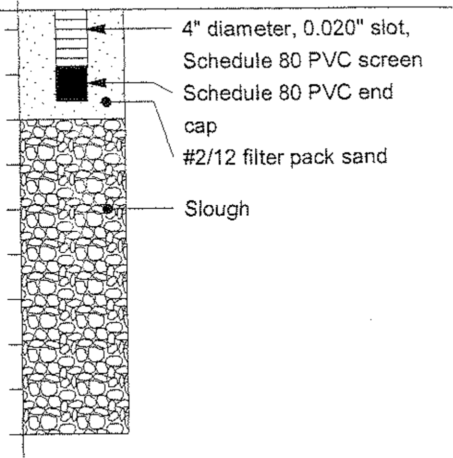
WELL3_INCHES

PROJECT: LA BASIN WATERSHED AUGMENTATION
Mid City Metals, Los Angeles, California

# Log of Well No. M-MW-1B (cont'd)

| DEPTH (feet) | SAMPLES<br>Sample No. | Sample | Blows/ 6 Inches | PID Reading (ppm) | DESCRIPTION<br>NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. |
|---|---|---|---|---|---|
| 252 | | | | | POORLY GRADED SAND with GRAVEL (SP): dark greenish gray (4/10Y 4/1), ~85% fine to coarse sand, ~15% fine gravel, some lenses of clay present |
| 253 | | | | | |
| 254 | | | | | |
| 255 | | ☒ | | | POORLY GRADED SAND (SP): dark greenish gray (4/10Y 4/1), ~95% fine to medium sand, ~5% low plasticity fines |
| 256 | | ☒ | | | |
| 257 | | | | | Bottom of boring at 256.5 ft bgs |
| 258 | | | | | |
| 259 | | | | | |
| 260 | | | | | |
| 261 | | | | | |
| 262 | | | | | |
| 263 | | | | | |
| 264 | | | | | |
| 265 | | | | | |
| 266 | | | | | |
| 267 | | | | | |
| 268 | | | | | |
| 269 | | | | | |
| 270 | | | | | |

WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS



PROJECT: LA BASIN WATERSHED AUGMENTATION
Sun Valley Paper Stock, Sun Valley, California

# Log of Well No. S-I-01

BORING LOCATION: ~8' E of LS-02A/B

GROUND SURFACE ELEVATION AND DATUM: Not surveyed; datum is ground surface

DRILLING CONTRACTOR: Layne Christensen Company

DATE STARTED: 11/17/03

DATE FINISHED: 11/19/03

DRILLING METHOD: Dual wall percussion hammer

TOTAL DEPTH (ft.): 143.2

SCREEN INTERVAL (ft.): NA

DRILLING EQUIPMENT: AP-1000

DEPTH TO WATER ATD: NA

CASING: 4" Sch. 40 PVC

SAMPLING METHOD: CA Modified split spoon sampler [18" x 2"]

LOGGED BY: J. Klein

HAMMER WEIGHT: 140 lbs

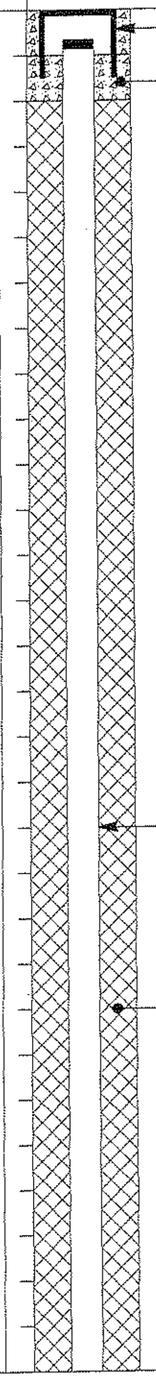
DROP: 30 in.

RESPONSIBLE PROFESSIONAL: K. Holland-Chominsky

REG. NO. RG 7033

| DEPTH (feet) | SAMPLES Sample No. | Sample | Blows/ 6 Inches | PID Reading (ppm) | DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. |
|---|---|---|---|---|---|
| | | | | | Surface Elevation: Not surveyed; datum is ground surface |
| | | | | | Concrete |
| | | | | | SILTY SAND (SM): light olive brown (2.5Y 5/3), moist, ~70% fine to coarse sand, ~20% low plasticity fines, ~10% fine gravel |
| 1 | | | | | |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| 5 | | | | | |
| 6 | | | | | |
| 7 | | | | | |
| 8 | | | | | |
| 9 | | | | | |
| 10 | | | | 0.0 (HS) | POORLY GRADED SAND (SP): light grayish brown (10YR 6/2), moist, ~95% fine to medium sand, ~5% coarse sand and cobbles |
| 11 | | | | | |
| 12 | | | | | |
| 13 | | | | | |
| 14 | | | | | |
| 15 | | | | | |

WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS



PID = Environmental Instruments Determinator Model 580 photoionization detector calibrated to 101 ppm isobutylene standard

PID readings are headspace (HS) readings in sealable plastic bags

PID background readings range between 0.0 and 0.3 ppm

Lithology assessed from drill cuttings and drive samples

WELL3_INCHES

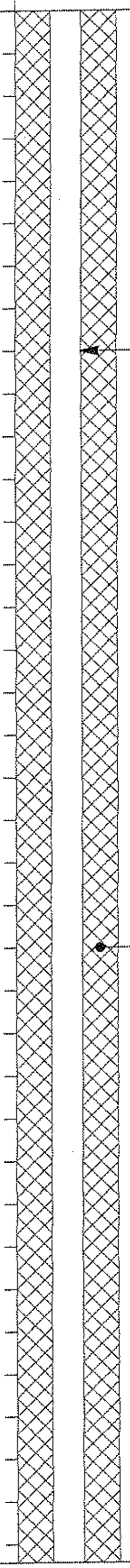
Geomatrix Consultants

Project No. 8952.000.0

PROJECT: LA BASIN WATERSHED AUGMENTATION
Sun Valley Paper Stock, Sun Valley, California

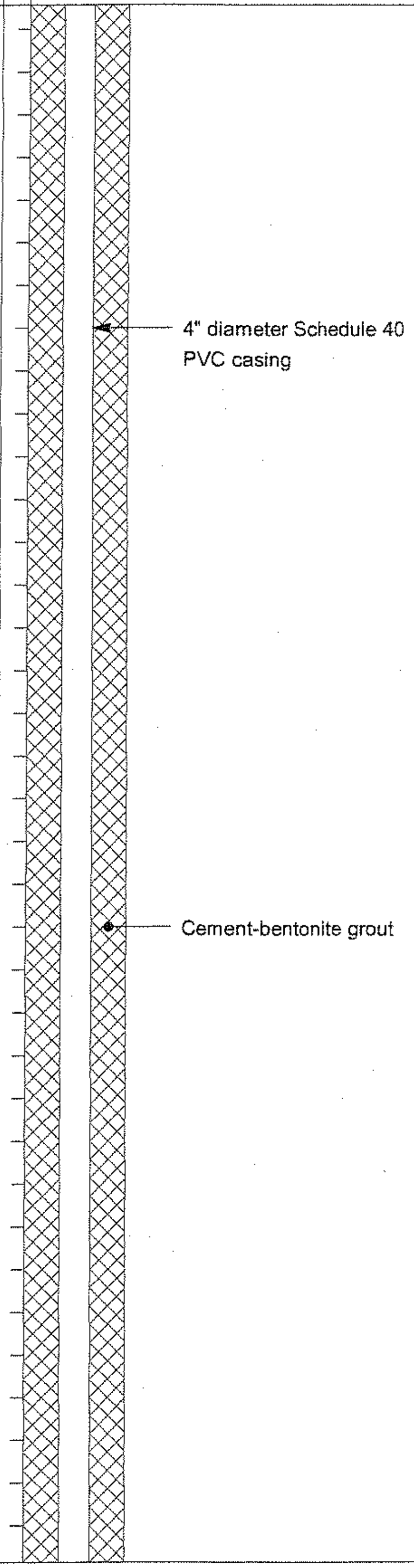
# Log of Well No. S-I-01 (cont'd)

| DEPTH (feet) | SAMPLES Sample No. | Sample | Blows/ 6 Inches | PID Reading (ppm) | DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. | WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS |
|---|---|---|---|---|---|---|
| | | | | | POORLY GRADED SAND (SP): continued<br>~100% fine to coarse sand | |
| 16 | | | | | | |
| 17 | | | | | | |
| 18 | | | | | | |
| 19 | | | | | | 4" diameter Schedule 40 PVC casing |
| 20 | | | | 0.4 (HS) | brown (10YR 5/3), ~90% fine to coarse sand, ~10% fine gravel | |
| 21 | | | | | | |
| 22 | | | | | | |
| 23 | | | | | | |
| 24 | | | | | | |
| 25 | | | | | | |
| 26 | | | | | | Cement-bentonite grout |
| 27 | | | | | | |
| 28 | | | | | | |
| 29 | | | | | | |
| 30 | | | | 0.3 (HS) | yellowish brown (10YR 5/4), ~95% fine to medium sand, ~5% coarse sand | |
| 31 | | | | | | |
| 32 | | | | | | |
| 33 | | | | | | |



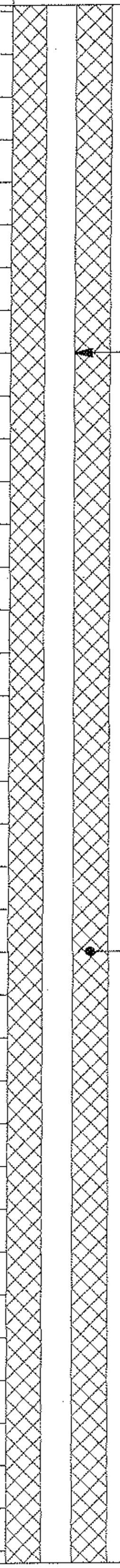
## Log of Well No. S-I-01 (cont'd)

| DEPTH (feet) | SAMPLES Sample No. | SAMPLES Sample | SAMPLES Blows/ 6 Inches | PID Reading (ppm) | DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. | WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS |
|---|---|---|---|---|---|---|
| | | | | | POORLY GRADED SAND (SP): continued | |
| 34 | | | | | | |
| 35 | | | | | | |
| 36 | | | | | | |
| 37 | | | | | | 4" diameter Schedule 40 PVC casing |
| 38 | | | | | | |
| 39 | | | | | | |
| 40 | | | | 0.1 (HS) | light yellowish brown (10YR 6/4) | |
| 41 | | | | | | |
| 42 | 1 | ■ | | | POORLY GRADED SAND with SILT (SP-SM): light olive brown (2.5Y 5/4), moist, ~90% fine sand, ~10% fines | |
| 43 | | | | | | |
| 44 | | | | | | Cement-bentonite grout |
| 45 | 2 | ■ | 22<br>31<br>36 | 0.5 (HS) | POORLY GRADED SAND (SP): light yellowish brown (2.5Y 6/3), moist, ~90% fine to medium sand, ~10% coarse sand | |
| 46 | | | | | | |
| 47 | | | | 0.4 (HS) | | |
| 48 | | | | | | |
| 49 | | | | | | |
| 50 | | | | 0.5 (HS) | light olive brown (2.5Y 5/3), ~100% fine to medium sand | |
| 51 | | | | | | |



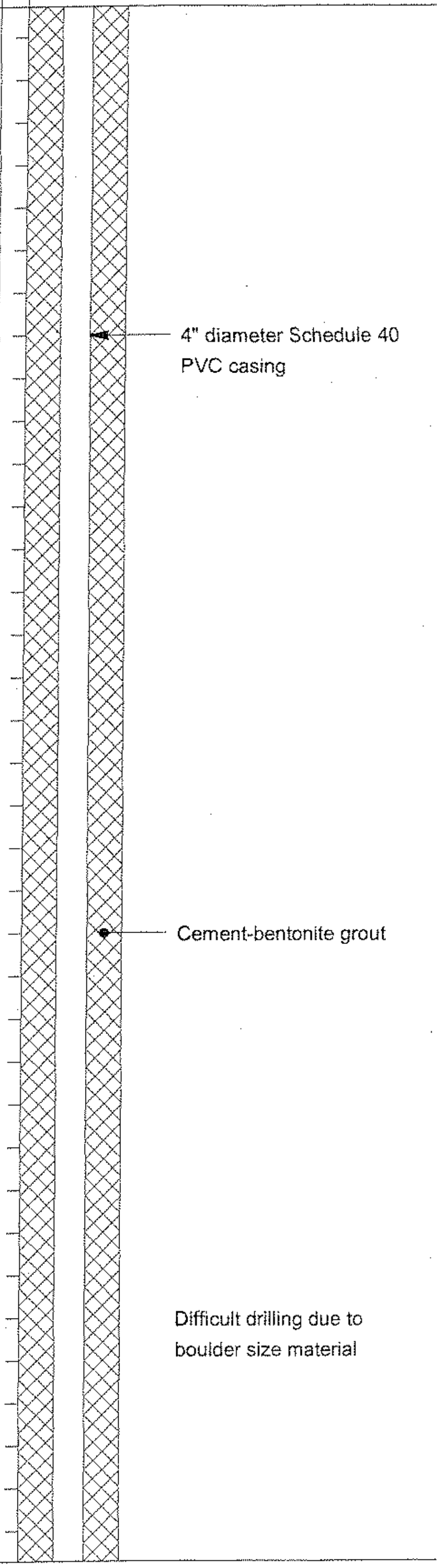
PROJECT: LA BASIN WATERSHED AUGMENTATION
Sun Valley Paper Stock, Sun Valley, California

# Log of Well No. S-I-01 (cont'd)



| DEPTH (feet) | SAMPLES<br>Sample No. | Sample | Blows/ 6 Inches | PID Reading (ppm) | DESCRIPTION<br>NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. | WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS |
|---|---|---|---|---|---|---|
|  |  |  |  |  | POORLY GRADED SAND (SP): continued |  |
| 52 |  |  |  |  |  |  |
| 53 |  |  |  |  |  |  |
| 54 |  |  |  |  |  |  |
| 55 |  |  |  |  |  | 4" diameter Schedule 40 PVC casing |
| 56 |  |  |  |  |  |  |
| 57 |  |  |  |  |  |  |
| 58 |  |  |  |  |  |  |
| 59 |  |  |  |  |  |  |
| 60 |  |  |  | 0.4<br>(HS) | ~95% fine to medium sand, ~5% fine gravel |  |
| 61 |  |  |  |  |  |  |
| 62 |  |  |  |  |  | Cement-bentonite grout |
| 63 |  |  |  |  |  |  |
| 64 |  |  |  |  |  |  |
| 65 |  |  |  |  |  |  |
| 66 |  |  |  |  |  |  |
| 67 |  |  |  |  |  |  |
| 68 |  |  |  |  |  |  |
| 69 |  |  |  |  |  |  |

| DEPTH (feet) | SAMPLES Sample No. | Sample | Blows/ 6 Inches | PID Reading (ppm) | DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. | WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS |
|---|---|---|---|---|---|---|
| 70 | | | | 0.1<br>(HS) | POORLY GRADED SAND (SP): continued ~90% fine to medium sand, ~5% fine to coarse gravel, ~5% cobbles | |
| 71 | | | | | | |
| 72 | | | | | | |
| 73 | | | | | | |
| 74 | | | | | | |
| 75 | | | | 0.0<br>(HS) | light brownish gray (2.5Y 6/2), ~100% fine to coarse sand | |
| 76 | | | | | | |
| 77 | | | | | POORLY GRADED GRAVEL (GP): multicolored, dry, ~90% fine to coarse gravel, ~5% fine to coarse sand, ~5% cobbles | |
| 78 | | | | | | |
| 79 | | | | | | |
| 80 | | | | 0.2<br>(HS) | POORLY GRADED SAND (SP): light brownish gray (2.5Y 6/2), dry, ~95% fine to coarse sand, ~5% fine gravel | |
| 81 | | | | | | |
| 82 | | | | | | |
| 83 | | | | | | |
| 84 | | | | | ~90% fine to coarse sand, ~10% fine to coarse gravel | |
| 85 | | | | | POORLY GRADED GRAVEL (GP): multicolored, dry, ~100% fine to coarse gravel, gravel is granitic, some weathered granitic clasts | Difficult drilling due to boulder size material |
| 86 | | | | | | |
| 87 | | | | | ~90% fine to coarse gravel, ~5% medium to coarse sand, ~5% cobbles | |

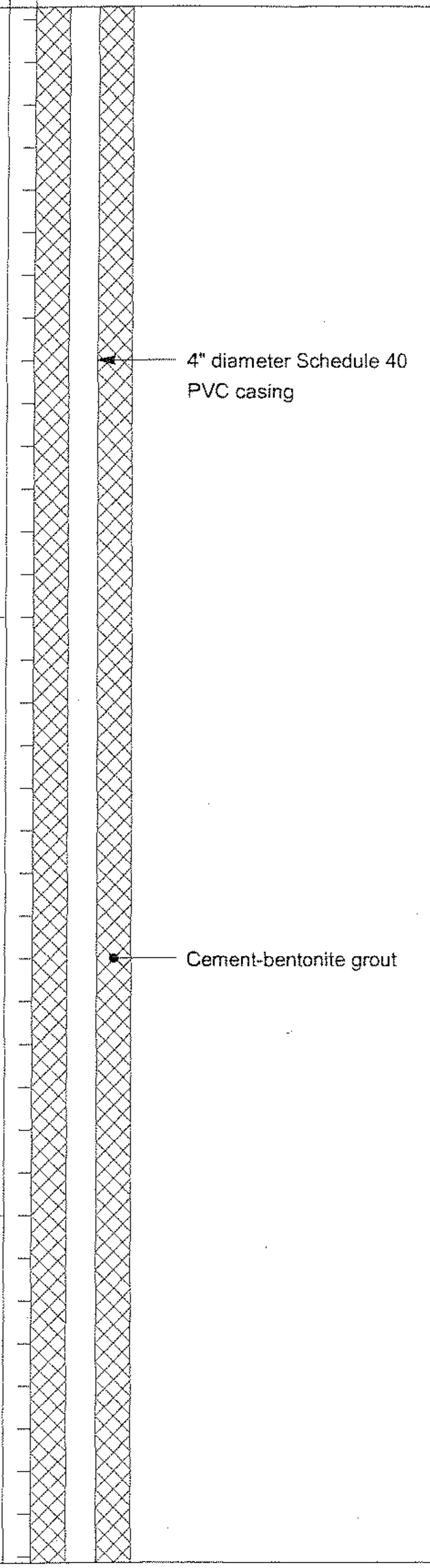


PROJECT: LA BASIN WATERSHED AUGMENTATION
Sun Valley Paper Stock, Sun Valley, California

# Log of Well No. S-I-01 (cont'd)

| DEPTH (feet) | SAMPLES<br>Sample No. | Sample | Blows/ 6 Inches | PID Reading (ppm) | DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. |
|---|---|---|---|---|---|
| 88 | | | | | POORLY GRADED GRAVEL (GP): continued |
| 89 | | | | | |
| 90 | | | | 0.2 (HS) | |
| 91 | | | | | |
| 92 | | | | | |
| 93 | | | | | |
| 94 | | | | | POORLY GRADED SAND (SP): olive brown (2.5Y 4/4), moist, ~90% fine to coarse sand, ~10% fine to coarse gravel |
| 95 | | | | 0.0 (HS) | POORLY GRADED SAND with GRAVEL (SP): olive brown (2.5Y 4/4), moist, ~85% fine to coarse sand, ~15% fine to coarse gravel |
| 96 | | | | | |
| 97 | | | | | |
| 98 | | | | | |
| 99 | | | | | |
| 100 | | | | 0.2 (HS) | |
| 101 | 3 | ■<br>□ | | 0.0 (HS) | POORLY GRADED SAND (SP): olive yellow (2.5Y 6/6), moist, ~95% fine to coarse sand, ~5% fine gravel |
| 102 | 4 | ■ | 6<br>6 | | POORLY GRADED SAND with GRAVEL (SP): light olive brown (2.5Y 5/4), moist, ~85% fine to coarse sand, ~15% fine gravel |
| 103 | | ☒ | 6 | | |
| 104 | | | | | |
| 105 | | | | | |
| 106 | | | | | |

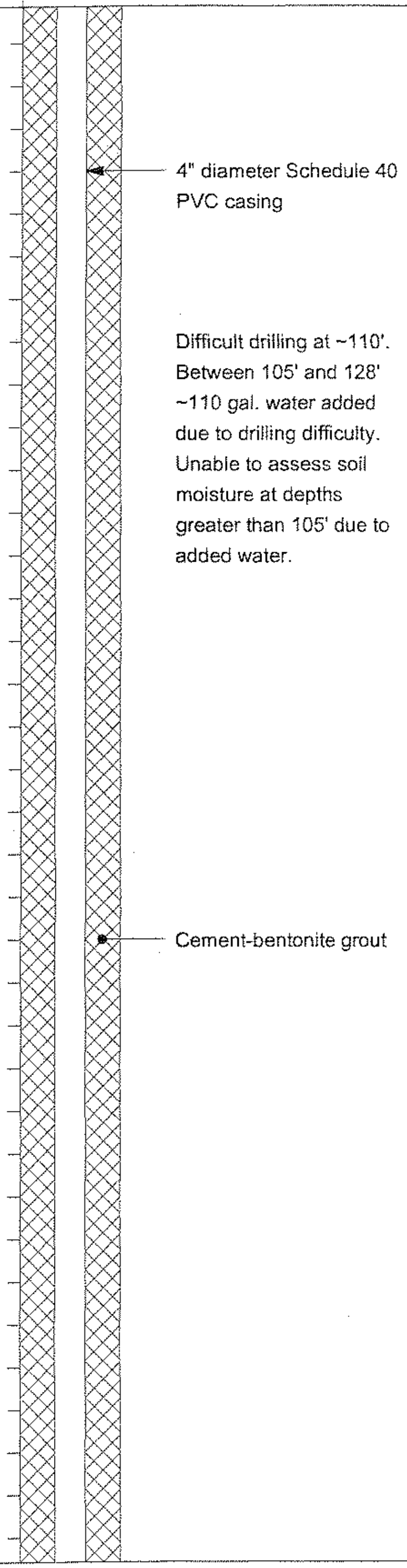
WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS



PROJECT: LA BASIN WATERSHED AUGMENTATION
Sun Valley Paper Stock, Sun Valley, California

# Log of Well No. S-I-01 (cont'd)

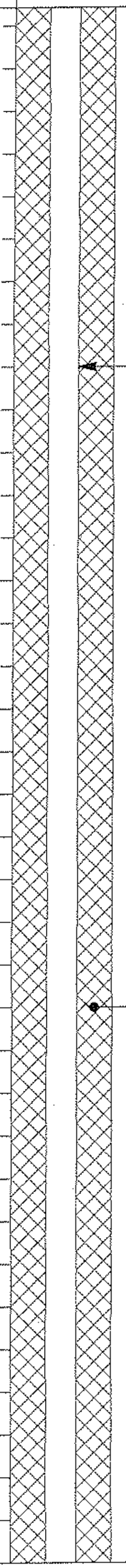
| DEPTH (feet) | SAMPLES<br>Sample No. | Sample | Blows/ 6 Inches | PID Reading (ppm) | DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. | WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS |
|---|---|---|---|---|---|---|
|  |  |  |  |  | POORLY GRADED SAND with GRAVEL (SP): continued |  |
| 107 |  |  |  | 0.1 (HS) | ~90% fine to coarse sand, ~10% fine to coarse gravel |  |
| 108 |  |  |  |  |  |  |
| 109 |  |  |  |  |  |  |
| 110 |  |  |  |  | POORLY GRADED GRAVEL (GP): multicolored, dry, ~90% fine to coarse gravel, ~5% medium to coarse sand, ~5% cobbles, gravel and cobbles are granitic | Difficult drilling at ~110'. Between 105' and 128' ~110 gal. water added due to drilling difficulty. Unable to assess soil moisture at depths greater than 105' due to added water. |
| 111 |  |  |  |  |  |  |
| 112 |  |  |  |  |  |  |
| 113 |  |  |  |  | POORLY GRADED SAND with GRAVEL (SP): multicolored, ~80% medium to coarse sand, ~20% fine gravel, gravel is granitic |  |
| 114 |  |  |  |  |  |  |
| 115 |  |  |  |  | POORLY GRADED GRAVEL with SAND (GP): multicolored, ~70% fine to coarse gravel, ~30% medium to coarse sand, gravel is granitic |  |
| 116 |  |  |  |  | POORLY GRADED SAND with GRAVEL (SP): multicolored, ~80% medium to coarse sand, ~20% fine to coarse gravel |  |
| 117 |  |  |  |  |  |  |
| 118 |  |  |  |  |  |  |
| 119 |  |  |  |  |  |  |
| 120 |  |  |  | 0.0 (HS) | ~75% fine to coarse sand, ~25% fine gravel |  |
| 121 |  |  |  |  |  |  |
| 122 |  |  |  |  |  |  |
| 123 |  |  |  |  |  |  |
| 124 |  |  |  |  |  |  |



PROJECT: LA BASIN WATERSHED AUGMENTATION
Sun Valley Paper Stock, Sun Valley, California

**Log of Well No. S-I-01 (cont'd)**

| DEPTH (feet) | SAMPLES Sample No. | Sample | Blows/ 6 Inches | PID Reading (ppm) | DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. | WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS |
|---|---|---|---|---|---|---|
| 125 | | | | 0.0 (HS) | POORLY GRADED SAND with GRAVEL (SP): continued<br>~85% fine to coarse sand, ~15% fine gravel | |
| 126 | | | | | | |
| 127 | | | | | | |
| 128 | | | | | | 4" diameter Schedule 40 PVC casing |
| 129 | | | | | | |
| 130 | | | | 0.0 (HS) | ~85% medium to coarse sand, ~15% fine to coarse gravel | |
| 131 | | | | | | |
| 132 | | | | | | |
| 133 | | | | | ~80% medium to coarse sand, ~20% fine gravel, gravel has high quartzite content | Difficult drilling due to boulder size material at ~133'. ~100 gal. water added from 128'-137'. |
| 134 | | | | | | |
| 135 | | | | 0.0 (HS) | ~85% medium to coarse sand, ~15% fine gravel | |
| 136 | | | | | | Cement-bentonite grout |
| 137 | | | | | | |
| 138 | | | | | ~80-85% fine to coarse sand, ~15-20% fine to coarse gravel | |
| 139 | | | | | | |
| 140 | | | | 0.2 (HS) | ~85% medium to coarse sand, ~15% fine to coarse gravel | |
| 141 | | | | | | |
| 142 | | | | | | |



WELL3_INCHES

PROJECT: LA BASIN WATERSHED AUGMENTATION
Sun Valley Paper Stock, Sun Valley, California

## Log of Well No. S-I-01 (cont'd)

| DEPTH (feet) | SAMPLES Sample No. | SAMPLES Sample | SAMPLES Blows/ 6 Inches | PID Reading (ppm) | DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. | WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS |
|---|---|---|---|---|---|---|
| 143 | | | | | POORLY GRADED SAND with GRAVEL (SP): continued<br>Bottom of boring at 143.2 ft bgs | <br>4" diameter Schedule 40 PVC casing<br>Cement-bentonite grout<br>4" diameter Schedule 40 PVC end cap<br>~60 gal. water added from 137'-143'. Refusal at ~143' due to boulder. |
| 144 | | | | | | |
| 145 | | | | | | |
| 146 | | | | | | |
| 147 | | | | | | |
| 148 | | | | | | |
| 149 | | | | | | |
| 150 | | | | | | |
| 151 | | | | | | |
| 152 | | | | | | |
| 153 | | | | | | |
| 154 | | | | | | |
| 155 | | | | | | |
| 156 | | | | | | |
| 157 | | | | | | |
| 158 | | | | | | |
| 159 | | | | | | |
| 160 | | | | | | |

PROJECT: LA BASIN WATERSHED AUGMENTATION
Veterans Park, Long Beach, California

# Log of Well No. V-MW-01

BORING LOCATION: ~9' N & ~45' W of NW corner of L. B. Recreation Ctr.

GROUND SURFACE ELEVATION AND DATUM: 19.18' MSL

DRILLING CONTRACTOR: Gregg Drilling & Testing, Inc.

DATE STARTED: 10/17/03

DATE FINISHED: 10/17/03

DRILLING METHOD: Hollow-stem auger

TOTAL DEPTH (ft.): 32.5

SCREEN INTERVAL (ft.): 17.0 - 31.3

DRILLING EQUIPMENT: Mobile B-61

DEPTH TO WATER ATD: 22'

CASING: 2" Sch. 40 PVC

SAMPLING METHOD: CA Modified split spoon sampler [18" x 2"]

LOGGED BY: J. Klein

HAMMER WEIGHT: 160 lbs

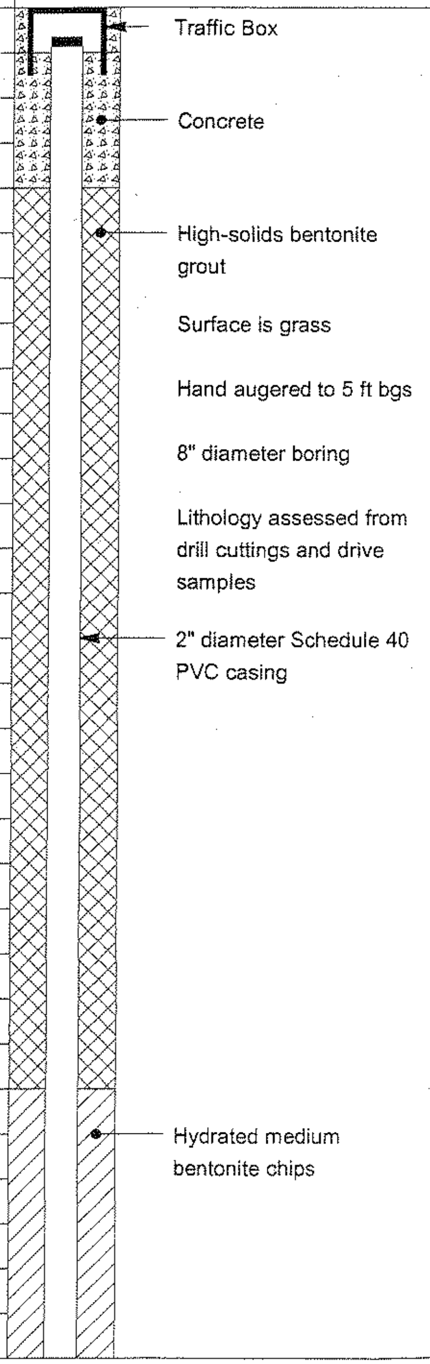
DROP: 30 in.

RESPONSIBLE PROFESSIONAL: K. Holland-Chominsky

REG. NO. RG 7033

| DEPTH (feet) | SAMPLES Sample No. | Blows/ 6 Inches | PID Reading (ppm) | DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. |
|---|---|---|---|---|
| | | | | Surface Elevation: 19.18' MSL |
| 0 | | | | Topsoil |
| 0.5 | | | | POORLY GRADED SAND with CLAY (SP-SC): dark grayish brown (10YR 4/2), moist, ~90% fine sand, ~10% fines |
| 3 | 1 | | | POORLY GRADED SAND (SP): brown (10YR 5/3), dry, ~95% fine sand, ~5% fines |
| 5 | 2 | 7<br>10<br>12 | | SILT (ML): pale brown (10YR 6/3), moist, ~95% fines, ~5% fine sand, low plasticity, rapid dilatancy |
| 6 | | | | ~90% low plasticity fines, ~10% fine sand |
| 10 | | 5<br>6<br>8 | | POORLY GRADED SAND (SP): dark grayish brown (10YR 4/2), moist, ~95% fine to medium sand, ~5% fines |

WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS



Surface is grass

Hand augered to 5 ft bgs

8" diameter boring

Lithology assessed from drill cuttings and drive samples

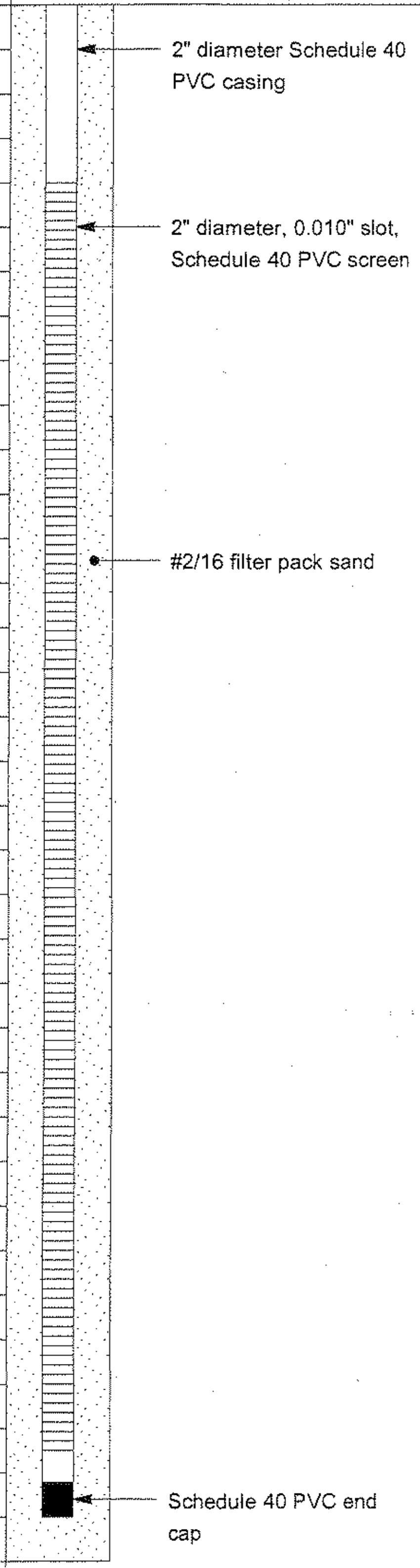
WELL3_INCHES

PROJECT: LA BASIN WATERSHED AUGMENTATION
Veterans Park, Long Beach, California

# Log of Well No. V-MW-01 (cont'd)

| DEPTH (feet) | SAMPLES Sample No. | SAMPLES Sample | SAMPLES Blows/ 6 Inches | PID Reading (ppm) | DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. |
|---|---|---|---|---|---|
| | | | 5 | | LEAN CLAY with SAND (CL): dark grayish brown (10YR 4/2), moist, ~85% fines, ~15% fine sand, medium plasticity, slow dilatancy |
| | | | 7 | | |
| 16 | | | | | |
| | | | 9 | | LEAN CLAY (CL): dark grayish brown (10YR 4/2), moist, ~90% fines, ~10% fine sand, medium plasticity, slow dilatancy |
| | | | 0 | | |
| 17 | | | | | |
| | 3 | | 4 | | LEAN CLAY with SAND (CL): grayish brown (2.5Y 5/2), moist, ~80% fines, ~20% fine sand, medium plasticity, slow dilatancy |
| | | | 9 | | |
| 18 | | | | | |
| | | | 5 | | LEAN CLAY (CL): dark grayish brown (2.5Y 4/2), moist, ~100% medium plasticity fines, no dilatancy |
| | | | 6 | | |
| 19 | | | | | very dark grayish brown (2.5Y 3/2) |
| | | | 10 | | |
| | | | 5 | | CLAYEY SAND (SC): dark gray (10YR 4/1), moist, ~60% fine to medium sand, ~40% medium plasticity fines |
| 20 | 4 | | | | |
| | | | 7 | | |
| | | | 8 | | LEAN CLAY (CL): dark grayish brown (10YR 4/2), moist, ~95% fines, ~5% fine sand, medium plasticity trace coarse sand below 21' |
| 21 | | | | | |
| | | | 6 | | |
| | | | 6 | | |
| 22 | | | | | |
| | | | 7 | | SANDY LEAN CLAY (CL): dark gray (10YR 4/1), wet, ~70% fines, ~30% fine to coarse sand, medium plasticity, slow dilatancy |
| | | | 7 | | |
| 23 | | | | | |
| | | | 13 | | POORLY GRADED SAND with CLAY (SP-SC): dark brown (10YR 3/3), wet, ~90% fine to coarse sand, ~10% fines |
| | | | 20 | | |
| 24 | | | | | |
| | 5 | | 10 | | POORLY GRADED SAND (SP): dark brown (10YR 3/3), wet, ~100% fine to coarse sand |
| | | | 12 | | |
| 25 | | | | | |
| | | | 16 | | trace gravel |
| | | | 6 | | |
| 26 | | | | | |
| | | | 6 | | |
| | | | 12 | | LEAN CLAY (CL): grayish brown (10YR 5/2), wet, ~100% medium plasticity fines, no dilatancy |
| 27 | | | | | |
| | | | 10 | | |
| | | | 12 | | |
| 28 | | | | | SANDY LEAN CLAY (CL): dark gray (10YR 4/1), wet, ~70% fine sand, ~30% fines, slow dilatancy |
| | | | 16 | | |
| | | | 10 | | |
| 29 | | | | | |
| | | | 11 | | |
| | | | 15 | | |
| 30 | | | | | LEAN CLAY (CL): dark grayish brown (10YR 4/2), moist, ~100% medium plasticity fines, no dilatancy |
| | | | 10 | | |
| | | | 10 | | |
| 31 | | | | | |
| | | | 13 | | |
| 32 | | | | | |
| | | | | | Bottom of boring at 32.5 ft bgs |
| 33 | | | | | |

WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS



2" diameter Schedule 40 PVC casing

2" diameter, 0.010" slot, Schedule 40 PVC screen

#2/16 filter pack sand

Schedule 40 PVC end cap

WELL3_INCHES

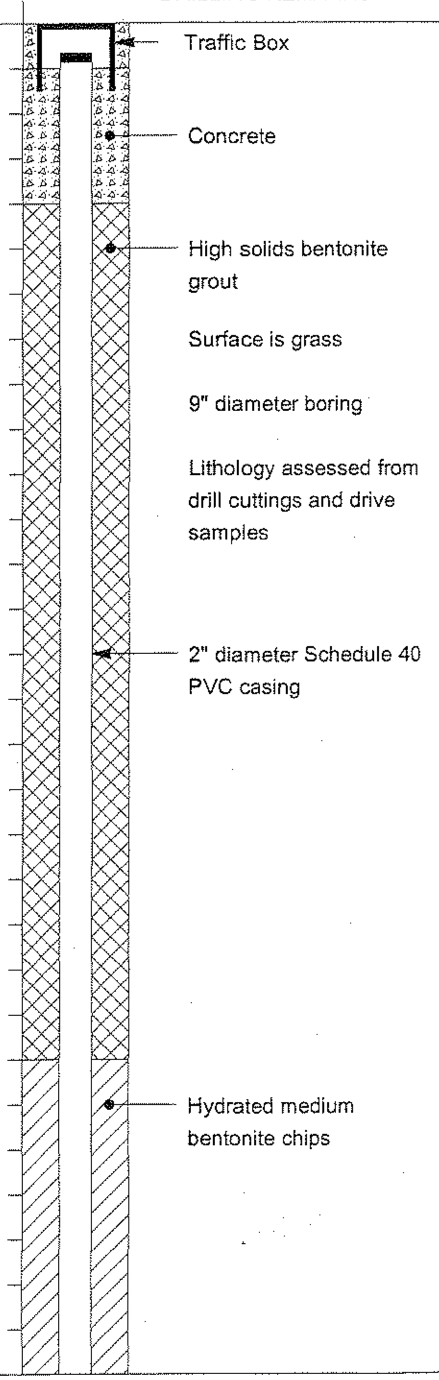
PROJECT: LA BASIN WATERSHED AUGMENTATION
Veterans Park, Long Beach, California

# Log of Well No. V-MW-02

BORING LOCATION: ~58' S & ~20' W of SW corner of L. B. Recreation Ctr.
GROUND SURFACE ELEVATION AND DATUM: 18.82' MSL
DRILLING CONTRACTOR: Gregg Drilling & Testing, Inc.
DATE STARTED: 10/28/03
DATE FINISHED: 10/28/03
DRILLING METHOD: Hollow-stem auger
TOTAL DEPTH (ft.): 31.5
SCREEN INTERVAL (ft.): 16.5 - 31.0
DRILLING EQUIPMENT: Mobile B-61
DEPTH TO WATER ATD: NA
CASING: 2" Sch. 40 PVC
SAMPLING METHOD: CA Modified split spoon sampler [18" x 2"]
LOGGED BY: J. Klein
HAMMER WEIGHT: 160 lbs
DROP: 30 in.
RESPONSIBLE PROFESSIONAL: K. Holland-Chominsky
REG. NO. RG 7033

| DEPTH (feet) | SAMPLES Sample No. | SAMPLES Sample | SAMPLES Blows/ 6 Inches | PID Reading (ppm) | DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. |
|---|---|---|---|---|---|
| | | | | | Surface Elevation: 18.82' MSL |
| 0 | | | | | Topsoil |
| 0 - 5 | | | | | SANDY LEAN CLAY (CL): very dark gray (5Y 3/1), moist, ~65% fines, ~35% fine sand, low plasticity, slow dilatancy |
| 5 | | ▨ | 6<br>7<br>7 | | SANDY LEAN CLAY (CL): dark brown (7.5YR 3/2), moist, ~65% fines, ~35% fine sand, medium plasticity |
| 6 | | | | | LEAN CLAY (CL): dark gray (7.5YR 4/1), moist, ~95% fines, ~5% fine sand, medium plasticity, slow dilatancy |
| 7 | | | | | POORLY GRADED SAND (SP): grayish brown (2.5Y 5/1), moist, ~95% fine to medium sand, ~5% fines |
| 10 | | ▨ | 5<br>6<br>8 | | LEAN CLAY (CL): dark gray (2.5Y 4/1), moist, ~95% fines, ~5% fine to medium sand, medium plasticity, slow dilatancy |
| 11 | | ☒ | | | LEAN CLAY with SAND (CL): dark gray (2.5Y 4/1), moist, ~85% fines, ~15% fine to medium sand, medium plasticity, slow dilatancy |

WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS



Surface is grass

9" diameter boring

Lithology assessed from drill cuttings and drive samples

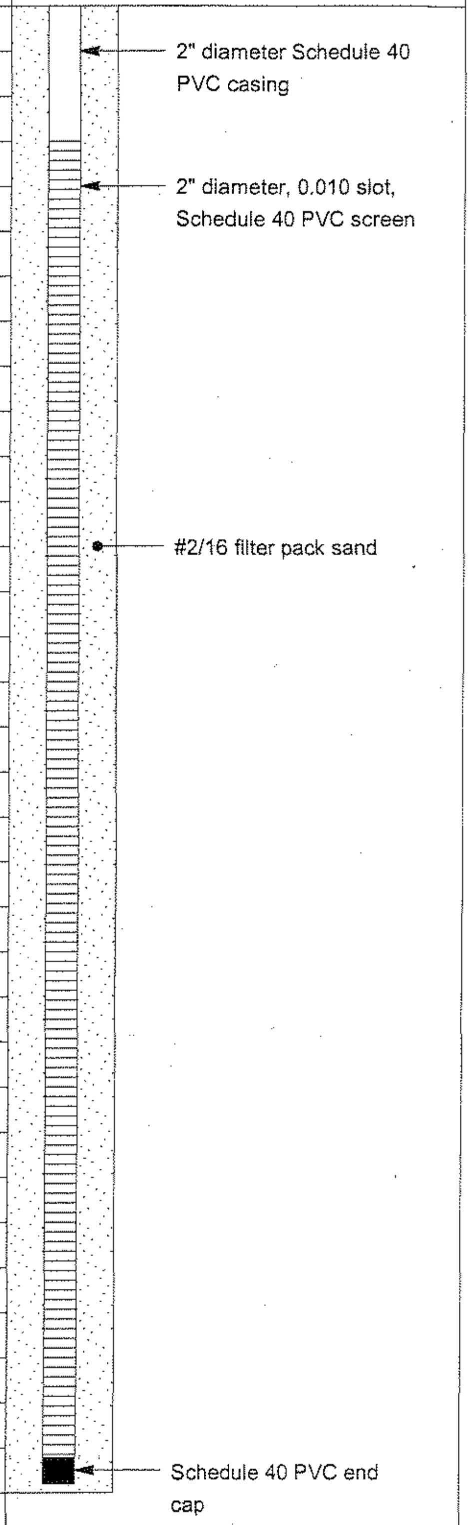
WELL3_INCHES

PROJECT: LA BASIN WATERSHED AUGMENTATION
Veterans Park, Long Beach, California

# Log of Well No. V-MW-02 (cont'd)

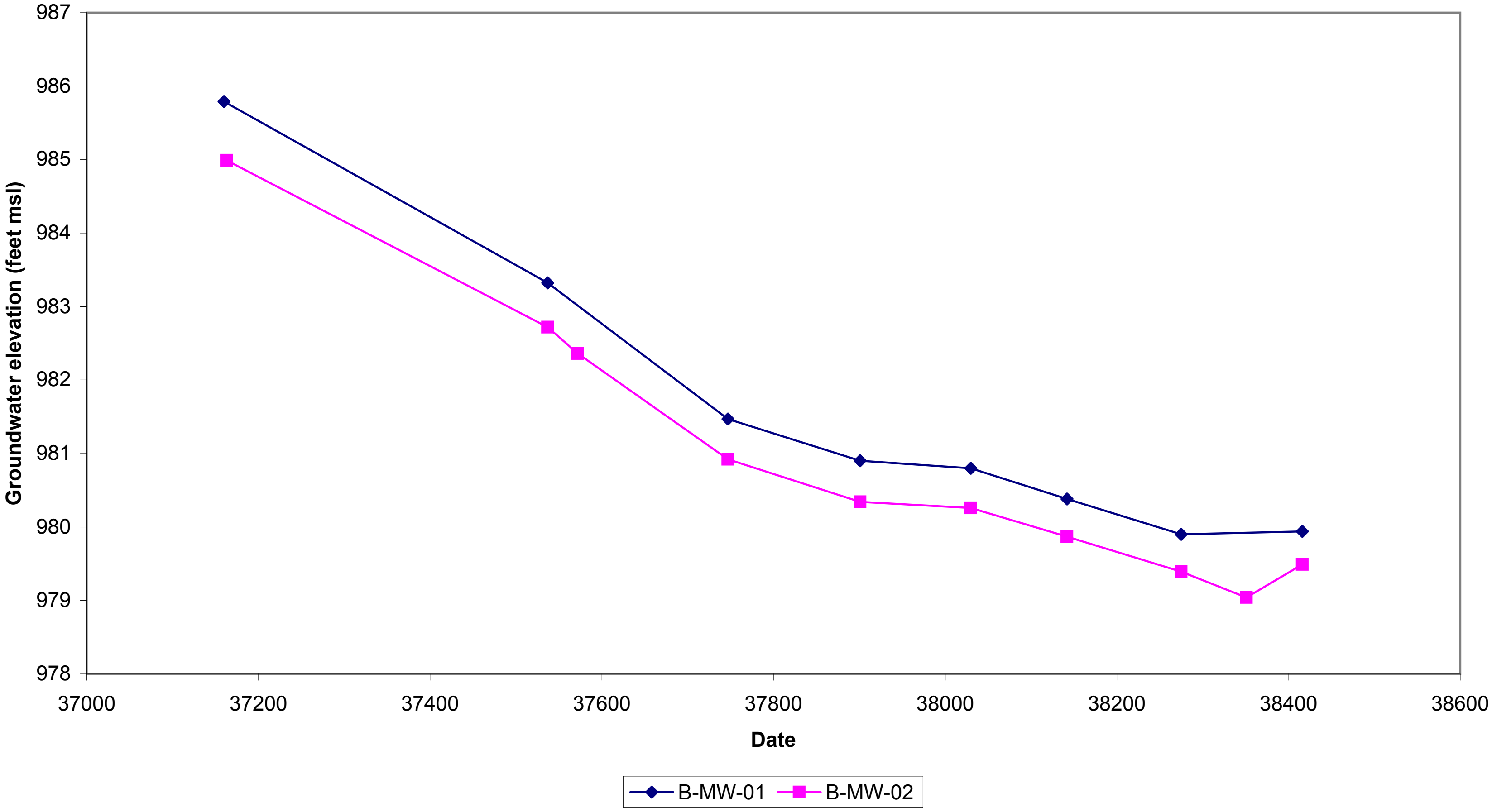
| DEPTH (feet) | SAMPLES Sample No. | SAMPLES Sample | SAMPLES Blows/ 6 Inches | PID Reading (ppm) | DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. |
|---|---|---|---|---|---|
| | | | 5<br>5<br>7 | | LEAN CLAY with SAND (CL): dark gray (2.5Y 4/1), moist, ~80% fines, ~20% fine sand, medium plasticity, slow dilatancy |
| 16 | | | | | |
| 17 | | | | | |
| 18 | | | | | |
| 19 | | | | | |
| 20 | | | 6<br>6<br>9 | | LEAN CLAY with SAND (CL): dark gray (10YR 4/1), moist, ~85% fines, ~15% fine sand, medium plasticity, slow dilatancy |
| 21 | | | | | |
| 22 | | | | | |
| 23 | | | | | |
| 24 | | | | | |
| 25 | | | 10<br>11<br>10 | | CLAYEY SAND (SC): olive brown (2.5Y 4/3), moist, ~60% fine sand, ~40% low plasticity fines<br>~75% fine sand, ~25% low plasticity fines |
| 26 | | | | | |
| 27 | | | | | |
| 28 | | | | | |
| 29 | | | | | |
| 30 | | | | | SANDY LEAN CLAY (CL): olive brown (2.5Y 4/3), moist, ~70% fines, ~30% fine sand, medium plasticity |
| 31 | | | | | |
| | | | | | Bottom of boring at 31.5 ft bgs |
| 32 | | | | | |
| 33 | | | | | |

WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS

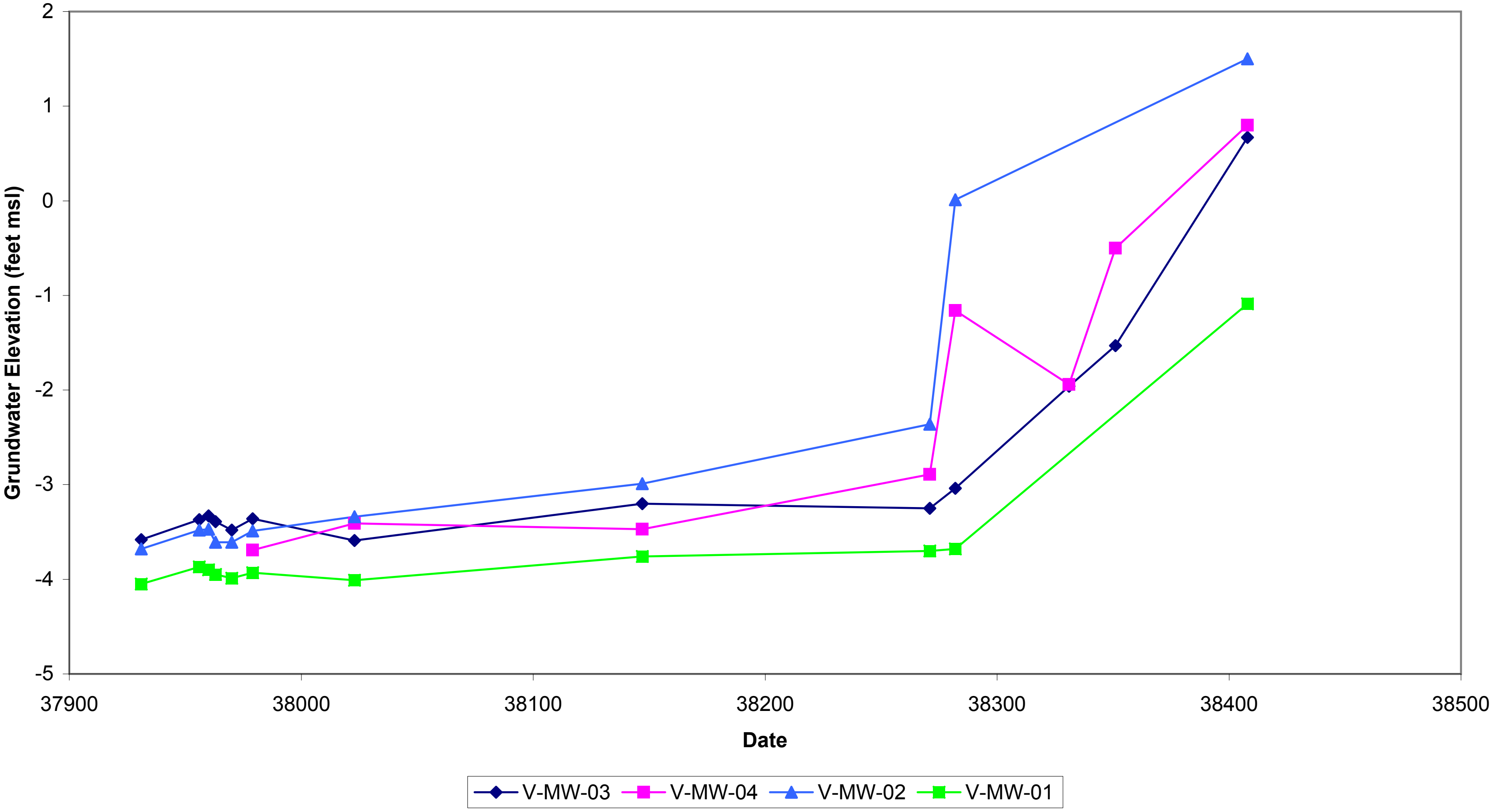


WELL3_INCHES

## Figure I-1
## Broadous B-MW-01 and B-MW-02



# Figure I-3
# All Veterans Park wells



## Figure I-2
## IMAX I-MW-01 and I-MW-02